

# GREAT SOUTHERN MINING LIMITED

Company Update

April 2019



ASX : GSN

CREATING VALUE THROUGH DISCOVERIES.



# Important notices



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Statements regarding the Company’s plans with respect to Mineral Resources, exploration programs and future developments are forward-looking statements. There can be no assurance that the Company’s plans will proceed at stated times in the future. Additionally, future drilling programs and outcomes presented are based on current estimates using information available at the time of the documents preparation. There is no guarantee that the programs will confirm the presence of additional mineral resources. Any opinions expressed in the presentation are subject to change without notice.

**Exploration Programs:** The actual number of holes drilled and the final meters drilled may vary based on geology and exploration results. For further information on Mon Ami exploration Program - refer to ASX announcement of 21 February 2019.

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GREAT SOUTHERN MINING LIMITED | ASX: GSN



# A journey to becoming a significant gold exploration Company

Nth Queensland well known to Management team.

Identified breccia pipes and porphyry systems which could host significant deposits.

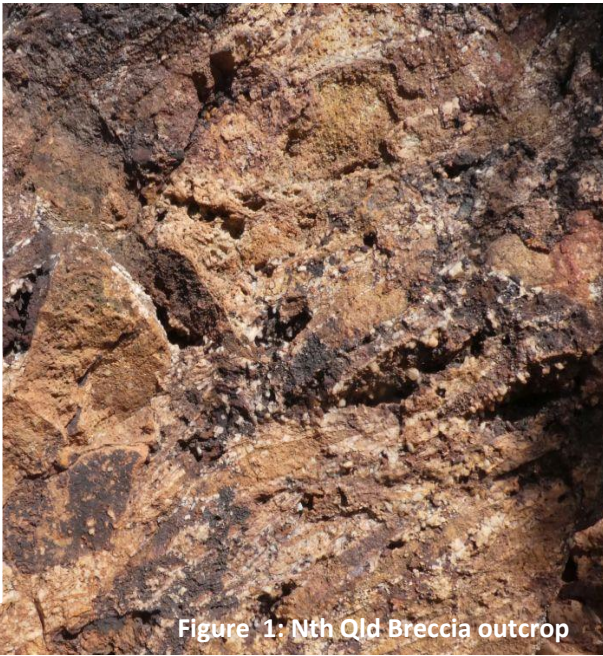


Figure 1: Nth Qld Breccia outcrop

1. Large tenure holdings in well endowed gold regions.
2. Geographical compatibility to operating mines and infrastructure.
3. Clear value generation opportunities.

North Queensland provides **discovery potential upside.**

Western Australia provides potential near term **monetisation.**



Figure 2: Nth Qld outcrops

The Projects are in recognised gold districts Laverton (>25M ounces) and North Queensland (>20M ounces).

>20,000m drill program planned for Q2 2019 at Mon Ami deposit.

Targeted program seeking to rapidly add ounces.



Figure 3: Drilling at Mon Ami



Figure 4: Mon Ami tenure

Mon Ami Project less than 25kms from multiple operating mills.

Metallurgy study at Mon Ami notes excellent recoveries up to 97%.



Figure 5: Dr Bryce Healy, John Terpu and Mark Petricevic



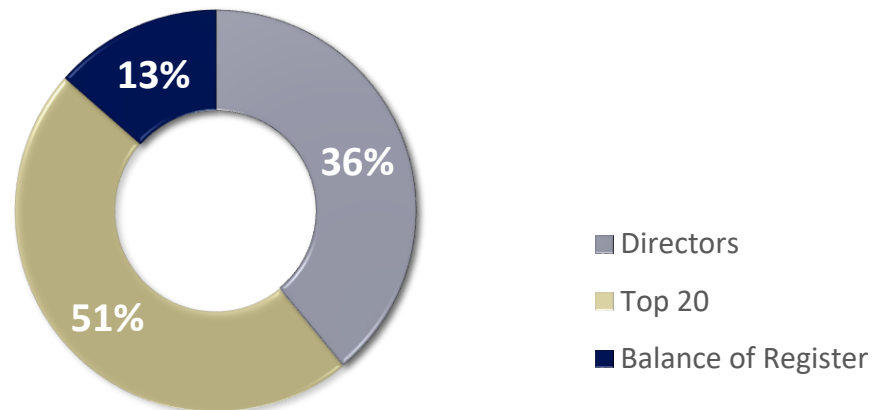
## BOARD OF DIRECTORS AND MANAGEMENT

Experienced team with proven track record

<b>John Terpu</b>	Executive Chairman
<b>Kathleen Bozanic</b>	Non-Executive Director
<b>Andrew Caruso</b>	Non-Executive Director
<b>Mark Petricevic</b>	Company Secretary
<b>Dr Bryce Healy</b>	Head of Exploration

## SHARE REGISTER SUMMARY

Strong share register



## CAPITAL STRUCTURE

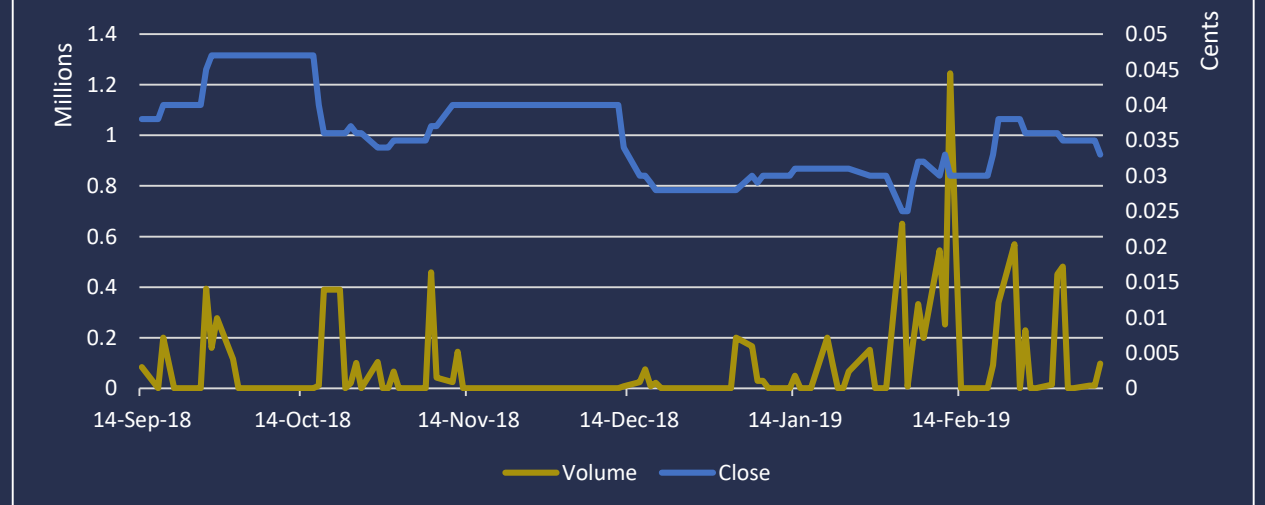
Issued Shares	300M <sup>1</sup>
Unlisted Options (exercise price \$0.02, expiry 31 Dec 19)	12.1M <sup>2</sup>
Director, Key Management holdings and top 20 holding	87%
Market Cap	\$10.8M <sup>3</sup>

1 - As at 29 March 2019.

2 - Held by consultants. 0.3m of which were issued under the Company's Long Term Incentive Plan.

3 - As at 29 March 2019.

## SHARE PRICE PERFORMANCE



# Management Team



## An experienced and highly qualified team

**John Terpu**

*Executive Chairman*

- Over **22 years** commercial and management experience.
- Former Managing Director of Conquest Mining Limited for 12 years and involved in the discovery of the Mt Carlton gold/silver/copper project.

**Kathleen Bozanic**

B.Com, ACA, AICD

*Non-Executive Director*

- Over **25 years** experience in compliance, governance, risk and financial management.
- Leadership experience in strategic transformation and restructure.
- CFO and General Manager of Finance experience in mining and construction companies.

**Andrew Caruso**

B.Eng (Mining)(Hons)

*Non-Executive Director*

- Mining executive with over **25 years** experience in the Australian and international mining industries, including significant corporate leadership and business development experience as well as operations and strategic planning and mine management.
- Includes 9 years as the Chief Executive Officer/Managing Director of a number of iron ore and coal operations and development companies.

**Mark Petricevic**

B.Com, ICAA, AGIA

*Company Secretary & CFO*

- Over **16 years** experience including 4 years as an Audit and Assurance Partner at major global accounting firm.
- Extensive experience in audit, assurance, governance, financial risk management, statutory reporting, controls and compliance.
- Significant leadership experience in business development, strategy and corporate finance transactions.

**Dr Bryce Healy**

MAIG, PhD,

BSc Hons 1<sup>st</sup> Class (Geology)

*Head of Exploration*

- Structural geologist with over **15 years** experience consulting experience in the exploration and mining sector.
- Specialises in exploration targeting and prospectivity reviews; structural geological analysis and mapping at regional exploration through to mine-scale geology; due diligence and asset valuations on mineral exploration projects.

# Unlocking potential for investors

## An active gold exploration company with Projects in world renowned gold districts

- Aiming for rapid resource growth.
- Excellent metallurgy provides multiple potential development options.
- Large landholding (451km<sup>2</sup>)\* located in gold rich Laverton (>25m ounces gold).
- Deposit open in all directions and at depth
- <25kms from **multiple** gold processing operations.

### MON AMI GOLD PROJECT WESTERN AUSTRALIA

#### VALUE POTENTIAL

- Targeted drilling program seeking to rapidly add ounces.
- Potential to monetise quickly.

- Large tenure over 1,000km<sup>2</sup>\* in Mt Carlton Region (>20m ounces gold).
- Geographical compatibility to existing mills. <20km to Mt Carlton Mine.
- Large porphyry system and multiple breccia pipes identified – discovery potential.
- High grade rock chip samples noted to date.
- Management experience in the region through Mt Carlton discovery.

### EDINBURGH PARK PROJECT NORTH QUEENSLAND

#### VALUE POTENTIAL

- Large, underexplored tenure.
- High grade results to date.
- Significant porphyry system identified.
- Potential for new discoveries.

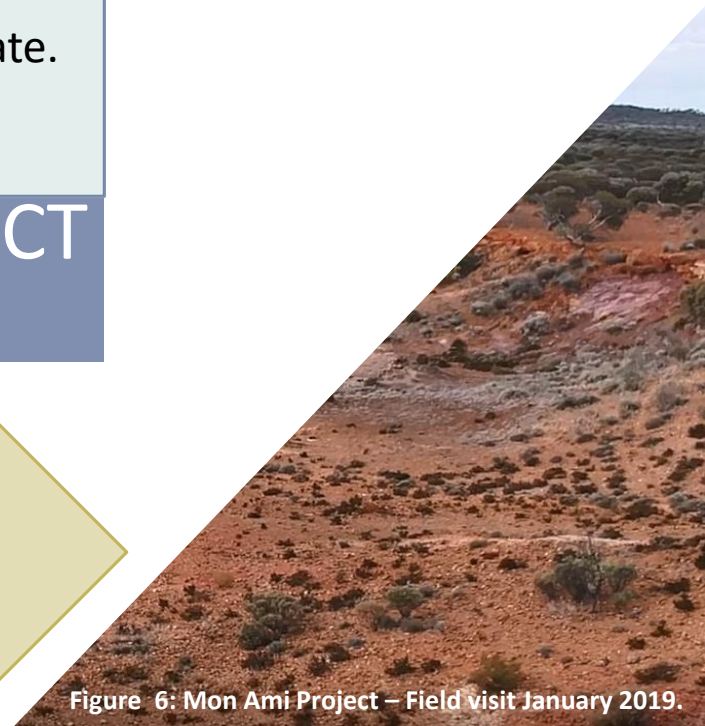
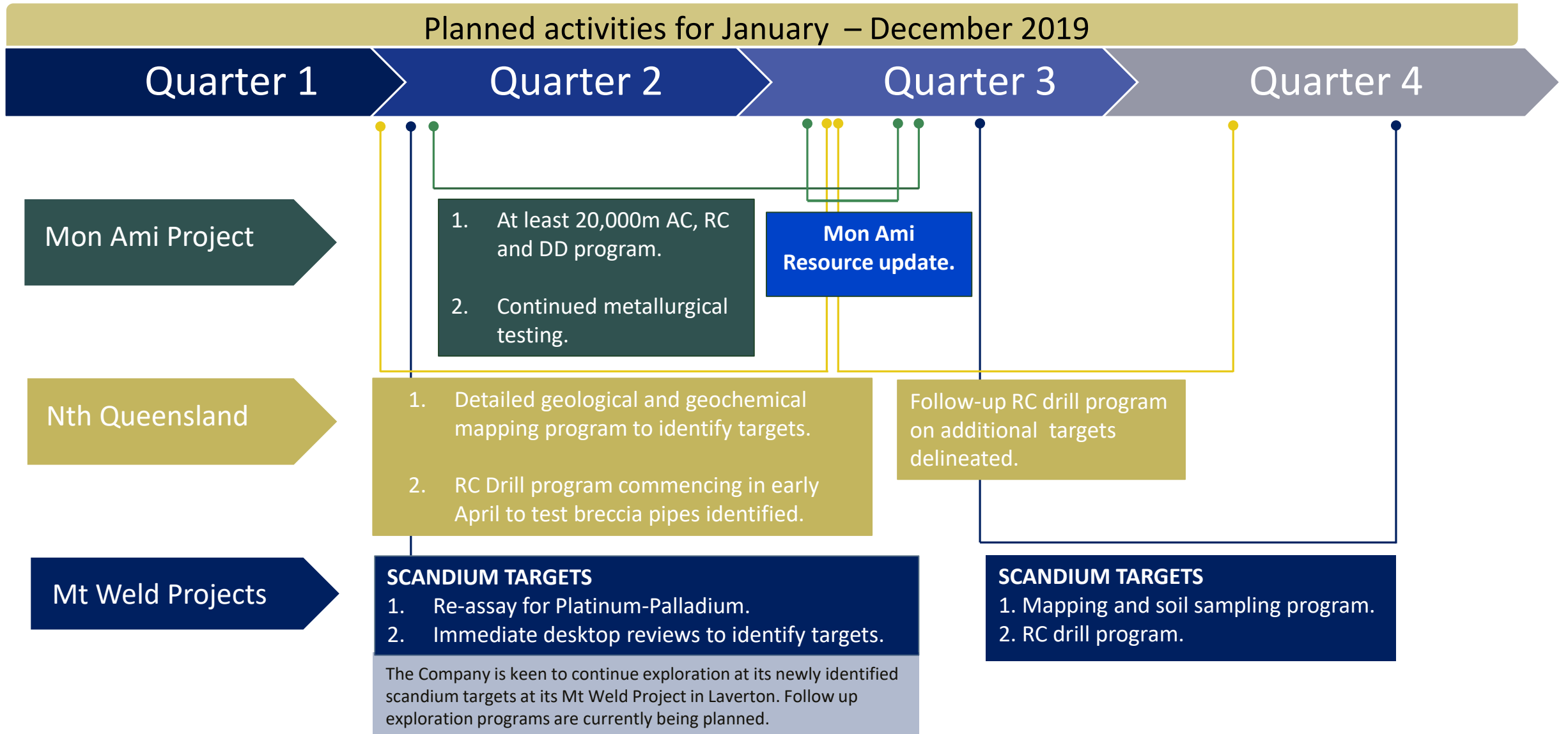


Figure 6: Mon Ami Project – Field visit January 2019.

\* 405km<sup>2</sup> in East Laverton and 519km<sup>2</sup> in North Queensland is subject to application. Tenure holding inclusive of tenements subject to grant. The Directors are not aware of any reason why the tenements would not be granted to the Company.

# Pathway to Value Generation





# Project Locations

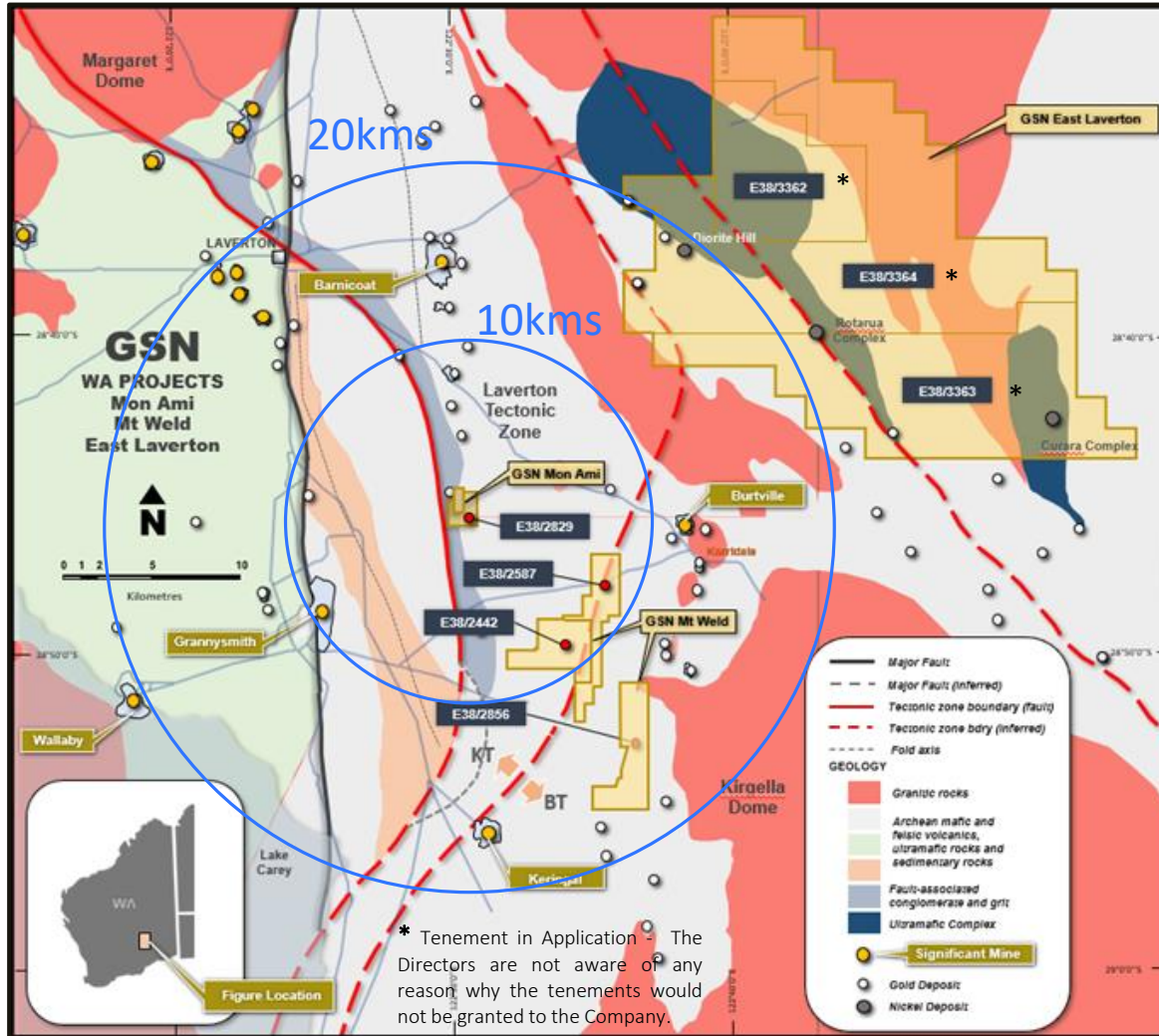


Figure 7: Proximity of Mon Ami Gold Project and other GSN Laverton Projects to existing mines and infrastructure.

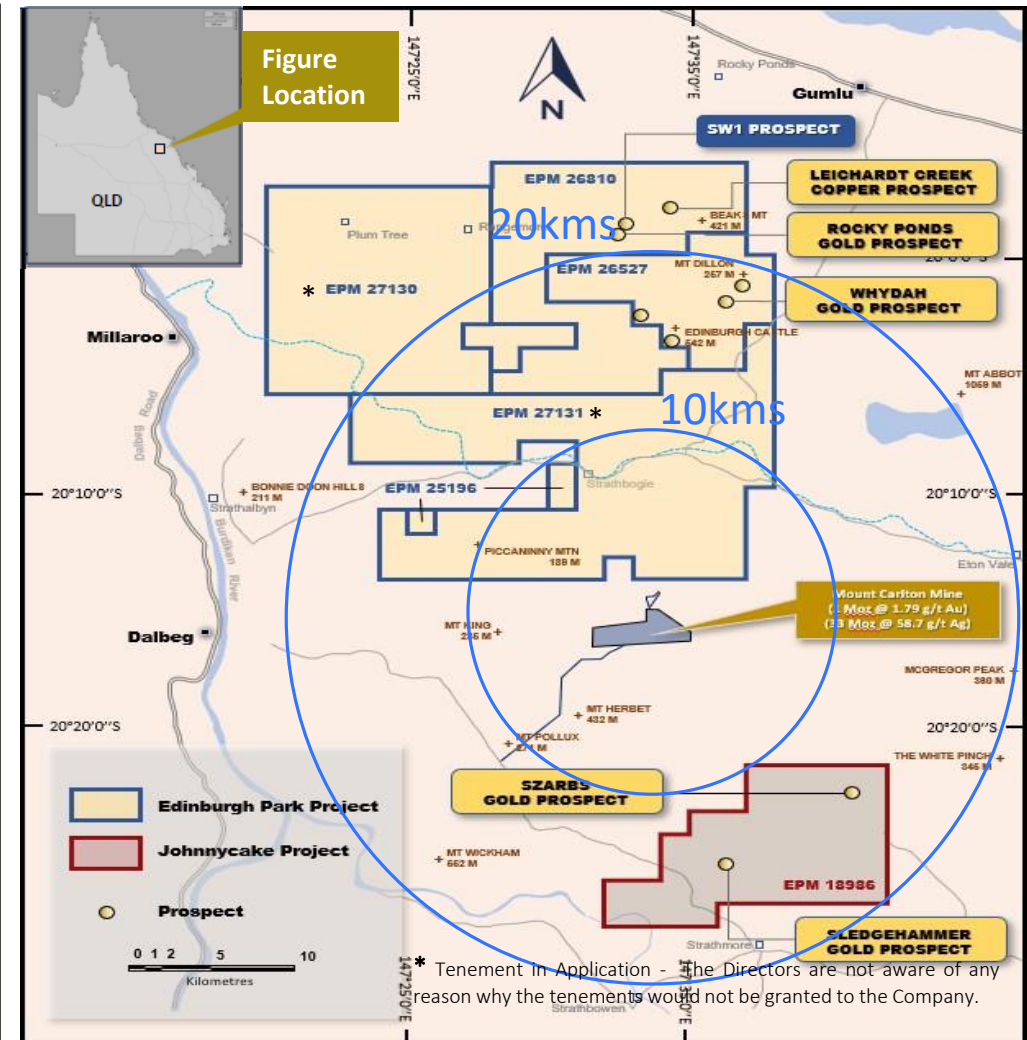


Figure 8: Location of Edinburgh Park Project, along with major Copper, Gold, Silver and Molybdenum porphyry discoveries.



# Mon Ami Gold Project - A New Gold Discovery



## MAIDEN MINERAL RESOURCE ESTIMATE (MRE)

In November 2018 the Company released its MRE on the Mon Ami Gold Project - noting a new gold discovery. The MRE uses a 1.0 g/t cut-off and is reported as follows:

Classification	Tonnes ('000)	Grade (g/t Au)	Ounces ('000)
Inferred	1,100	1.7	59

### Notes:

Discrepancies may occur due to rounding.

Historic mining depletion has been taken into account.

The MRE excludes mineralisation noted >150m below surface.

Cut-off	Grade Au g/t	Tonnage (000's)	Au Ounces (000's)
0.4	1.2	1,937	77
0.5	1.3	1,734	74
0.6	1.4	1,595	72
0.7	1.5	1,478	69
0.8	1.6	1,320	66
0.9	1.6	1,204	62
1	1.7	1,071	59
1.1	1.8	932	54
1.2	1.9	797	49
1.3	2.0	687	44
1.4	2.1	587	40
1.5	2.2	524	37

Sensitivity of grade-tonnage to cut-off - gold

## HIGHLIGHTS

- Deposit is open in all directions.
- The MRE is based on only 10,052m of drilling. 65 Reverse Circulation holes and 2 diamond holes.
- Since 2009, \$1.5m spent on the project with over \$1m spent by GSN since February 2018.
- Discovery cost per resource ounce of June 2018 drilling of approximately **\$15/oz.**
- Mineralisation below 150m currently excluded from the MRE. Multiple holes finished in mineralisation below this point.
- Deposit is in the renowned Laverton gold field with over 25m ounces of gold discovered to date.
- Close proximity (within 25kms) to substantial milling operations.
- Metallurgical test work indicates >95% recovery from conventional methods.

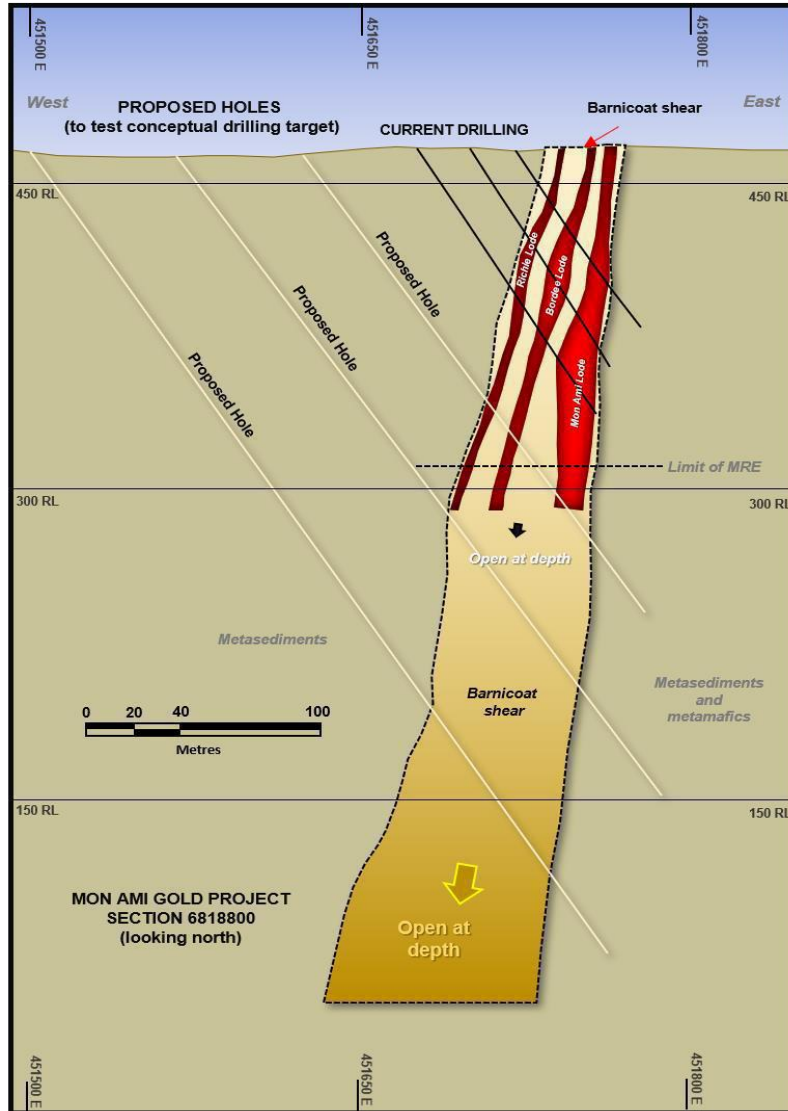


Figure 9: Geological cross-section through the deposit showing the Location of proposed drilling and basic geology.

## GEOLOGY OF DEPOSIT

- Currently three north-south trending extensions split into three lodes.
- All are open in all directions.
- Constrained by drilling to date – multiple holes hit mineralisation below 150m not included in MRE.
- Additional ground acquired (refer Figure 12) provides potential extensions along strike of more than 800m – 1,000m to the south.
- Extension targets are untested by modern exploration methods.

## NEXT STEPS:

- 1) Seeking to rapidly add ounces with drill extensions to the south over a continuous 800m – 1,000 m strike;
- 2) Expand the Resource at depth, testing extensions below 150m.
- 3) Test underground potential.

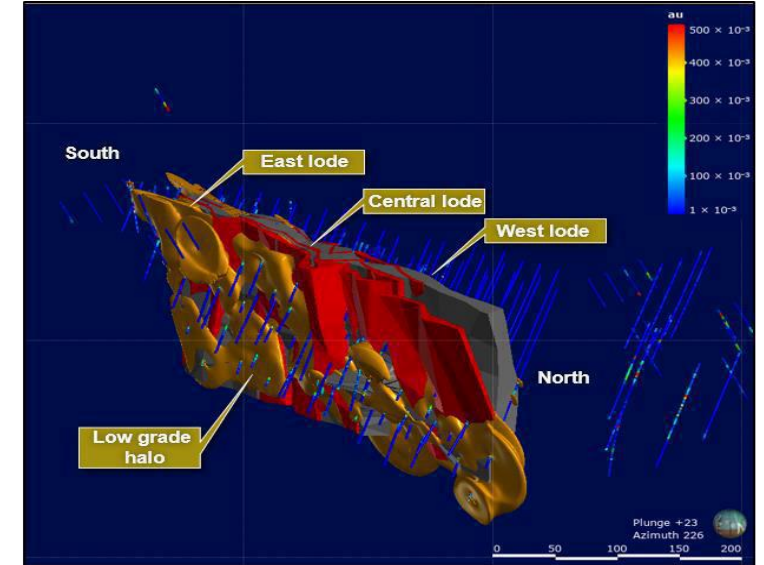


Figure 10a: Block Model - Geological cross-section of Mon Ami

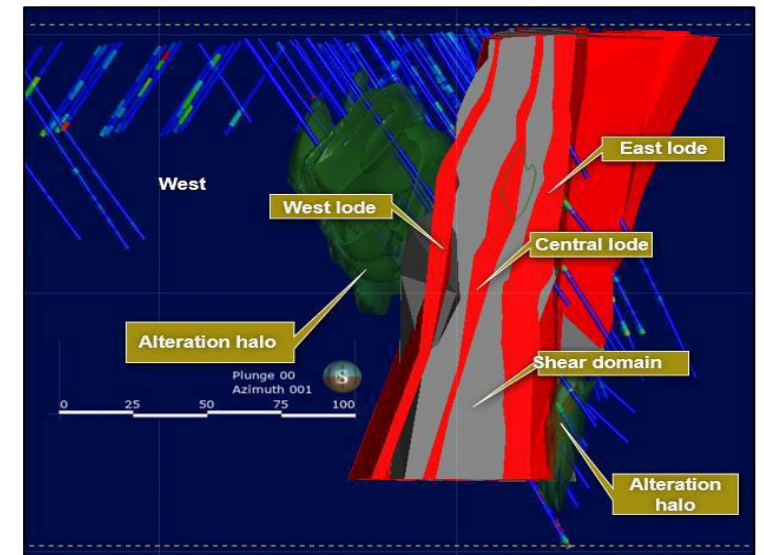
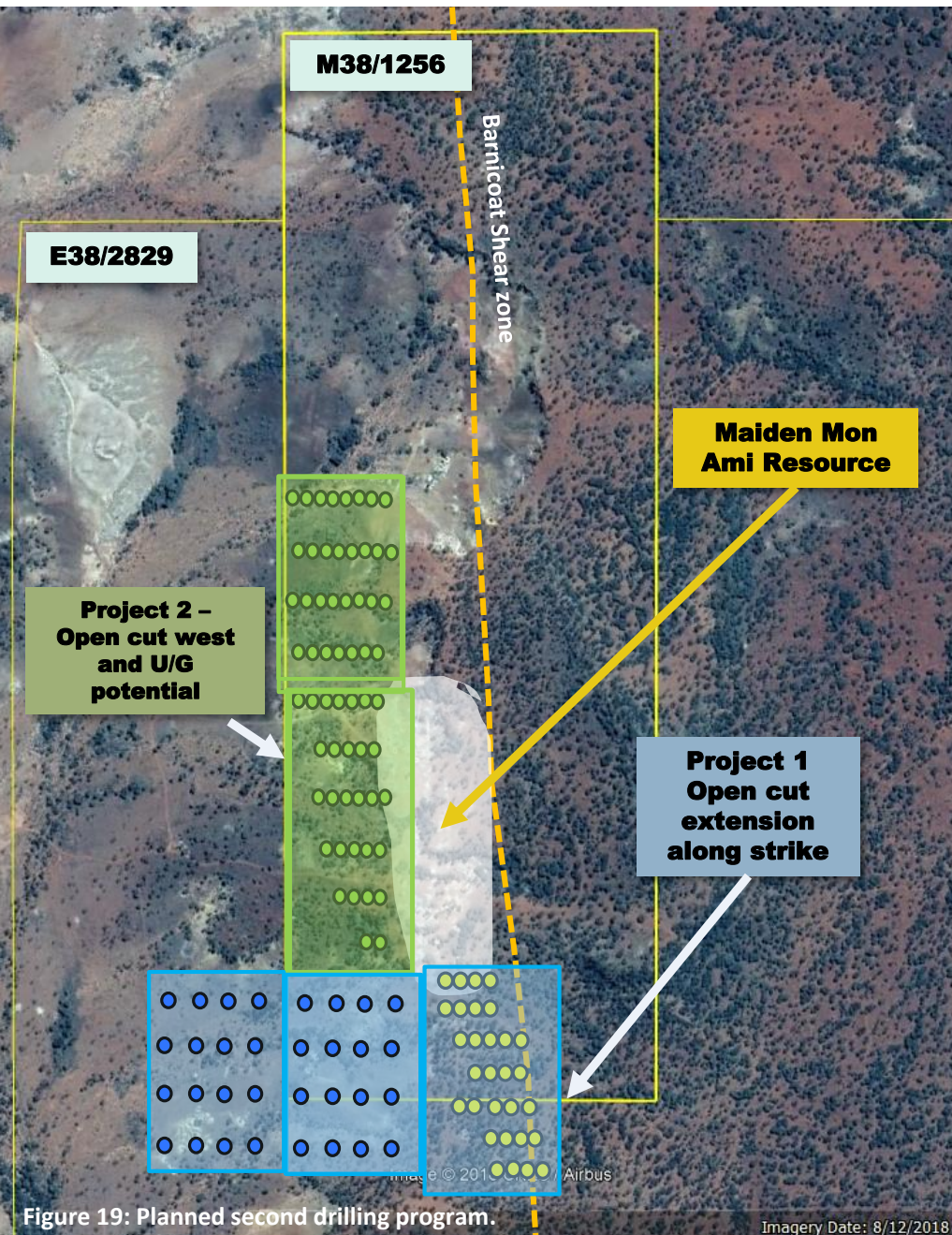


Figure 10b: Block Model - Geological cross-section of Mon Ami





## NEXT STEPS - SEEKING TO RAPIDLY ADD OUNCES

The second program consists of at least **20,000m** of drilling split into two projects.

### Project 1 – Open cut extension

- 88 Reverse Circulation holes and 3 Diamond Core - total up to **15,700m**.
- Targeting the following:
  - **Extensional drilling south and east:** additional ounces over 800m strike extension.
  - **East of Barricoot Shear:** Underexplored with no historical drilling. Potential for new discoveries.
  - **Infill drilling:** add additional ounces rapidly to current resource.

### Project 2 – Open cut west and underground potential

- 52 Reverse Circulation holes and 3 Diamond Core - total up to **10,400m**.
- 20% testing underground potential with hole depths range from 212m to 360m.
- Targeting the following:
  - **Defined deposit:** targeting extension under the current deposit (central).
  - **Extensional to the West:** targeting extension to the west north of current resource with noted east – west trending.

## NEXT STEPS – SEEKING TO RAPIDLY ADD OUNCES

- Infill and extensional drilling seeking to add ounces quickly. Estimated Exploration Target released to ASX 21 February 2019.
- Continued metallurgical test work.
- **Updated JORC Resource estimated Q3 2019.**



Figure 11: Historic headframe and shaft at Mon Ami.



# Mon Ami Gold Project – Mirrors significant deposits along strike

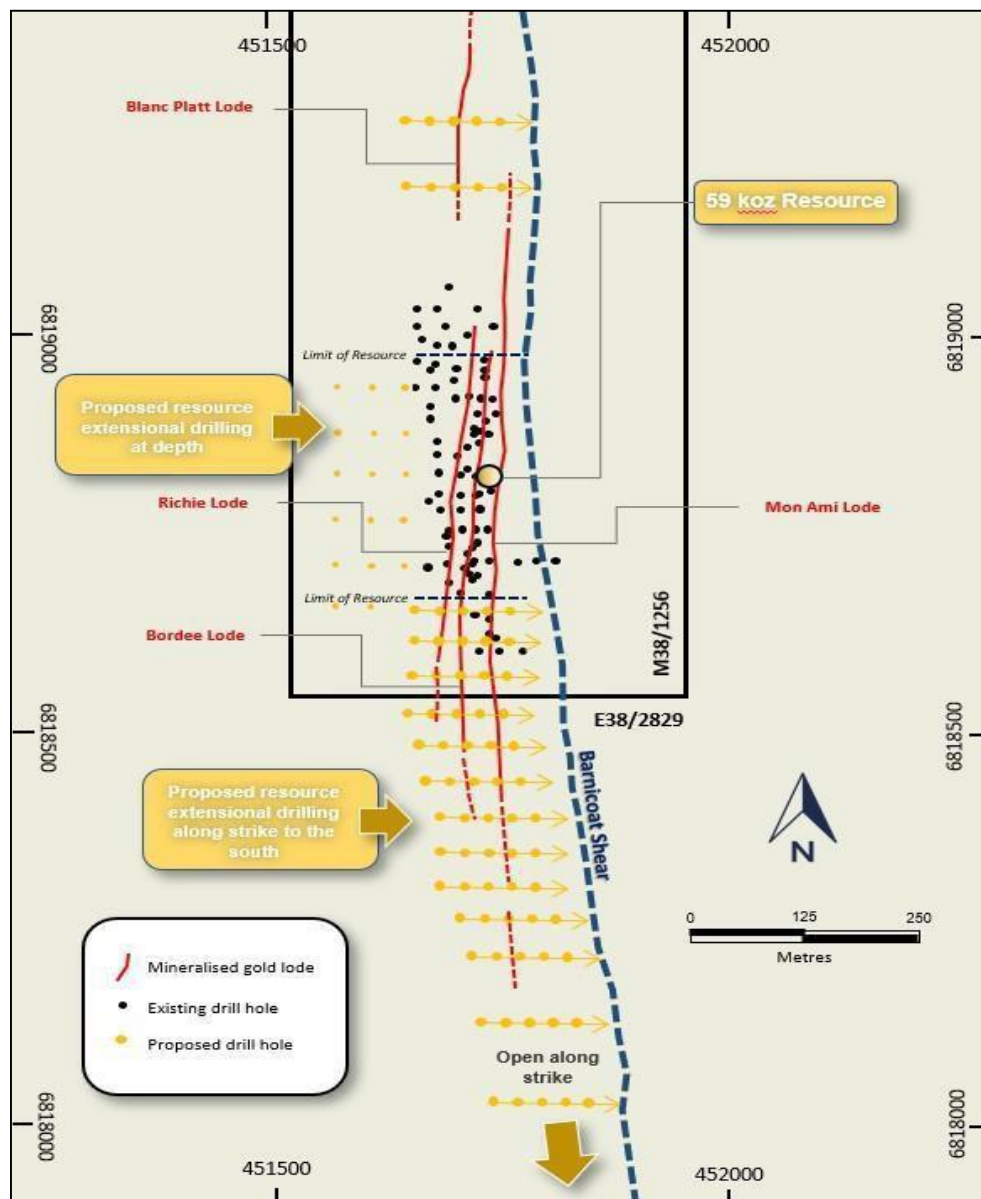


Figure 12: Location of proposed drilling and basic geology.

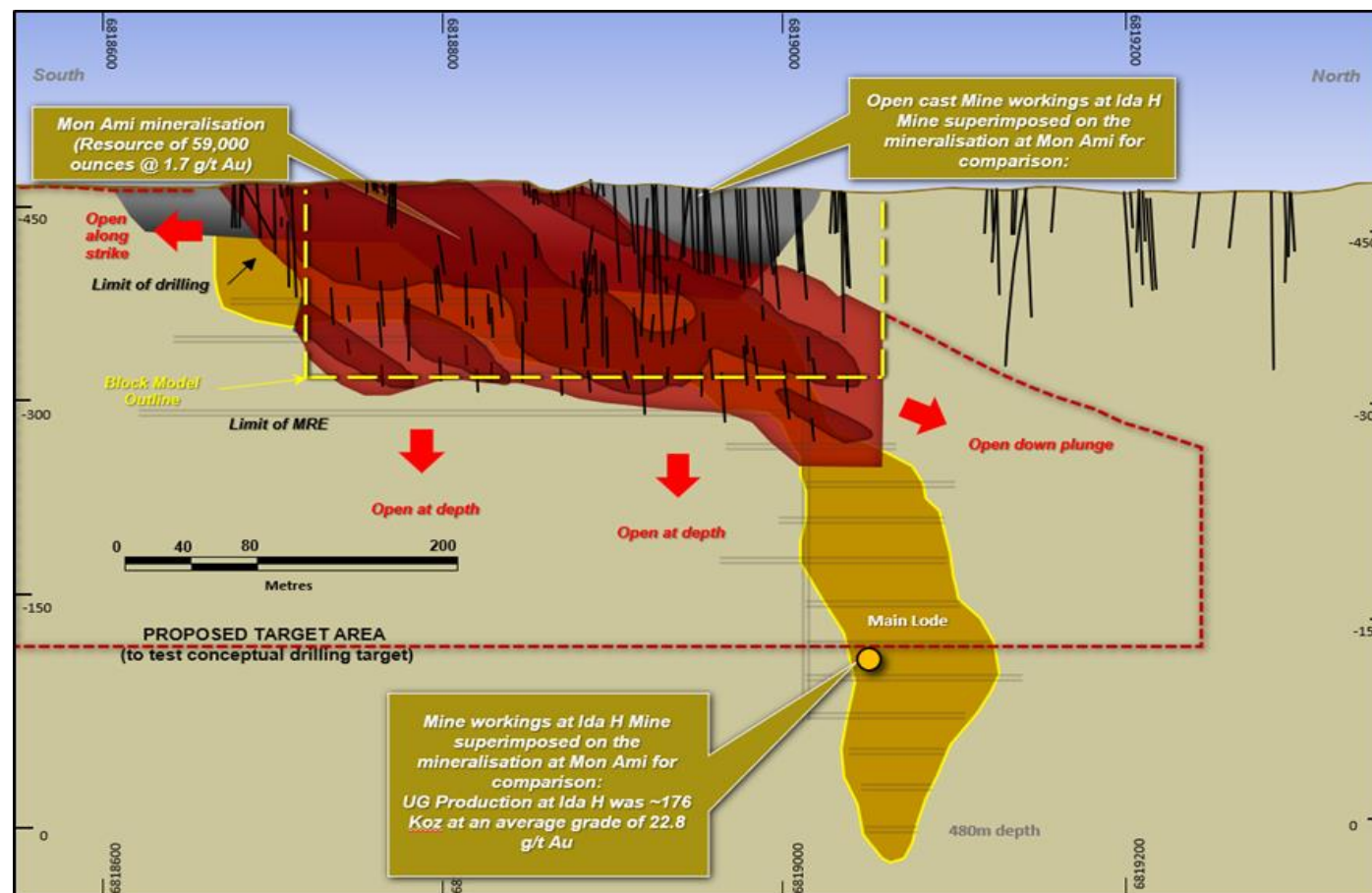


Figure 13: Mon Ami comparison to Ida H.

## Ida H mine:

- Only 6kms north of the Mon Ami Gold Project.
- Produced **172k oz's at 22.6 g/t.**
- Down to 480m. Similar to Mon Ami with down plunge lode style deposits with high grade at depth.



# North Queensland – Adding value through discovery

## HIGHLIGHTS:

### Edinburgh Park Project

- Large Greenfield tenure (>1,000 km<sup>2</sup>). **Increases discovery potential.**
- Highly prospective area only 20kms from **Tier 1 Mining project in Mt Carlton** (Evolution Mining Limited);

## PROSPECTIVITY:

- The geological setting is an extension of the epithermal geology at Mt Carlton;
- Management have extensive experience in the region with John Terpu's involvement in discovery of Mt Carlton project.
- The geology has demonstrated extensive mineralization associated with:
  - **Significant porphyry system** and associated stockworks;
  - Intrusive related hydrothermal **breccia pipes** (e.g. Kidston, Mt Wright, Mt Leyshen, Welcome - Style);
- Polymetallic systems with rock chips from gossanous outcrops confirming potential for economic grades of **Gold (up to 10.6 g/t)**, **Silver (up to 315 g/t)** and **Copper (up to 1.95%)** as well as elevated zinc and lead;
- All within 40km's of operating mines, 45 minutes from Townsville.

## NEXT STEPS:

- Detailed mapping and geochemical program continuing through Q1 and Q2 2019.
- Target delineation for drill programs. Breccia pipe subject to immediate RC drill program commencing early April 2019.
- Following mapping program in Q1 and Q2, extensive drill programs planned for **Q3 2019.**

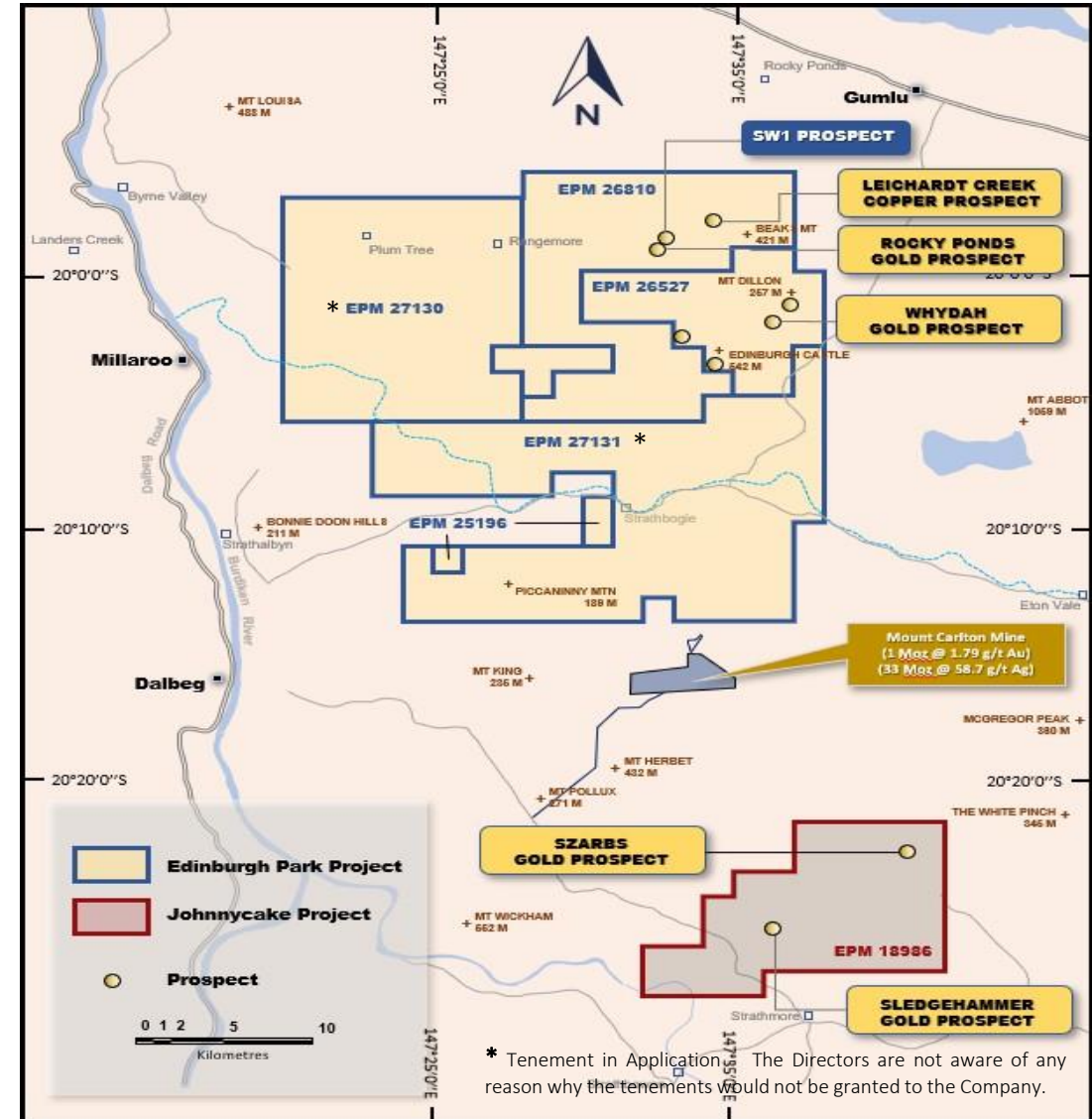


Figure 14: Map of Qld Tenements and neurology to Mt Carlton Mine.

## HIGHLIGHTS:

- Recent geological mapping and geochemical sampling program has to date defined a large mineralised porphyry system over **6km<sup>2</sup>**.
- Extensive mineralised gossanous quartz vein stockworks and disseminations appear to host polymetallic Au-Ag-Cu-Zn-Pb mineralisation.
- Reconnaissance rock chip samples up to **0.56% Cu**, **0.12 g/t Au** and **0.45% Mo**.
- Regional mapping and geochemical programs ongoing with geophysical surveys planned for Q1 2019.

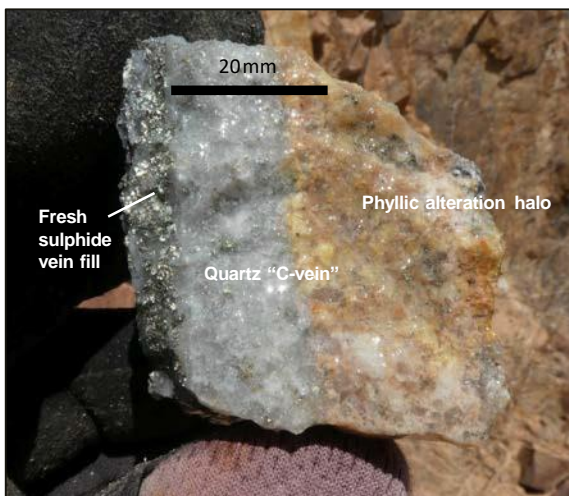


Figure 15: Transition through sulphide vein fill central to the quartz vein and strong phyllic alteration halo.

## PROSPECTIVITY

- Intrusive related gold system (IRGS) breccia-hosted gold deposits similar in style to the **Kidston (5 Moz)**, **Mount Leyshon (3.5 Moz)**, **Mt Wright (1.0 Moz)** and **Welcome (0.21 Moz)** deposits; and
- Molybdenum-copper mineralization associated with miarolitic granophyres within the intrusive complex.

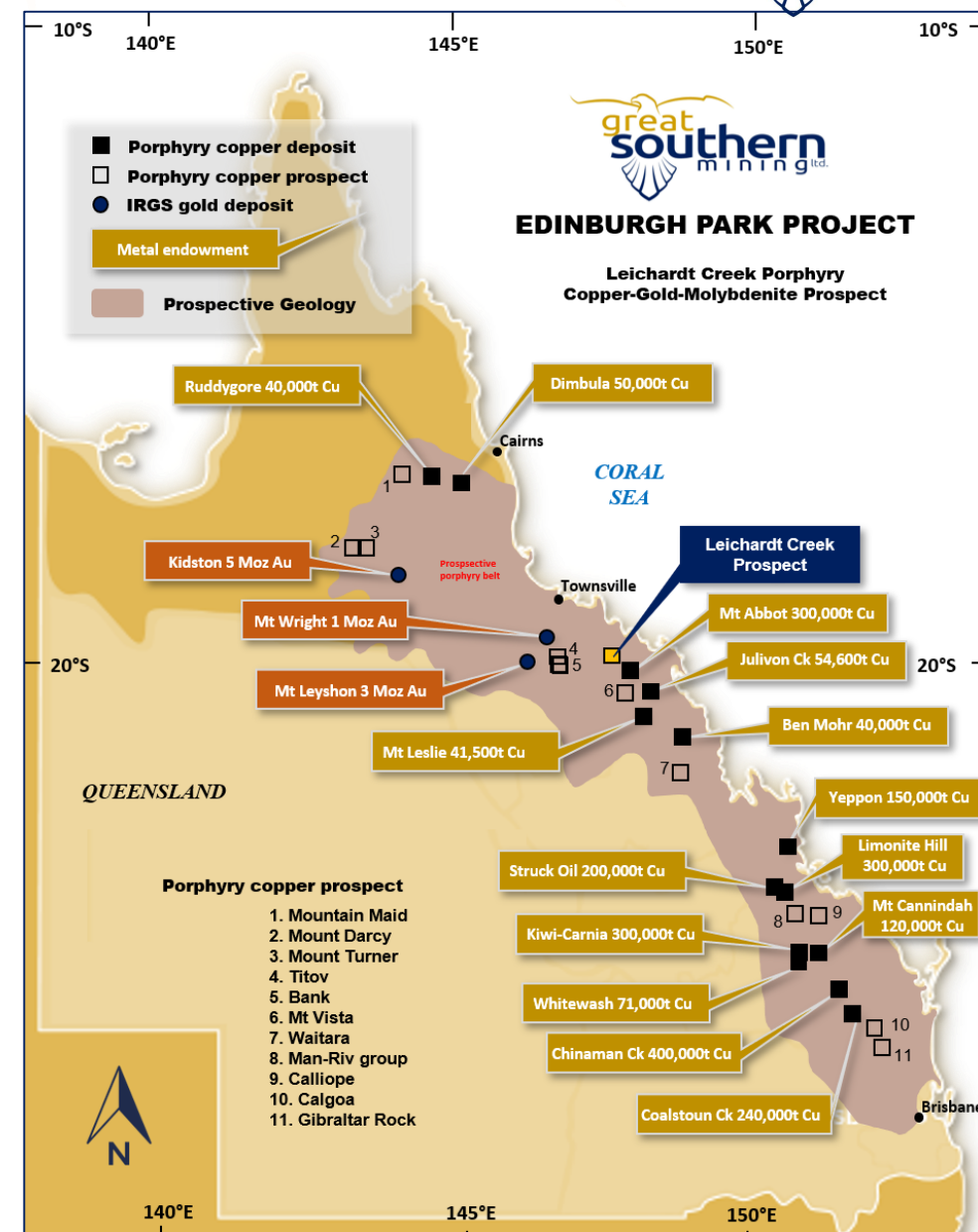
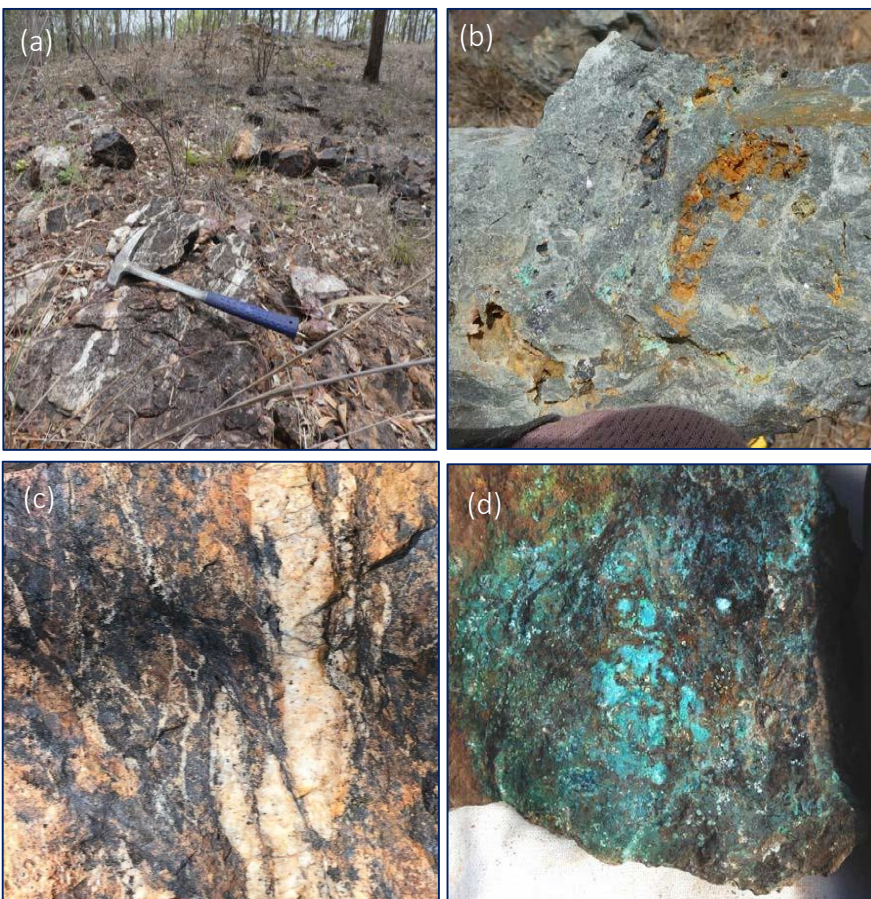


Figure 16: Location of Edinburgh Park Project, along with major Cu (±Au and Mo) porphyry discoveries.





- (a) Gossanous stockwork zones up to 10m wide with compact fine comb quartz and gossan infill in cavities.
- (b) Fresh galena and sphalerite mineralisation in the stockworks.
- (c) Stockworked qtz veins up to 1.5m wide with coarse comb quartz with open cavities and after pyrite.
- (d) Silicified diorite with abundant malachite, azurite, FeMn oxides and fine grained galena and sphalerite (No visible pyrite), along the contact between diorites and the stockworked granites to the east.

## BRECCIA PIPES:

Polymetallic systems with rock chips from gossanous outcrops confirming potential for economic grades of **gold (up to 10.6 g/t), silver (up to 315 g/t) and copper (up to 1.95%)** including:

10.6 g/t Au, 11 g/t Ag and 0.07% Cu;  
 0.36 g/t gold, 315 g/t silver, 1.9% copper and 0.29% lead;  
 4 g/t Ag, 0.84% copper and 0.20% zinc;  
 0.2 g/t gold, 12 g/t silver, 0.07% copper 0.24% zinc;  
 15 g/t Ag, 0.8% Copper and 1.16% Zinc;  
 0.1 g/t gold, 0.33% copper and 0.14% zinc

## PROSPECTIVITY

- Can be highly prospective and polymetallic.
- Tend to occur in clusters.
- Only 10% of tenure mapped. Potential for more discoveries.

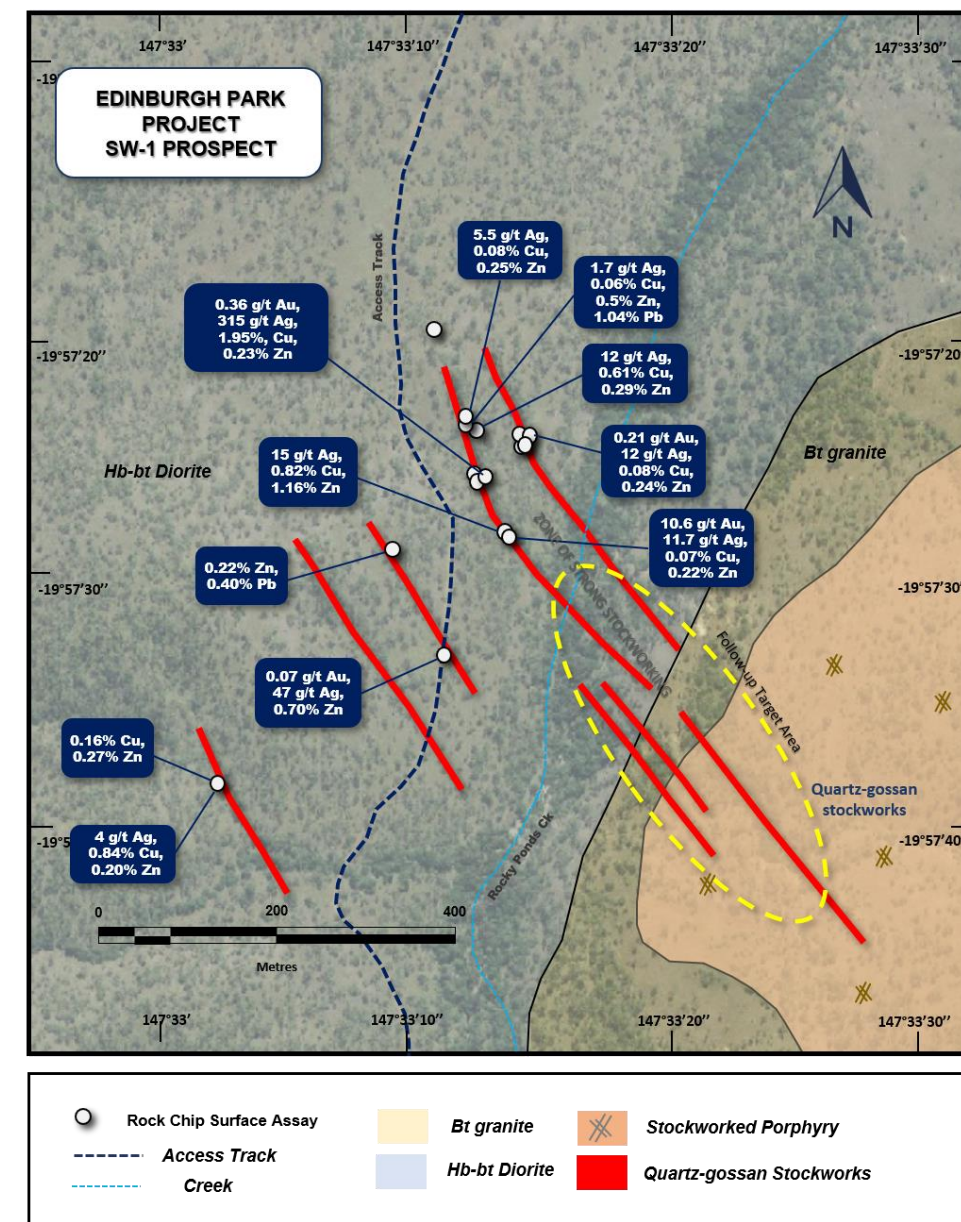


Figure 17: SW-1 Prospect with Rock Chip Results and locations.



# Mt Weld Project Tenement Package

## HIGHLIGHTS:

- Close proximity to Mon Ami Project extending over 51km<sup>2</sup>.
- Underexplored for gold (previous focus was nickel and rare earths).
- Exciting new cobalt-scandium (± nickel) exploration opportunity identified
- 100%-owned Mt Weld Project adjacent to the Mt Weld Mine operated by Lynas Corporation.
- 4m composite assay samples from drilling have returned up to **252 g/t Sc** and **0.35% Co**. Refer ASX announcement of 18 March 2019.

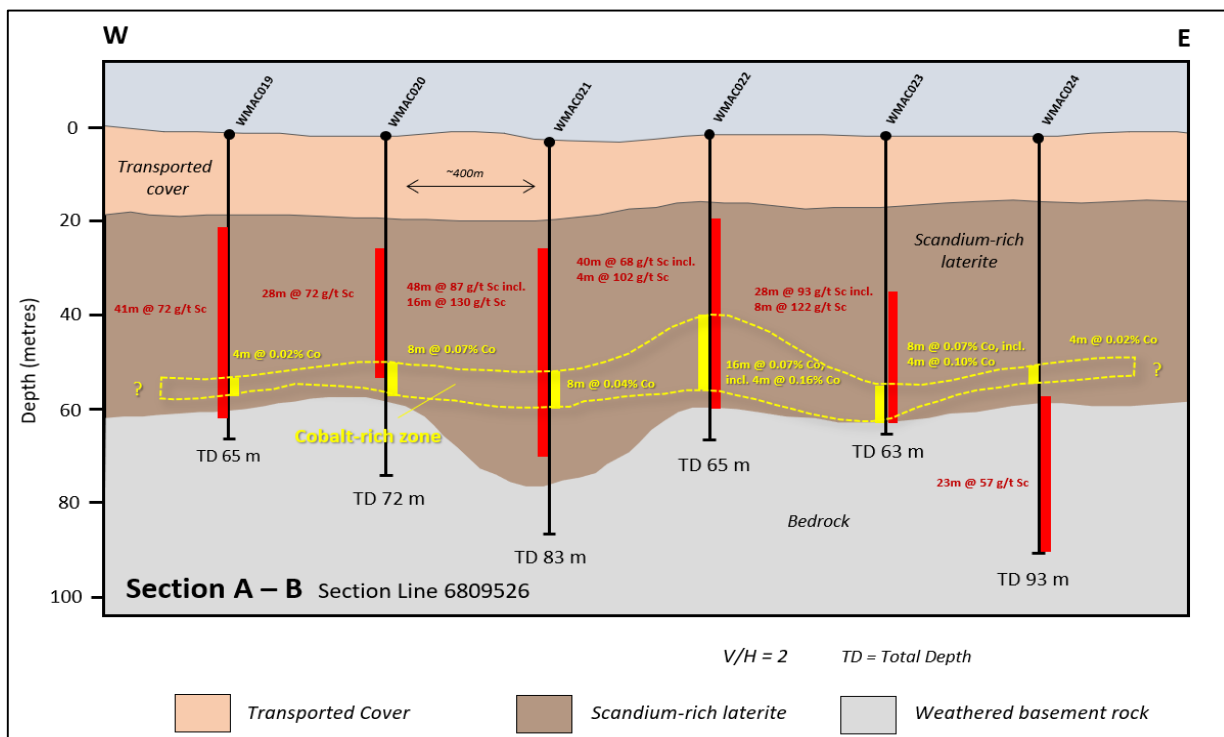


Figure 18: Interpreted drill section lines with scandium and cobalt mineralisation

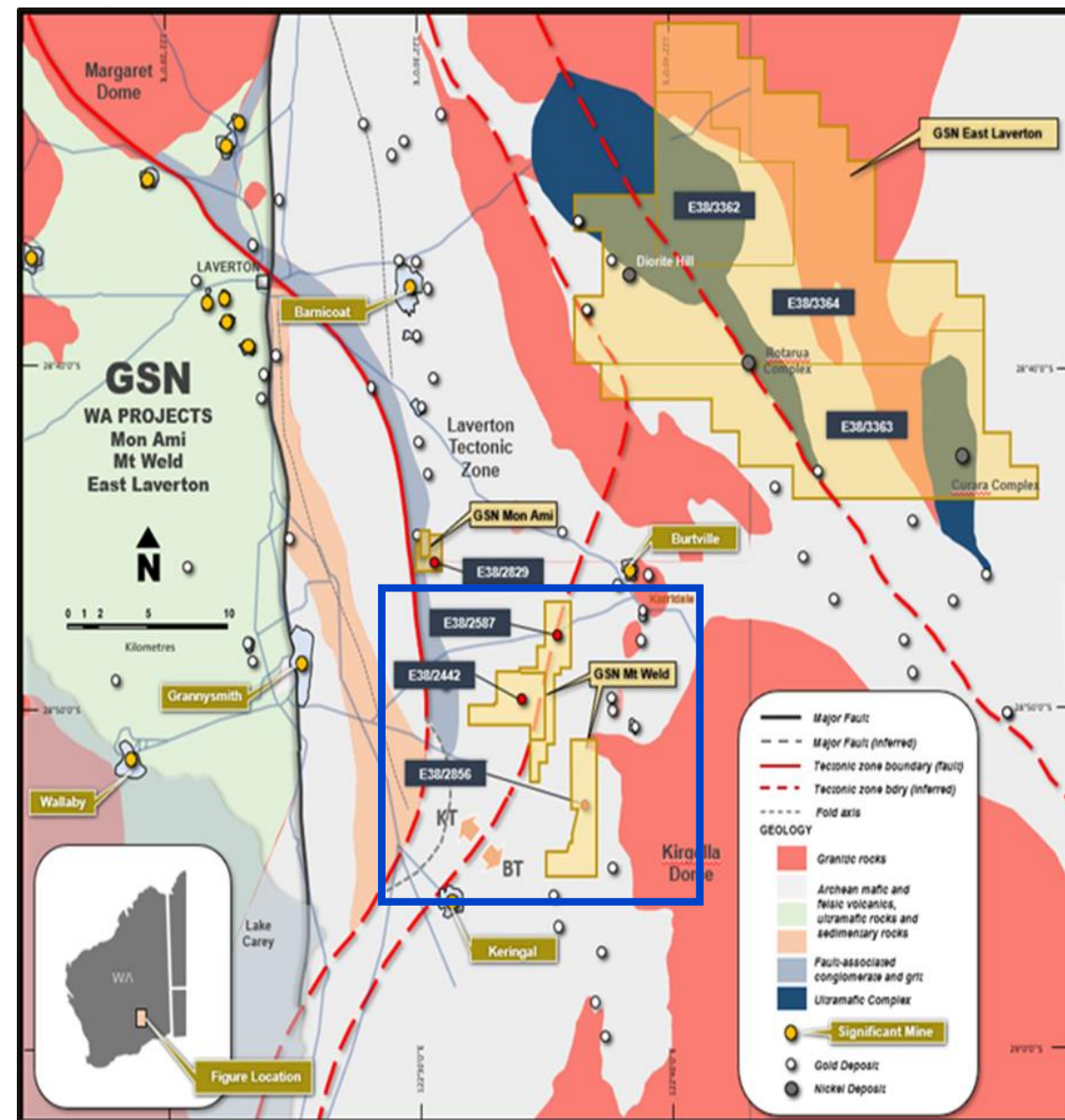


Figure 19: Location of the Mt Weld Project.



# Mt Weld Project Tenement Package

## HIGHLIGHTS (Continued):

- Historically underexplored.
- GSN analysis of aircore drilling undertaken in the past identified the following:

12m @ **116 g/t Sc** and 4m @ 0.02% Co (MWAC015)

12m @ **132 g/t Sc** and 4m @ 0.03% Co (MWAC017)

16m @ **130 g/t Sc** and 8m @ 0.04% Co (MWAC021)

4m @ **102 g/t Sc** and 4m @ 0.16% Co (MWAC022)

12m @ **164 g/t Sc** (MWAC026)

8m @ **102 g/t Sc** and 12m @ 0.19% Co (MWAC027)

- Potential to rapidly extend deposit through follow up drill program with closer line spacing and improved knowledge of structure.

## NEXT STEPS:

- GSN is currently in the process of re-assaying the samples for multiple elements including platinum and palladium.
- Continued review of information for target delineation for future drill programs in late 2019.

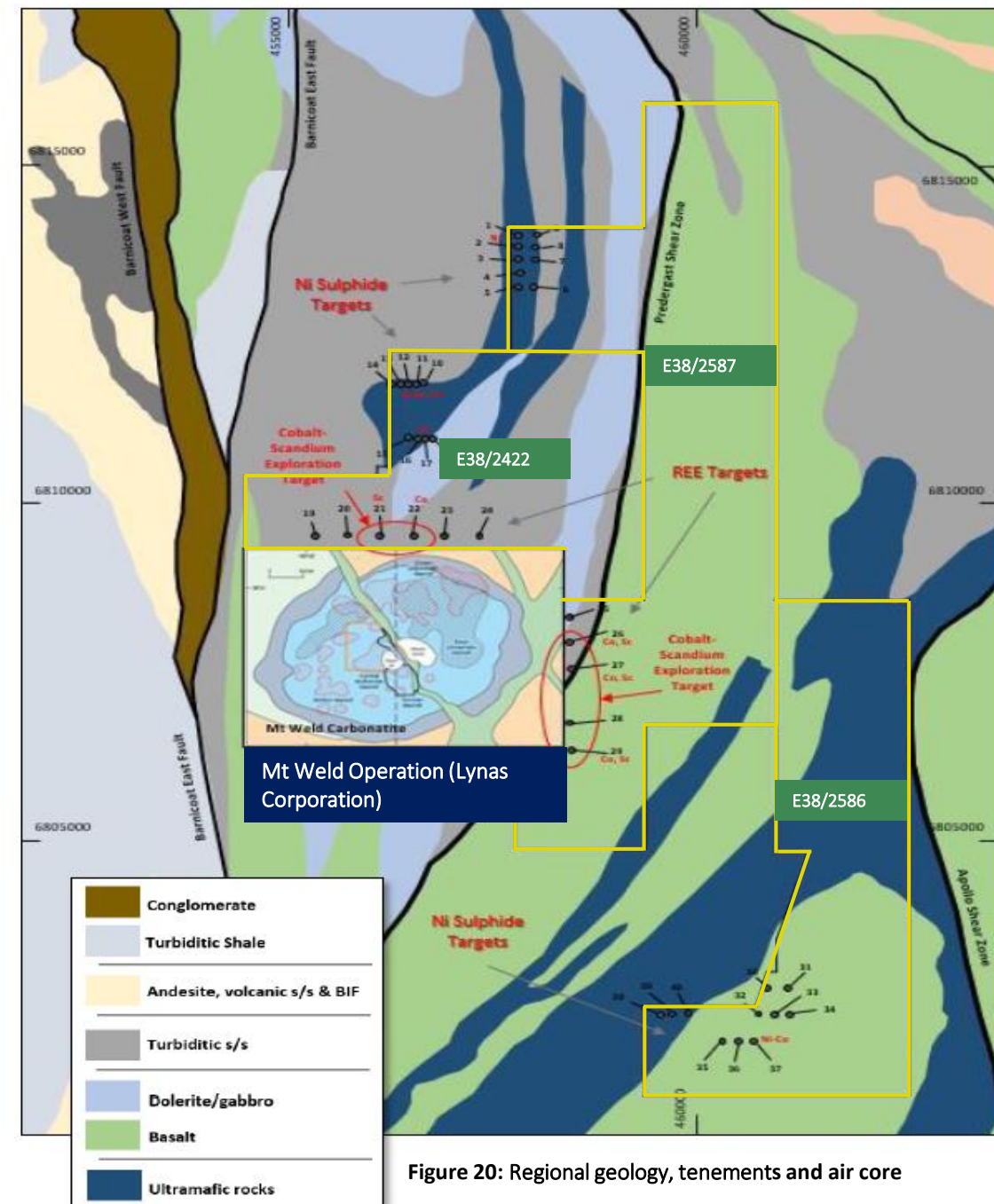


Figure 20: Regional geology, tenements and air core drill hole locations. (Source: Modified from Standing 2008 )

# Competent Persons Statement



## Competent Persons Statement

*The information in this report that relates to exploration targets and exploration results on ML38/1256, E38/2829, E38/2442, E38/2856, E38/2857, EPM26810 and EPM26527 is based on, and fairly represents, information and supporting documentation compiled by Dr Bryce Healy. Dr Healy is an employee of Noventum Group Pty Ltd (ACN 624 875 323) and has been engaged by Great Southern Mining Limited as Head of Exploration. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration. Dr Healy is a Member of the Australian Institute of Geoscientists and as such, is a Competent Person for the Reporting of Exploration Results, Mineral Resources and Ore Reserves under the JORC Code (2012). Dr Healy consents to the inclusion in the report of the matters based on his information in the form and context in which they occur.*

*The information in this report that relates to the Mineral Resources estimation approach at the Project is based on information compiled by Dr Michael Cunningham, GradDip, (Geostatistics) BSc honours (Geoscience), PhD, MAusIMM, MAIG. Dr Cunningham is a Principal Consultant, full-time, of SRK Consulting (Australasia) Pty Ltd. He has sufficient experience relevant to the assessment and of this style of mineralisation to qualify as a Competent Person as defined by the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)”. Dr Cunningham consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Dr Healy. Statements regarding the Company’s plans with respect to Mineral Resources, exploration programs and future developments are forward-looking statements. There can be no assurance that the Company’s plans will proceed at stated times in the future. Additionally, future drilling programs and outcomes presented are based on current estimates using information available at the time of the documents preparation. There is no guarantee that the programs will confirm the presence of additional mineral resources.*

*The Company has released all material information that relates to exploration results and Mineral Resources estimates on a continuous basis to the ASX and in compliance with JORC 2012. The Company confirms that it is not aware of any new information that materially affects the content of the announcements. Refer to each relevant announcements in the table for JORC 2012 compliant Table 1 disclosure.*

ASX Announcement referred to in this Presentation are as follows:

Date	Announcement
18-03-19	Cobalt - Scandium Targets confirmed at the Mt Weld Project
21-02-19	Acceleration of drilling activities - Mon Ami Gold Project
14-02-19	High grade rock chips returned at Edinburgh Park Project
11-02-19	Edinburgh Park Project - Rocky Ponds Breccia
06-02-19	Porphyry system identified at Edinburgh Park Project
31-01-19	Quarterly Cashflow Report
31-01-19	Quarterly Activities Report
25-01-19	Mon Ami Gold Project -Metallurgical announcement – updated
07-11-18	Mon Ami Gold Project - Maiden Mineral Resource Estimate
03-09-18	Acquisition of tenement package



