

14 February 2019

## ST GEORGE MINING – INVESTOR PRESENTATION

St George Mining Limited (ASX: **SGQ**) ('St George' or 'the Company') is pleased to issue a new Investor Presentation titled *"Building a High-Grade Nickel Sulphide Inventory in Western Australia"*.

This Investor Presentation has been issued to coincide with the major drilling campaign that is scheduled to commence this weekend at the Mt Alexander Project.

A copy of the new Presentation is attached.

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# *Building a High-Grade Nickel Sulphide Inventory in Western Australia*

*14 February 2019*



St George Mining Limited | ACN 139 308 973

**ASX: SGQ**

# Growth Nickel Stock

## *Building a High-Grade Nickel Inventory in a Rising Nickel Market*



### **Growth Focused Nickel Sulphide Explorer/Developer:**

- Outstanding discovery of high-grade nickel-copper-cobalt-PGEs at Mt Alexander
- Drilling continues to expand the footprint of mineralisation
- Located in one of the world's largest nickel producing regions

### **Positioned For Nickel Market Growth:**

- Nickel set for deepening deficit, falling stocks and rising prices
- Demand for battery grade nickel predicted to increase 19-fold over next 10 years
- Wood Mackenzie long-term forecast of US\$21,000/t

# Corporate Overview



*St George is listed on the ASX:*

**Listed shares (SGQ):** 298,116,211  
**Listed options (SGQOB):** 24,579,714  
*SGQOB - exercise price of 20c, expire 30 Sept 2020.*

**Market cap:** **A\$42m** (*@14 per share*)  
**Cash:** **A\$2.1m** (*at 31 Dec 2018*)

## Broad Shareholder Base

Over 3,500 shareholders including Australian and overseas institutions, high net worths and retail investors

## Share Ownership

Top 10: 19%      Top 20: 29%  
Directors: 9.16%

## Largest Shareholders

John Dawson: 4.6%  
John Prineas: 4.4%  
City Natural Res's: 3%

## Broker Coverage:

Argonaut: *Spec Buy*  
Bell Potter: *Spec Buy*

## Directors and Management with a Track Record of Success

**John PRINEAS, Executive Chairman** – founding shareholder with over 25 years experience in mining, and the banking and legal sectors servicing the resources industry.

**John DAWSON, Non-executive Director** – over 30 years in the finance and mining sectors where he occupied very senior roles with global investment banks Goldman Sachs and Dresdner Kleinwort Wasserstein.

**Sarah SHIPWAY, Non-executive Director/Company Secretary** – Chartered Accountant with extensive experience in advising listed exploration companies.

**Dave O'NEILL, Exploration Manager** – over 20 years experience as a geologist with particular expertise in nickel sulphide exploration gained in senior roles with WMC Resources, BHP and Western Areas; has managed exploration programmes at Mt Alexander for BHP and Western Areas.

**Charles WILKINSON, Technical Consultant** – over 32 years' as a geologist with 16 years at WMC including as Exploration Manager - Nickel. Joined Western Areas in 2008 as General Manager Exploration. During his 9 years at WSA, it significantly grew its resource inventory and became Australia's No. 1 independent nickel sulphide producer.

# Nickel Market Dynamics

# Nickel Outlook

## Price Increases Forecast

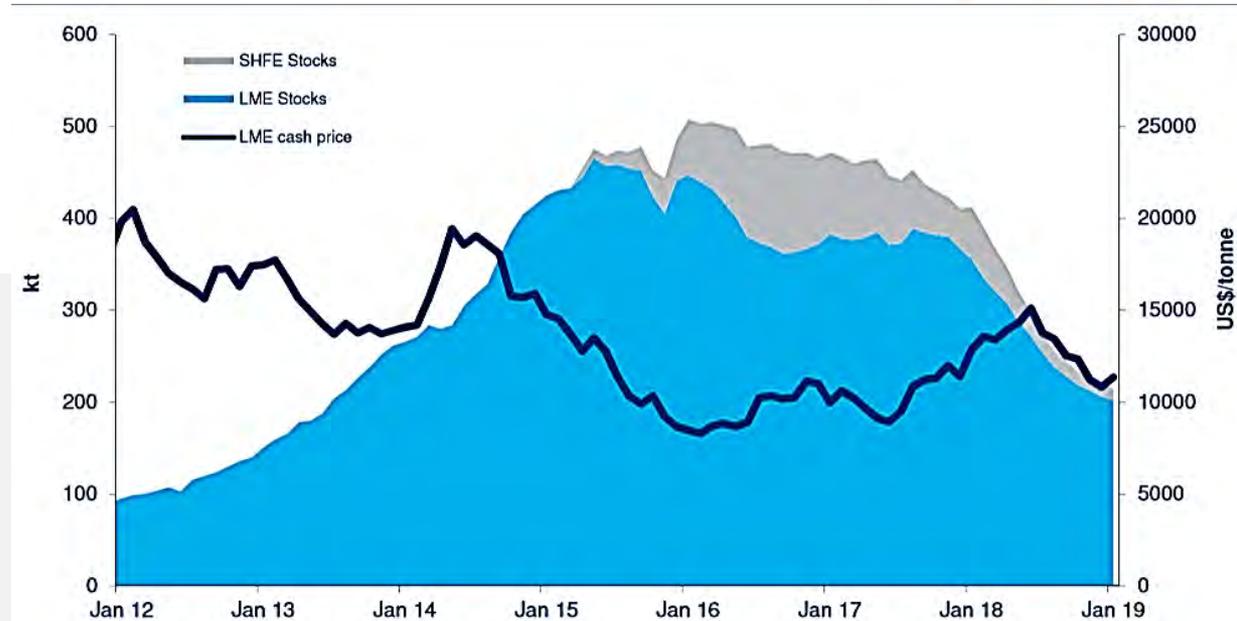
LME and SHFE stocks have fallen steadily from 370 kt in December 2017 to 200 kt today

Clear upswing in cycle with increases in the nickel price set to continue

Wood Mackenzie forecasts a long term price of US\$21,000 /t

Market dynamics are driven by:

- Cyclical growth in demand
- Traditional stainless steel demand for nickel grew by 5% in 2018
- Structural growth in demand with battery revolution – electric vehicles (EV) and alternative power
- EV battery market forecast to grow c. x10 by 2025



Source: LME; SHFE

### Long Term Price Forecasts Set to Increase

(US\$ / t)



Source: Broker Consensus, CapIQ

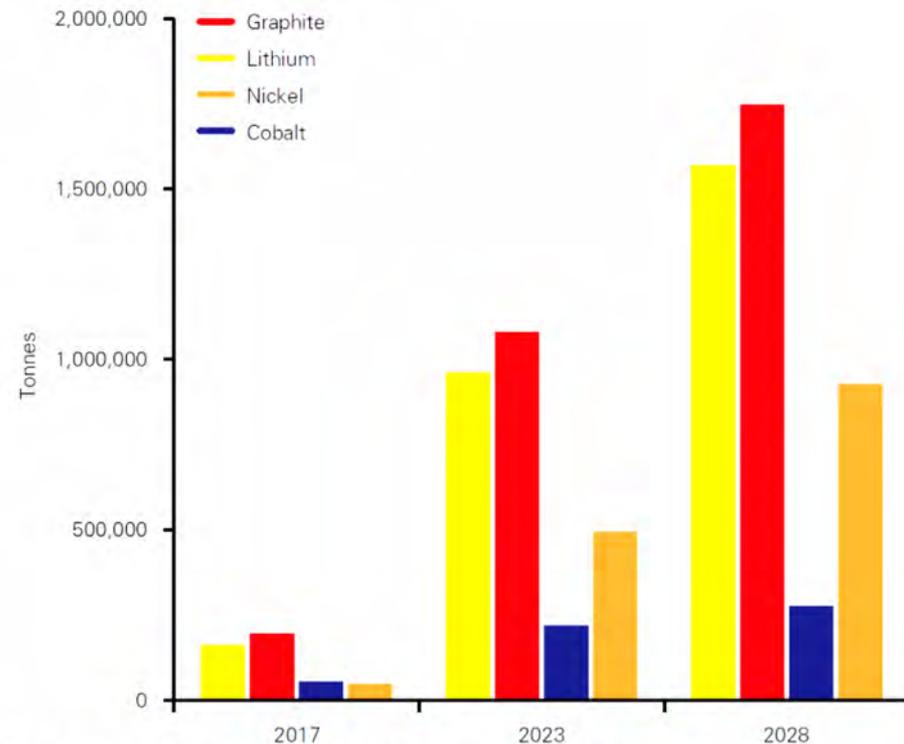
**BHP: 90% of nickel sulphide production will be sold for batteries from 2019 to meet increasing demand from EV's:**  
*Diggers & Dealers Conference, 7 August 2018*

# Electric Battery Revolution

## Nickel has most growth of battery metals

**Benchmark Mineral Intelligence, 5 February 2019, US Senate Committee:**

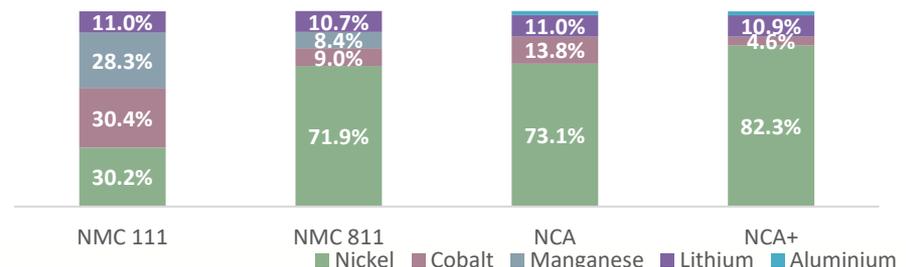
- 70 lithium-ion battery megafactories under construction globally – in Oct 2017 the number was only 17
- New plants almost exclusively designed to make NCM and NCA batteries (higher energy density and better performance)
- Potential for new plants to increase demand for “lithium by over eight times, graphite anode by over seven times, nickel by a massive 19 times, and cobalt demand will rise four-fold”



Source: Benchmark Mineral Intelligence

MATERIAL	2017	2023	2028
LITHIUM	162,752	961,351	1,570,020
GRAPHITE ANODE	194,160	1,080,360	1,747,800
COBALT	54,354	219,679	276,401
NICKEL	48,584	494,774	928,018

### Nickel Largest Ingredient in Cathodes



Source: Independence Group

# Securing Nickel Supply

- *Private equity recognises significant valuation upside and is accumulating assets*
- *Battery manufacturers are competing for supply by offering offtake finance and taking strategic stakes in miners*

## Texan firm makes its move on Poseidon

■ Stuart McKinnon

Texas-based Black Mountain Metals has signalled a firm intention to move into the WA battery minerals space by taking a 7.6 per cent stake in Poseidon Nickel and lobbing a \$67 million cash bid for the Andrew Forrest-backed explorer.

Shares in Poseidon surged 1.74, or nearly 44 per cent to 5.64

stake in Poseidon from New York investment bank Jefferies and would assume its \$US17.5 million convertible note holding in the company.

Black Mountain's proposal includes an offer of a \$2 million loan to Poseidon while it conducts due diligence.

Poseidon emerged from a trading halt yesterday morning to announce the proposal by

*The West,  
18 August 2018*

## US player strikes Lanfranchi mine deal

■ Stuart McKinnon

US private equity player Black Mountain Metals has struck a deal to buy Panoramic Resources' shuttered Lanfranchi nickel mine near Kambalda for \$15 million.

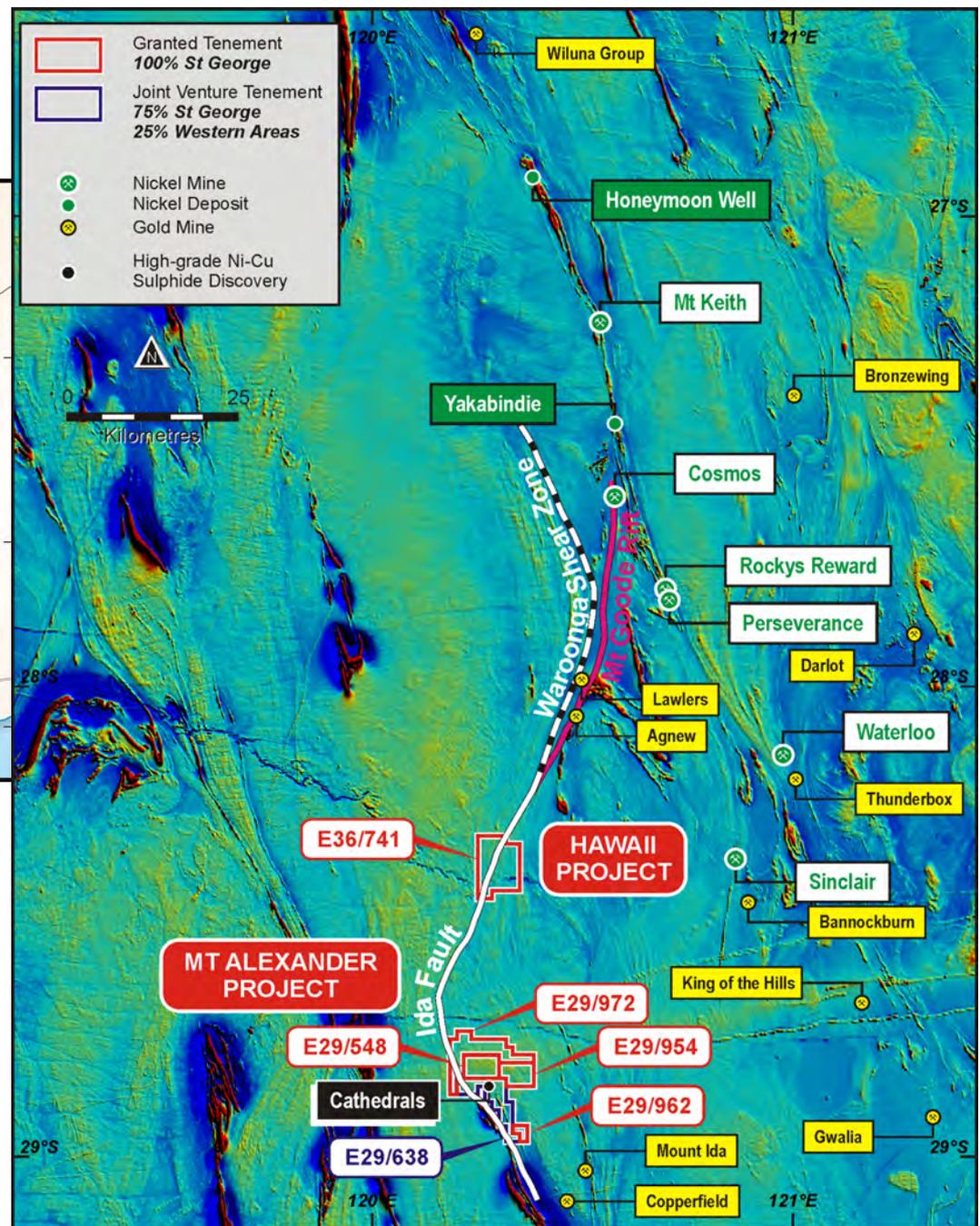
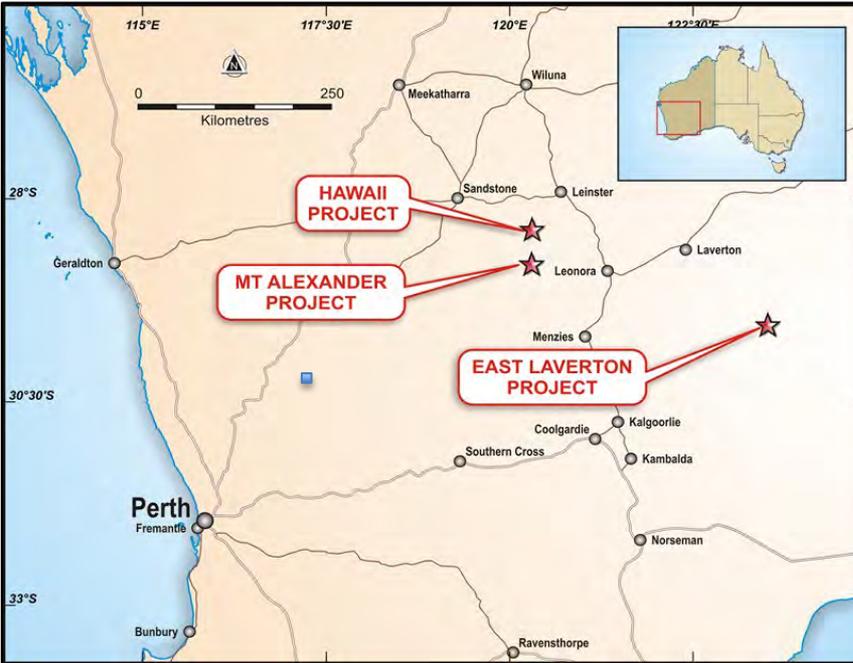
The announcement comes just weeks after the acquisitive, Carlyle Group-backed company launched an unsuccessful \$67 million takeover bid for Poseidon Nickel.

The deal highlights renewed

*The West,  
14 Sept 2018*

# High-Grade Discovery at Mt Alexander

# World Class Address



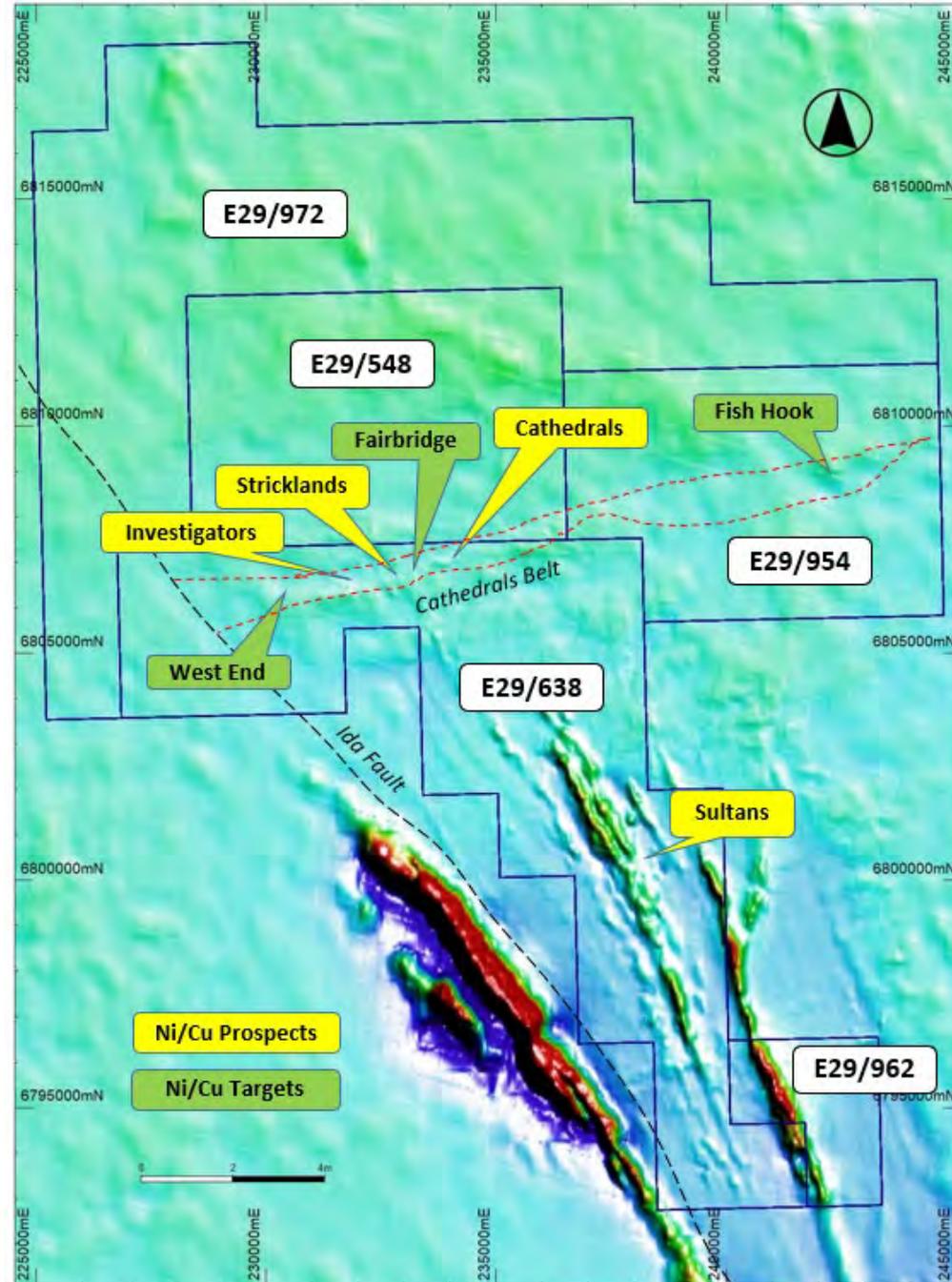
## Favourable Location:

- Located S-SW of world class nickel and gold mines of the Agnew-Wiluna Belt
- Close to infrastructure, processing plants, mining workforce & service industry
- Suitable and reliable jurisdiction

*The Cathedrals, Stricklands and Investigators Prospects are located on E29/638, which is held in joint venture by Western Areas Limited (25%) and St George (75%). St George is the Manager of the Project with Western Areas retaining a 25% non-contributing interest in the Project (in regard to E29/638 only) until there is a decision to mine. St George has 100% of all other tenements at Mt Alexander.*

# Large Mineral System

- *200 sq km tenement package with multiple discoveries and targets*
- *Potential to establish a nickel camp with several deposits*
- **Cathedrals Belt:**
  - *East-northeast oriented belt*
  - *Three discoveries – the Investigators, Stricklands and Cathedrals Prospects – within a 4.5km section of the Belt*
  - *Resouce definition drilling underway*
  - *New targets to be drilled in 2019*
- **Mt Alexander Belt:**
  - *North-northwest ultramafic belt with a strike of 7km*
  - *Widespread intersections of nickel sulphide mineralisation*
  - *Underexplored prospects including undrilled conductors*



*Right: Mt Alexander tenements against RTP magnetics with key prospects highlighted.*

# Exceptional Nickel-Copper Sulphide Discovery

## Cathedrals Belt Discovery at Shallow Depths:

- *Massive sulphide mineralisation 30m from surface*
- *Intrusive system with potential for significant mineralisation at depth*

## High Grade and Polymetallic:

- *Nickel sulphide plus copper, cobalt and PGEs (70% Pd,30% Pt)*
- *Key high demand battery/EV metals*

## Extensive Strike of Mineralisation:

- *Nickel-copper sulphides occur over a 4.5km strike of the Cathedrals Belt with potential extensions to the east and west*
- *100% success rate in testing EM conductors in the Cathedrals Belt*

*On right: Drill core from MAD56 that returned assays of 7.5m @ 3.90%Ni, 1.74%Cu, 0.12%Co and 3.32g/t total PGEs from 57.8m, including 3.15m @ 6.36%Ni, 2.92%Cu, 0.20%Co and 5.03g/t total PGEs from 61.81m*



# Grade is King

## *Wide intersections of high-grade Ni-Cu-Co-PGEs*

### MAD71 (Stricklands Prospect):

17.45m @ 3.01%Ni, 1.31%Cu, 0.13%Co and 1.68g/t total PGEs from 37.45m, including  
5.3m @ 4.39%Ni, 1.45%Cu, 0.21%Co and 2.09g/t total PGEs from 39.3m; and  
2.02m @ 5.05%Ni, 2.01%Cu, 0.21%Co and 3.31g/t total PGEs from 50.6m.

### MAD56 (Cathedrals Prospect):

7.5m @ 3.90%Ni, 1.74%Cu, 0.12%Co and 3.32g/t total PGEs from 57.8m, including  
3.15m @ 6.36%Ni, 2.92%Cu, 0.20%Co and 5.03g/t total PGEs from 61.81m

### MAD126 (Investigators Prospect) – drill core on right:

7.86m @ 5.70%Ni, 2.11%Cu, 0.18%Co and 2.65g/t total PGEs from 184m, including  
5.25m @ 6.95%Ni, 2.67%Cu, 0.23%Co and 3.10g/t total PGEs from 185m

### MAD127 (Investigators Prospect):

8.49m @ 5.78%Ni, 2.64%Cu, 0.18%Co and 3.61g/t total PGEs from 183.9m, including  
6.39m @ 6.48%Ni, 2.77%Cu, 0.21%Co and 3.68g/t total PGEs from 184.42m

### MAD108 (Investigators Prospect):

8.4m @ 2%Ni, 0.96% Cu, 0.646% Co, 2.59g/t total PGEs from 199m, including  
1.37m @ 6.83% Ni, 2.88% Cu, 0.21% Co, 5.58g/t total PGEs from 206.03m

## *Significant vertical metres of metal*

- *High-grade massive sulphide intercepts plus halos of matrix, blebby and disseminated sulphides*
- *Potential for significant metal per vertical metre (TBC by resource drilling)*

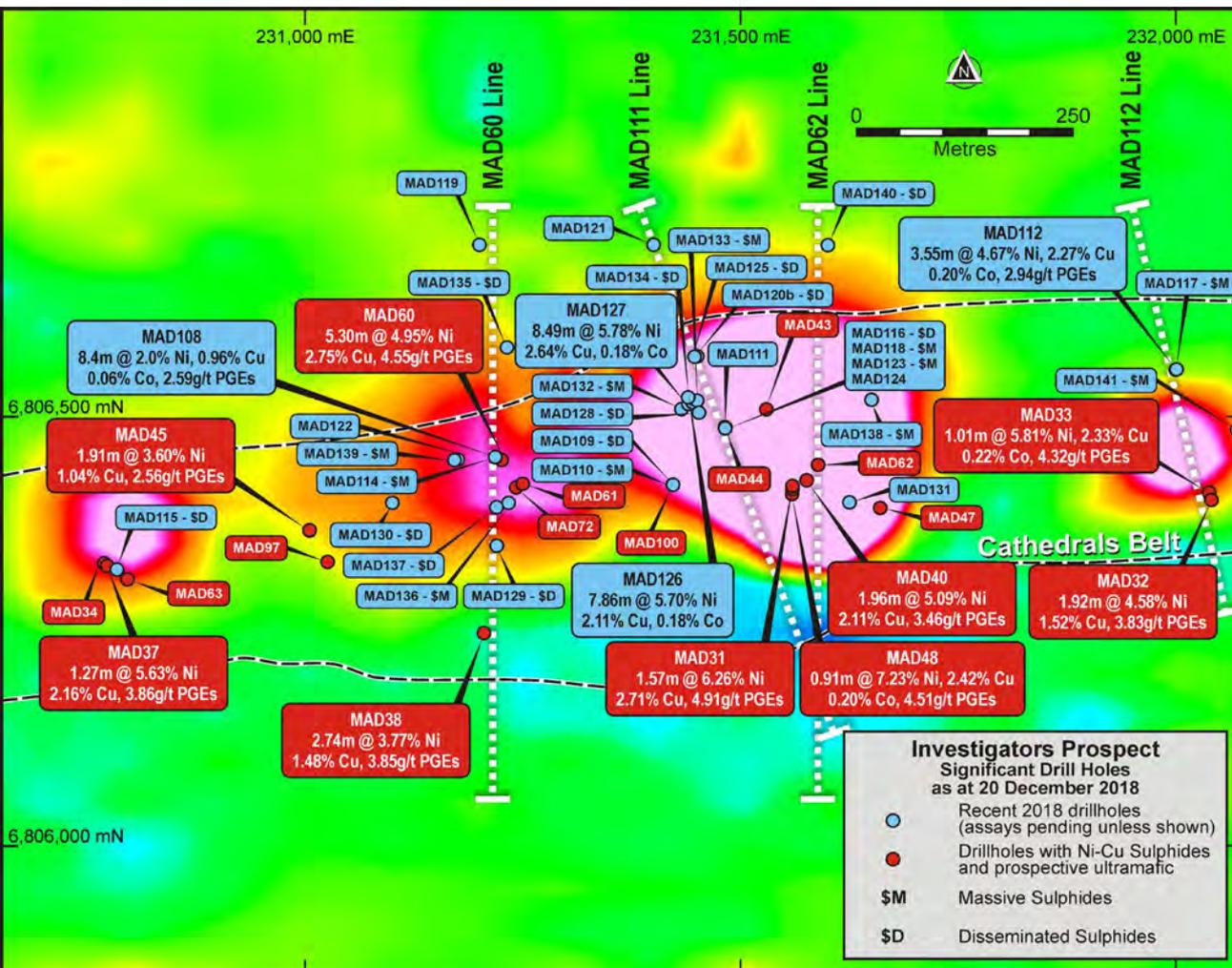


# Extensions of High-Grade Mineralisation

# Investigators Prospect

## Unlocking a Major Mineralised System

- High powered SAMSON electromagnetic (EM) survey identifies large areas of EM conductivity indicating potential for extensive sulphide mineralisation over an east-west strike of 1.5km



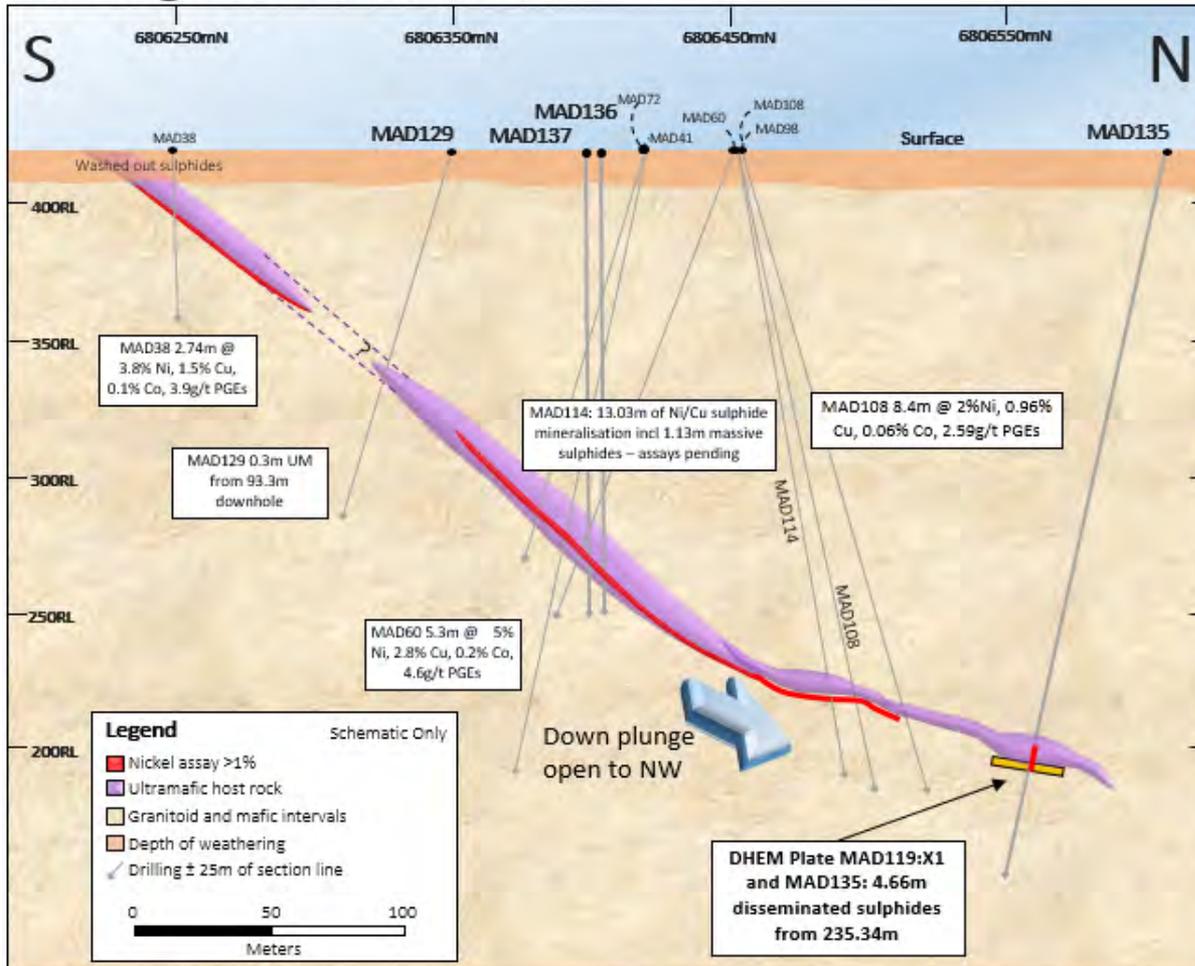
- Mineralised ultramafic unit dips 30 degrees to the north
- Drilling on three north-south lines – MAD60, MAD111 and MAD112 Lines – intersects additional massive Ni-Cu sulphides and new EM conductors in the northerly down dip direction
- Downhole EM surveys and drilling are used concurrently to scope out the extent of the high-grade mineralisation

*Left: plan view of Investigators Prospect with drill hole collar locations (completed and planned) over the large SAMSON total field EM anomalies (red/pink colours). The three north-west lines which are the priority for current drilling are highlighted.*

# Plunge Increased by Latest Drilling

*Drilling and downhole EM surveys used concurrently to identify more high-grade mineralisation at depth*

## Investigators Cross-section 231225E



- **MAD60 Line (approx. 231225E) high-grade mineralisation starts at 30m below surface and has a plunge strike of 380m**
- **High-grade mineralisation footprint now covers a 1.5km east-west strike and a 380m northerly plunge**

### MAD60 :

5.3m @ 4.95%Ni, 2.75%Cu, 0.16%Co and 4.55g/t total PGEs from 157.9m, including 3m @ 6.40%Ni, 3.55%Cu, 0.21%Co and 5.25g/t total PGEs from 159.38m

### MAD108:

8.4m @ 2%Ni, 0.96% Cu, 0.646% Co, 2.59g/t total PGEs from 199m, including 1.37m @ 6.83% Ni, 2.88% Cu, 0.21% Co, 5.58g/t total PGEs from 206.03m

*Left: Schematic cross section of the MAD60 line (facing west) with down plunge of mineralisation over 320m and open to the north-west.*

# More High-Grade Intersections



*Right: photo of drill core from MAD136 which intersected 20m of mineralised ultramafic; core shown is from the massive sulphide interval between 149.55m to 151.93m with average XRF readings of 8.1%Ni and 3.21%Cu (assays pending)*

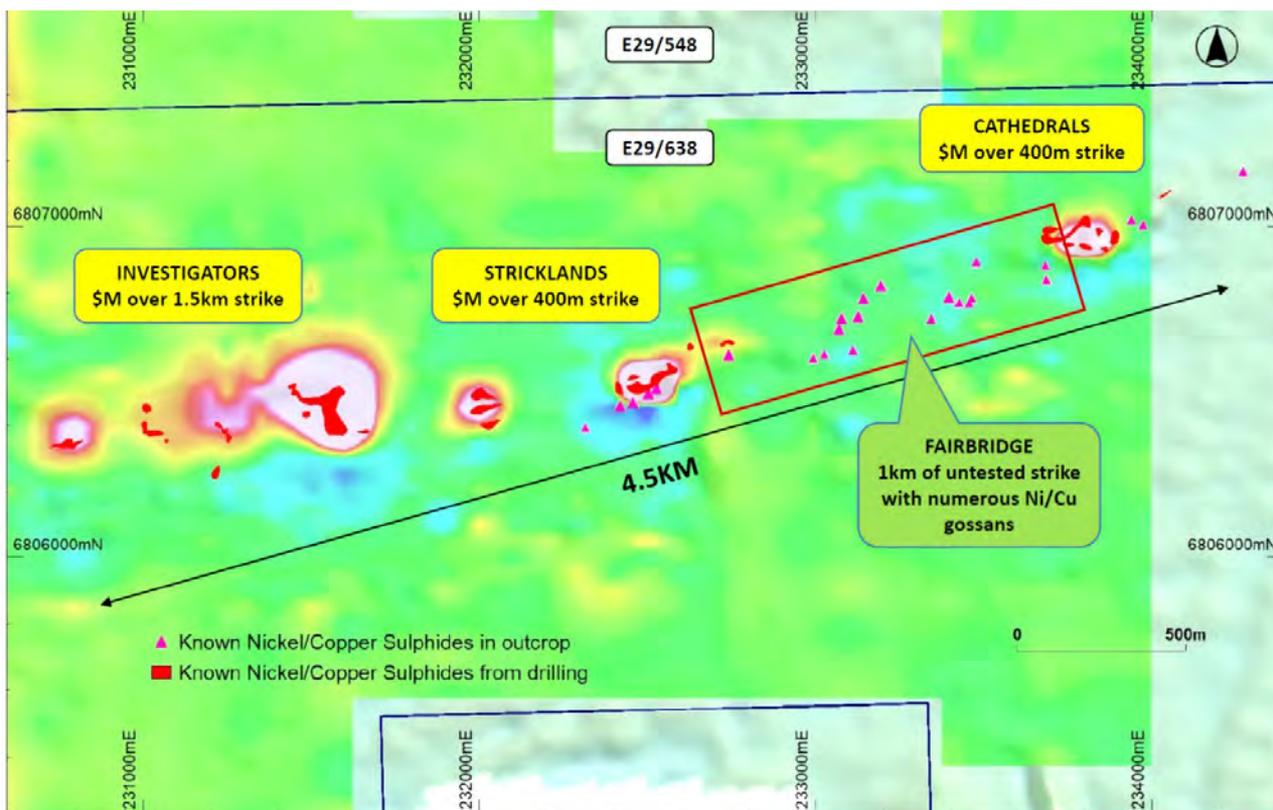
*Left: drill core tray for MAD127 at Mt Alexander with assays of 8.49m @ 5.78%Ni, 2.64%Cu, 0.18%Co and 3.61g/t total PGEs (Pd, 2.96g/t; Pt, 0.65g/t) from 183.9m*



# 2019 Drilling Commences

*+5,500m RC drill programme begins in mid-February 2019*

- ***Infill and extensional drilling planned for the Investigators Prospect to support resource definition***
- ***First ever drilling of the interpreted mineralised contact at the Fairbridge Prospect where nickel-copper sulphide gossans have been identified over a 1km strike***
- ***Drill targets at Fairbridge include several anomalies with geophysical signatures consistent with nickel sulphide mineralisation***



- ***First ever drilling at the West End Prospect to test for the interpreted western extension of the highly mineralised Cathedrals Belt towards the Ida Fault***
- ***First ever drilling by St George at the Mt Alexander Belt to follow-up massive nickel-copper sulphide intersections in previous exploration by BHP***

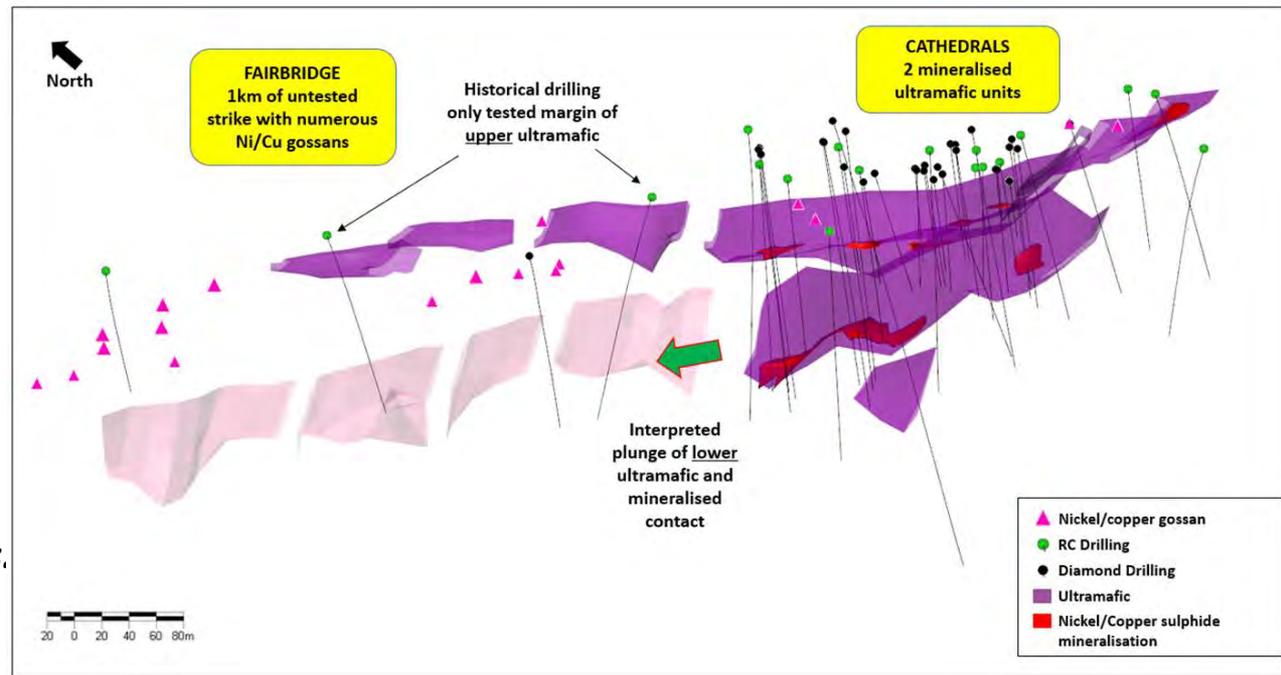
*Left: The Cathedrals Belt over SAMSON total field EM data (strong SAMSON anomalies present as red/pink colours). The numerous gossans in the Fairbridge Prospect are highlighted.*

# New Targets

## West End:

***Below: The Cathedrals Belt is interpreted to extend from the western margin of the Investigators Prospect to the Ida Fault 2.5km to the west.***

***The Belt dips underneath a paleochannel which could interfere with surface EM surveys. A line of holes will be drilled along the undercover Belt.***

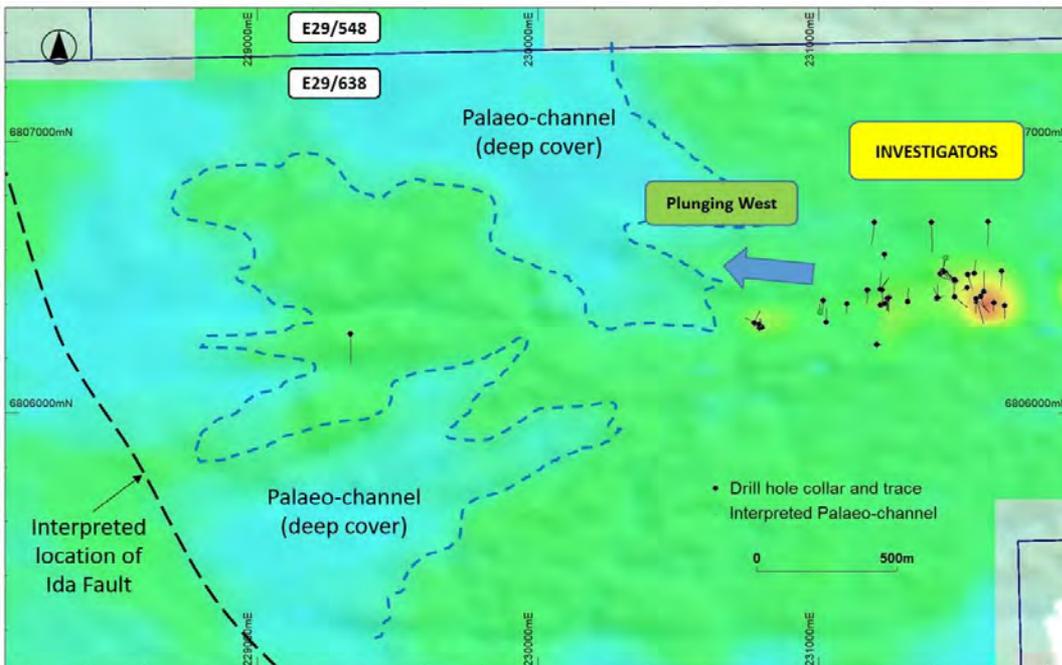


## Fairbridge:

***Above: 3D section of the Cathedrals Belt showing the Fairbridge and Cathedrals Prospects with completed drill holes.***

***The ultramafic units are interpreted to extend from Cathedrals through Fairbridge and onto Stricklands.***

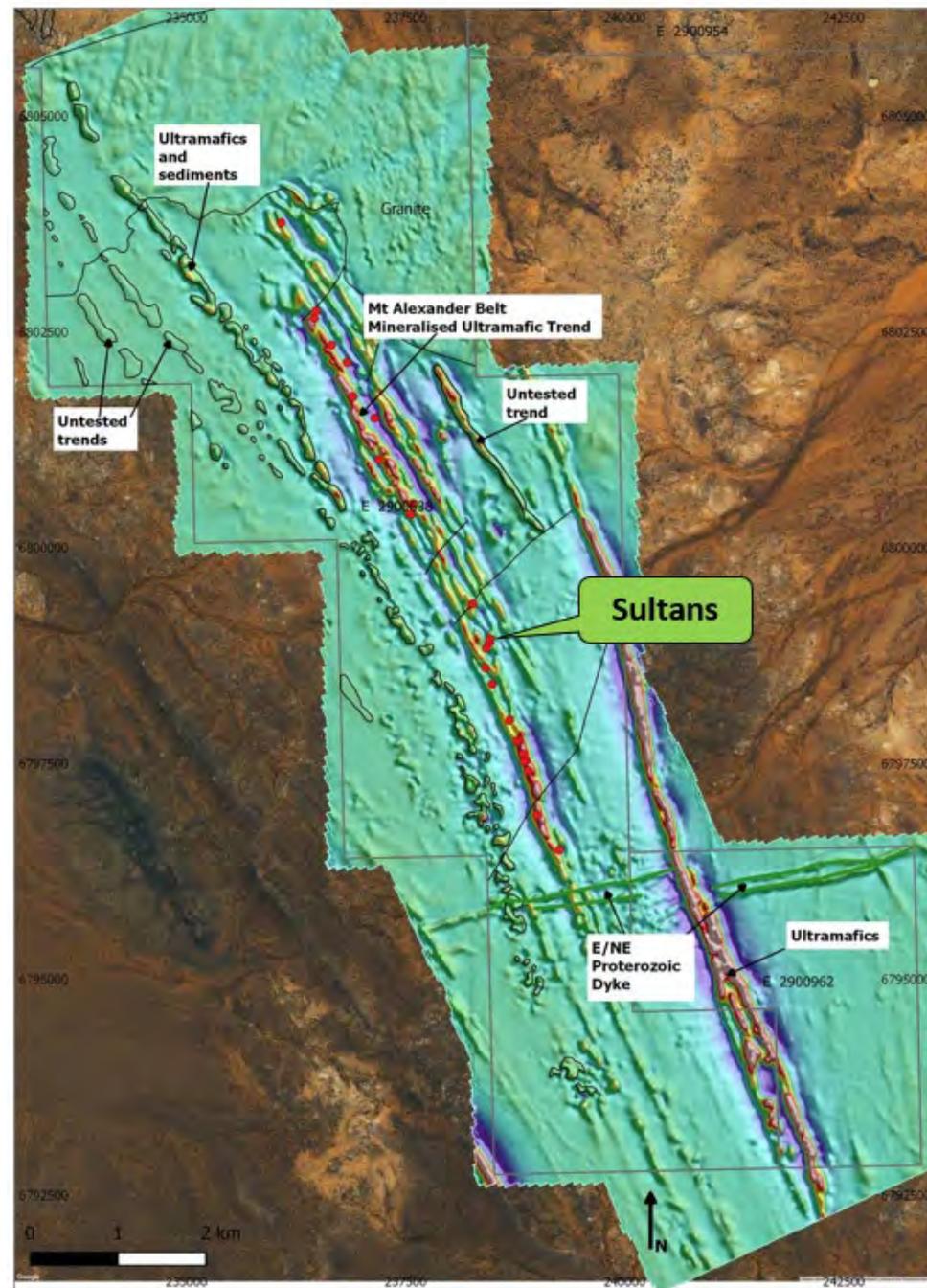
***There are numerous gossans at Fairbridge which can be indicative of sulphide mineralisation at depth. There has been no drilling to date of the mineralised contact at Fairbridge.***



# Mt Alexander Belt

- **Mt Alexander Belt is north-northwest trending with a strike of 7km**
- **Historical drilling has intersected widespread nickel sulphides including massive sulphides**
- **The priority area on the Mt Alexander Belt is the Sultans Prospect where two drill holes have intersected massive sulphides that returned assays of:**
  - **MARC40 – 2m @ 2.14%Ni from 64m**
  - **MAD1 – 80cm @ 2.85%Ni, 0.13% Cu and 1 g/t PGEs from 115.4m**
- **A DHEM conductor was detected down-dip from the high-grade intersections but never drill tested. It will be drilled by St George in the upcoming RC programme.**

Right: new high resolution magnetic data (RTP 1VD) acquired by St George for the southern portion of E29/638 set against an airphoto of the surrounding ground. The new data clearly recognises the north-northwest Mt Alexander Belt and a series of weak-moderate magnetic sequences that are parallel to the west and east of the mineralised ultramafic trend (drill holes with NiS shown in red).



# Project Development

# Metallurgical Testwork

## *High Recoveries from Ore:*

- >99% recoveries of Ni and Cu to concentrates from preliminary testwork on massive sulphides

## *Clean Concentrate:*

- No deleterious elements like MgO, talc or arsenic

## *Standard Flotation:*

- Separate nickel and copper concentrates produced by standard flotation process (*on right: copper being floated in test completed by Strategic Metallurgy Pty Ltd*)

## *High Value Concentrate:*

- Nickel concentrate with **18%Ni** (*Nova is 13.5%Ni\**)
- Copper concentrate with **32%Cu** (*Nova is 29%Cu\**)
- Cobalt grade of **0.55%Co** in nickel concentrate
- **PGEs + Au of 13.5 g/t** in nickel concentrate
- **PGEs + Au of 3.2 g/t** in copper concentrate

***Clean and high grade concentrate will attract a premium price***



\* Nova Optimisation Study: IGO ASX Release dated 14 December 2015

# Opportunity for Low Cost/ High Margin Project

*Key project features support favourable project economics which will be assessed by scoping/feasibility studies*

## Shallow Mineralisation:

- *Low cost drilling/low cost potential mining*

## Existing Infrastructure:

- *Established mining centre*
- *Close to roads, power and workforce*

## High Value Concentrate:

- *High grade Ni, Cu plus credits for Co, PGEs*
- *Amenable to blending with lower grade ore*

*Right: Tim King Pit at Spotted Quoll mine at Forrestania (owned 100% by Western Areas Limited) where high grade nickel sulphides were mined from 60m below surface*

The location and quality of the Mt Alexander Project presents:

- *Multiple potential development and processing options (subject to scoping/feasibility studies)*
- *Strategic value and corporate M&A*



# 2019 – Growth Initiatives

## *Building a Resource Inventory*

### *Resource Definition:*

- Continue extensional and infill drilling to support delineation of a resource estimate

### *Review Mining Potential:*

- Initiate studies to assess the potential for a low cost/high margin mining operation at Mt Alexander

### *Regional Exploration:*

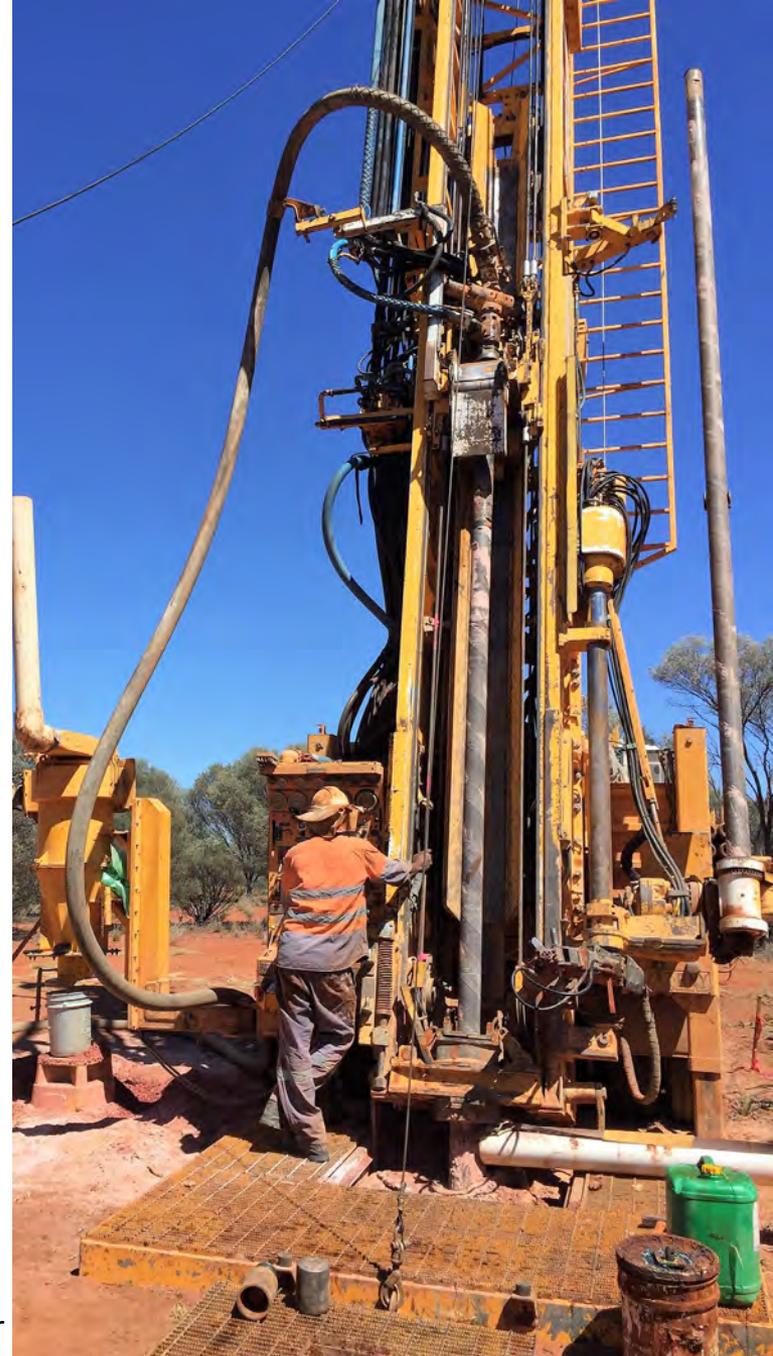
- Escalate exploration of unexplored and underexplored areas to deliver more discoveries and increase the potential resource base

### *Maximise Returns to Shareholders:*

- Grow the company with minimal dilution to shareholders and maximum leverage to the rising nickel price

***Positioned for a Pivotal Year in 2019***

*Right: Diamond drilling at Mt Alexander*



# **St George Mining:** ***driving shareholder value*** ***through exploration success***



Above: diamond drill rig at Stricklands, Cathedrals Belt. Right: Drill core from MAD108.

## DISCLAIMER:

Certain statements contained in this presentation, including information as to the future financial or operating performance of St George Mining Limited (ASX:SGQ) and its projects, are forward looking statements:

- may include, among other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions;
- are necessarily based upon a number of estimates and assumptions that, while considered reasonable by St George Mining, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; and
- involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward looking statements.

St George Mining disclaims any intent or obligation to update publicly any forward looking statements, whether as a result of new information, future events or results or otherwise. The words “believe”, “expect”, “anticipate”, “indicate”, “contemplate”, “target”, “plan”, “intends”, “continue”, “budget”, “estimate”, “may”, “will”, “schedule” and similar expressions identify forward looking statements.

All forward looking statements made in this presentation are qualified by the foregoing cautionary statements. Investors are cautioned that forward looking statements are not guarantees of future performance and investors are cautioned not to put undue reliance on forward looking statements due to the inherent uncertainty therein.

## COMPETENT PERSON STATEMENT:

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Dave O’Neill, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr O’Neill is employed by St George Mining Limited to provide technical advice on mineral projects and holds performance rights in the Company.

This ASX announcement contains information extracted from the following reports which are available on the Company’s website at [www.stgm.com.au](http://www.stgm.com.au):

- 7 December 2017 *Further Nickel-Copper Sulphides Intersected at Mt Alexander*
- 15 December 2017 *Assays Confirm Best Ever Intersection at Mt Alexander*
- 4 April 2018 *Nickel-Copper Sulphide Drilling at Mt Alexander – Update*
- 11 April 2018 *Further Nickel-Copper Sulphides Intersected at Mt Alexander*
- 19 May 2018 *Nickel-Copper Sulphide Drilling at Mt Alexander – Update*
- 4 June 2018 *Assays Confirm High Grades at Mt Alexander*
- 21 June 2018 *Assays Confirm Further High Grades at Mt Alexander*
- 23 July 2018 *High-Grade Nickel-Copper Sulphides in First Drill Hole*
- 15 August 2018 *Further High-Grade Nickel-Copper Sulphides*
- 24 August 2018 *Mt Alexander Continues to Deliver Outstanding Results*
- 5 September 2018 *Mt Alexander – Drilling Update*
- 18 September 2018 *More Strong Results at Mt Alexander*
- 3 October 2018 *Downhole EM Surveys Light Up Strong Conductors*
- 19 October 2018 *Extension to High-Grade Mineralisation at Mt Alexander*
- 25 October 2018 *Best Ever Intercept At Investigators*
- 1 November 2018 *More Massive Nickel-Copper Sulphides at Investigators*
- 20 November 2018 *Further Extensions to Nickel-Copper Sulphides At Mt Alexander*
- 30 November 2018 *Assays Confirm Best Ever Intercepts*
- 20 December 2018 *Strong Results Continue at Mt Alexander*
- 31 January 2019 *More Outstanding Nickel-Copper Sulphide targets*
- 12 February 2019 *St George Ready to Drill*

The Company confirms that it is not aware of any new information or data that materially affects the exploration results included in any original market announcements referred to in this report and that no material change in the results has occurred. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcements.