

# **Navarre Minerals Limited**

October 2019



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# Contents

ictoria's Golden Comeback	. 1
ey Points	. 1
wot Analysis	. 2
trategy and Project Overview	. 3
urrent and Upcoming Activities	. 4
eer Group Analysis	. 4
inancial Position	. 5
apital Structure	. 6
unior Mineral Resource Incentive Eligibility	. 6
ictorian Exploration Projects	. 7
Regional Geology	. 7
Mineralisation	. 8
Stawell Corridor Gold Project (Navarre 100%)	. 9
St Arnaud Gold Project (Navarre 100%)	17
Glenlyle Project (Navarre 100%)	19
Tandarra Project (Navarre 49%, Catalyst 51%)	23
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# **Navarre Minerals Limited**

# **Initiation - October 2019**

**Note**: This report is based on information provided by the Company as of October 1, 2019.

Investment Profile	
Share Price October 1, 2019	A\$0.088
12 Month L/H	A\$0.045/ A\$0.11
Issued Capital:	
Ordinary Shares	435.0 m
Unlisted Options	21.8 m
Fully Diluted	456.8 m
Market Capitalisation UD	A\$38.28 m
Cash - June 30, 2019	A\$6.02 m

#### **Board and Management**

Mr Kevin Wilson: Non-Executive Chairman

Mr Geoff McDermott: Managing Director

Mr John Dorward: Non-Executive Director

Mr Colin Naylor: Director and Company Secretary

Mr Shane Mele: Exploration Manager

Mrs Jodi Ford: Assistant Company Secretary and Accountant

Dr Jason Thomas: GM - Strategic Development and Stakeholder Engagement

Major Shareholders	
VBS Exchange (Smorgon Group)	10.29%
Crocodile Gold Australia Pty Ltd	10.03%
1832 Asset Management	5.17%
Board	9.66%
Top 20	49.38%



#### Mark Gordon - Senior Analyst

The investment opinion in this report is current as at the date of publication. Investors and advisers should be aware that over time the circumstances of the issuer and/or product may change which may affect our investment opinion.

# VICTORIA'S GOLDEN COMEBACK

Navarre Minerals Limited ("Navarre" or "the Company") is one of the pioneers of Victoria's gold renaissance having been an early mover to access quality exploration acreage when the competition for prospective ground was less intense. Within its project portfolio, Navarre is generating considerable exploration success, including discoveries at Irvine and more recently at the Langi Logan gold prospects within the broader Stawell Corridor Gold Project ("SCGP") as well as at Tandarra, along the Whitelaw Fault Corridor north of Bendigo. Although early days, these discoveries have returned excellent results and have good potential to be converted into gold deposits with ongoing drilling. In addition, Navarre has identified a pipeline of prospects that, with targeted drilling, have the potential to result in further quality discoveries.

Victorian gold is now in focus on the back of the exceptional performance of Kirkland Lake Gold's (ASX:KLA, TSX:KL), Fosterville Gold Mine ("FGM", 7 Moz gold endowment) which is on track to produce 550,000 – 600,000 ounces of gold in 2019. Recent drilling at Fosterville has defined the Swan Zone, with Reserves of 588 kt at an exceptionally high 61.2 g/t Au for 1,156,000 oz, highlighting the opportunities that still exist in the Victorian goldfields.

Gold mineralisation in Victoria, which has historically produced some 80 Moz, is orogenic in style, similar to that in Western Australia, with Navarre targeting mineralisation similar to that at the Stawell Gold Mine ("SGM", 4 Moz historical production) and Fosterville. These deposits are characterised by relatively continuous gold grades, unlike the highly nuggety Bendigo and Ballarat mineralisation that is commonly associated with Victorian gold deposits.

Gold in Victoria occurs along a number of distinct structural trends that extend under younger cover to the north and south of the exposed gold-bearing basement rocks. Navarre's strategy has been to peg ground under areas of shallow cover along these trends, with most of these areas having had no previous exploration. Tandarra is an example of one of the Company's discoveries made under cover, with this now part of a Joint Venture with Catalyst Minerals ("Catalyst," ASX: CYL, market capitalisation of A\$193 million).

Results of first-pass shallow aircore drilling at the Glenlyle Project ("Glenlyle"), targeting epithermal, VMS and porphyry mineralisation have been positive, intersecting elevated silver and gold within broad alteration envelopes. Glenlyle is situated over an interpreted intrusive centre hosted in the same broad Cambrian magmatic arc that hosts Stavely Minerals (ASX: SVY) Thursday's Gossan porphyry discovery.

Stavely's recent discovery of high grade massive sulphide copper-gold lode style mineralisation at Thursday's Gossan (with an intersection of 32 m @ 5.88% Cu, 1.00 g/t Au and 58 g/t Au) has shed new light on Glenlyle (which will be re-evaluated), with massive sulphides intersected in the drilling that discovered the 150 m wide zone of silver-gold-base metals under shallow cover.

Navarre is set to commence an expansive drilling program in the Stawell Corridor, which is expected to contribute towards Navarre's first Mineral Resource. This will include deeper diamond drilling at the Adventure and Resolution gold discoveries at Irvine and expansion aircore drilling at the more recently discovery Langi Logan prospect.

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# **KEY POINTS**

**Highly prospective holdings:** The Company's projects are located over areas with a long history of gold production, and along strike or adjacent to historic and/or currently producing minors.

**Exploration success:** Work to date has confirmed the prospectivity, with a several new discoveries being made; there still remain a number of prospects that need to be tested, and thus there is the chance for further discoveries.

Well served by infrastructure: All projects are in areas that are well served by infrastructure, and with ready access to skilled personnel.

**Experienced personnel:** Company personnel have extensive and successful experience in the resources industry, including in operational, technical and commercial roles; this includes experience operating the 4 Moz Stawell Gold Mine in western Victoria. The Board, which is comprises all the founding directors of the Company, has a major aggregate shareholding in Navarre of approximately 10%, thus aligning their interests with those of other shareholders.

**Strong and supportive register:** The two top key shareholders, Crocodile Gold (an Australian subsidiary of Kirkland Lake Gold, the operator of the FGM) and VBS Exchange (part of The Victor Smorgon Group) have been supportive and have taken part in recent placements.

Steady news flow: Upcoming work, including drilling, will result in a steady news flow.

**Leveraged to exploration success:** With a market capitalisation of ~A\$38 million, Navarre is well leveraged to further exploration success and proximity to other discoveries; recent Victorian examples have been Catalyst with their Four Eagles discovery near Tandarra, and Stavely's recent discovery - these have resulted in current share prices of multiples of those pre-discovery, with Catalyst trading at a market capitalisation of A\$193 million and Stavely at A\$158 million - Navarre has exposure to both the geological terranes that host these.

### **SWOT ANALYSIS**

# **Strengths**

- **Location:** the flagship Stawell Corridor projects are in a mining town, and hold considerable strategic value given their proximity to the nearby operating Stawell process plant.
- **Project portfolio:** The discoveries made to date highlight the quality and depth of the Company's portfolio of projects, with the potential for further discoveries.
- Exposure to the gold belts and Stavely Arc: Navarre is the only listed company operating in Victoria with exposure to both the prolific gold belts and the Stavely Arc, which, in view of recent discoveries, are exploration "hot-spots".
- ♦ **Prolific gold producing region:** A total 5 million ounces of gold has been produced to date from the Stawell Goldfield and 1 million ounces from the adjoining Ararat Goldfield.
- Experienced board and management with skin in the game: Personnel with the relevant experience is vital to the success of any project; Navarre has this, with personnel being involved in all stages of resource projects, including bringing new projects into production.
- Dedicated stakeholder engagement executive: This is key in rural areas such as in the parts of Victoria where Navarre is operating, where maintaining solid and mutually beneficial relationships are important.
- ♦ Strong and supportive partners, solid register: Having solid cornerstone investors who will take up in further raisings is a vote of confidence in the Company; one of the cornerstones is Kirkland Lake Gold (through Crocodile Gold), owner of the Fosterville Gold Mine.

#### Weaknesses

- ♦ Low market capitalisation: This is both a weakness and opportunity; on the weakness side it can make it difficult for larger institutional investors to buy shares in the company if it does not meet their minimum market capitalisation criteria, but clearly this is also the opportunity for investors today to acquire a position whilst the stock seems somewhat undervalued relative to its peers.
- Complexity of mineralisation: Mineralisation geometry can be complex with a number of controls leading to shoot development. This can make interpretations difficult, and results in the requirement for relatively close spaced drilling for robust interpretations and Resource estimations.

# **Opportunities**

- ♦ **Cover:** The opportunity arises in the discovery of mineralisation under areas of cover that have not been explored before.
- Drilling success: This applies both to further drilling on the known mineralisation and new targets, and is the main opportunity for junior exploration companies.

#### Threats/Risks

- ♦ Lack of exploration success: This follows on from the above, and should it lead to a significant fall in share price will make future fundraising difficult, and lead to significant dilution of existing shareholders.
- ▶ Equity and metals markets: Although the junior resource and gold sectors are relatively strong at the moment, they can turn very quickly due to changes in market sentiment or movements in metals prices, impacting the ability of companies to raise equity. Mitigating this in the case of Navarre is the current very strong Australian denominated gold price of over \$2,200/oz, the resurgence of interest in Victoria, as well as the Company having ~A\$6 million in cash, sufficient, in our view, to fund 12 18 months of activities.
- Permitting: In the longer term, if there is the potential for an operation, there may be delays given the location of most projects over agricultural land, however we understand Navarre has broad support from its local community and land owners who wish to see Navarre success with their plans to become a gold miner

#### STRATEGY AND PROJECT OVERVIEW

- Navarre is exploring for, and discovering gold mineralisation in western Victoria, chasing under-explored areas of the major recognised gold trends, including where they extend under shallow basin and basalt cover (Figure 1).
- Victoria has historically been a major gold producer, producing some 80 Moz since the gold rushes of the 1850s; this production has only been surpassed by Western Australia in relatively recent times key Victorian gold producers shown on Figure 1.
- The Company's key projects, all of which have returned strong drilling results, include:
  - The SCGP (Navarre 100%, Figures 4 to 14), situated in the Stawell Zone of the Lachlan Orogen and which includes Irvine and Langi Logan, along strike to the south of the 4 Moz Magdala (Stawell) Gold Mine; this also covers the historic Ararat Goldfield that produced some 1 Moz,
  - The Tandarra Gold Project JV (Catalyst 51% and Manager, Navarre 49%, Figures 21 to 23), situated 60 km to the NNW of Kirkland Lake's Fosterville Gold Mine, targeting Fosterville style gold mineralisation,
  - St Arnaud Gold Project (Navarre 100%, Figures 15 and 16), located immediately to the north of the historic St Arnaud Goldfield, which produced 400,000 oz of gold from alluvials and high grade reefs; and,
  - Glenlyle (Navarre 100%, Figures 17 to 20), located in the Stavely-Grampians Belt, part of the Cambrian Delamerian Orogen, and targeting epithermal precious metal and porphyry copper mineralisation a re-evaluation of Glenlyle will be undertaken given Stavely's discovery of high grade lode-style mineralisation at Thursday's Gossan this mineralisation is possibly akin to high grade lodes associated with porphyry copper systems at Butte, Montana and San Miguel (Magma), Arizona.
- Stavely is earning up to 80% of EL5425 (the Stavely Project), which surrounds Stavely's eponymous Stavely Copper Project given recent developments these tenements are now considered potentially prospective for high grade lode-style copper-gold mineralisation.

NAVARRE MINERALS **MURRAY BASIN** WESTERN VICTORIA COPPER PROJECT (Stavely Arc) EL 4897 Tandarra STAWELL GOLD CORRIDOR Bendigo Horsham Fosterville 5 Moz Au Black Range EL 5476 EL 5480 Tatyoon **Hamilton** Melbourne Geelong Portland BASALT PLAINS 60km Major Deposit LOCALITY MAP Navarre tenement MGA Zone 54 (GDA94) Prospect **NAVARRE MINERALS LIMITED** Basement rocks VICTORIA Cover rocks VICTORIAN TENEMENT Base metal corridor HOLDINGS Gold corrido Major road/highway April 2018

Figure 1: Navarre project location map

The gold mineralisation styles targeted are like those at the Stawell Gold Mine (SGM) and Fosterville Gold Mine (FGM), with a number of the company's key projects having the potential to host significant gold Resources

# **CURRENT AND UPCOMING ACTIVITIES**

- Navarre has an active work programme planned for the rest of 2019 and into 2020, with this including significant drilling from October, with the drilling programmes currently being planned.
- Key activities will include:
  - Deeper diamond drilling at the Adventure and Resolution lodes,
  - Aircore drilling at Langi Logan,
  - Initial Resource estimate in respect of the Stawell Corridor Project,
  - Drill Tandarra through the JV,
  - Further exploration and drilling on other prospects as necessary, with this including an EM survey at Glenlyle and a re-evaluation of targeting criteria.

### PEER GROUP ANALYSIS

- ♦ Table 1 presents a list of ASX-listed junior explorers largely operating in the Lachlan Orogen in Victoria, else in the western Stavely Arc of the Delamerian Orogen of Victoria (Stavely Minerals).
- All companies are exploring for gold and/or base metals, with the key styles of mineralisation including orogenic gold and porphyry-related copper-gold.
- What is noticeable is the relative market capitalisation of Catalyst Metals which is partly by virtue of the Four Eagles discovery, located along the Whitelaw Fault Corridor 10 km to the north of Tandarra.
- This discovery has resulted in some spectacular intersections, and highlights the upside with discoveries; ongoing strong results over the past two years has steadily moved CYL's stock price from A\$0.50/share to A\$2.70/share.
- ♦ The other major mover is Stavely, which increased by 500% on the recent discovery of the high grade lode-style mineralisation at Thursday's Gossan this took the price from A\$0.24/ share to an intraday high of A\$1.25/share.
- Navarre is the only one of the peers with exposure to both the prolific gold belts and the Stavely Arc which have, on the basis of discoveries in their respective areas, provided significant share price increases to Catalyst and Stavely.
- ♦ These examples highlight the upside potential leverage to drilling success, and the opportunity for Navarre, with discoveries and positive results from a number of projects, and a number of highly prospective targets that remain to be tested.

Table 1: Junior explorers' comparison

Junior explorers comparison							
Company	Last Price	MC	Precious Metals	Base Metals	Jurisdictions	Projects	
Catalyst Metals	\$2.470	A \$194.9 m	Υ		VIC	Four Eagles, Tandarra - Whitelaw Corridor	
Stavely Minerals Ltd	\$0.935	A \$159.5 m	Υ	Υ	VIC, QLD	Stavely Porphyry Exploration	
Emmerson Resources	\$0.120	A \$51.0 m	Υ	Υ	NSW, NT	Various Macquarie Arc Exploration Areas	
Navarre Minerals Ltd	\$0.088	A \$38.3 m	Υ	Υ	VIC	Stawell, St Arnaud, Tandarra, Glenlyle	
Kalamazoo Resources	\$0.275	A \$27.1 m	Υ	Υ	VIC, WA	Castlemaine Exploration	
Nagambie Resources	\$0.060	A \$26.2 m	Υ		VIC	Nagambie and Others	
Centennial Mng Ltd	\$0.010	A \$10.4 m	Υ		VIC	A1 Gold Mine, Admin, shows last quoted price	
Austar Gold Ltd	\$0.003	A \$10.2 m	Υ		VIC	Morningstar Gold Mine, Woods Point	

Source: IRESS, Company reports

- ♦ Although Navarre is yet to define a Resource, we have included Table 2 to provide information on valuations of gold juniors with Resources (this is a selection, and not an exhaustive list); we also note that Catalyst is yet to report a Mineral Resource for any of their projects.
- This has been sorted on the EV/oz equity share to compare companies this measure however needs to be used with caution, as a number of factors can affect the value.
- ♦ The Resource weighted EV of all companies is A\$55/oz equity share contained gold.

Table 2: Comparison of juniors with gold resources

Company	Location	EV (A\$m)	Global Tonnes	Grade (g/t Au)	Owner ship	Cont. Au (Moz)	EV/oz Equity Share	Status
Bellevue Gold	WA, Australia	\$299.4	5.0	11.10	100%	1.78	\$167.78	Evaluation
Echo Resources	WA, Australia	\$214.2	28.5	1.93	100%	1.77	\$120.89	Development Studies
Egan Street	WA, Australia	\$34.1	1.5	9.22	100%	0.46	\$74.71	DFS completed
Kingwest	WA, Australia	\$12.3	2.7	2.23	100%	0.20	\$62.84	Evaluation
Musgrave	WA, Australia	\$25.9	4.8	2.84	100%	0.44	\$58.63	Evaluation
Breaker Resources	WA, Australia	\$57.2	24.6	1.35	100%	1.07	\$53.42	Evaluation
Genesis Minerals	WA, Australia	\$35.5	7.1	3.30	100%	0.75	\$47.07	Development Studies
Bardoc Gold	WA, Australia	\$121.1	40.7	2.05	100%	2.68	\$45.11	Development Studies
Ora Banda	WA, Australia	\$78.3	21.1	2.67	100%	1.81	\$43.34	Re-start
Saturn Metals	WA, Australia	\$28.1	20.7	1.02	100%	0.68	\$41.59	Exploration
Calidus	WA, Australia	\$47.9	21.2	1.82	100%	1.24	\$38.59	Development Studies
Alto Metals	WA, Australia	\$7.9	5.4	1.65	100%	0.29	\$27.46	Exploration
Kin Mining	WA, Australia	\$18.6	18.3	1.43	100%	0.84	\$22.06	Development/ Review
Kairos	WA, Australia	\$11.3	14.4	1.39	100%	0.64	\$17.52	Evaluation
Tyranna	SA, Australia	\$3.7	9.5	1.15	78%	0.27	\$13.51	Exploration
Middle Island	WA, Australia	\$6.8	12.1	1.38	100%	0.54	\$12.60	Development Studies
Rimfire	NSW, Australia	\$2.7	6.3	1.12	100%	0.23	\$11.90	Resource
Theta Gold Mines	South Africa	\$49.9	44.8	4.19	74%	4.46	\$11.18	Development Studies
Austar	VIC, Australia	\$9.6	4.8	5.96	100%	0.93	\$10.38	Development Morning Star Walhalla Belt

Source: IRESS, Company reports

1: We have added a silver credit equivalent to 0.5g/t Au to Rimfire's Resource

# **FINANCIAL POSITION**

- ♦ As of June 30, 2019, the Company had A\$6.023 million in cash and no debt.
- Over the 12 months to June 30, 2019, the Company spent A\$3.696 million on exploration and evaluation, and A\$0.714 million on administration and overheads - this highlights the high proportion of money going into the ground.
- ♦ Navarre raised a total of A\$9.013 million in the twelve months to June 30, 2019 this included a placement and an oversubscribed SPP that raised A\$3.014 million in September 2018, and a placement that raised A\$6.000 million at A\$0.075/share in April 2019.

### **CAPITAL STRUCTURE**

- Following the April placement the Company has 435.0 million ordinary shares and 21.8 million unlisted options on issue; options are detailed in Table 3.
- ♦ As of June 30, 2019 major shareholders included Kirkland Lake Gold (10.03%), the Victor Smorgon Group (10.29% through VBS Exchange) and 1832 Asset Management (5.17%).
- Also, as of June 30, Board members held 9.66%, with the Top 20 holding 49.38%.

**Table 3: Unlisted options** 

Unlisted options						
Expiry Date	Number	Exercise Price	Cash on Exercise			
31/12/2019	50,000	A\$0.040	\$2,000			
31/12/2021	700,000	A\$0.070	\$49,000			
31/12/2021	700,000	A\$0.090	\$63,000			
29/01/2023	4,250,000	A\$0.150	\$637,500			
10/04/2023	5,400,000	A\$0.150	\$810,000			
6/06/2021	1,000,000	A\$0.150	\$150,000			
21/02/2024	2,100,000	A\$0.120	\$252,000			
17/05/2024	6,100,000	A\$0.120	\$732,000			
17/05/2022	4,000,000	A\$0.131	\$525,200			
Total	21,800,000	A\$0.134	\$2,915,700			

Source: Navarre

# JUNIOR MINERAL RESOURCE INCENTIVE ELIGIBILITY

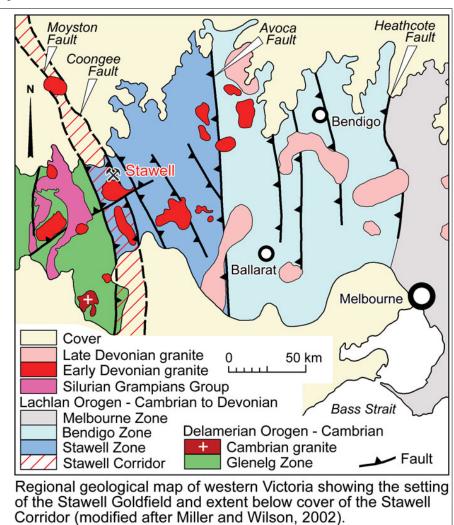
- ♦ The Company has been successful in its applications for participation in the Federal Government's Junior Mineral Resource Incentive ("JMEI") scheme for the 2018/2019 and 2019/2020 tax years; the scheme is voluntary and the Company needs to make a new application each year.
- ♦ This allows for credits of up to A\$1.5 million to be distributed to shareholders as a tax offset or franking credit, and is in effect a transfer of tax losses from the Company to the eligible shareholders, and is designed to boost investment in the junior resources sector.
- Eligible shareholders include Australian residents who applied for and were issued new shares in Navarre's capital raisings in the relevant financial years, with the maximum credit for each shareholder being the capital issued multiplied by the corporate tax rate; the credits will be issued to eligible shareholders on a pro-rata basis.

#### VICTORIAN EXPLORATION PROJECTS

#### REGIONAL GEOLOGY

- Most projects are situated over Cambrian to Ordovician basement rocks of the Lachlan Orogen, with the Glenlyle and Stavely projects being situated over the Stavely-Grampians Zone, on the western edge of the older Cambrian Delamerian Orogen (Figure 2) what needs to be noted are the large areas of younger cover, which, when shallow, provide the discovery opportunity.
- ♦ The key gold mineralised areas, namely the Stawell, Bendigo and Melbourne Zones form a roughly "V" shaped slice of Cambrian to Ordovician oceanic seafloor basalts and overlying turbidites, overlying older basement units (Figure 4) in the Melbourne Zone Paleozoic sedimentary rocks include Devonian units.
- There is a general younging of the sedimentary rocks going from west to east, with these being sourced from the eastern edge of a continent, represented by the Delamerian Orogeny units; the continental margin is interpreted as being an active convergent one with westerly dipping subduction; the Stawell Zone is thought to represent the lower portion of the subducting oceanic plate.
- The amphibolite metamorphic facies Moornambool Metamorphic Complex at the western edge of the Stawell Zone represents an upthrust, originally deeply buried portion of the subducted plate.
- Post deposition, the area was subject to a number of orogenic events (seven stages of deformation have been recognised), with the major one being the Late Ordovician to Early Silurian Benambran Orogeny (~455 Ma to 435 Ma), with later ones including the Early Devonian Bindian Orogeny (~420 Ma to 410 Ma) and the Devonian Tabberabberan Orogeny (~ 385 Ma to 380 Ma).

Figure 2: Tectonic elements of Victoria



Source: Reproduced with permission from www.portergeo.com.au/database

MELBOURNE ZONE (134 t Au) AWELL ZON NDIGO ZON EAST WEST C Cambrian mafic volcanic rocks Proterozoic crust Cambrian mafic volcanic rocks

cambrian mafic volcanic rocks

with interlayered sedimentary rocks

Ordovician to Devonian sedimentary

rocks (Melbourne Zone)

Ordovician to Silurian sedimentary

rocks (Tabberabbera Zone) Selwyn Block Upper layer (?Cambrian calc-alkaline volcanic rocks) Paleozoic granite Cambrian turbidites (Stawell Zone) Middle layer (Proterozoic crust?) Cambrian? to Ordovician turbidites Lower layer (Proterozoic crust?) (Bendigo Zone)

Figure 3: Interpreted cross section over Western Victoria

Source:

These orogenies resulted in significant shortening of the crust, and the complex, reverse listric faulting as shown in Figure 3; these major structures are important with regards to the gold mineralisation.

50 km

♦ The Silurian to Devonian also saw the intrusion of a number of granitoids.

zone boundary fault

- ♦ The units of the Stavely Zone are also of interest, as they represent terranes accreted during the Delamerian Orogeny, with these including volcanic arc rocks amongst others; this zone is interpreted as being continuous with the highly mineralised Cambrian West Tasmanian Terrane, a significant producer of base and precious metals.
- Stavely Minerals is currently having exploration success for porphyry copper mineralisation, with Navarre also finding epithermal mineralisation at Glenlyle; both types of mineralisation are typical of volcanic arcs.

#### MINERALISATION

rock boundary / fault

- The gold mineralisation is typically orogenic in style, which is the same broad style seen in Western Australia; as in Western Australia there are a number of different subtypes, depending upon host rocks and structure - these range from the nuggety, quartz vein hosted Bendigo/Ballarat style through to sulphide-replacement mineralisation, as seen at the SGM and FGM.
- ◆ The main period of mineralisation peaked at 440 Ma, during the Benambran Orogen, however there were later, lesser periods at ~420 Ma to 400 Ma (Bindian) and 380 Ma to 370 Ma (Tabberabberan); the Fosterville deposit is interpreted as being related to this younger event.
- At Stawell, it is interpreted that the Wonga deposit is related to the emplacement of the Stawell Granite at ~410 Ma, and hence significantly younger and different in style to the main Magdala deposit.
- The orogenic gold is interpreted as being sourced from the oceanic basalts, with gold being mobilised through metamorphic dewatering of hydrous minerals (mainly micas), generally at a temperature of above 500°C.
- Although anhydrous when initially extruded, reaction of the hot basalt lavas with sea water would have led to the formation of the hydrous minerals.
- The volatile (and gold) rich metamorphic fluids then moved up in the crust, with the major, first order structures (those shown in Figure 3) providing the main fluid conduits, as well as the being the broad control on the location of mineralisation.
- However it is interpreted that low displacement, second order structures localise mineralisation, with fold hinge zones also doing likewise.
- As stated earlier, there are a number of different mineralisation styles in the Victorian goldfields, with influencing factors including structure and host lithologies.
- Mineralisation associated with quartz veining in the Bendigo Goldfield (Victoria's largest at 22 Moz) is generally nuggety, contains low amounts of sulphides, and is deposited in structural features, including along bedding slip planes (saddle reefs), and in other structures - lithologies are generally unreactive.

- ♦ At Stawell (and also at Fosterville) there are significant amounts of sulphide-replacement mineralisation, controlled by the intersection of structures and reactive host rocks, including the Albion Formation, a dominantly black shale sequence immediately above the Magdala Basalt at Stawell.
- Another common feature of Victorian gold is that it is generally depleted in the weathering zone (unlike in Western Australia where supergene mineralisation is commonly found); with most of Navarre's drilling to date being limited to the oxide zone we may expect increases in grade with more drilling into fresh rock.
- A case in point is the Fosterville Gold Mine, which commenced operations on a 1.1 g/t Au oxide heap leach operation; however grades increased to 4 g/t to 7 g/t once underground mining commenced.

# **STAWELL CORRIDOR GOLD PROJECT (NAVARRE 100%)**

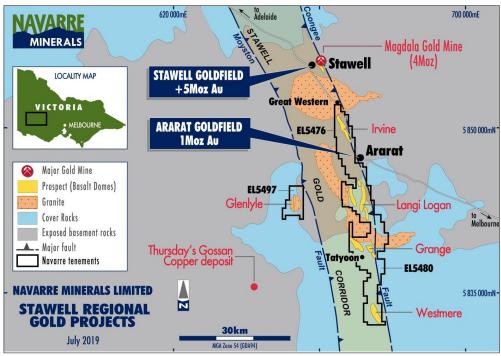
#### **Location and Tenure**

- The northern extent of the SCGP is south of the town of Stawell in Western Victoria (Figures 1 and 4) and extends for ~60 km SSW along the Stawell Gold Corridor.
- The SCPG comprises 8 granted Exploration Licences ("EL") and two Exploration Licence Applications ("ELA") for 330 km<sup>2</sup> all tenements are currently in good standing.
- ◆ The area is well served by power and transport infrastructure (including road, rail and air), covers two regional cities, Stawell and Ararat (with a combined population of ~14,500), with Stawell also being a mining centre, with the SGM having recently restarted operations through private equity capital group, Arete Capital Partners.
- ♦ In addition to Stawell, there is a history of mining at Ararat, with ~1 Moz produced historically from alluvial operations

# **Geology**

- A number of the points below relate to the geology and mineralisation of the SGM, with these interpreted as being similar through the Stawell Gold Corridor.
- ♦ The SCGP covers a 60 km strike of the Stawell Gold Corridor, a zone of up-thrusted metamorphic rocks (the Moornambool Metamorphics), along the western edge of the Stawell Zone (Figures 1, 2, 3 and 4).

Figure 4: Stawell Gold Corridor Project location



Source: Navarre

♦ The Stawell Gold Corridor, which represents the lowest and westernmost units of the Lachlan Orogen, is bounded to the west by the east-dipping Moyston Fault (which juxtaposes the Stawell Gold Corridor against lower metamorphic grade Cambrian rocks of the Delamerian Glenelg Zone); to the east it is bounded by the west dipping Coongee

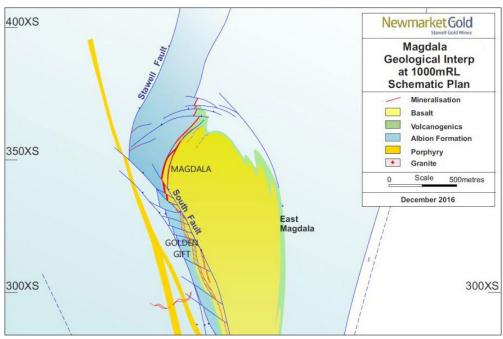
- Break, which, along with other west dipping structures, including the Stawell Fault, represent back thrusts from the Moyston Fault.
- ♦ The oldest unit in the corridor is the Magdala Basalt, a boninitic unit that forms a number of double plunging, NNW striking domes along the corridor; this commonly contains highly mineralised interflow/interfingered sediments, termed "Waterloos" in the Stawell Gold Mine.
- ♦ The basalt is overlain by the Albion Formation (which has variable a thickness), a sequence of reactive black (carbonaceous and pyritic) mudstones, and calcarious and siliceous siltstones; there is some interfingering at the contact between the basalt and overlying sediments
- Conformably overlying the Albion Formation is the Leviathan Formation, comprised largely
  of fine to medium grained marine quartz rich sandstones.
- At Stawell, the primary host for the sulphide-replacement mineralisation is the Magdala Facies (previously termed the Magdala Volcanogenics), an intensely chlorite +-stilpnomelane altered mudstone/shale unit at the base of the Albion Formation, immediately above the Magdala Basalt.
- Intruding the package are a number of small, felsic intrusive dykes dated at 413+-3 Ma, and the early Devonian Stawell Granite, dated at 410 Ma; with the latter interpreted as being the source of mineralisation at the Wonga orebody at Stawell.
- ♦ The southern 35 km of strike is masked by the Quaternary Newer Volcanics, which comprise a series of flat-lying basalt flows with a thickness of up to 80m, increasing to the south (Table 2).
- The youngest units include recent alluvials, which are the host for alluvial mineralisation in the region.
- ♦ There has also been appreciable weathering of the older units, leading to a laterite profile up to 50m deep being developed; this includes up to 15m of transitional material at the base of the profile.
- The area is structurally complex, comprising a series of NNW striking, doubly plunging basalt domes (anticlines), which have been cut by brittle faulting which includes both westerly and north-easterly dipping structures that offset the mineralisation at the recently re-opened Stawell Gold Mine.

#### Mineralisation

- ♦ The Stawell Goldfield historically produced over 5 Moz in two main periods; both alluvial and hard rock mining produced some 2.7 Moz of gold from 1853 to 1926, with ~2.6 Moz being produced from 1984 to cessation of operations in December, 2016, with the majority of the modern production from underground.
- Most of the hard rock gold was produced from the west flank of the basalt dome, however more recent work at Stawell has identified the potential of the east flank; this is supported by the discoveries at Navarre's Irvine Project (discussed below).
- ♦ A further ~one million ounces was produced from mainly deep leads and alluvial workings at the Ararat Goldfield between 1854 and 1925.
- There are a number of controls, both structural and lithological (and the intersection of the two) on the mineralisation, including:
  - Rheological differences between the Magdala Basalt and overlying Albion Formation for the larger deposits;
  - Rheological differences between the Albion and Leviathan Formations that control hanging wall lodes,
  - Dilational zones caused by basalt flow geometry,
  - The presence of reactive black sulphidic mudstone (the Magdala Facies) in contact with the basalt which, when intersected by structures, leads to sulphide-replacement mineralisation with shoot geometries; and,
  - Shear controlled quartz/sulphide lodes.
- ♦ The Magdala Facies is best developed on the western flank of the basalt dome at Stawell, and hence so is the majority of the mineralisation; the mineralisation is hosted in a number of structurally offset bodies, including the Magdala and Golden Gift ore bodies (Figures 5 and 6).

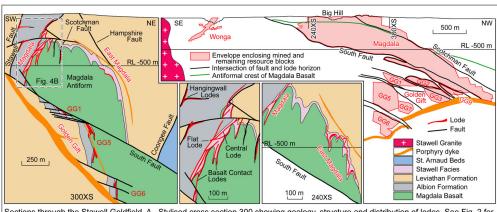
- ♦ A number of styles of mineralisation have been recognised, including quart-rich shear lodes, basalt contact lodes (which are represented by arrays of quartz-sulphide tension veins) and stockwork lodes.
- These generally form shoots, with widths of up to 30m, strike lengths of up to 450m, and vertical extents, in the case of the Central Lode, of up to 1km; mineralisation has been identified to a depth of 2,000 metres below surface.
- Mineralisation at Wonga is interpreted as being related to the Stawell Granite.

Figure 5: Magdala geological interpretation



Source: Adapted from Stawell Gold Mine December 31, 2016 NI43-101 Report - Kirkland Lake Gold

Figure 6: Stawell Gold Mine cross sections (left) and long section (right)



Sections through the Stawell Goldfield. A - Stylised cross section 300 showing geology, structure and distribution of lodes. See Fig. 2 for location. GG1, 5 and 6 are Golden Gift lenses also shown on Fig. 3D. B - Enlarged portion of Fig. 3A showing lode styles and distribution C - Cross section 240 showing East Magdala mineralisation relative to the Magdala deposit. D - Longitudinal projection of mineralised envelope and structure (Modified after Kirkland Lake Gold Limited Canadian NI 43-101 report, 2016).

Source: Reproduced with permission from www.portergeo.com.au/database

#### **Previous Exploration**

- The Stawell Gold Corridor has seen generally only early stage exploration, with limited drilling away from the Stawell Gold Mine.
- Work, completed by Centaur Mining and Exploration, CRA Exploration and Stawell Gold Mines included surface mapping, geochemical sampling and limited drilling, including rotary air blast ("RAB"), reverse circulation ("RC"), aircore and diamond drilling.
- ♦ A few holes intersected gold mineralisation, including one diamond hole that intersected 0.5m @ 7.2 g/t Au from a "classic Magdala footwall sequence" near what is now Navarre's Irvine Gold Project.
- More recent work, largely completed by Leviathan, has included geological mapping, geochemical sampling and geophysical surveying, including induced polarisation ("IP"), gravity and magnetics.

#### **Work by Navarre**

- Initial work by Navarre included re-processing of the geophysical data, with this then being used to identify and prioritise targets for follow up work the key targets are basalt domes as at the SGM, with a number being identified (Figure 4, Table 4).
- Original work had interpreted Langi Logan and Langi Logan South as separate domes, however more recent work has recognised that they form one, 12 km long Magdala-style basalt dome.
- Initial work was completed at the Grange prospect in the Tatyoon EL (Figure 5), following up drilling from the early 2000's by Leviathan Resources that intersected "Waterloo" style mineralisation; the work by Navarre included the reinterpretation of geological and geophysical data which resulted in the identification of a Magdala-style basalt dome target.
- Drilling on the western flank was completed in early 2015 with sulphide mineralisation being intersected, however at the time the tenor downgraded the prospect; given the recognition of mineralisation on the eastern flanks of the domes at Irvine, the prospectivity of Grange has been upgraded.

Table 4: Basalt dome targets

Basalt dome targets							
Dome	Depth of Cover	Approx Strike (m)	Approx Width (m)	Drilling (inc. NML & historical)	Best Gold m (g/t)	Notes	
Irvine	0m	9,000	350	435 AC, 35 RC, 14 DDH	18.7 (7.1)	Discovery of Resolution and Adventure Lodes below Ararat Goldfield - east flank of Magdala Basalt	
Langi Logan	0-40m	12,000	600	~100 AC, 3 RC, 5 DDH	33 (2.9)	Recent work has identified Magdala-style gold mineralisation	
Langi Logan West	0-30m	5.600	800	9 AC	NSR	West of main gold corridor?	
Grange	30-60m	2,200	800	~20 AC, 6 RC, 6 DDH	1.8 (4.2)	Confirmed Magdala-style basalt	
Hermitage	40-60m	5,000	1,200	4 AC	NSR	West of main gold corridor?	
Shiraz	50-70m	1,600	600	-	-	Not drilled	
Westmere	60-80m	12,500	3,000	18 AC	4.0 (0.3)	Magdala-style basalt, most AC holes did not reach basement, not adequately tested	

Source: Navarre

#### The Irvine Gold Project

- The prospectivity of Irvine was first recognised from the results of geological mapping and geochemical sampling completed in early 2015 (in parallel with the Grange drilling), with subsequent activities concentrated at Irvine.
- Work to date has included ongoing geological mapping and geochemical sampling, along with appreciable drilling; this has included 435 aircore holes for 22,678 m, 14 diamond holes for 3,372.5 m and 35 RC holes for 4,315 m the most recent work was a 33 hole, 4,315 m RC programme completed over the Adventure Lode in early 2019 and an 11 hole, 446 m aircore programme successfully extending higher grade zones at Resolution in mid-2019.
- The exploration led to the discovery of the Resolution and Adventure (formerly Cullings and Dutton) lodes, with a number of other targets identified but still needing to be followed up (Figure 7); Figure 7 also highlights the resistivity of the basalt, and the suitability of IP as an exploration tool.
- Unlike at the SGM, both of these lodes are on the eastern side of the basalt dome, however with the same lithologies and similar alteration to that at Stawell.
- ♦ However, given that some of the alluvial gold at Ararat drains from the west side the dome hard rock mineralisation should be present on the west flank, with a number of targets being identified for future drilling.
- ♦ A plan of Irvine is shown in Figure 7, with long and cross sections of Resolution and Adventure shown in Figures 8 to 12.

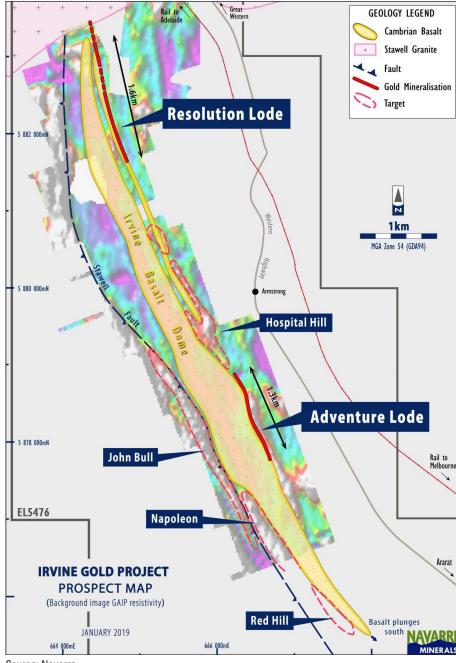


Figure 7: Irvine plan, showing prospects

- Drilling was initially targeted at the shallow oxide zone, with this returning very encouraging results on relatively wide spaced traverses, and highlighting the potential for deeper, high grade primary mineralisation; also of note are the extensive strike lengths of the surface footprints, considerably longer than that for Magdala (Figures 8 and 9); mineralisation intersected to date is largely associated with quartz and sulphides in major structures, with "Magdala facies" mineralisation yet to be intersected.
- Grades at Resolution to date are broadly comparable with those at Magdala ranging from 1 g/t to 4 g/t, with, in the oxide zone, true thicknesses being between 1 m and 11 m; one hole, RD006 returned 18.7 m @ 7.1 g/t Au, however was at an acute angle to the dip of the mineralised shear and more recently hole RD012 intersected 10.6 m @ 6.2 g/t Au at around 120 m below surface, and RD013 returned 10.8 m @ 3.8 g/t Au (Figures 9 and 10).
- Recently completed shallow infill aircore drilling at Resolution has returned up to 4 m @ 6.4 g/t Au, supporting results of previous work (Figure 9).
- ◆ The significance of holes RD006, RD012 and RD013 is shown in Figure 9, in that they highlight the potential for a high grade mineralised system in the primary zone relative to depleted oxide mineralisation; it needs to be noted that these cover a strike length of ~250 m with no drilling between, and also, orogenic gold deposits are continuous over significant vertical distances.

- Grades from drilling thus far at the Adventure Lode are broadly similar to those at Resolution, ranging between 1 g/t and 4 g/t (and up to 7 g/t, Figures 11 and 12), with Figure 11 showing the development of four mineralised shoots.
- Significant RC intersections from the Adventure Lode include, amongst others:
  - 6m @ 4.2 g/t Au from 67m, including 4m @ 6.1 g/t Au (IRC013),
  - 5m @ 4.0 g/t Au from 41m from within a broader intersection of 11m @ 2.1 g/t Au from 38m (IRC004); and,

Figure 8: Adventure lode long section

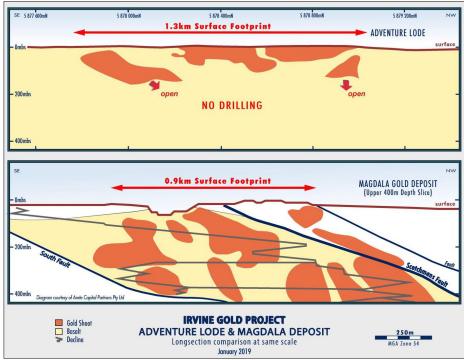


Figure 9: Resolution long section - this highlights generally higher grades in fresh mineralisation than in oxide

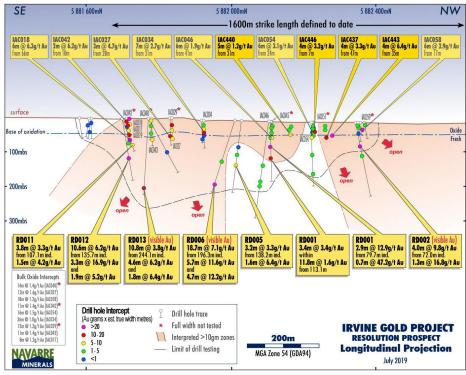


Figure 10: Resolution Lode cross section 5881700 Mn

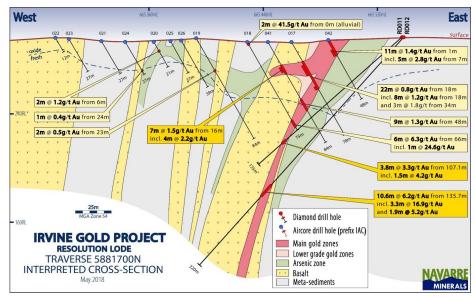
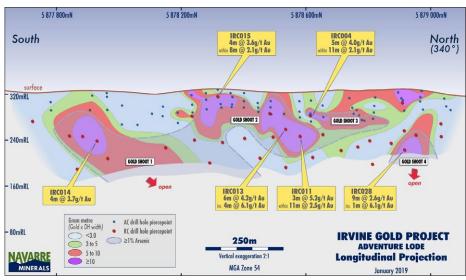
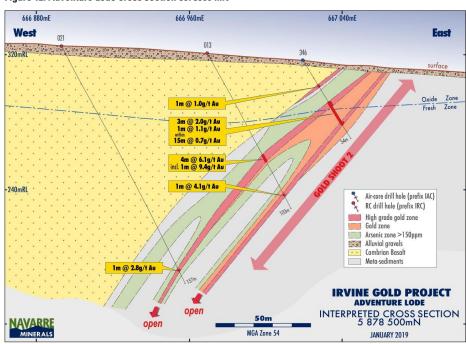


Figure 11: Adventure Lode long section showing shoots and selected results from latest drilling



Source: Navarre

Figure 12: Adventure Lode cross section 5878500 mN



First pass aircore traverses have also been undertaken at a number of other prospects, with encouraging results; these include Red Hill, Napoleon and Hospital Hill (Figure 7), located on both the west and east flanks of the Irvine Dome.

#### Langi Logan

- Recent work at the SCGP has been concentrated on the Langi Logan discovery, again with mineralisation associated with a basalt dome.
- An interpretation of the gravity data indicates that the dome (Langi Logan and Langi Logan South) has a strike length of ~12 km, more than double the 5 km strike as originally thought (Figure 13).
- An initial aircore programme of 77 holes for 7,298.5 m was undertaken by Navarre in late 2018 to early 2019 over Langi Logan, with this returning a number of significant intercepts as shown in Figures 13 and 14 (this included single metre values of up to 33.6 g/t Au, highlighting the potential for a major discovery.
- As with other SCGP prospects, mineralisation is steeply dipping, and is controlled by the margins of the basalt dome at Langi Logan mineralisation has been intersected on both the western and eastern basalt contacts (Figure 14).
- Recently completed aircore drilling intersected anomalous gold on the western flank of Langi Logan South - due to the weather the eastern flank was unable to be drilled.

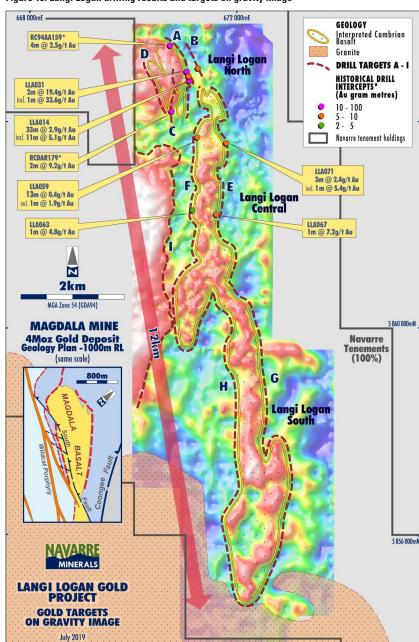


Figure 13: Langi Logan drilling results and targets on gravity image

671 200mE 671 800mE 671 400mE 671 600mE West East A' 059 060 058 054 071 057 056 TERTIARY BASALT 3m @ 2.4g/t Au CLAY/SAND 1m @ 5.4g/t Au QUARTZ GRAVEL 1m @ 1.3g/t Au -200mRL open 1m @ 0.6q/t Au 15m @ 0.2g/t Au Fresh 13m @ 0.4g/t Au 1m @ 1.9g/t Au **TARGET TARGET** 0mRL Air-core drill hole (prefix LLA) Gold mineralisation **LANGI LOGAN GOLD** Tertiary Basalt **PROJECT** Clay/sand 100m INTERPRETED CROSS SECTION 5 863 650mN Alluvial gravels Cambrian Basalt NAVARRI MGA Zone 54 April 2019 Meta-sediments

Figure 14: Langi Logan cross section 5863650 mN

# ST ARNAUD GOLD PROJECT (NAVARRE 100%)

#### **Location and Tenure**

- ♦ St Arnaud is located near the town of St Arnaud (population 3,500), some 100 km west of Bendigo and 240 km by road NW of Melbourne (Figure 1).
- ♦ The project comprises one EL and one ELA, with the EL having an area of 479 km² and the application 8 km², with the granted tenement being in good standing (Figure 15).
- ♦ As with the other Victorian projects St Arnaud is will served by infrastructure and is largely located over farming and grazing properties.

#### **Geology and Mineralisation**

- ♦ St Arnaud is located over the western part of the Bendigo Zone (Figures 1 and 2), with a number of NNW striking gold trends being recognised (Figure 15), with gold generally hosted in quartz reefs within deformed Cambro-Ordovician turbidites; the field reportedly produced some 400,000 oz of gold from alluvial and hard rock sources.
- ♦ The Paleozoic geology extends north under shallow Murray Basin cover, with historic mining extending to the edge of the cover.
- Gold is associated with steeply west dipping faults, ranging in width from 10 cm to several metres, with gold commonly hosted in laminated quartz veins within the faults and in extensional splays extending up to 5 m into the wallrocks.
- ♦ The Lord Nelson Mine, which was the major producer, produced some 323,000 oz between 1864 and 1916, with this from ten auriferous quartz reefs of between 0.8 and 7.5 m in width; the mine extended to 685 m depth with gold being produced over a strike length of 3.2 km.

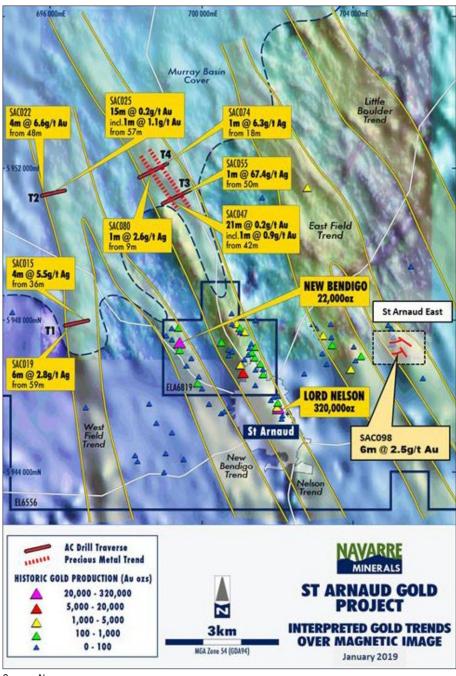
# **Previous Exploration**

- Previous exploration has been largely limited to the known extents of the historic goldfield, with a number of companies operating from the 1960's until recent times.
- This included drilling on the recognised lodes, as well as the mining of a small open pit by Glenburn Manor (International Minerals NL) in 1995.
- More recent work included that by Rex Minerals in 2008; this included drilling underneath the richest lodes and flying a detailed magnetics survey to identify the mineralised structures striking north under the Murray Basin cover.

### **Work by Navarre**

- ♦ To date, work by Navarre has included three aircore drilling programme totaling 8,967 m in 110 holes (Figures 15 and 16) the first included 80 holes in four traverses over the northern part of the tenements, with the second and third comprising 30 holes at St Arnaud East assays are awaited for 11 holes completed in June 2019.
- ◆ This has returned very encouraging results, including an intersection of 4 m @ 6.6 g/t Au; in addition appreciable silver was intersected including 1 m @ 67.4 g/t Ag; intersections at St Arnaud East included 6 m @ 2.5 g/t Au (Figure 15).
- The results of the broad spaced traverses in the initial drilling highlight the requirement for further follow up drilling, and, in the case of traverse T2 resulted in a 160 m wide mineralised zone hosting six separate veins (Figure 16).

Figure 15: St Arnaud gold trends on magnetics image



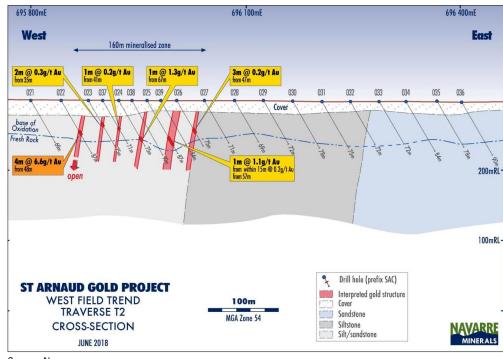


Figure 16: St Arnaud aircore traverse T2 section

# **GLENLYLE PROJECT (NAVARRE 100%)**

#### **Location and Tenure**

- Glenlyle is part of the broader Western Victoria Copper Project, which includes tenure over three areas within the prospective Stavely Arc: EL5497 (Glenlyle, 46 km², Navarre 100%), EL4590 (Black Range, 124 km², Navarre 100%) and EL5425 (Stavely, 201 km², Stavely Minerals earning 80%).
- All tenements are in good standing.
- ♦ In brief, the terms of the Stavely Minerals earn-in into EL5425 include an initial 51% earn-in through the expenditure of A\$150,000 over two years, followed by an optional stage to earn an additional 29% through the expenditure of a further A\$300,000 over the subsequent three years; after Stavely has earned 80% both parties can enter into a JV to fund expenditure on a pro-rata basis, else can elect to dilute.
- Glenlyle is located 20 km SW of Ararat, and is readily accessible by sealed "B" roads, and then all-weather farm roads and tracks.

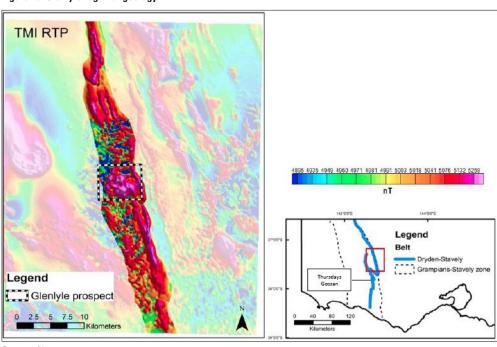
#### **Geology and Mineralisation**

- Glenlyle is situated over the Cambrian Dryden Volcanic Arc, part of the broader Dryden-Stavely Volcanic Arc, which hosts Stavely Minerals' Thursday Gossan porphyry copper discovery (Figure 17), as well as the recent lode-style discovery.
- The belt which is part of the Delamerian Orogen at the eastern side of the Grampians-Stavely Zone, is generally around 3 km to 8 km wide, and is comprised of mafic to felsic igneous rocks (with, importantly, some ultramafic/serpentinite units); it is one of a number of such belts, which are separated by terrigenous deep marine sedimentary units of the Glenthompson Sandstone; volcanics in the Stavely Complex have been dated at 500 Ma to 510 Ma.
- The belts were folded and faulted at ~500 Ma during the Delamerian Orogen, and locally have sub-vertical dips.
- During deformation originally subvertical units, such as intrusives, will act as buttresses and generally retain their orientation.
- ♦ Glenlyle is covered by up to 60 m of Quaternary basalt cover, which complicates exploration.
- Original work by Stavely Minerals recognised porphyritic intrusives at Thursday's Gossan, which are the hosts for and cause the porphyry copper-gold mineralisation; it has been assumed that these are coeval with the volcanics, however it may be possible that these have a post orogenic age of ~487+-7 Ma.

Western Intrusion Thursdays Gossan 5,830,000 mN Glenlg Highway LEGEND Navarre Prospects Thursdays Gossan Stavely-Dryden Trend exington Navarre Tenements Stavely Minerals Tenements Railways \* Background image magnetics Major Roads

Figure 17: Glenlyle regional geology

Figure 18: Glenlyle regional geology



- ♦ If this is the case it would be similar to that of the major NSW porphyry systems, including North Parkes and Cadia, which are related to post tectonic intrusives; there are also porphyry copper and related deposits in NSW that are associated with intrusives coeval with the arc rocks.
- Volcanic arcs are hosts to a number of porphyry and related mineralisation styles, including porphyry copper-gold-molybdenum, copper-gold skarn, epithermal gold-silver and carbonate base metal gold; the style of mineralisation is related to the distance above the porphyry intrusives as well as wall rock lithologies.
- ♦ A circular feature with a diameter of ~5 km has been recognised from the airborne magnetic data at Glenlyle (Figure 19), which is the main focus of activities this is thought to represent an intrusive complex, which are generally the host for the styles of mineralisation being sought.
- ♦ A newly discovered style of mineralisation at Thursday's Gossan is the high grade structurally controlled lode-style poly-metallic mineralisation, which is located at the faulted contact between the volcano-sedimentary package and a serpentinite unit the drilling has intersected both Cu-Au-Ag and Ni-Co rich lenses.
- Mineralisation has potentially been deposited from mineralised fluids driven by the porphyry hydrothermal system and moving along faults hitting reactive rocks, such as the serpentinites - this is broadly similar to skarn formation, however with skarns being associated with limestones and marbles.
- This mineralisation is thought to be similar to the high grade lodes found at Butte, Montana and San Miguel (Magma), Arizona - these are both associated with underlying porphyry systems.
- This discovery means that significant additional areas may now be considered prospective for mineral discoveries, including Glenlyle, Black Range (Eclipse) and within the Stavely JV tenements all these areas include underlying structures.

# **Previous Exploration**

- Previous work at Glenlyle has targeted the circular feature, with this including limited ground magnetics, trial EM and four IP lines; this was followed up by drilling including bedrock aircore and five shallow RC holes.
- ♦ The drilling intersected andesites, as well as alteration typical of epithermal and porphyry systems; the IP identified an IP chargeable zone, which was one area targeted by Navarre.

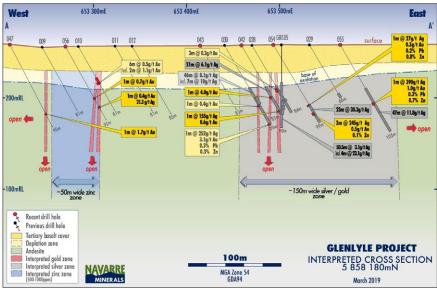
# Work by Navarre

- ♦ Initial work by Navarre included data compilation, which was used in planning an initial 33 hole, 2,100 m aircore drilling programme, with final results released to the market in April 2018 this was followed by a second phase, 19 hole, 1,690 m expansion aircore programme in early 2019 hole collars and results of the more recent drilling are shown in Figures 19 and 20.
- ♦ The results of this were very encouraging, in that holes intersected epithermal style alteration and silver mineralisation (Figures 19 and 20), and identified a broad north trending zone of silica-sericite-pyrite (phyllic) alteration, which is typically associated with porphyry mineralisation the Company interprets that the drilling has intersected an epithermal system above a deeper porphyry target, thus highlighting the prospectivity of Glenlyle.
- ♦ Individual one metre assays of up to 390 g/t Ag and 4.0 g/t Au were intersected in the second programme, with mineralisation being open down dip and across strike to the east.
- However, the Company will re-evaluate results and future programmes in view of Stavely's Thursday's Gossan discovery, and the potential for structurally hosted lode-style mineralisation - previous drilling has intersected massive sulphide chips which may prove a pointer to mineralised lodes.

652 500mE 655 000mE Interpreted Intrusional Complex Recent drilling N Previous drilling 1km IP chargeability zone MGA Zone 54 (GDA94) Interpreted silver/gold Dryden-Stavely Volcanic Belt Andesite Gravity low 5 860 000mN GAC057 51m @ 7.3g/t Ag incl. 1m @ 248g/t Ag 0.5g/t Au 0.2% Zn GAC030 46m @ 8.1g/t Ag from 53m ind. 1m @ 252g/t Ag 3.1g/t Au 0.3% Pb 0.3% Zn GAC042 1m @ 4.0g/t Au 1m @ 155g/t Ag 0.6g/t Au Section A-A' (5 858 180mN) . GAC054 23m @ 30.3g/t Ag incl. 2m @ 245g/t Ag 5 857 500mN 0.5g/t Au 0.1% Zn П GAC055 47m @ 11.8g/t Ag incl. 1m @ 390g/t Ag 1.0g/t Au 0.3% Pb 0.7% Zn - 5 855 000mN **GLENLYLE PROJECT** AIR CORE DRILL PROGRAM LOCATION MAP March 2019 MINERALS Background image magnetics

Figure 19: Interpreted geology and drilling, Glenlyle Project

Figure 20: Glenlyle cross section looking north



# **TANDARRA PROJECT (NAVARRE 49%, CATALYST 51%)**

# **Location, Tenure and Ownership**

- ♦ Tandarra comprises one Retention Lease ("RL") covering the area of the previously held 59 km² EL4897 RL06660 was granted in November 2019 and has a term of 10 years with expenditure commitments of A\$3.1 million over that period.
- ♦ Tandarra is centered 45 km north of Bendigo, with well-established transport and power infrastructure and located over farming and grazing properties.
- Navarre and Catalyst originally finalised a Heads of Agreement ("HoA") in June 2014 for Catalyst to acquire 51% of Tandarra through the expenditure of A\$3 million over a period of four years.
- ♦ The terms of the earn-in have been met, with 51% ownership of the RL now being transferred to Catalyst, and the terms of the formal JV Agreement being settled (including with expenditure to be pro-rata) and the JV Agreement executed.

# **Geology and Mineralisation**

- Tandarra is located over the Whitelaw Fault Corridor, which also hosts the Bendigo Goldfield and Catalyst's recent Four Eagles discovery (Figure 21).
- The underlying geology comprises faulted tightly to chevron folded early Ordovician turbidities of the Castlemaine Group with fold hinges of the regional scale anticline striking north-south.
- ♦ The area is covered by ~20m of younger Murray Basin units.
- The area is interpreted as being a northern extension of the Bendigo gold field, with mineralisation thus far identified in a number of north-south trending zones - most work today has been concentrated on the "Tomorrow Zone", which comprises a number of gently plunging stacked lodes (Figure 21), with long strike lengths.
- Stacking of lodes is also seen at Bendigo, as well as at Fosterville (Figure 22) and a number of other Victorian gold deposits; there is a trend of increasing grade at depth at Fosterville, with the Swan Zone having Reserves of 588 kt @ 61.2 g/t Au for 1,156,000 oz contained gold; this is within an overall hard rock reserve of 2.288 Mt @ 23.11 g/t for 1,699,000 oz contained gold.
- ♦ Fosterville, located 20 km east of Bendigo, has produced approximately 2.5 Moz of gold over a number of periods of production, with it currently producing at ~250,000 kozpa.
- Mineralisation at Tandarra is hosted in quartz veins, with sulphides including arsenopyrite and pyrite, and is thought to be closer to Bendigo in style rather than Fosterville; we have used Fosterville here as an example of lode stacking.

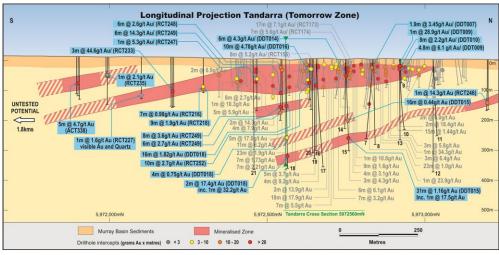
#### **Work by Navarre and Current Work**

- ♦ Tandarra was discovered in 2005 by now key executives of Navarre, with activities continuing under the 2014 farm-out agreement, and now under the JV.
- As stated earlier, Tandarra is currently being operated and managed by Catalyst, with work over the past five years largely concentrated on drilling, with a hiatus of about one year whilst the RL application was being assessed.
- Drilling has included aircore, RC and diamond, with this to date identifying the two lodes at the Tomorrow Zone (Figure 22) - both of these lodes are open along strike, with only 750 m of the upper lode being tested, and only two holes to date intersecting the lower lode; Figure 22 highlights intersections from the drilling with these including a number of significant widths and grades.
- ♦ A 10,000 m aircore, RC and diamond drilling programme has recently been completed with results to date being positive (Figure 21) this follows the drilling of diamond hole DDT018 in early 2019, which intersected and discovered two deeper lodes, with intersections of 2.0 m @ 17.4 g/t Au from 332 m and 16.0 m @ 1.8 g/t Au from 148 m, further supporting the interpretation of multiple stacked lodes as at Bendigo and Fosterville.

230 000mE 250 000mE + + Granite **N Basement rocks** Cover rocks **Gold occurrence** Main road Railway **Four Eagles Project** - 5 980 000mN **TANDARRA GOLD PROJECT** EL 4897/RL 6660 vimi, or openent - 5 960 000mN Outcrop Raywood • **Kirkland Lake** Fosterville Gold Mine
~9M oz - 5 940 000mN **Fosterville** Bendigo Bendigo Goldfield ~22M oz **NAVARRE MINERALS LIMITED** 15km **TANDARRA GOLD PROJECT LOCATION MAP** MGA Zone 54 (GDA94) March 2019

Figure 21: Tandarra location and regional geology

Figure 22: Tandarra long section looking west, showing results of recent drilling



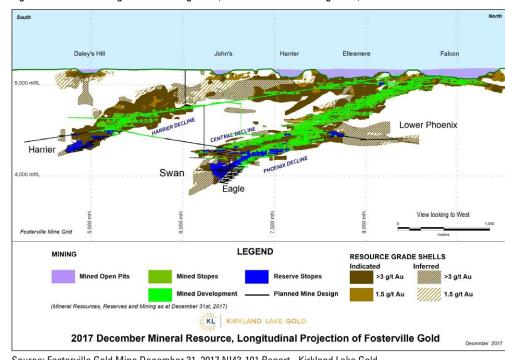


Figure 23: Fosterville long section looking west (note different scale to Figure 19)

Source: Fosterville Gold Mine December 31, 2017 NI43-101 Report - Kirkland Lake Gold

#### **BOARD AND MANAGEMENT**

- Mr Kevin Wilson BSc (Hons), ARSM, MBA Non-Executive Chairman: Mr Wilson has over 30 years' experience in the minerals and finance industries. He was the Managing Director of Rey Resources Limited, an Australian energy exploration company, from 2008 to 2016 and Leviathan Resources Limited, a Victorian gold mining company, from its initial public offering in 2005 through to its sale in 2006. He has prior experience as a geologist with the Anglo American Group in Africa and North America and as a stockbroking analyst and investment banker with CS First Boston and Merrill Lynch in Australia and USA.
- Mr Geoff McDermott BSc(Hons), MAIG Managing Director: Mr Geoff McDermott is an experienced geologist and senior company executive. He was appointed Managing Director on May 19, 2008. Geoff has over 30 years industry experience working as a geologist in surface and underground metalliferous mining operations, in minerals exploration and as a consultant to the minerals industry. He has a broad range of international experience having worked as a geologist in Canada, Fiji and Australia for companies such as WMC and Rio Tinto as well as with the Government of the Northwest Territories, Canada. From 2002 until 2007 Geoff was Chief Geologist and Group Geologist with MPI Mines Limited and Leviathan Resources Limited.
- Mr John Dorward BComm (Hons), CFA Non-Executive Director: Mr John Dorward was previously CFO of Mineral Deposits Limited where he was responsible for financing the Sabodala Gold Project in Senegal, West Africa. Prior to joining Mineral Deposits he was CFO and Company Secretary of Leviathan Resources Limited and Commercial Executive and Company Secretary of MPI Mines Limited. Before joining MPI Mines Limited, John had eight year's experience in the banking sector with a number of years spent in a senior resource project finance role with BankWest. John holds a Bachelor of Commerce (Hons) from the University of Melbourne, a Graduate Diploma in Applied Finance and Investment and a Graduate Diploma from Chartered Secretaries Australia. He has also completed the Chartered Financial Analyst (CFA) program. John is currently the President, Chief Executive Officer and Director of Roxgold, a TSX listed gold exploration and development company.
- Mr Colin Naylor BBus (Acc), FCPA Director and Company Secretary: Mr Colin Naylor was appointed a Director of Navarre in 2010. Colin was previously Chief Financial Officer and Company Secretary of oil and gas explorer, Melbana Energy Limited. Before joining Melbana, Colin held a number of senior roles in major resource companies, including Woodside Petroleum, BHP Petroleum and Newcrest Mining. Colin also worked at MPI Mines Limited and Leviathan Resources Limited. Colin is a Fellow of the Certified Practicing Accountants and has previously been a member of the Victorian Divisional

Council of the CPA and a previous member of the Group of 100 National Executive and Victorian State Chapter.

Mr Shane Mele – BSc ( Hons), MAusIMM - Exploration Manager: Mr Shane Mele has more than 20 years' experience in the resources industry, predominantly in gold mining and exploration, and also in base metal exploration. Prior to joining Navarre, Shane was Managing Director of Kidman Resources and held senior management and geological roles with St Barbara Limited, BCD Resources NL, Leviathan Resources Limited and MPI Mines Limited with a range of responsibilities including regional exploration management and technical project assessments for business development. He holds a Bachelor of Science (Honors) from LaTrobe University is a member of the Australasian Institute of Mining and Metallurgy.

- Mrs Jodi Ford BBus (Acc), ASA Assistant Company Secretary and Accountant: Mrs Jodi Ford has been the Accountant of Navarre Minerals for over 7 years and was appointed Assistant Company Secretary in 2017. Jodi has previously held finance roles in the services and not-for-profit sectors.
  - Jodi holds a Bachelor of Business (Accounting) and is currently completing her CPA studies.
- ♦ Dr Jason Thomas PhD General Manager Strategic Development & Stakeholder Engagement: Dr Jason Thomas has advised a number of resource companies including Indophil Resources, Perseus Mining, Zinjin and the Asia Development Bank for the TAPI pipeline project specifically in relation to community, tribal and stakeholder involvement in Cote d'Ivoire, the Philippines and Peru. He has also implemented humanitarian development programs in Afghanistan, South Sudan, Jordan as well as Sri Lanka and conducted field-based assessments that inform the implementation of programs in Iraq and Syria, Turkmenistan and Pakistan. Jason teaches post-graduate risk management at Swinburne University.

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