

7 May 2019

## PRESENTATION – RIU RESOURCES CONFERENCE

St George Mining Limited (ASX: **SGQ**) ('St George' or 'the Company') is participating in the RIU Resources Conference which commences today in Sydney.

A copy of the Investor Presentation for the Conference, which showcases the Company's flagship Mt Alexander high-grade nickel-copper sulphide project, is attached.

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

**RIU Resources Sydney**  
*7, 8 and 9 May 2019*



St George Mining Limited | ACN 139 308 973

**ASX: SGQ**

# Growth Nickel Stock

*Creating Shareholder Value through Exploration Success*



## 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

*Photo: Diamond drilling at Mt Alexander for St George Mining by DDH1 Drilling*



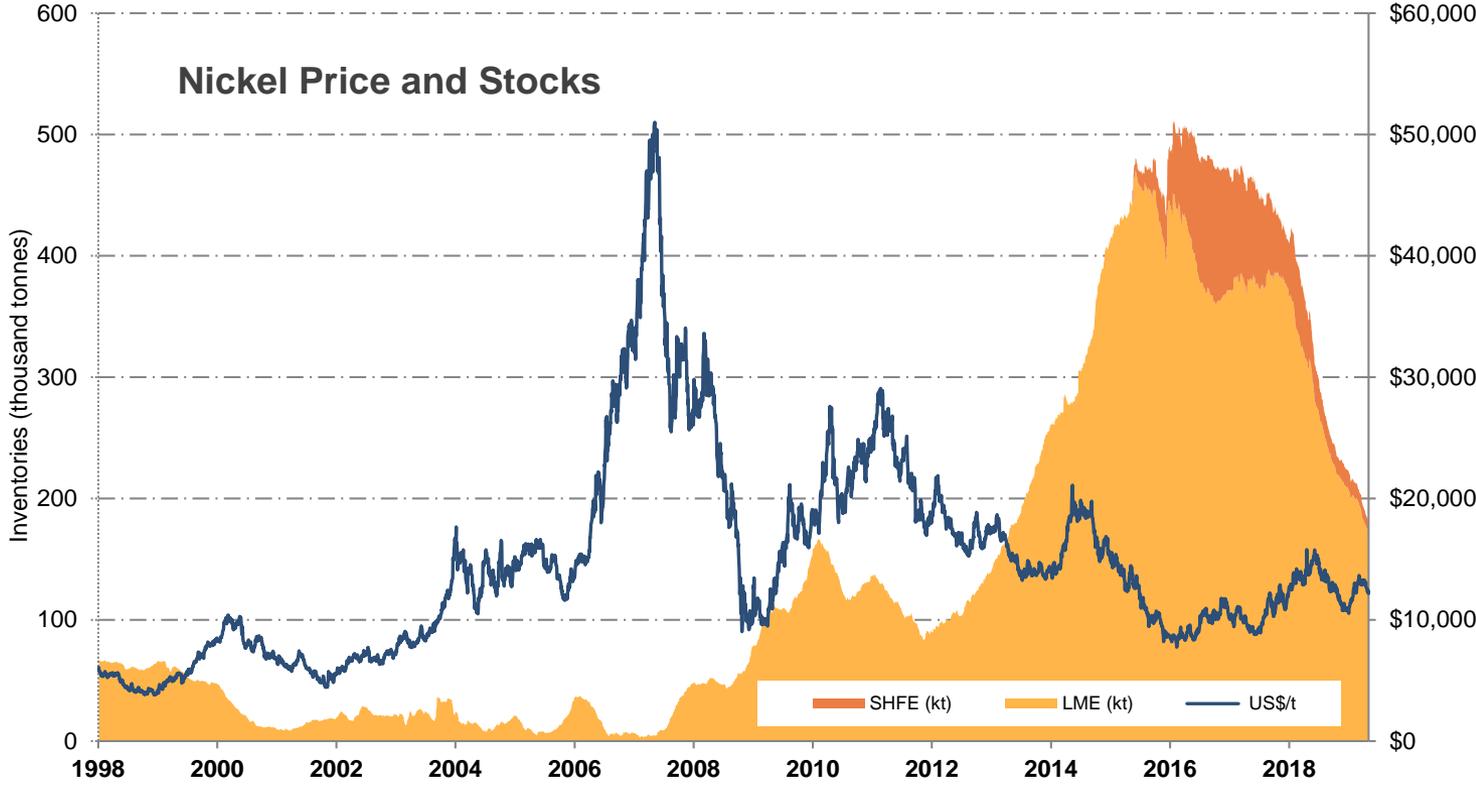
# Nickel Market Outlook



## Nickel is Essential to the EV and Battery Revolution

### Compelling Scenario for Sustainable Price Increases:

- Demand for battery grade nickel forecast to increase up to 10x over next 10 years
- Stockpiles falling rapidly; deficits increasing
- Incentive price for supply response is US\$21,000/t (currently circa. US\$12,000/t)



# Corporate Overview

*St George Mining is listed on the ASX*



St George Mining Ltd	SGQ
Listed Shares	298,116,211
Listed Options (20c, 30 Sep 20)	24,579,714
Share Price (3 May 2019)	\$0.14
Market Capitalisation	\$42m
Cash*	\$6.3m

\* Cash/committed cash facilities

**Broad Shareholder Base with over 3,500 shareholders including Australian and overseas institutions, high net worth and retail investors**

Shareholders	%
John Dawson	4.6%
John Prineas	4.4%
City Natural Resources	3.0%
Top 20 shareholders	29.0%
Directors & Management	9.2%

## 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.

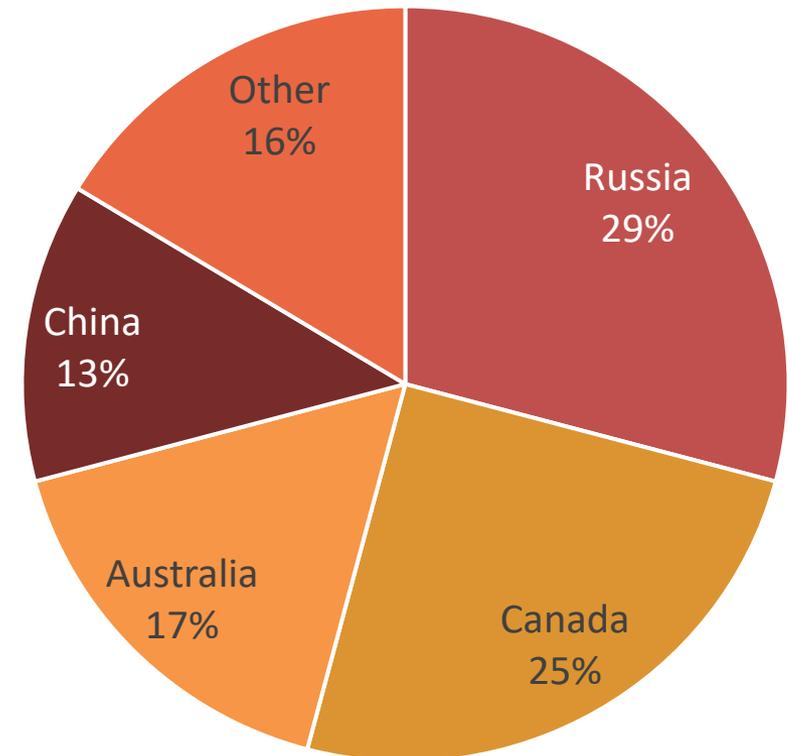
# Nickel Market Dynamics

# A Small Number of Global Players

## *Global production overview*

- Australia is a major global producer of high-grade nickel sulphide for several decades
- Global production is falling
- Nickel sulphide is Class 1 nickel and the low cost alternative for producing battery grade nickel sulphate
- New discoveries are highly prized

*2018 - Global Nickel Sulphide Mine Production  
Total 741,000 tonnes*



Source: Wood Mackenzie

Global Nickel Sulphide Production			
	1998	2008	2018
<b>Total</b>	<b>669kt</b>	<b>812kt</b>	<b>741kt</b>
Russia	190kt	222kt	216kt
Canada	207kt	258kt	185kt
Australia	145kt	166kt	124kt
China	48kt	70kt	95kt
Other	79kt	96kt	121kt

# Electric Revolution

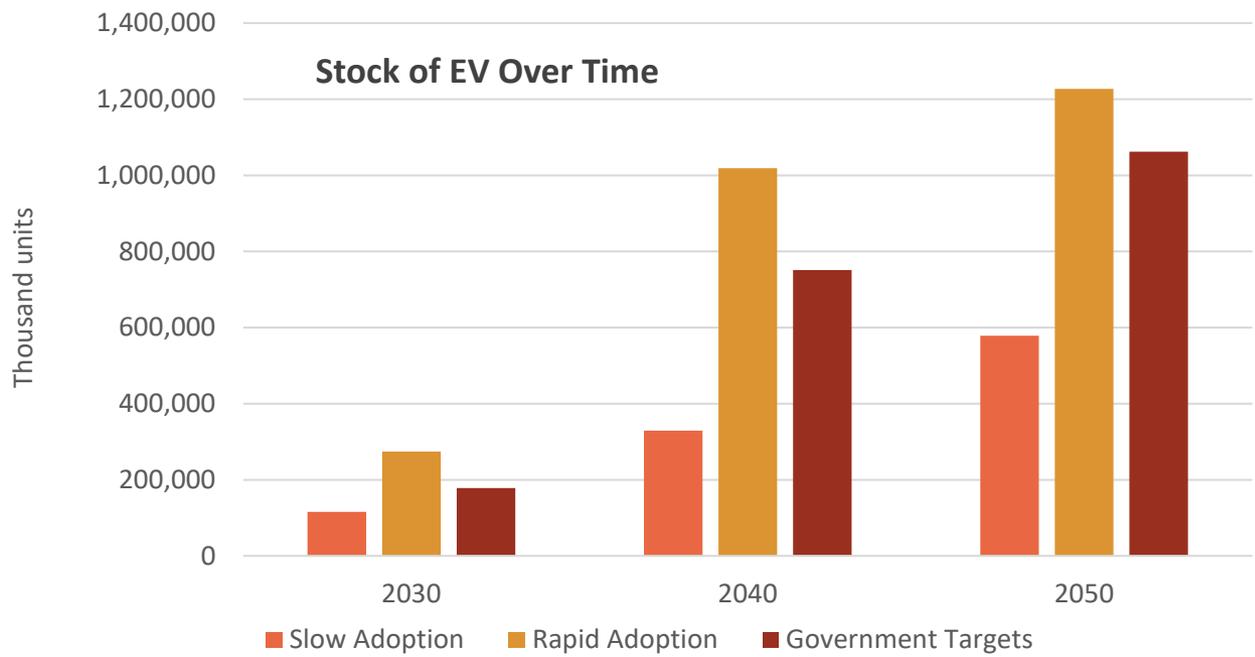
## Investment Thematic



**“One of the most important global trends over the next decade and beyond will be the electrification of mobility, which will have massive ramifications for autos, batteries and the entire upstream battery supply chain.”**

**“We see the miners as the perfect way to play the EV theme.”**

Source: Bernstein, Electric Revolution 2019, 4 March 2019



# Supply Challenge

## More New Projects Required

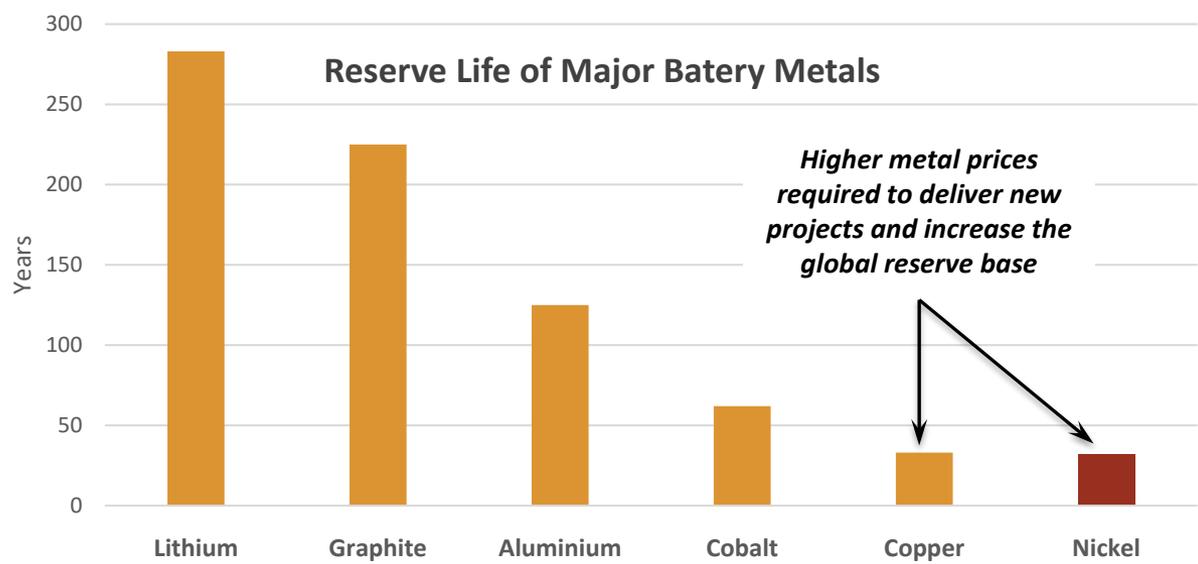
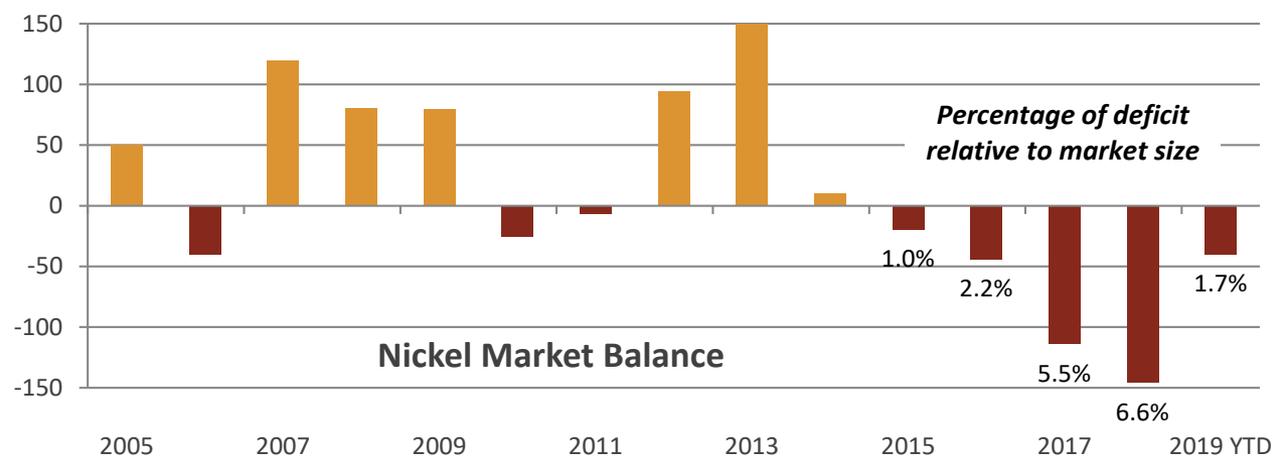


Nickel faces the biggest supply challenge of all battery metals:

- *Lagging supply response is generating significant market deficits*
- *LME & SHFE stocks have fallen steadily from 500,000 t in August 2016 to below 190,000 t today*
- *Reserve life is constrained*

Nickel price needs to rise to incentive price – US\$21,000/t – to generate investment in new projects

**“Tesla expects global shortages of nickel, copper and other EV battery minerals due to underinvestment in the sector.”**  
*Tesla’s Global Supply Manager, Reuters - 2 May 2019*



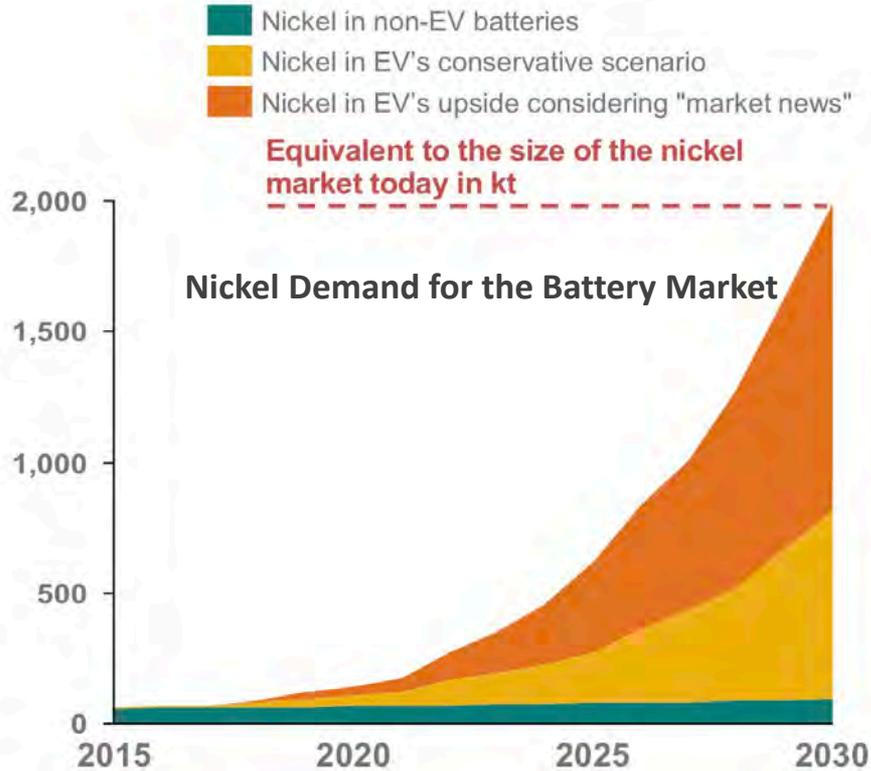
Source: INSG, USGS, Terra Studio

# Electric Vehicle Demand

## Big Impact on Nickel Demand

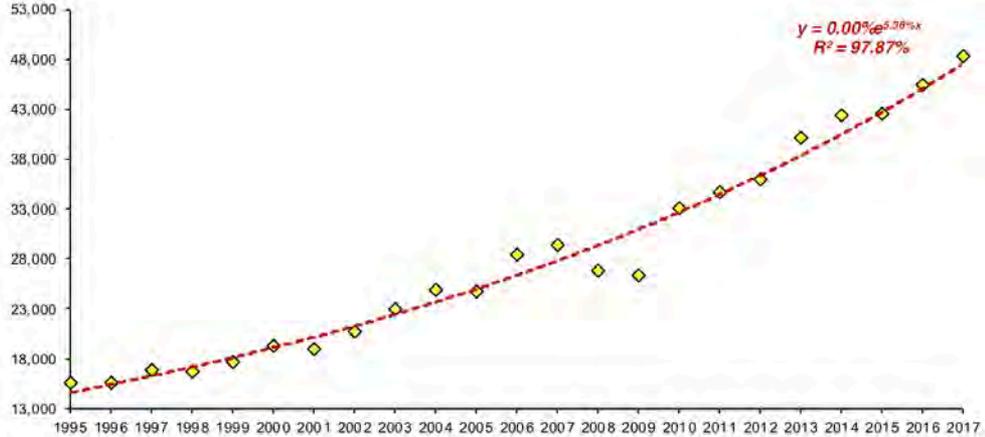


**ST GEORGE**  
MINING LIMITED



Source: Vale

**Left:** Nickel demand from EV will far exceed nickel production from existing operations in any scenario of EV adoption



Source: Wood Mackenzie, Bernstein analysis

**Above:** Traditional demand from stainless steel currently representing 70% of nickel demand is expected to continue to grow steadily at 5.4% p.a. as it has for more than 20 years

**Market Impact:** BHP announced that 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

# Nickel Price Outlook



## The Next Nickel Boom is Forming

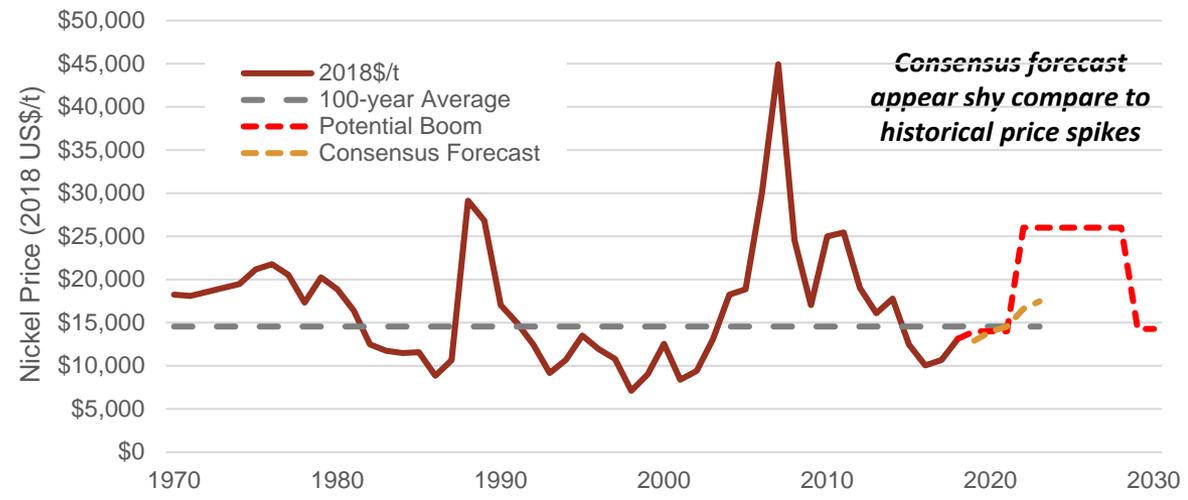
Nickel price history shows strong upswings such as in 1988 and 2006

The market is getting set for the next upswing:

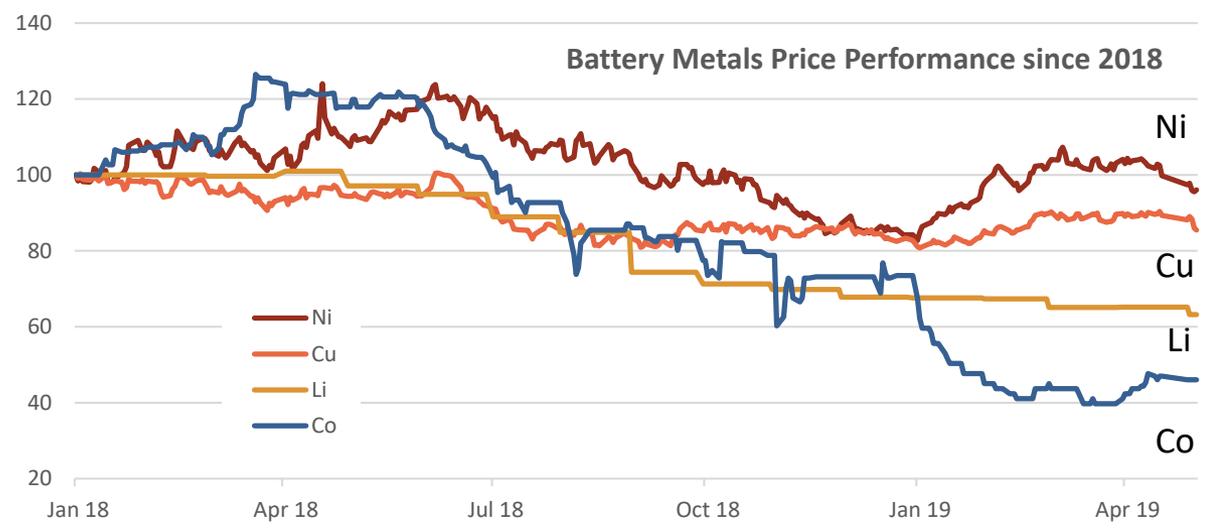
- Market in deficit since 2015
- Lack of new projects
- Traditional demand growing steadily, plus
- Fast growing demand from EV and battery revolution

Nickel price already outperforming other battery metals (see graph on bottom right)

**Nickel Sulphide Producers to Gain**  
 Class 1 nickel from sulphide ores will achieve the largest profit margins for producers - lowest cost to process into battery grade nickel sulphate compared to treating laterites with HPAL plants



Source: S&P Consensus Forecast Prices, Terra Studio, USGS



Source: Terra Studio

# High-Grade Discovery at Mt Alexander

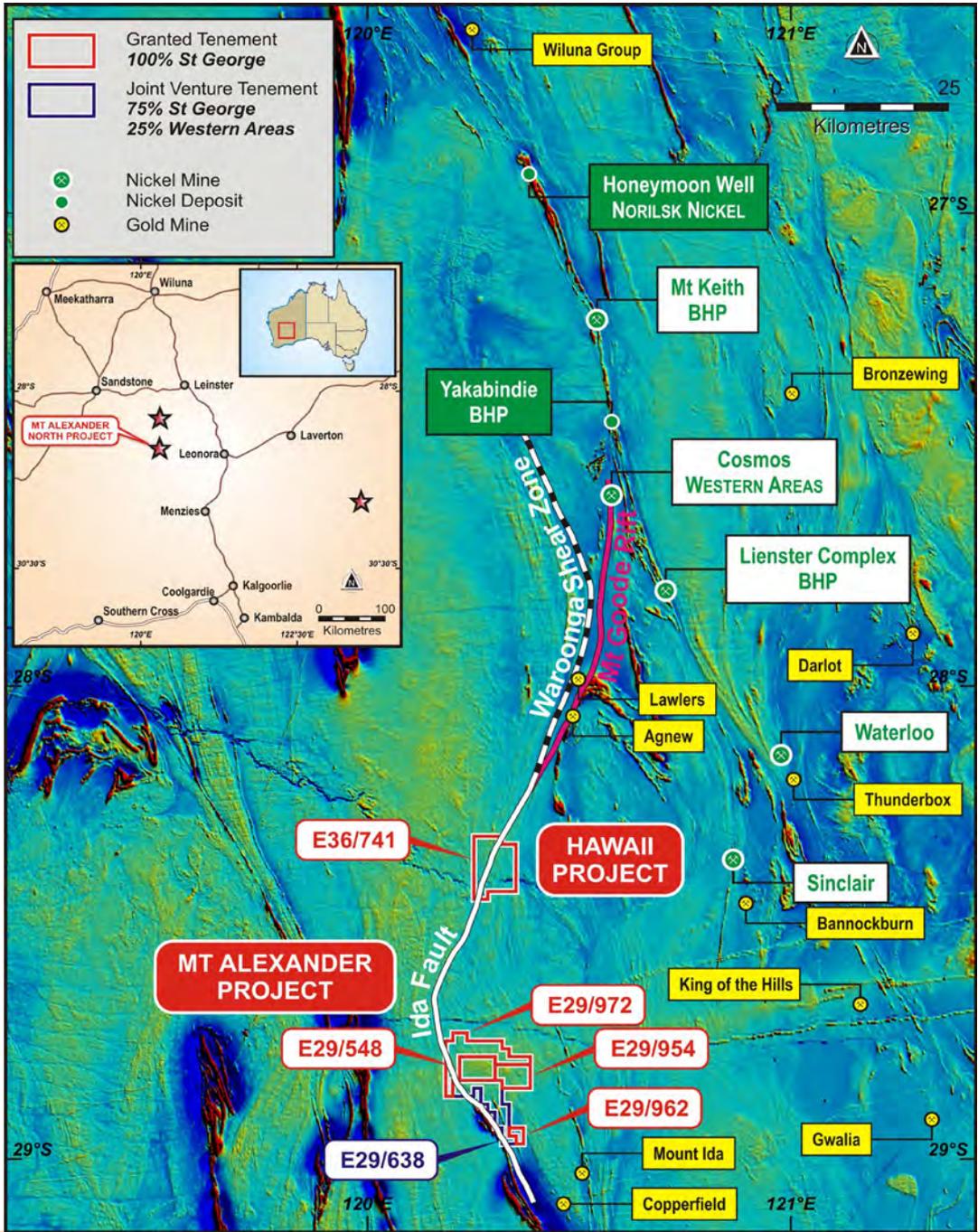
# World Class Address

*Next to the Majors' backyard*

## Mt Alexander – St George's Flagship Nickel-Copper Sulphide Project

- Highly prospective and strategic tenement holding next to Tier 1 assets
- Located S-SW of world class nickel and gold mines of the Agnew-Wiluna Belt
- Close to infrastructure, processing plants, mining workforce & service industry
- Stable and reliable jurisdiction with numerous successful mines and projects

*Left: St George Mining Ltd holds 100% of all the Mt Alexander tenements with the exception of E29/638, which is held in Joint Venture: St George Mining Ltd (75%) and Western Areas Ltd (25%). St George is the manager of the Project with Western Areas retaining a 25% non-contributing interest in the Project until decision to mine.*



# Large Mineral System

*Discovery continues to grow*

## 200 km<sup>2</sup> tenement package:

- Multiple discoveries and targets already over a small fraction of the exploration ground
- Potential to establish a nickel camp with several deposits

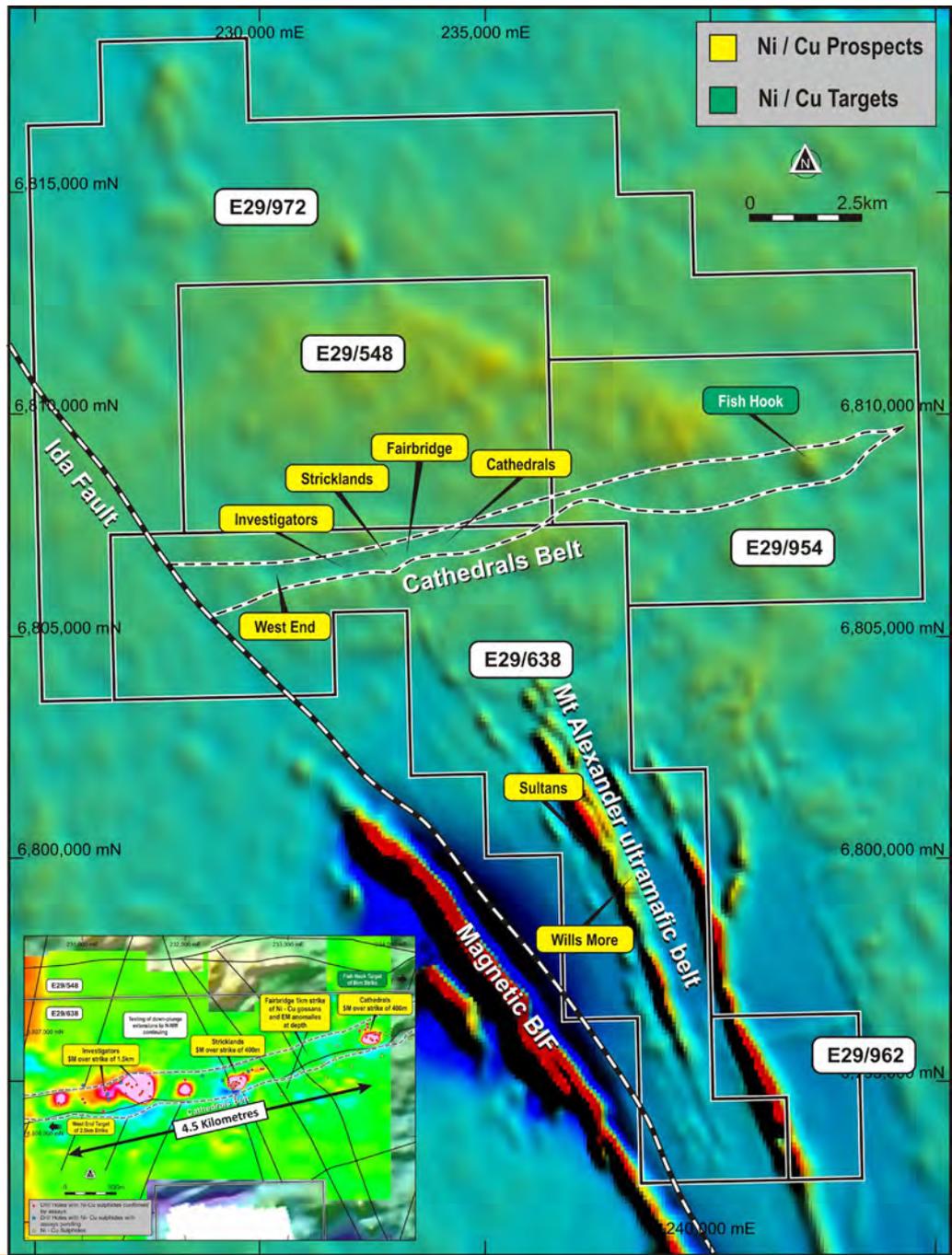
## Cathedrals Belt (east-northeast oriented belt):

- High-grade discoveries at Investigators, Stricklands and Cathedrals Prospects – within a 4.5 km section of the Belt
- Potential for significant extensions to known mineralisation over interpreted 15km strike of the Belt plus potential parallel repetitions of the Cathedrals structure to the north
- New geophysical surveys underway to identify drill targets along strike of known mineralisation at West End and Fish Hook

## Mt Alexander Belt (north-northwest belt):

- Ultramafic belt with a strike of 7 km
- Widespread intersections of nickel sulphide mineralisation but remains underexplored

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



# Exceptional Discovery

## *Favourable Geological Features*

- **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 4.5 km strike of the Cathedrals Belt with potential extensions to the east and west*
  - *100% success rate in drill 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 61.8m*



# Grade is King

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

Prospect	Hole	From m	Width m	Ni %	Cu %	Co %	PGE g/t
Stricklands	MAD71 <i>including and</i>	37.5	17.45	3.0	1.3	0.13	1.68
		39.3	5.30	4.4	1.5	0.21	2.09
		50.6	2.02	5.1	2.0	0.21	3.31
Cathedrals	MAD56 <i>including</i>	57.8	7.50	3.9	1.7	0.12	3.32
		61.8	3.15	6.4	2.9	0.20	5.03
Investigators	MAD126 <i>including</i>	184.0	7.86	5.7	2.1	0.18	2.65
		185.0	5.25	7.0	2.7	0.23	3.10
Investigators	MAD127 <i>including</i>	183.9	8.49	5.8	2.6	0.18	3.61
		184.4	6.39	6.5	2.8	0.21	3.68
Investigators	MAD108 <i>including</i>	199.0	8.40	2.0	1.0	0.06	2.59
		206.0	1.37	6.8	2.9	0.21	5.58



### Significant vertical metres of metals

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

Right: Drill core from Hole MAD126

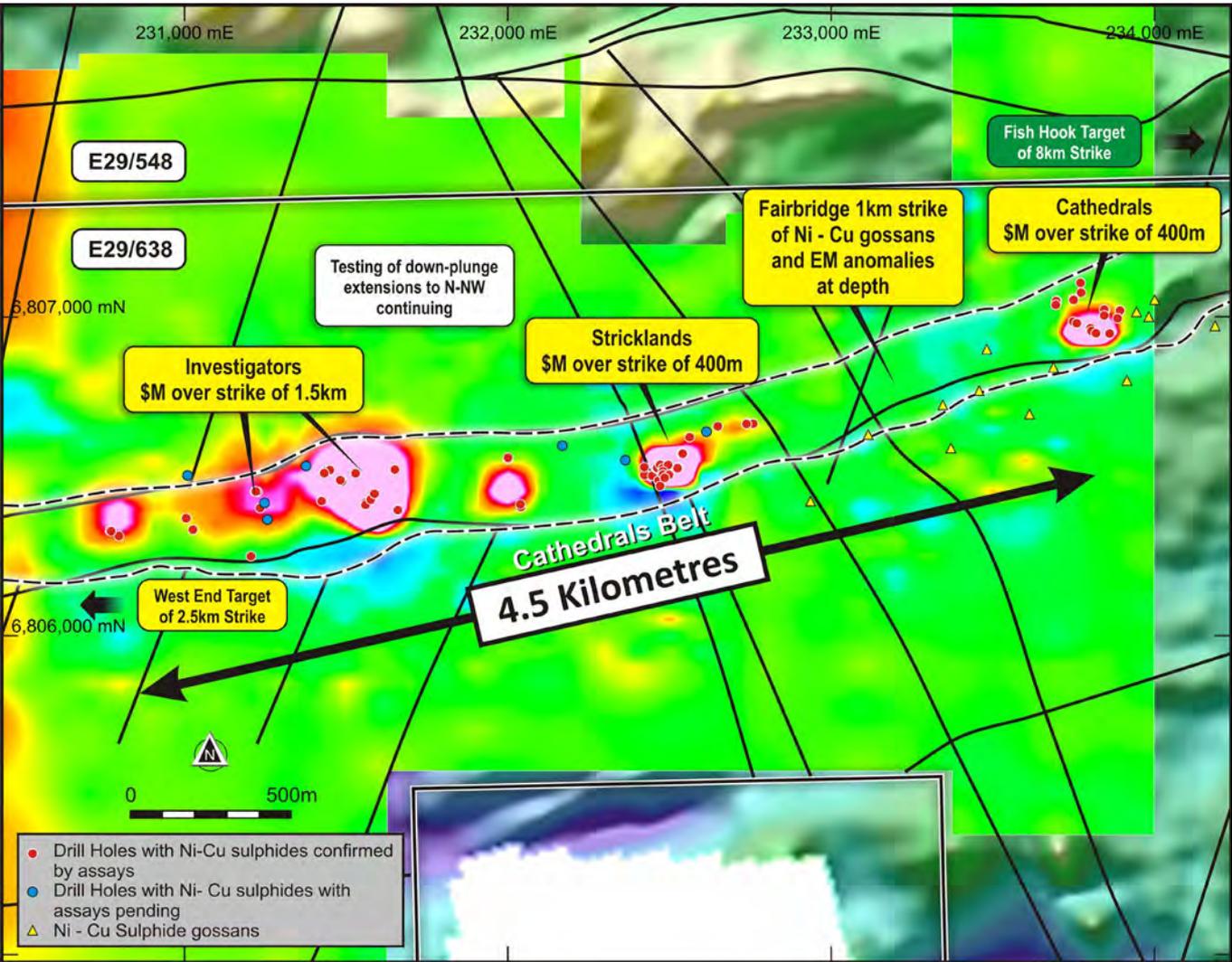
# 2019 Exploration and Drilling Programmes

# Cathedrals Belt



## Unlocking a Major Mineralised System

- High-grade nickel-copper sulphides discovered over an east-west strike of 4.5km
- Interpreted east-west strike of up to 15km with large unexplored areas



- Sustained drilling continues to define and extend the footprint of mineralisation
- Downhole EM surveys and drilling are used concurrently to scope out the extent of the high-grade mineralisation including down-plunge extensions
- First ever drilling underway at Fairbridge where gossans have been identified over a 1km strike

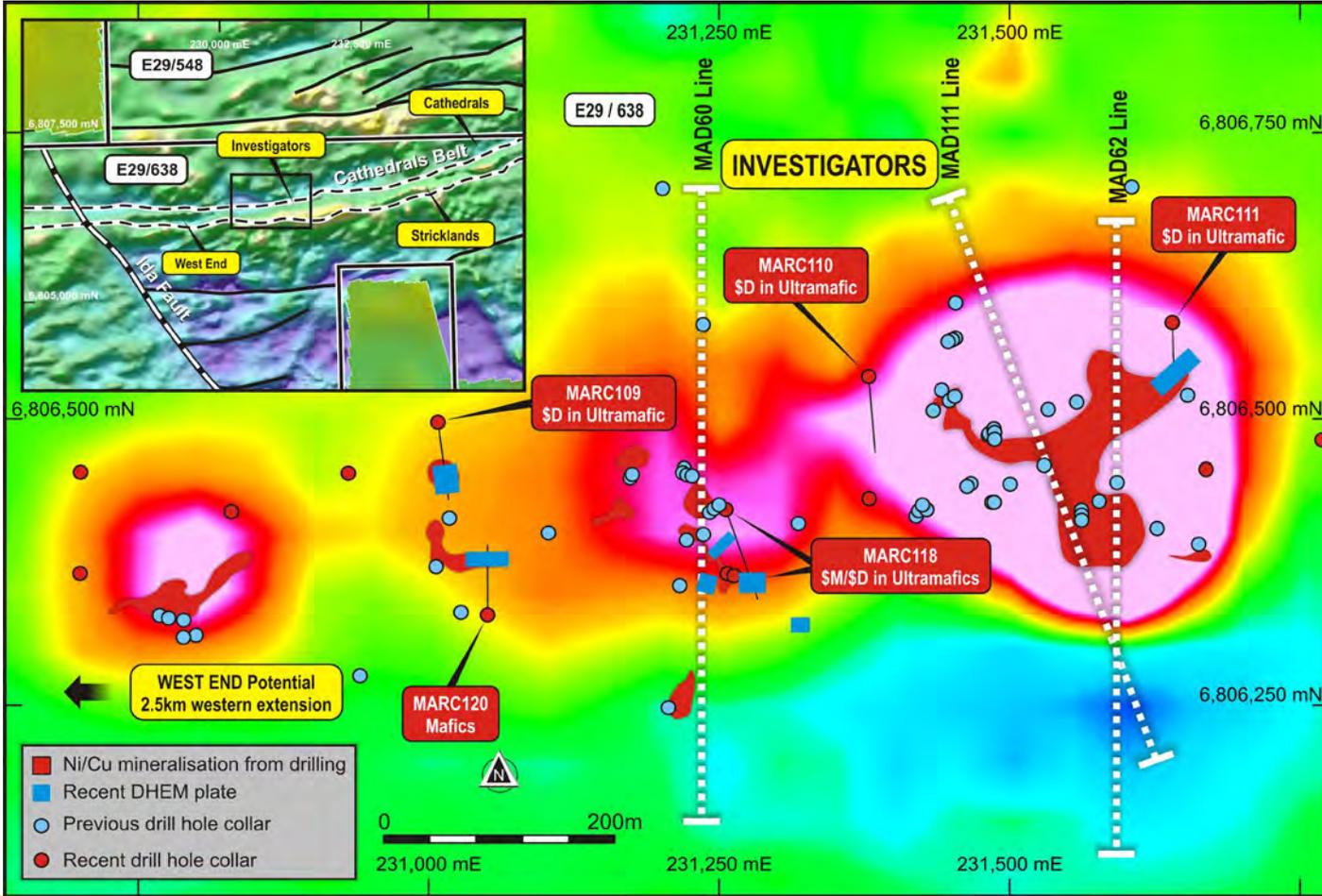
*Left: The Cathedrals Belt over SAMSON total field EM data (strong anomalies are red/pink colours). The numerous Ni-Cu sulphide intersections and gossans are shown.*

# Investigators Prospect



## Large scale emerging

- Nickel-copper sulphide mineralisation discovered over an east-west strike of 1.5 km, within a large area of EM conductivity identified by a high powered SAMSON electromagnetic (EM) survey
- Mineralised ultramafic unit dips 30 degrees to the north



- Drilling confirms high-grade mineralisation over a 1.5km east-west strike and 380m down-plunge to the north
- Drilling on three north-south lines – MAD60, MAD111 and MAD12 Lines – intersects Ni-Cu sulphides down-plunge

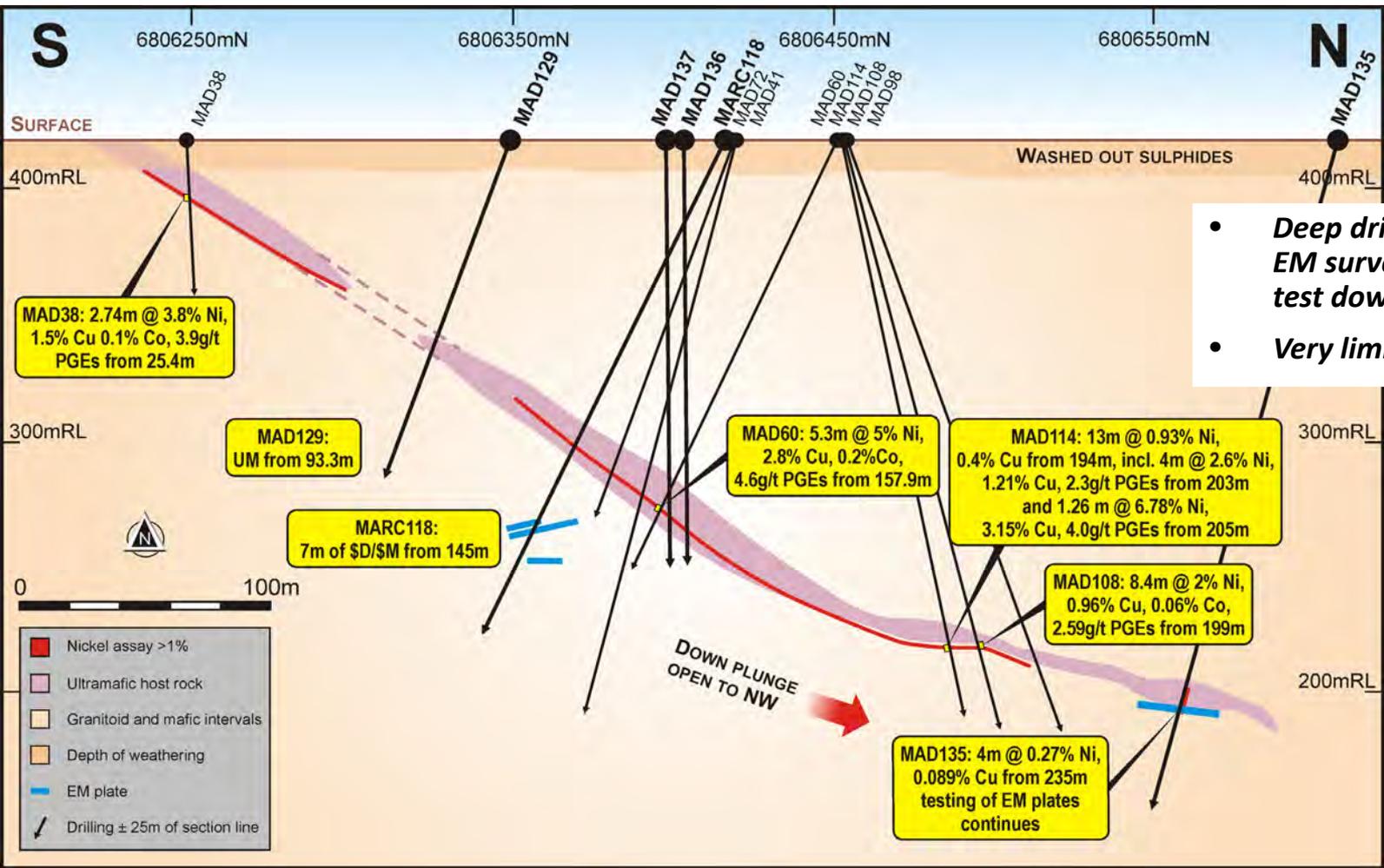
*Left: plan view of the Investigators Prospect with drill hole collar locations over the large SAMSON total field EM anomalies (red/pink colours). Known zones of mineralisation are highlighted.*

# Down Plunge Increased



*More high-grade mineralisation at depth*

- **MAD60 Line (approx. 231225E) high-grade mineralisation starts at less than 30m below surface and has a plunge strike of 380m**



- **Deep drilling and powerful EM surveys will continue to test down-plunge extensions**
- **Very limited drilling at depth**

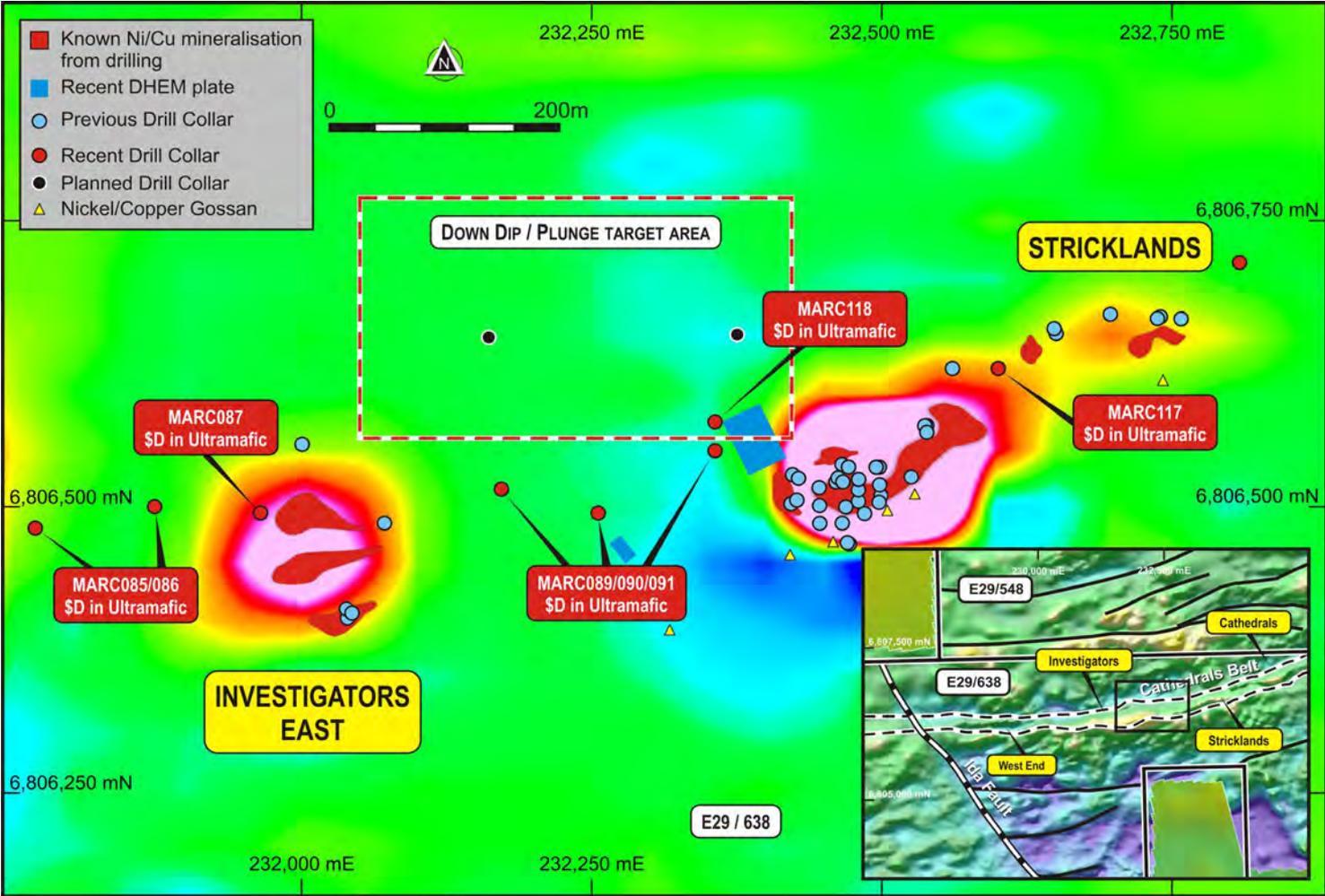
*Left: Schematic cross section of the MAD60 line (facing west) with down plunge of mineralisation over 320m and open to the north-west.*

# 2019 Extension Drilling



## Drilling success continues

- Latest RC drilling has confirmed continuity of the mineralised trend between Investigators and Stricklands Prospects – a new 500m strike of nickel-copper sulphide mineralisation



- New DHEM conductors identified for drilling
- Down-plunge extensions to be tested by deeper drilling
- Extension and infill drilling continues

Left: plan view of the Investigators Prospect with drill hole collar locations over the large SAMSON total field EM anomalies (red/pink colours). Known zones of mineralisation are highlighted.

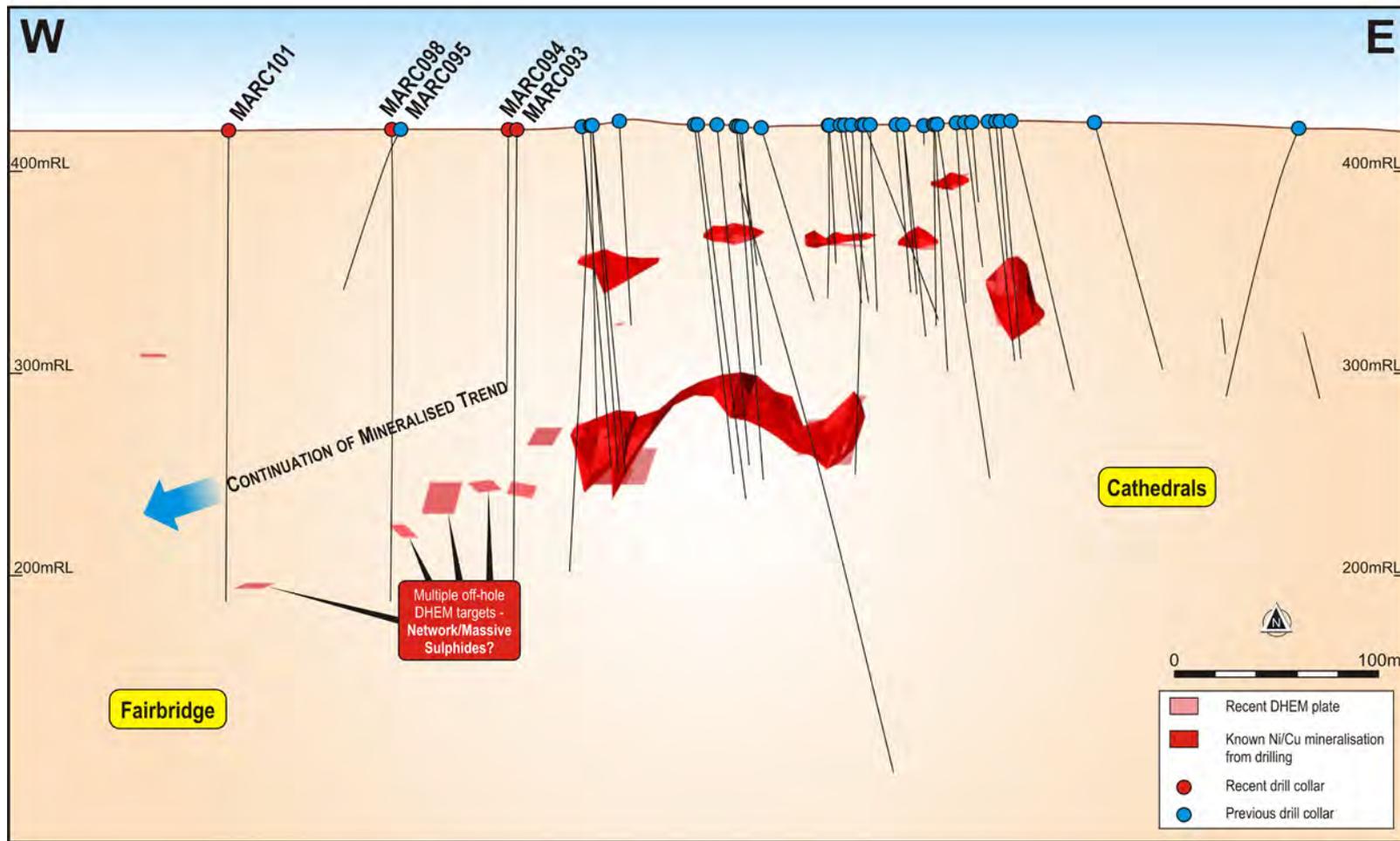
# Fairbridge Prospect



## Drilling confirms continuity at new prospect

- All drill holes completed at Fairbridge have intersected the mineralised Cathedrals structure
- DHEM surveys at Fairbridge and north-west of Cathedrals identify off-hole EM conductors – potential Ni-Cu sulphides that may be associated with surface gossans

Right: Schematic long section of the Cathedrals Prospect showing continuation of the mineralised trend from Cathedrals to Fairbridge.

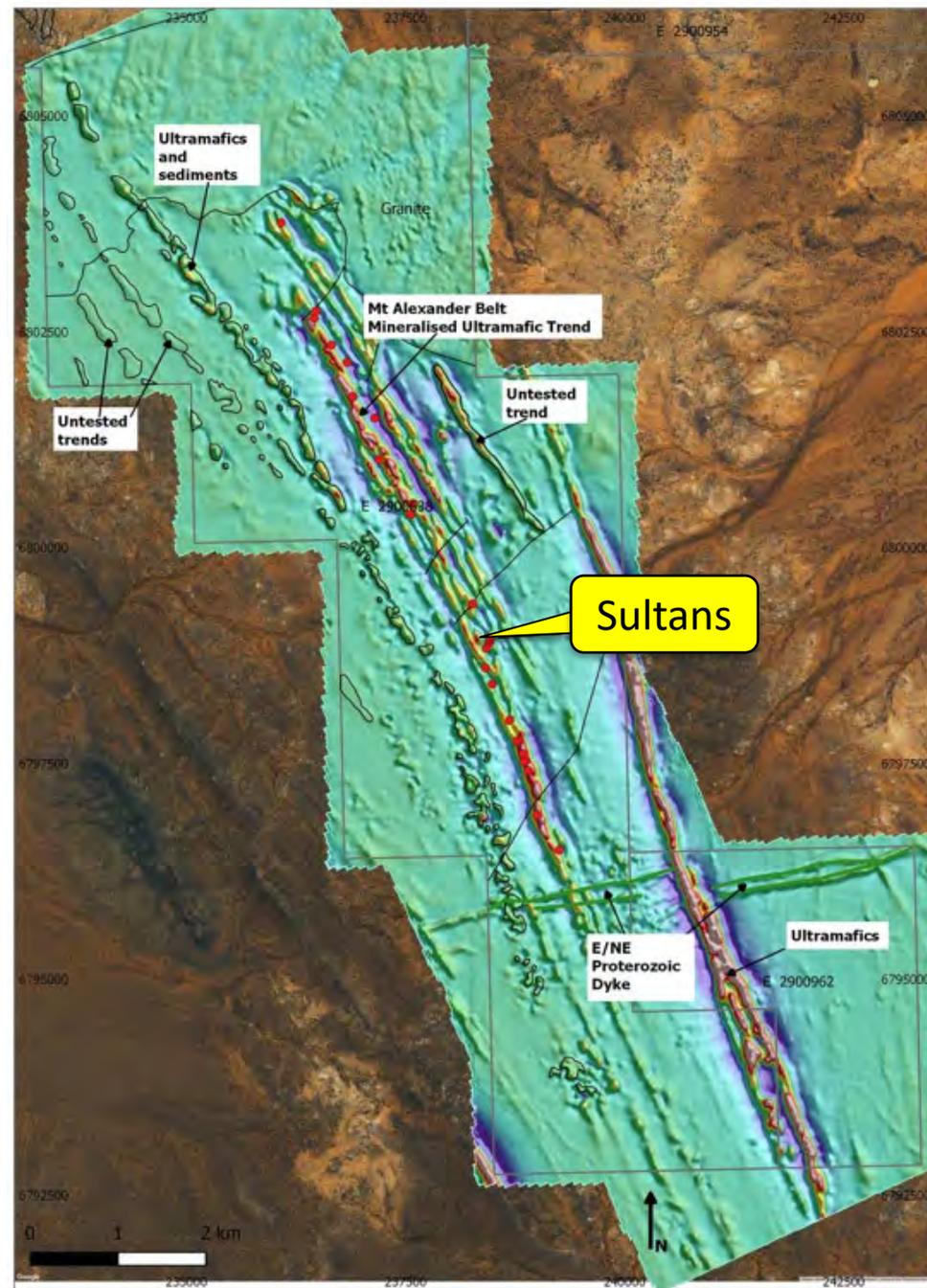


# Mt Alexander Belt

## *Underexplored fertile belt*

- ***Mt Alexander Belt is north-northwest trending with a strike of 7km***
- ***Historical drilling by BHP 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***

*Right: new high resolution magnetic data (RTP 1VD) acquired by St George for the southern portion of E29/638 set against an air photo 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 bulk concentrates
- Separate nickel and copper concentrates produced by standard flotation process with 89% and 86% recoveries respectively (**on right**: copper being floated in test completed by Strategic Metallurgy Pty Ltd)

## *Clean Concentrate:*

- No deleterious elements like MgO, talc or arsenic

## *Standard Flotation:*

- Standard re-agents utilised, confirming excellent amenability of ore to flotation process

## *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***



# 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 + credits for Co, PGEs*
- *Amenable to blending with lower grade ore*

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

The location and quality of the Mt Alexander Project presents:

- ***Multiple potential development & 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

### ***Regional Exploration:***

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

### ***Review Mining Potential:***

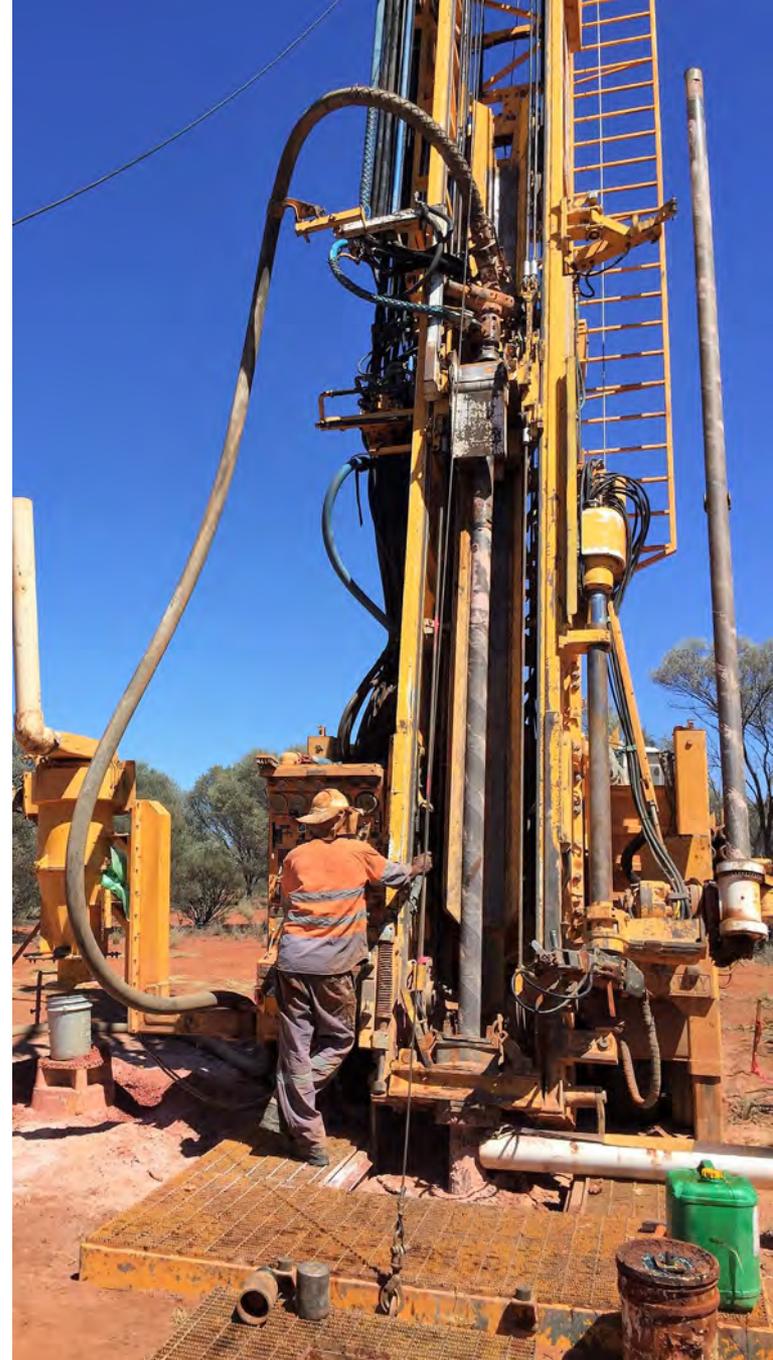
- Initiate studies to assess the potential for a low cost/high margin mining operation at Mt Alexander

### ***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



## *Creating Shareholder Value through Exploration Success*

***Photo: Diamond drilling at Mt Alexander for St George Mining by DDH1 Drilling***



# 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):

- 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*
- 7 March 2019 *Nickel-Copper Sulphide Drilling at Mt Alexander*
- 18 March 2019 *Drilling at Mt Alexander – Strong Results Continue*
- 9 April 2019 *Nickel-Copper Sulphide Drilling at Mt Alexander - Update*

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.

## 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.