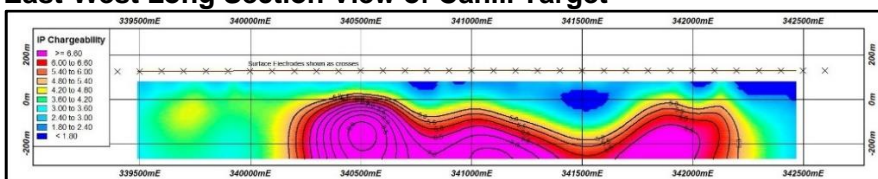


GOLD HIGHLIGHTS

- ❖ A cluster of **four sulphide-gold-in-sediments targets**, all of them compelling drill targets, was depicted in the Nagambie Mine and Racecourse induced polarisation (IP) surveys. The four large, east-west-striking, underground targets appear to be based on the gravity-indicated, north-west-striking Nagambie Crustal Fault and have been modelled over 2.7 km south to north – Nagambie Mine, Nagambie North, Cahill and Racecourse.
- ❖ The **Nagambie Mine** target is over 2,000m long, is down dip of the 1990s oxide open pits (steep northerly dip) and commences approximately 230m vertically below surface (roughly 180m down dip of the oxide pits). The first diamond drill hole into this target, NAD001, on 27 April had progressed to 206m downhole (approximately 178m below surface) and should reach the middle of the IP anomaly during the week commencing 30 April.
- ❖ The **Nagambie North** target is only 250m north of the Nagambie Mine target, is around 500m long and commences around 200m below surface. The Nagambie Mine IP survey does suggest that Nagambie North could extend further to the west at a greater depth below surface. A new IP survey to the west is being planned to confirm this and to test for another cluster of sulphide-gold targets based on the gravity-indicated, north-west-striking Wandean Crustal Fault which is 4.3 km west of the indicated Nagambie Crustal Fault.
- ❖ The **Cahill** target is 1.7 km north of the Nagambie Mine target, extends for 1,800m to the west of the gravity-indicated Nagambie Crustal Fault, and commences only 100m below surface.

East-West Long Section View of Cahill Target



- ❖ The **Racecourse** target is 2.7 km north of the Nagambie Mine target, extends for 1,850m to the east of the indicated Nagambie Crustal Fault and, like Cahill, also commences only 100m below surface.

COMMENTARY

Nagambie Resources' Chairman, Mike Trumbull said: "The combination of high-tech IP and our advanced gold deposition model for the Waranga Province now possibly has the Company on the cusp of making a series of major gold discoveries in central Victoria.

"The drilling of the four compelling, Fosterville-style, sulphide-gold-in-sediments targets is a potential game-changer for the Company. If the drilling program intersects economic-grade gold mineralisation, the value of our Nagambie Project gold tenements, which cover over 2,000 sq km and encompass all the 10 significant indicated crustal faults in the Waranga Province, will increase dramatically."

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.

SHARES ON ISSUE

403,935,912

ASX CODE: NAG

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Board

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

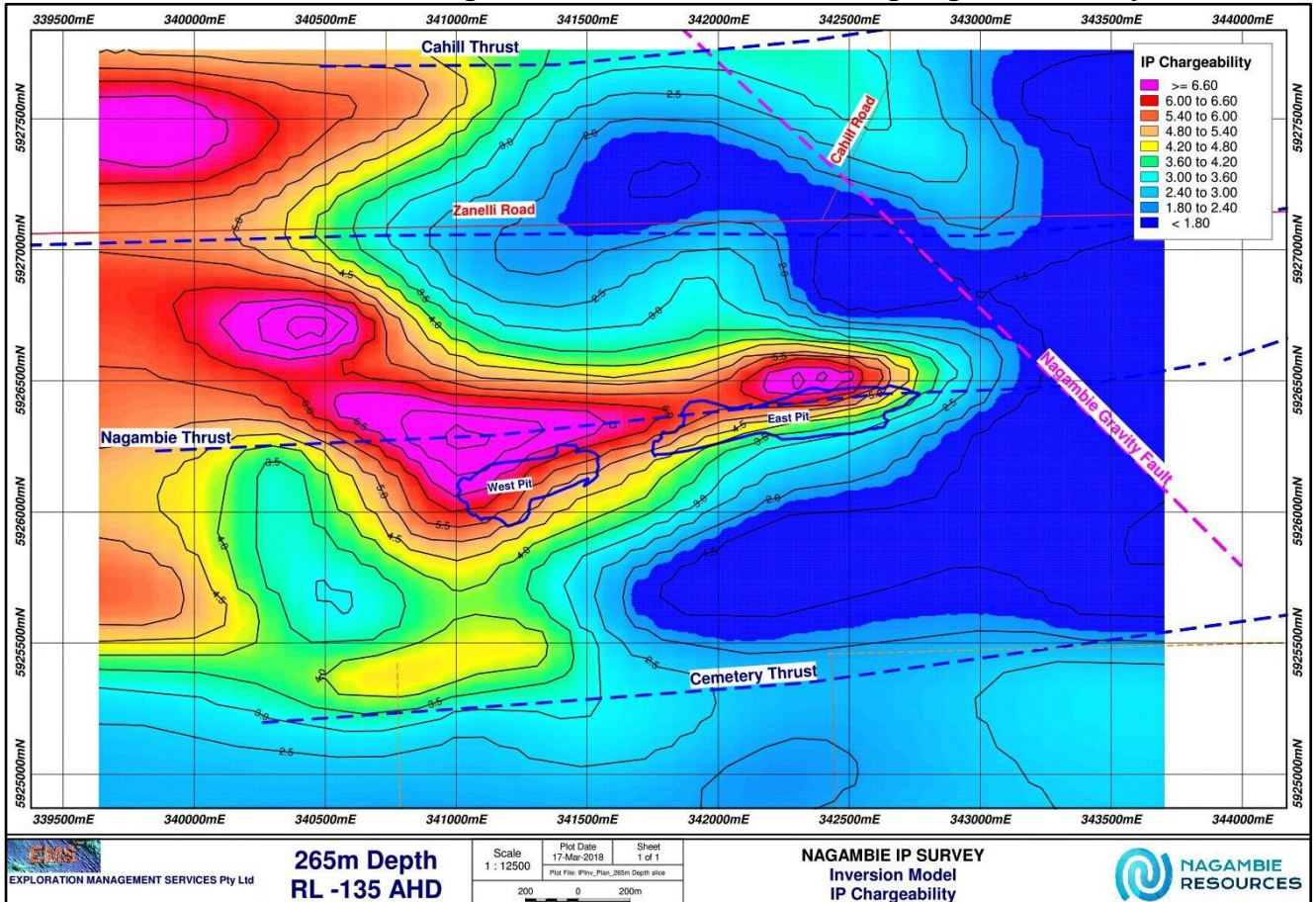
James Earle CEO

GOLD EXPLORATION

Nagambie Mine IP Survey

The results of the Nagambie Mine Survey and its relevant JORC 2012 Edition, Table 1 Checklist were released to the ASX on 22 March 2018.

Figure 1 Plan View showing Slice through Mine Survey IP Chargeability Model at 265m Depth, East Pit, West Pit, east-west striking Thrusts and north-west striking Nagambie Gravity Fault



Arsenopyrite-pyrite gold mineralisation of the Fosterville and Lockington style occurs as very fine sulphide crystals in a sandstone or siltstone host rock. Arsenopyrite has a weaker IP chargeability response than pyrite, and the IP survey chargeability levels matched expectations.

The targeted mineralisation style also is associated with strong silicification and fine quartz veining – this style is associated with higher than normal electrical resistivities. The survey results showed a strong association of higher resistivity with higher IP chargeability.

All the IP “hot zones” (red and purple coloured inversion-modelled high chargeability contours) for the Nagambie Mine sulphide-gold target are adjacent to the aeromagnetic-interpreted, east-west-striking Nagambie Thrust, conforming with Nagambie Resources’ gold deposition model.

No drill hole has ever intersected the Nagambie Mine underground target IP “hot zones”, though several of the FY 2007 drill holes came within 50m to 100m of doing so.

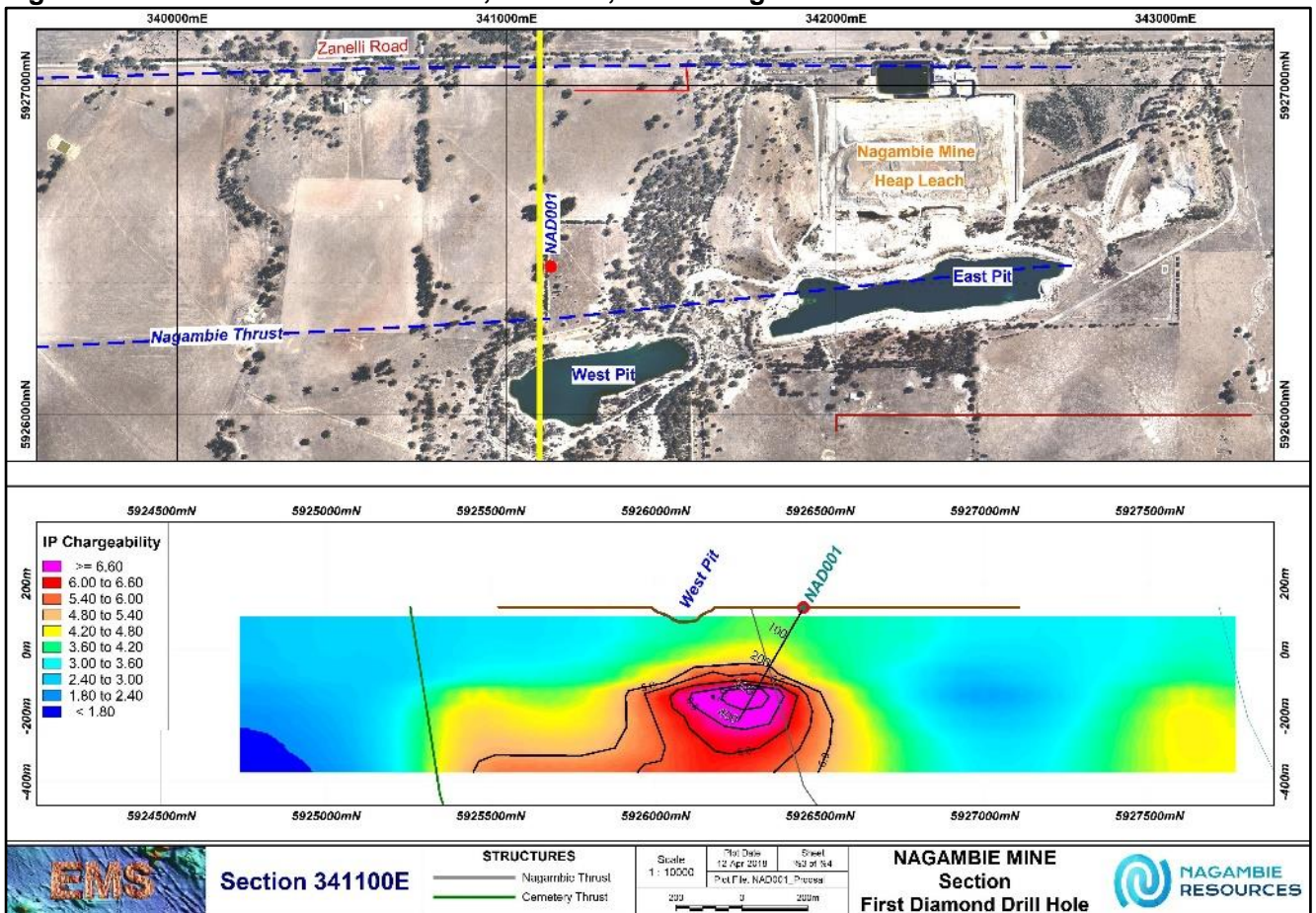
Immediately north west of the Nagambie Mine target is a new IP sulphide target, Nagambie North, that commences approximately 200m below surface and has also never been drilled. The IP survey does suggest that Nagambie North could extend for at least another 1,000m to the west, commencing deeper at around 325m below surface, and could in fact result from mineralised fluids that moved eastwards under pressure from the gravity-indicated, north-west-striking Wandean Crustal Fault (the same indicated crustal fault that is believed to have given rise to the Wandean oxide gold prospect 9 km north west of the Nagambie

Mine, refer Figure 8). An IP survey is being planned to extend westwards to the gravity-indicated Wandean Crustal Fault and along it both to the north and south to test for another cluster of sulphide-gold targets. The indicated Wandean and Nagambie Crustal Faults are parallel to each other and 4.3 km apart east-west (refer Figure 8).

Drilling of NAD001

The drilling of NAD001, the first diamond drill hole into the Nagambie Mine underground sulphide-gold target, is underway. Photo 1 is a drone shot of the drilling rig during set up. On 27 April the hole had progressed to 206m downhole (approximately 178m below surface) and should reach the middle of the IP anomaly during the week commencing 30 April.

Figure 2 Cross Section of NAD001, West Pit, IP and Nagambie Thrust



The cross section follows the yellow line at 341100E on the Google Earth plan view and the collar of NAD001 is shown as a red dot on both the plan and cross section. Being drilled directly south at 60 degrees below horizontal, the nominal length of NAD001 is 400m, but the hole will be continued if it is intersecting sulphide mineralisation. The first drilling rig has the capacity to drill to 1,300m.

Racecourse IP Survey

The results of the Racecourse Survey and its relevant JORC 2012 Edition, Table 1 Checklist were released to the ASX on 9 April 2018.

Figure 3 shows the Inversion-Modelled IP Chargeability along the east-west line through the centre of the Cahill Anomaly, looking north. The yellow line on the aerial photograph shows the line of section, 1.7 km north of the Nagambie Mine. The purple-coloured contours indicate the zones of inversion-modelled high chargeability over a length of 1,800 metres, commencing around 100m below surface. The westernmost 500m of the Cahill target has significantly intense IP chargeability, and is interpreted as indicating stronger sulphide mineralisation.

Figure 4 shows the Inversion-Modelled Resistivity along the same Cahill east-west section. Note the strong association of high resistivity with the high chargeability zones.

Figure 3 Cahill Anomaly: East-West Section 5927850N IP Chargeability

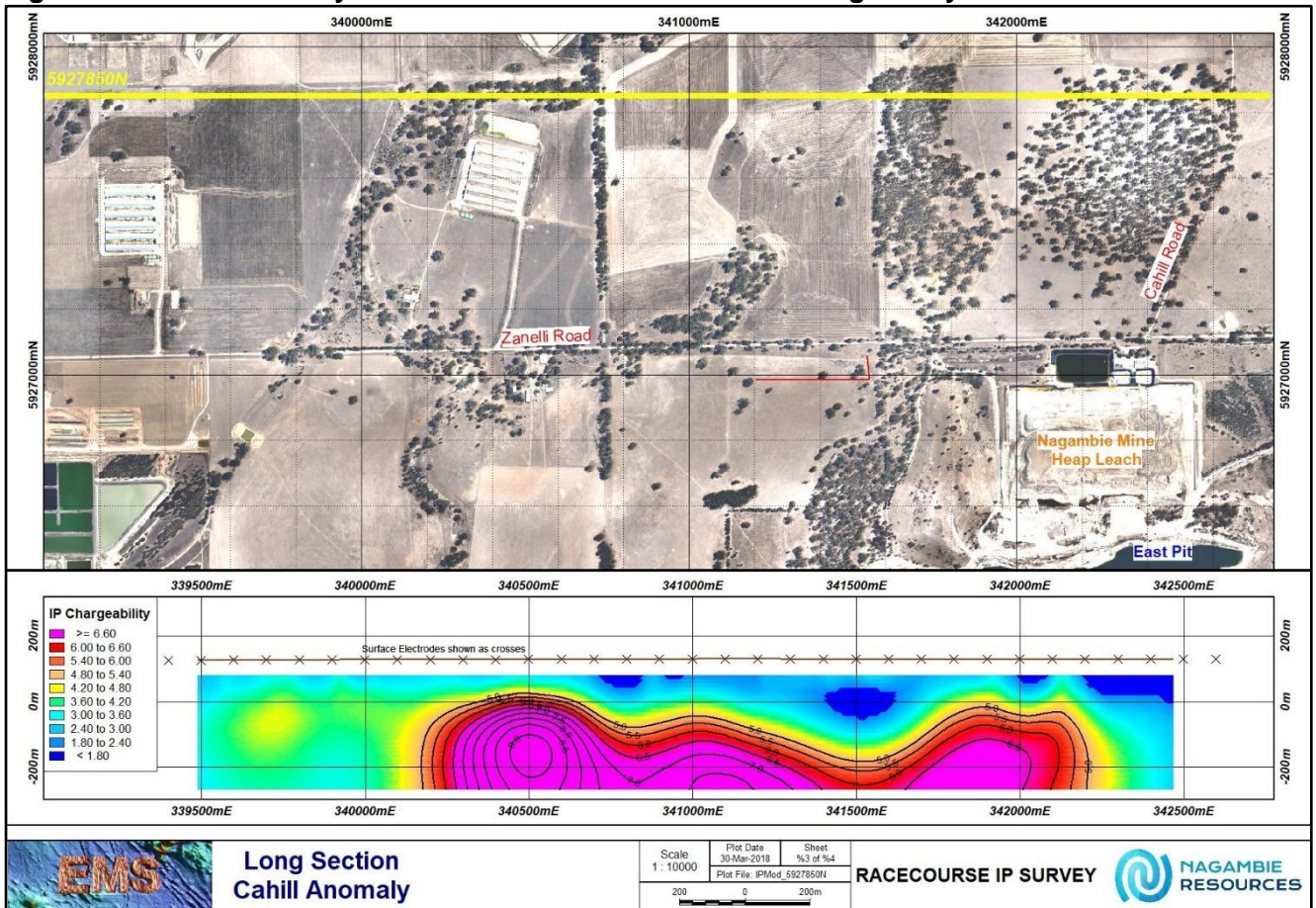


Figure 4 Cahill Anomaly: East-West Section 5927850N Resistivity

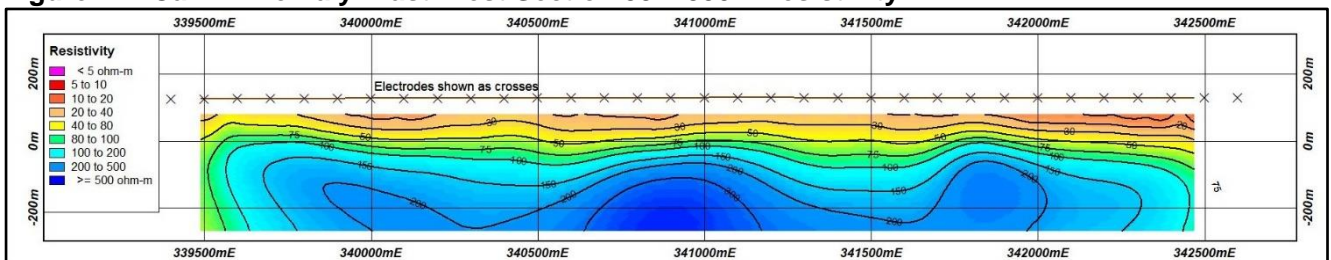


Figure 5 shows the Inversion-Modelled IP Chargeability along a north-south line (looking to the west) at 341450E, showing the locations of the Cahill Anomaly to the south (left of image) and the Racecourse Anomaly to the north (right of image). The gravity-interpreted Nagambie deep crustal fault runs through this section at around (592)8260N, just to the right of the Cahill Anomaly. On this section, the Cahill Anomaly is weakening and the Racecourse Anomaly is starting to strengthen. Also on this section, the top of the Cahill Anomaly commences at around 200m below surface while the top of the Racecourse Anomaly commences at around 100m below surface.

It is possible that Racecourse was the eastern extension of Cahill when deposition of the sulphide mineralisation occurred around 377 million years ago, and that Racecourse was subsequently offset 1.0 km to the north of Cahill along the Nagambie crustal fault as a result of a later regional east-west compression event.

Figure 6 shows the Inversion-Modelled Resistivity along the same section. The higher chargeability zones coincide with a broad zone of high resistivity.

Figure 5 Cahill and Racecourse Anomalies: North-South Section 341450E IP Chargeability

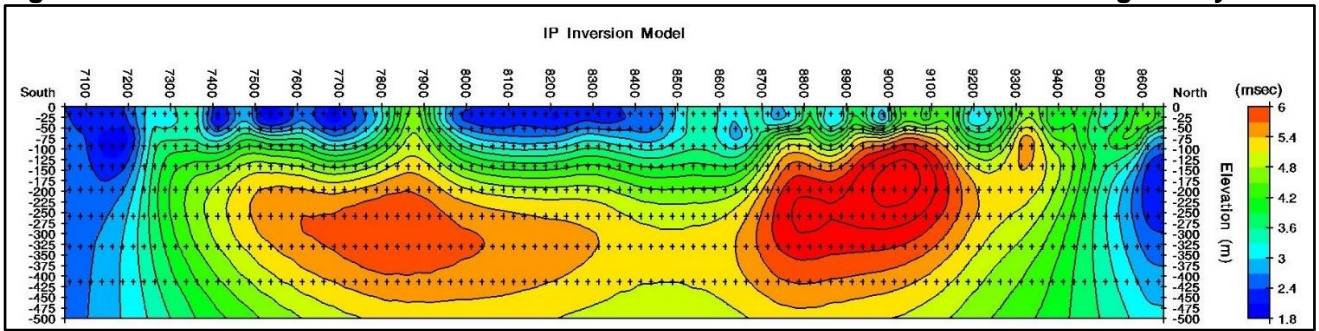


Figure 6 Cahill and Racecourse Anomalies: North-South Section 341450E Resistivity

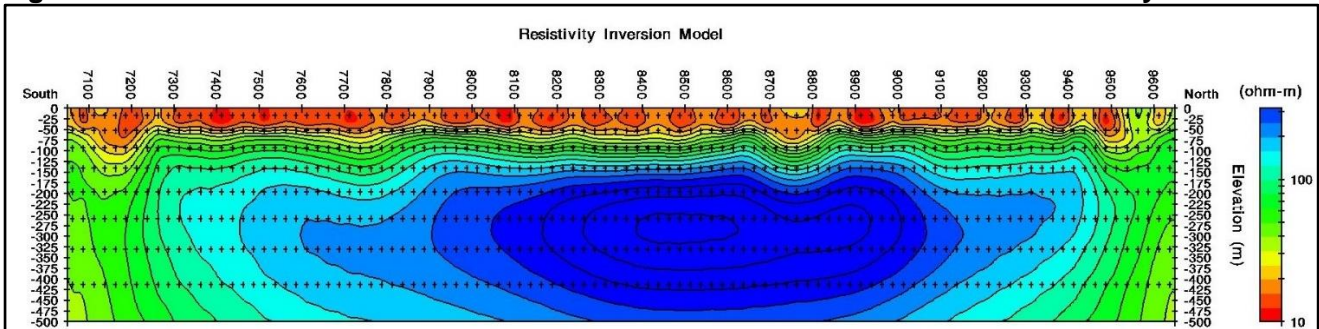


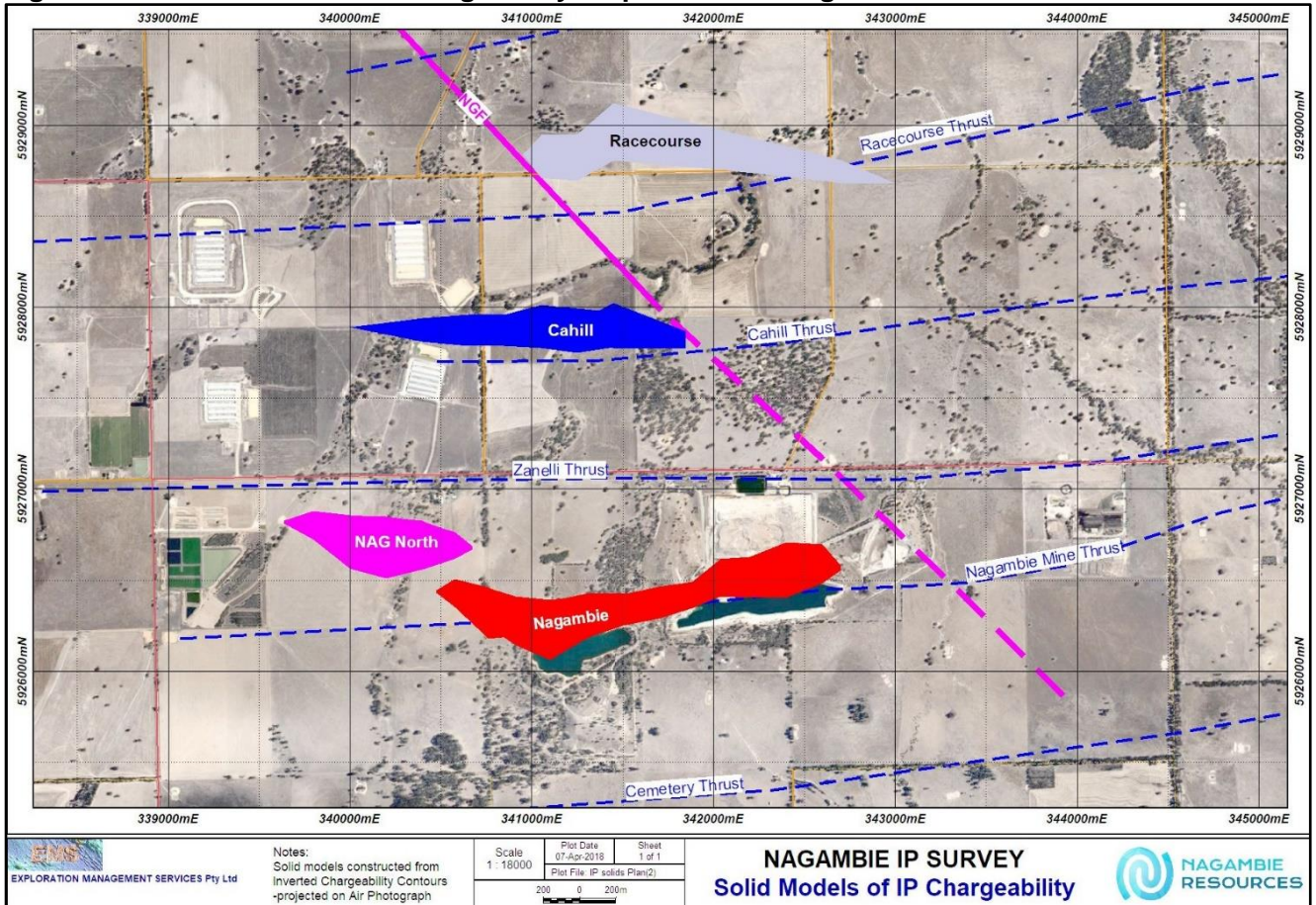
Photo 1 Setting Up the Diamond Drilling Rig for Hole NAD001



Overview of both the Nagambie Mine and Racecourse IP Surveys

Figure 7 shows the solid outlines of the four main zones of anomalous IP chargeability, identified by both the Racecourse and the Nagambie Mine surveys.

Figure 7 Solid Models of IP Chargeability Sulphide-Gold Targets



The Nagambie, Cahill and Racecourse sulphide targets show a strong association with magnetic-interpreted thrusts and the intersecting Nagambie Gravity Fault (NGF), interpreted to be a significant deep crustal fault, one of 10 indicated by gravity data for the Waranga Province.

The cluster of IP sulphide-gold targets could extend further north of the Racecourse anomaly along the gravity-indicated, north-west-striking Nagambie Crustal Fault.

The Zanelli Thrust may not be associated with host rocks favourable to gold deposition (e.g. shales, low iron content). The Nagambie North sulphide target may be associated with an as-yet unidentified thrust.

Regional Implications

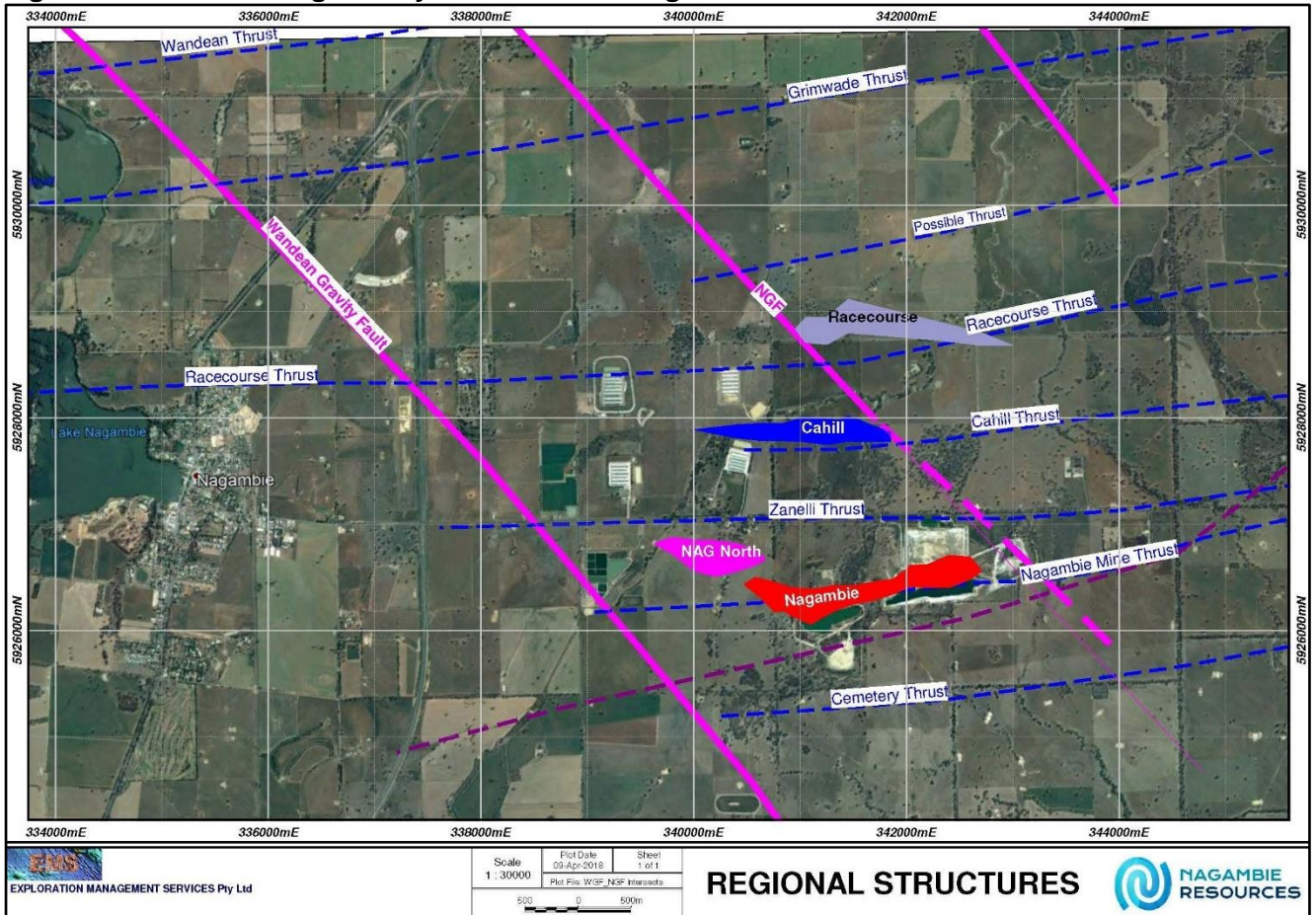
Nagambie Resources has developed an advanced model of gold deposition in the Waranga Province of the Melbourne Zone based on hot gold-rich sulphidic fluids rising from the basement crust under pressure up deep crustal faults interpreted from gravity data. Where these deep crustal faults intersect the shallower thrusts (faults) interpreted from magnetic data, the fluids travel under pressure along the shallower structures to iron-rich sites favourable to the deposition of gold with arsenopyrite.

The Nagambie Mine, Cahill and Racecourse IP anomalies lie close to the intersection of the gravity-interpreted north-west-striking Nagambie Crustal Fault and a set of east-west-striking thrusts, supporting the Company’s regional gold deposition model.

Similarly, the Wandean Prospect (identified by drilling in 2013/2014) is at the intersection of the Wandean Thrust (identified in outcrop on Kirwans Bridge Road) and another identified north-west-striking gravity-

interpreted crustal fault, the Wandean Gravity Fault (refer Figure 8).

Figure 8 Plan showing Gravity-Indicated and Magnetic-Indicated Structures



Hence, intersections of deep gravity-interpreted structures with surface magnetic-interpreted structures are the Company’s principal regional exploration focus. Both the Nagambie Mine and Racecourse IP Surveys have shown that modern ground IP can be used to survey all the relevant intersections and locate all sulphide-gold targets within 400m of the surface.

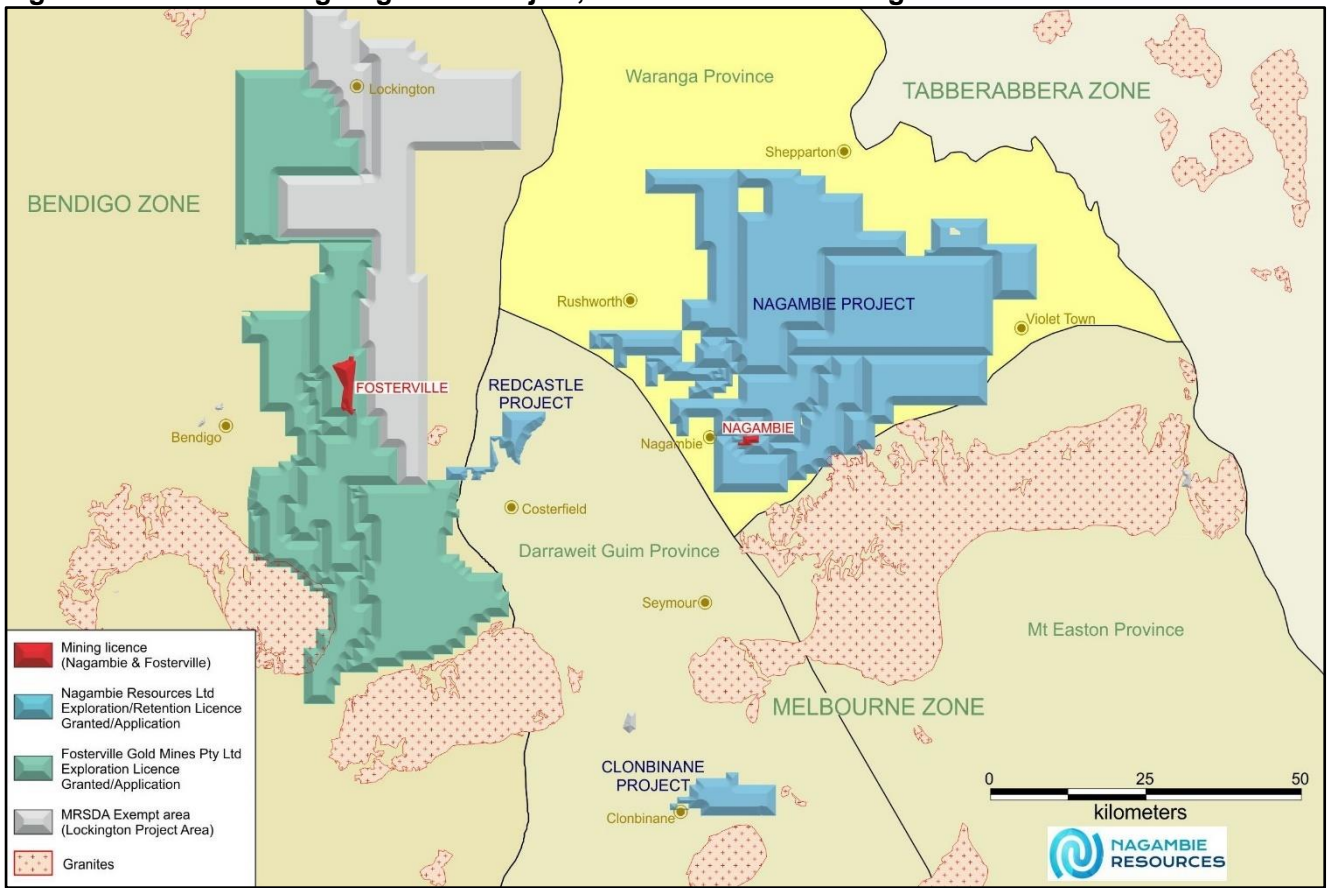
Nagambie Resources’ exploration licences (ELs and ELAs with priority) in the Waranga Province cover over 2,000 sq km (refer Figure 9) and encompass all the 10 significant north-west-striking, gravity-indicated, deep crustal faults identified to date. The number of east-west-striking surface thrusts (faults) in the Waranga Province could be many multiples of 10, given that 5 occur (maybe 6 allowing for Nagambie North) over the total distance of only 4 km north to south tested by the Nagambie Mine and Racecourse IP Surveys. The number of intersections or potential “crust-to-surface plumbing systems” in the Company’s tenements could therefore be a very significant number.

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 Waranga Province, both as tenements were dropped by other explorers and as field reconnaissance identified additional east-west structures in the region.

Nagambie, Fosterville and Lockington all Geologically Similar

Fosterville is 20 km east of Bendigo, 45 km south of Lockington and 60 km west of Nagambie (refer Figure 9). The Nagambie Mine, the Fosterville Mine and the Lockington Deposit are all antimony-arsenic-associated, 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). Importantly, the Fosterville Mine has demonstrated conclusively that gold grades over mineable widths in silicified sediments can be many times higher than typical gold grades in quartz veins.

Figure 9 Plan showing Nagambie Project, Fosterville and Lockington Tenements



Gold Tenement Changes

Nagambie Resources group tenements as at 31 March 2018 are shown in Appendix 1 (plan and table). EL6606 (Gowangardie) of 120.0 sq km was granted during the quarter. EL6719 (Euroa) of 204.0 sq km, EL6720 (Tatura) of 214.0 sq km and EL6731 (Arcadia) of 493.0 sq km were applied for during the quarter.

PASS PROJECT

PASS stands for Potential Acid Sulphate Soil (or silt or rock).

Renewal of EMP for PASS Management at the Nagambie Mine

Nagambie Resources has been working with EPA Victoria to extend the Company’s current Environmental Management Plan (EMP) for PASS Management at the Nagambie Mine, utilising underwater storage, beyond 30 June 2018.

As part of that process, Nagambie Resources held Community Information Drop-In Sessions on two successive nights during the quarter at a Community Hall in Nagambie. The Company had run notices in the local Nagambie paper, advising the details for the two nights. The information drop-in sessions were held to allow the community to be informed of the proposed project to rehabilitate the West Pit at the Nagambie Mine utilising PASS from the major infrastructure construction works in Melbourne. It also gave the community an opportunity to provide Nagambie Resources with feedback on the rehabilitation project.

The information boards prepared by the Company for the drop-in sessions are attached at the end of this quarterly report.

Officers from EPA Victoria attended both nights (three on the first night and four additional officers on the second night), while a number of Councillors from Strathbogrie Shire attended on the second night. The Company’s hydrogeological (groundwater) consultant attended both sessions and assisted Nagambie

Resources' CEO to explain the technical aspects of the project and to answer questions from community members. Other than two landholders to the south of the Nagambie Mine, no community member expressed concerns about the rehabilitation project. The concerns raised by the two landholders were addressed in writing following the sessions by the Company's CEO and copies of those letters were provided to EPA Victoria and the Strathbogie Shire.

QUARRYING

Nagambie Resources won various bids for road gravel, rock fill and beaching rock during the quarter. The quarry team was kept busy scalping and screening overburden (using a hired scalper and the new Astec dry screen) to fulfil those orders. Sales receipts for the quarter were \$65,000 plus invoices issued during the quarter for the sale of quarry products but yet to be paid at the end of the quarter totalled an additional \$299,000.

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

It had been planned to purchase a second Astec MFS dry screening unit to operate in series with the first unit to screen the mine tailings which total over 5 million tonnes.

Commissioning of the Astec high-frequency dry screening unit on the mine tailings during the quarter showed that it could remove the great majority of the fines from the various aggregate sizes (ranging between 4mm and 20mm) but that it will be more efficient, both in terms of final product quality and cost, to have the initial Astec unit feeding its product into a clean water rinsing arrangement ahead of a conventional multi-deck final screen. Designing and pricing of this arrangement instead of a second Astec unit is underway.

CORPORATE

Cash

At 31 March 2018, total cash held by the group was \$1,260,000 plus \$1,000,000 remains undrawn under the two-year Unsecured Loan Facility. Additionally, invoices issued during the quarter for the sale of quarry products, but yet to be paid at the end of the quarter, totalled an additional \$299,000.

Unlisted Options Issued to Directors, Consultants and Employees

The various expiry dates and the exercise funds that could be paid to Nagambie Resources are as follows.

The 9.5 million options that expire on 3 December 2018 with an exercise price of \$0.10 each are likely, at this stage, to all be exercised, which would raise \$950,000 for the Company.

The directors will consider exercising their options ahead of the various expiry dates if it assists the Company in a material way.

Expiry Date	Number	Exercise Price	Exercise Funds
3 December 2018	9,500,000	\$0.10	\$950,000
28 November 2019	10,500,000	\$0.10	\$1,050,000
16 November 2020	3,500,000	\$0.10	\$350,000
16 November 2020	8,000,000	\$0.10	\$800,000
4 July 2021	2,000,000	\$0.255	\$510,000
30 November 2021	12,500,000	\$0.25	\$3,125,000
24 November 2022	13,750,000	\$0.10	\$1,375,000
20 December 2022	1,000,000	\$0.141	\$141,000
Total	60,750,000		\$8,301,000



James Earle
Chief Executive Officer

STATEMENT AS TO COMPETENCY

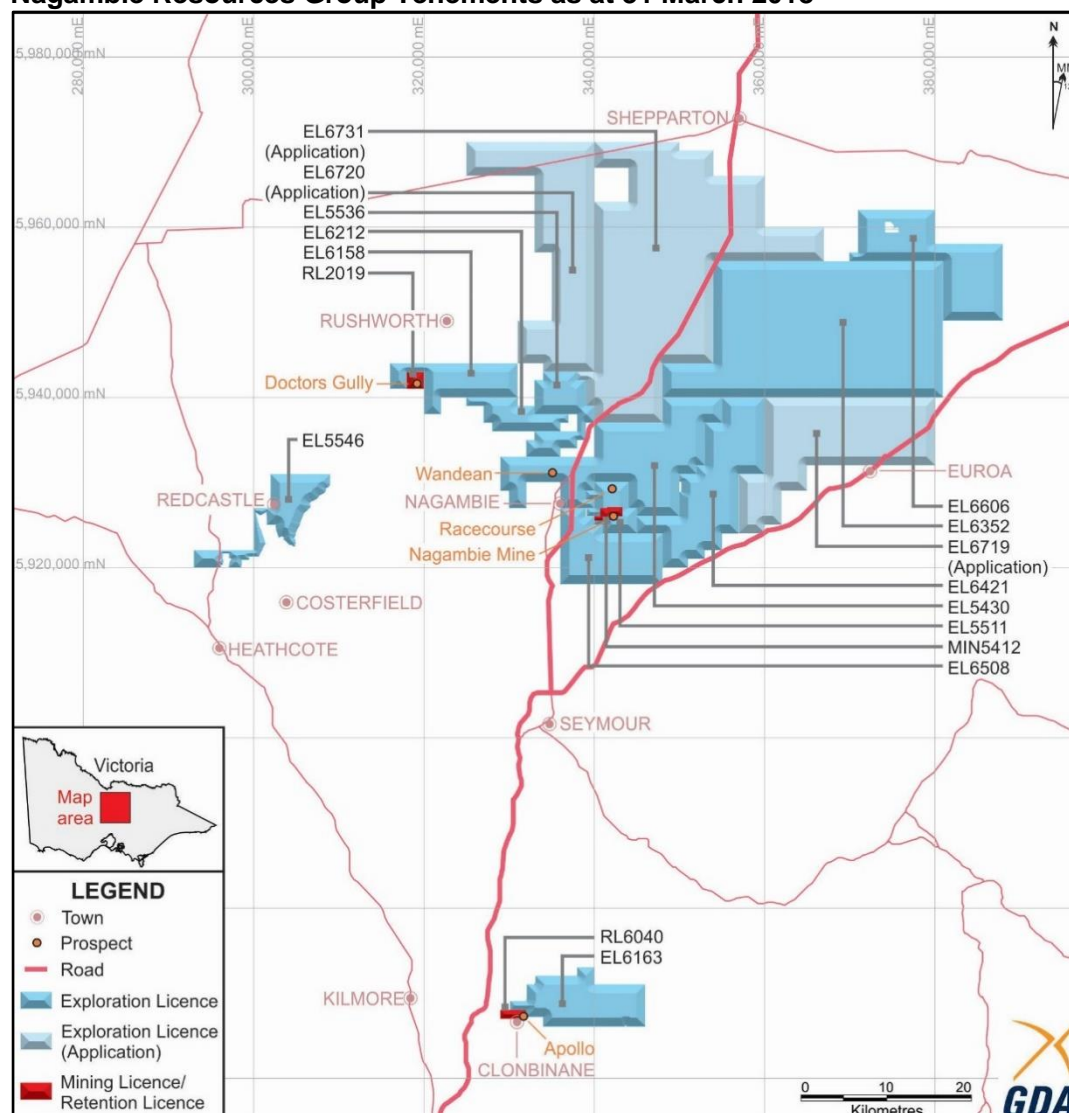
The Exploration Results in this report have been compiled by Dr Rod Boucher, who has a PhD in Geology, is a Member and RPGeo of the Australian Institute of Geoscientists, is a Member of the Australian Institute of Mining and Metallurgy, has more than ten years in the estimation, assessment, and evaluation 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 March 2018



Nagambie Resources Group Tenements as at 31 March 2018

Tenement Number	Tenement Name	sq km
MIN 5412	Nagambie Mining Licence	3.6
EL 5430	Bunganail Exploration Licence	181.0
EL 5511	Nagambie Exploration Licence	27.0
EL 5536	Wandean North Exploration Licence	48.0
EL 6212	Reedy Lake North Exploration Licence	30.0
EL 6158	Rushworth Exploration Licence	56.0
RL 2019	Doctors Gully Retention Licence	4.0
EL 6352	Miepoll Exploration Licence	455.0
EL 6421	Pranjip Exploration Licence	139.0
EL 6508	Tabilk Exploration Licence	84.0
EL 6606	Gowangardie Exploration Licence	120.0
ELA 6719	Euroa Exploration Licence Application	204.0
ELA 6720	Tatura Exploration Licence Application	214.0
ELA 6731	Arcadia Exploration Licence Application	493.0
Subtotal Waranga Province		2,058.6
EL 6163	Clonbinane South Exploration Licence	79.0
RL 6040	Clonbinane Retention Licence	3.0
EL 5546	Redcastle Exploration Licence	69.0
Total		2,209.6

THE PROPOSAL & COMMUNITY CONSULTATION

THE PROPOSAL: TO BACKFILL THE WEST PIT AND RESTORE THE AREA FOR FARMING USE



THE WEST PIT

Nagambie Resources Limited (NRL) is proposing to backfill an open pit and rehabilitate the area so it is suitable for farming use. It is proposed to backfill the pit with **Potential Acid Sulfate Soil and Rock (PASS)** and cover the PASS with a 3m thick clay cap. The cap would then be revegetated.

COMMUNITY CONSULTATION

Nagambie Resources Limited (NRL) is seeking to consult with the community about the proposal. The purpose of this consultation is to inform the community of the proposal's technical aspects, potential impacts and benefits, whilst also providing an opportunity for the community to provide NRL with feedback. NRL will consider all constructive feedback and will endeavour to plan and conduct operations accordingly.

NRL is required to consult with the community as a condition of the EPA Victoria approved Environmental Management Plan for the rehabilitation of the West Pit.

ABOUT NAGAMBIE RESOURCES LIMITED:

Nagambie Resources Limited (NRL) is an ASX listed company operating in the gold exploration and extractive materials industries. Headquartered at the Nagambie Mine, NRL currently undertakes gold exploration activities in the region and produces quarry materials at the mine site in Zanelli Road, as part of the site's rehabilitation.

The company is owned by public shareholders.

WE WELCOME YOUR FEEDBACK

Please contact us via:

EMAIL: info@nagambieresources.com.au

POST: PO Box 339 Nagambie VIC 3608

You are also welcome to send your comments to EPA Victoria via contact@epa.vic.gov.au



FILLING THE PIT

FILLING THE WEST PIT

PASS WOULD BE EXCAVATED FROM 25m BELOW MELBOURNE AND TRUCKED TO THE NAGAMBIE MINE.

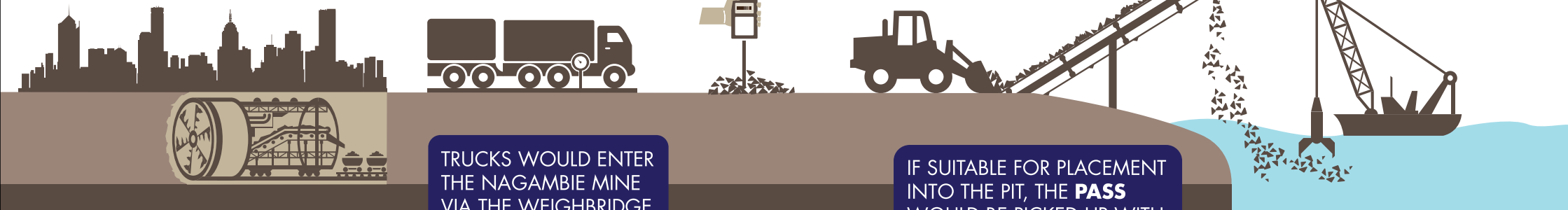
EACH **PASS** LOAD WOULD BE TIPPED ONTO THE GROUND WHERE IT WOULD BE INSPECTED AND THE pH OF THE ROCK WOULD BE TESTED

DURATION OF FILLING 
LIKELY TO BE MORE THAN 5 YEARS

PASS IS MOVED UNDER WATER VIA DREDGE

TRUCKS WOULD ENTER THE NAGAMBIE MINE VIA THE WEIGHBRIDGE

IF SUITABLE FOR PLACEMENT INTO THE PIT, THE **PASS** WOULD BE PICKED UP WITH A LOADER AND SAFELY CONVEYED INTO THE PIT



CAPPING THE PIT

CAPPING THE PIT

HEIGHT OF FILLING BELOW WATER LEVEL

The pit will be filled to a minimum level 1.0 metre below the water level in the pit.

This will ensure the PASS is always submerged until the cap is constructed.

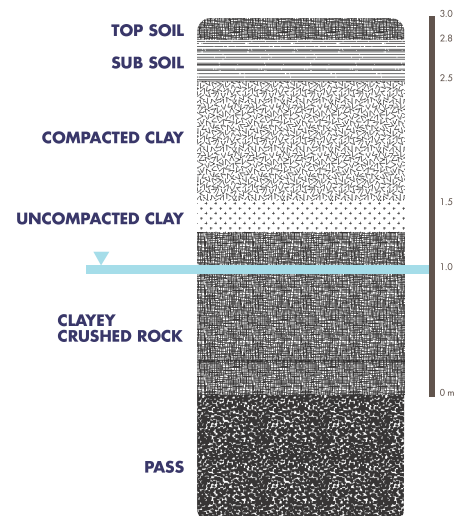
CAP CONSTRUCTION

A three-metre thick cap would be constructed over the submerged PASS material to ensure it remains in an anaerobic (oxygen-free) state. The cap would predominantly be comprised of compacted clay and would be similar to the capping layer systems used to rehabilitate landfills and manage mine tailings.

Capping materials would mostly sourced from on-site materials including gravel screening and overburden dump materials.

The cap would be designed by external engineering consultants and would be constructed under third-party quality control supervision.

INDICATIVE CAP DESIGN

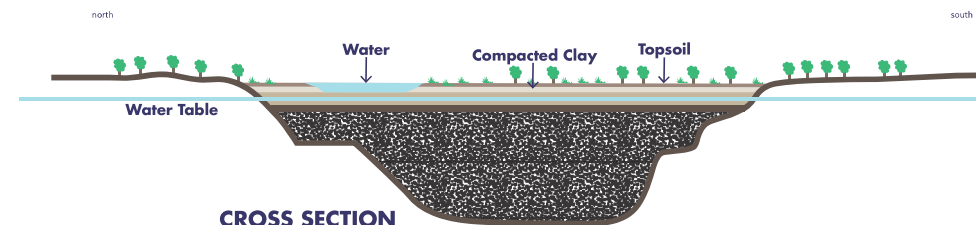


CONCEPTUAL FINAL LANDFORM

PLAN VIEW



CROSS SECTION



POLICIES & APPROVALS

THE PROPOSAL IS IN ACCORDANCE WITH GOVERNMENT POLICY

The Proposal aligns with the following government policies and industry sustainability standards:

- Victoria's Value Creation and Capture Framework - Maximising social, economic and environmental value from infrastructure investment;
- Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soils (Department of Sustainability and Environment, 2010);
- EPA Publication 655.1 – Acid Sulfate Soil and Rock;
- Statewide Waste and Resource Recovery Infrastructure Plan Victoria 2017-2046
- Infrastructure Sustainability Council of Australia's IS Rating Scheme



EPA VICTORIA

In accordance with the Industrial Waste Management Policy (Waste Acid Sulfate Soils) a person must not cause or permit the disposal or reuse of waste acid sulfate soils at any premises, except where the occupier of the premises has an environment management plan prepared in accordance with the Policy and approved by the EPA.

NRL has developed an environment management plan for reusing PASS for filling the pit at the Nagambie Mine. This EMP meets all the requirements of the Policy and has been approved by EPA Victoria.

EARTH RESOURCES REGULATION (DEDJTR)

NRL holds mining license MIN5412 which allows mining and rehabilitation works to be undertaken within the licensed area until 2031 in accordance with an approved Work Plan.

Currently NRL is preparing a Work Plan Variation in accordance with the *Mineral Resources (Sustainable Development) Act 1990* to include the Proposal as part of the approved works that can be carried out on land under the mining licence.

STRATHBOGIE SHIRE COUNCIL

Under clause 63.11 of the Strathbogrie Planning Scheme, NRL has existing use rights to rehabilitate the Nagambie Mine including the backfilling of the West Pit.

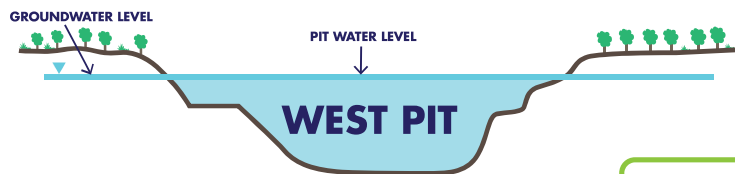


GROUNDWATER

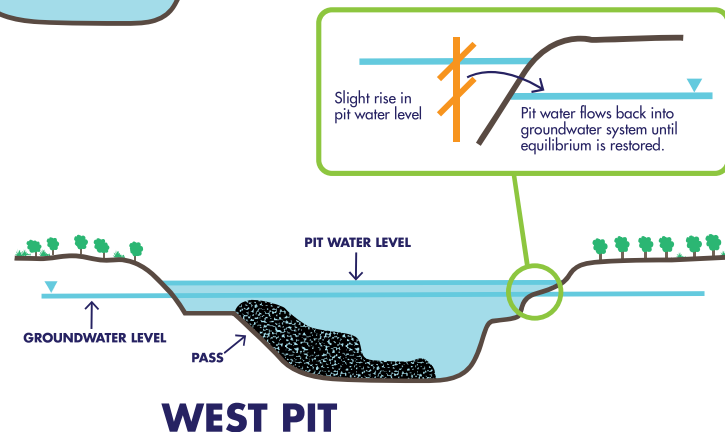
GROUNDWATER LEVEL

When the large open pits were mined, dewatering pumps were needed to keep the local groundwater out of the pits. When mining ceased in the 1990's, the dewatering pumps were turned off and groundwater was allowed to flow back into the pits. The groundwater flowed until a local equilibrium was reached between the pit water level and the groundwater level in the surrounding area. That is:

PIT WATER LEVEL = GROUNDWATER LEVEL IN THE SURROUNDING AREA



As the PASS is put underwater, it will displace the pit water and there will be a small and temporary rise in the pit water level. The displaced water in the pit will be slightly higher than the groundwater level and will therefore flow back through the walls of the pit. Since the volume of water flowing back into the groundwater system is only a fraction of the volume of groundwater already in the system, there will be negligible change to the groundwater level. That is, the water level in the pit will quickly return to the groundwater level in the surrounding area.



GROUNDWATER QUALITY

NRL has engaged Hydrus Consulting to conduct a hydrogeological investigation of the groundwater. New and existing boreholes have been used to sample and monitor the quality of the groundwater.

The findings of the assessment to date are:

- The direction of regional groundwater flow is from south to north.
- The groundwater is highly saline. It is **not potable** and **not suitable for crop irrigation**. It is unlikely to be suitable for livestock watering unless it is diluted with fresh water;
- The groundwater in the pit is alkaline (pH ≈ 8.5), providing a natural buffering capacity for the addition of PASS
- The groundwater quality (including chemical composition) is currently being recorded to allow comparisons to be made with the quality once the backfilling with PASS commences.

Salinity level ≈ 11,000 $\mu\text{s} / \text{cm}$
pH ≈ 8.5

- PASS material becomes a problem if it oxidises (i.e. if it is exposed to air and moisture). The oxidation process generates an acidic liquid discharge which can be harmful to the environment. If the acid is strong enough (i.e. pH < 5.5), it can also mobilise the naturally occurring trace elements in the PASS and/or the surrounding soil or rock (such as lead, iron, cadmium, zinc, arsenic etc) into the groundwater. In sufficient concentration, these trace elements can also harm the environment.
- Placing PASS beneath the water will prevent it oxidising. Therefore acid will not be generated and the pH of the pit water is not likely to fall below 5.5 pH units. As such the proposal poses minimal risks to the groundwater quality.
- Groundwater quality will be reported to the EPA annually. NRL will also publish recorded groundwater quality regularly in the local printed press.

THE PROPOSAL POSES MINIMAL RISK TO GROUNDWATER QUALITY AND AVAILABILITY (GROUNDWATER LEVEL).

GROUNDWATER RISK MANAGEMENT

PREVENTING CONTAMINATED SOIL BEING PLACED IN THE PIT

- All loads of PASS would be visually inspected for contamination, prior to being placed into the Pit. Any contaminated loads or loads suspected of being contaminated, would be rejected and reloaded onto the delivery truck for appropriate offsite disposal;
- Loads of PASS would be randomly sampled at a frequency of at least one load in twenty, and analysed in an external laboratory for contaminants.
- If contaminants are detected in the PASS, water from the pit would be sampled within a week for those contaminants. Administrative procedures would be enforced to prevent any more contaminated soil from being received at the Nagambie Mine from the offending site.

PREVENTING ACTUAL ACID SULFATE SOIL (AASS) BEING PLACED IN THE PIT

- Under the EPA approved Environmental Management Plan, no ASS material is to be accepted at the Nagambie Mine;
- The water in the Pit is significantly alkaline which provides a natural buffer in the unlikely event ASS material is placed in the Pit.
- Every load of PASS will be pH tested in the field prior to placement into the West Pit. If the pH is below 5.5 then the PASS will be treated with lime until the pH is 6.5 to 7.
- Every week, the pH of the pit water will be measured using a portable analyser.
- Every three months the pH levels of the pit water will be measured in an external laboratory
- In the unlikely event that the pH of the West Pit water ever falls below 6.0, agricultural lime, from a stockpile held for the purpose, will be added to the water to provide the additional buffering required.

PREVENT THE WATER LEVEL IN THE PIT FALLING BELOW THE TOP OF THE PASS MATERIAL DURING BACKFILLING

- During backfilling, natural groundwater levels will fluctuate.
- Backfilling of the Pit would cease when the PASS material is not less than 1.0 m beneath the surface of the water.
- If for any unforeseen circumstance the groundwater level drops rapidly during backfilling and there is a risk that PASS would become exposed to air, water from the East Pit would be pumped into the West Pit to maintain the minimum 1.0 m depth of water over the PASS.

FACT

DURING THE 13 YEAR MILLENNIUM DROUGHT (2000 to 2013), the recorded groundwater level near Nagambie fell by an average of less than 0.2m per year. Therefore, with a minimum depth of 1.0m of water above the top of the PASS material, there is conservatively a period of 5 years to construct the cap until the water level falls below the top of the PASS

WHAT IF GROUNDWATER LEVELS DROP BELOW THE PASS AFTER THE CAP HAS BEEN CONSTRUCTED?

- The thickness of the cap would prevent capped PASS being exposed to oxygen if the groundwater level dropped in the future. The clay cap would be at least 3m thick, which significantly exceeds the recommended cap thickness of 0.2m - 0.5m as provided in the Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines (Dear et al, p79). Due to the thickness of the cap, its integrity is unlikely to be breached even if consolidation of the PASS material occurs over time.
- The clay cap would be constructed in layers and compacted in a similar manner to the construction of a clay cap to control gas emissions from landfills. The clay cap will be impermeable and thus would also have an extremely low coefficient of oxygen diffusion.
- Following capping, on-going groundwater monitoring would be undertaken. In the highly unlikely event that a decrease in the pH of the pit water occurs, there are proven groundwater treatment options that can be implemented to restore the pH level before groundwater migrates off-site.



IMPACTS & BENEFITS

NOISE AND VISUAL IMPACT

Noise from operations at the West Pit are not expected to be significant as operations are over 1 km from Zanelli Road and the nearest residential dwelling.

Residents on Zanelli Road and the truck routes to the Goulburn Valley Highway would be consulted before night time operations commence.

NATIVE VEGETATION

The proposal will not require the removal of native vegetation. However, vehicle movements will likely occur within the drip line of approximately four mature gum trees located around the West Pit. NRL is required to off-set these trees in accordance with regulations.

PROPOSAL BENEFITS

The proposal would achieve:

- Direct economic investment and job creation (est. 10+ positions) in Nagambie
- Income which would be used to finance Nagambie's gold exploration activities, potentially resulting in further economic stimulus through underground gold mine development and operation
- A superior environmental outcome as the PASS material would be put to its highest value reuse
- Preservation of diminishing landfill space in Melbourne

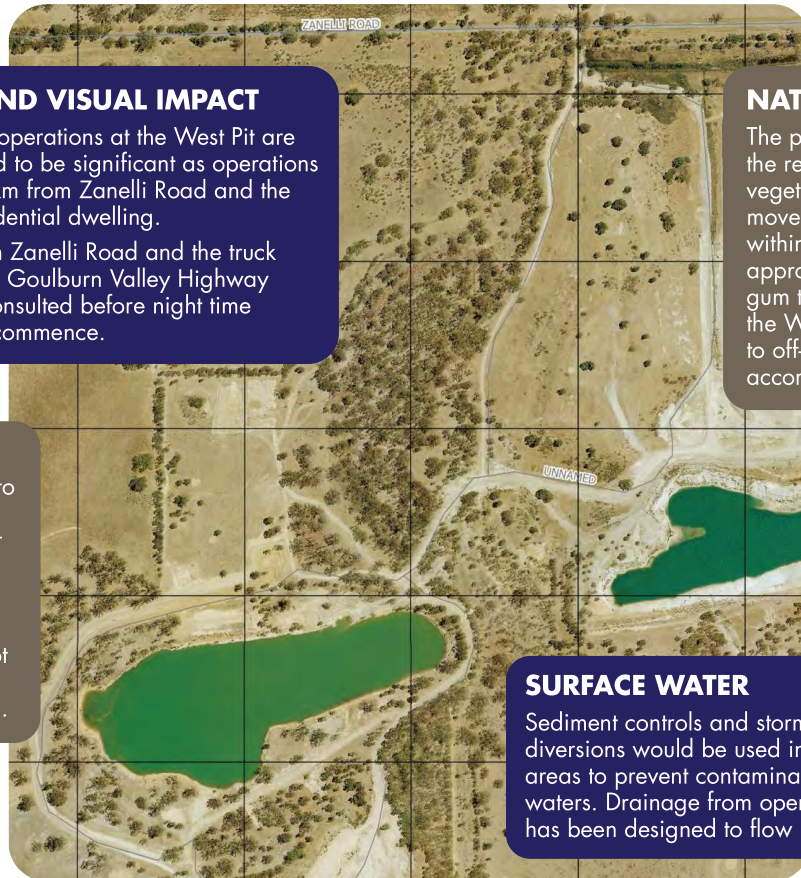
DUST

A water truck will be used to ensure internal roads are kept damp to minimise dust generation. On hot days vehicle speed restrictions will apply.

Unloading the PASS will not generate dust due to the nature of the PASS material.

SURFACE WATER

Sediment controls and stormwater diversions would be used in operating areas to prevent contamination of surface waters. Drainage from operating areas has been designed to flow into the pits.



TRUCKS ON LOCAL ROADS

EXPECTED NUMBER OF TRUCKS PER DAY



The expected truck movements calculated here are 'worst-case' estimates. Actual truck movements will depend principally on whether Nagambie Resources Limited is successful in tendering to receive the PASS material, and in what quantity.

Based on the Environmental Effects Statement for the Melbourne Metro Rail Project, approximately 1.2 million tonnes of PASS material is expected to be generated.



THE EXPECTED TRUCK MOVEMENTS ARE AS FOLLOWS:

Expected amount of PASS generated by the Metro Tunnel Project:
1,000,000 to 1,200,000 tonnes

Expected amount of PASS generated by the Metro Tunnel Project per annum (assuming a 5 to 6-year construction period):
200,000 tonnes

Expected amount of PASS that could be received at the Nagambie Mine per year:
100,000 to 200,00 tonnes

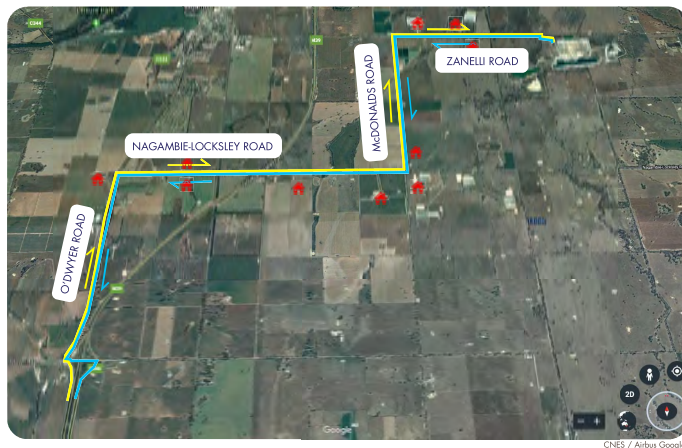
Expected amount of PASS that could be received at the Nagambie Mine per day (based on the tunnel boring machines operating 350 days per year):
286 to 572 tonnes



Expected number of trucks that could be received at the Nagambie Mine per day: **8 to 15 trucks per day** (allowing an average of 38 tonnes per truck)

EXISTING ROAD NETWORK DEVELOPED BY STRATHBOGIE SHIRE COUNCIL

Transport route from Goulburn Valley Highway (Nagambie Bypass) via O'Dwyer Road, Nagambie-Locksley Road, McDonalds Road and Zanelli Road)



Transport route from Goulburn Valley Highway (Nagambie Bypass) via Grimwade Road, McDonalds Road and Zanelli Road)



PROPOSED NEW ON- AND OFF-RAMPS PROPOSED BY NAGAMBIE RESOURCES

