



# *'2017 Nickel Sulphide Drilling - Exceptional Growth Opportunity'*

7 March 2017



St George Mining Limited | ACN 139 308 973

# 2016 Drilling Success

## High Grade Ni-Cu-PGE Discovery at Mt Alexander

- ✓ St George acquires Mt Alexander Project from BHP Billiton in January 2016
- ✓ St George identifies 15 electromagnetic (EM) conductors prospective for massive sulphides
- ✓ Drilling by St George intersects nickel-copper-PGE mineralisation in every EM conductor
- ✓ Fresh nickel-copper sulphides discovered at shallow depths from 30m below surface (*Right: Drill core from MAD31 showing a thick vein of coarse grain pure pentlandite – spot values of 28%Ni from portable XRF readings; assays on page 12*)
- ✓ Multiple new discoveries in 2016 establish recurrent mineralisation over 3.5km strike at Cathedrals Belt



***Mt Alexander - an emerging new nickel camp with potential for multiple deposits***

# 2017 – Positioned for Greater Success



## Increasing Shareholder Value

### Major Drill Programme

- 19 drill holes planned in Phase 1 of the 2017 drill programme
- Testing new EM conductors and geological targets as well as commencing extensional drilling of known mineralised zones to establish a resource base
- Further drilling to be planned after Phase 1 results reviewed
- Outstanding potential to discover further high grade Ni-Cu-PGE sulphides

### Regional Exploration

- New EM survey underway to explore new target areas
- Excellent potential to confirm additional mineralised belts within the large 200 sq km Project area

### Review Mining Potential

- Evaluate resource potential
- Assess the scope for a low cost/high margin mining operation

**Shareholders are Highly Leveraged to Further Exploration Success**  
***Strong potential for outsized shareholder gains***

# Overview of St George Mining

## High Quality Explorer

### ASX listed: SGQ

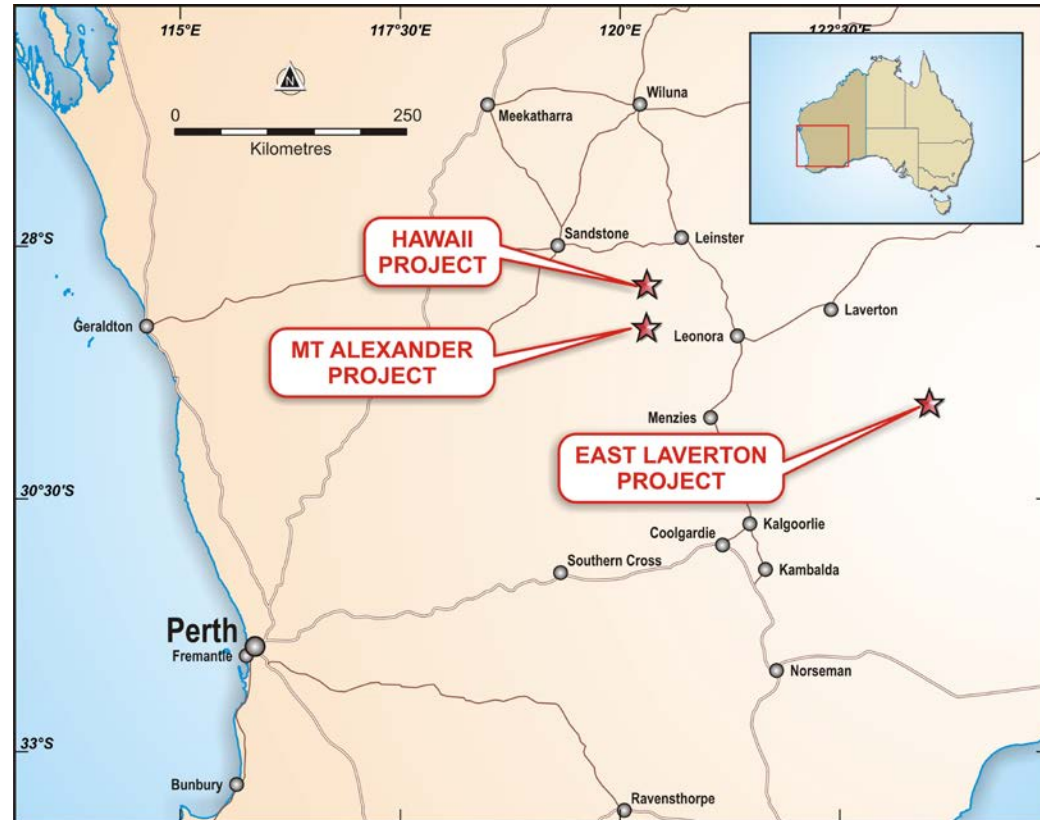
- *Based in Perth, WA*

### Multiple exploration projects

- *Nickel sulphide and gold*
- *Dominant landholdings in strategically important districts but underexplored*
- *Projects with potential for discovery of world class deposits*
- *Focus on mineral-rich Yilgarn Craton, Western Australia*

### Creating shareholder wealth

- *Tight capital structure*
- *Targeting high multiplier returns on investment*



**East Laverton Project:** *High priority targets for gold and nickel sulphide over three major greenstone belts*

**Hawaii Project:** *Early stage exploration at recently recognised undercover and unexplored greenstones*



# Corporate Snapshot

## Strong shareholder base and market support

**Listed shares (SGQ):** 250,359,725  
**Listed options (SGQOA):** 50,854,622  
 SGQOA - exercise price of 20c, expiring on 30 June 2017.

**Market cap:** \$36m (@14.5c per share)  
**Cash:** \$5.8m (as at 1 March 2017)

### Largest Shareholders

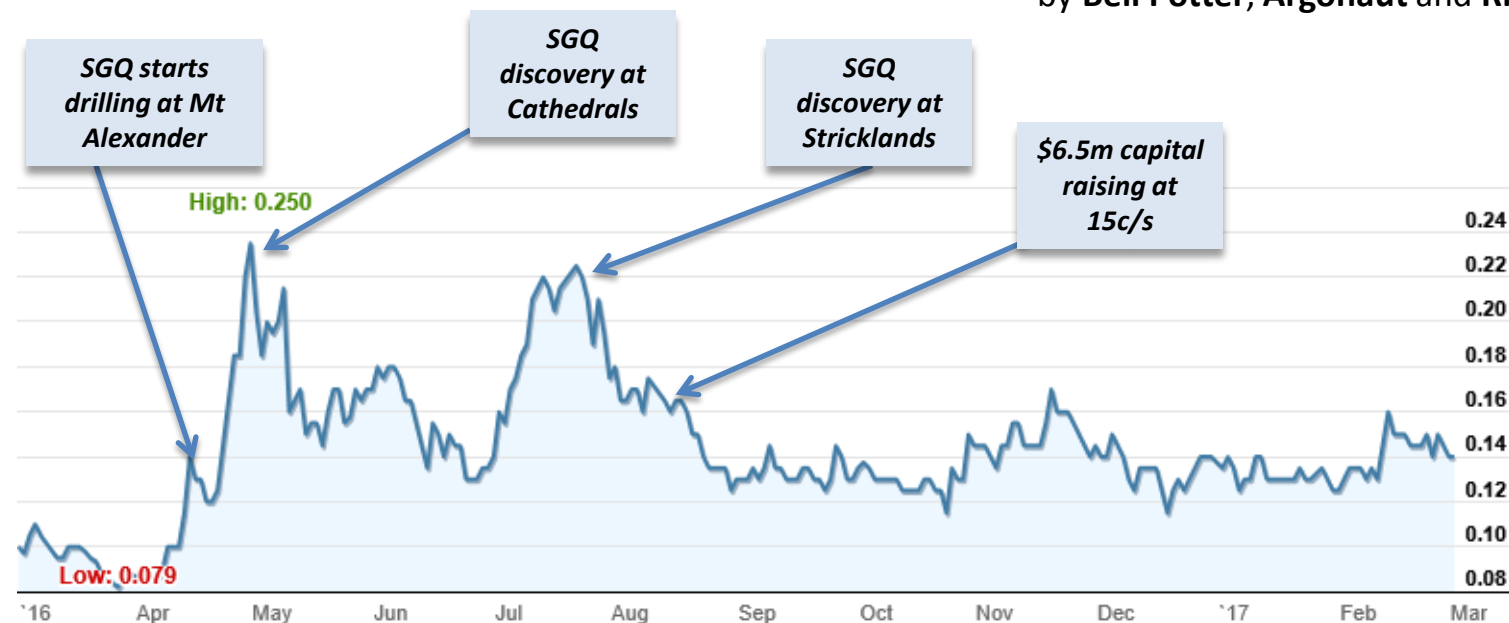
Impulzive: 4.5% City Natural Res's: 4%  
 John Prineas: 4.16% Oceanic Capital: 3%

### Share Ownership

Top 10: 21% Top 20: 30%  
 Directors: 6%

**Broad Shareholder Base:** Over 2,750 shareholders including retail investors, high net worths, Australian and overseas institutions

Oversubscribed capital raising in August 2016 by **Bell Potter, Argonaut and RM Capital**



**SGQ market cap increased by 400% in 2016 and share price is highly leveraged to further exploration success**

# Highly Qualified Team

## Track Record of Exploration Success

Directors, Management	Consultants
<p><b>John PRINEAS, Executive Chairman</b> – founding shareholder with over 25 years experience in banking and legal sectors servicing the resources industry.</p>	<p><b>Newexco</b> - Leading geophysical consultants in nickel sulphide exploration. Advisers on Nova-Bollinger deposit for Sirius Resources NL, and the Spotted Quoll and Flying Fox deposits for Western Areas Limited (ASX: WSA).</p>
<p><b>Tim HRONSKY, Technical Director</b> - over 25 years as a geologist in the global exploration and mining industry, including 15 years with Placer Dome Inc.</p>	<p><b>Dr Jon HRONSKY</b> - Chairman of the Centre for Exploration Targeting in WA, adviser on exploration targeting. Previously, Manager-Strategy &amp; Generative Services for BHP Billiton Mineral Exploration.</p>
<p><b>Sarah SHIPWAY, Non-executive Director/Company Secretary</b> - Chartered Accountant with extensive experience in advising listed exploration companies.</p>	<p><b>Dr Martin GOLE</b> – Consultant geologist, global expert and leading authority on magmatic nickel sulphide deposits. Author/co-author of several landmark research papers on major deposits in the Yilgarn.</p>
<p><b>Matthew McCARTHY, Exploration Manager</b> - ex-BHP Billiton; part of the team that discovered the Venus nickel sulphide deposit (+200,000 Ni) at Leinster.</p>	



*Above: part of the massive nickel-copper sulphide intersection in MAD40 that graded 7.88%Ni and 3.11%Cu*



# Mt Alexander

## Strategic Location

### Favourable Region

South-west of world class nickel sulphide mines on the Agnew-Wiluna belt, with existing road access and infrastructure (Left: regional location map set over TMI magnetics)

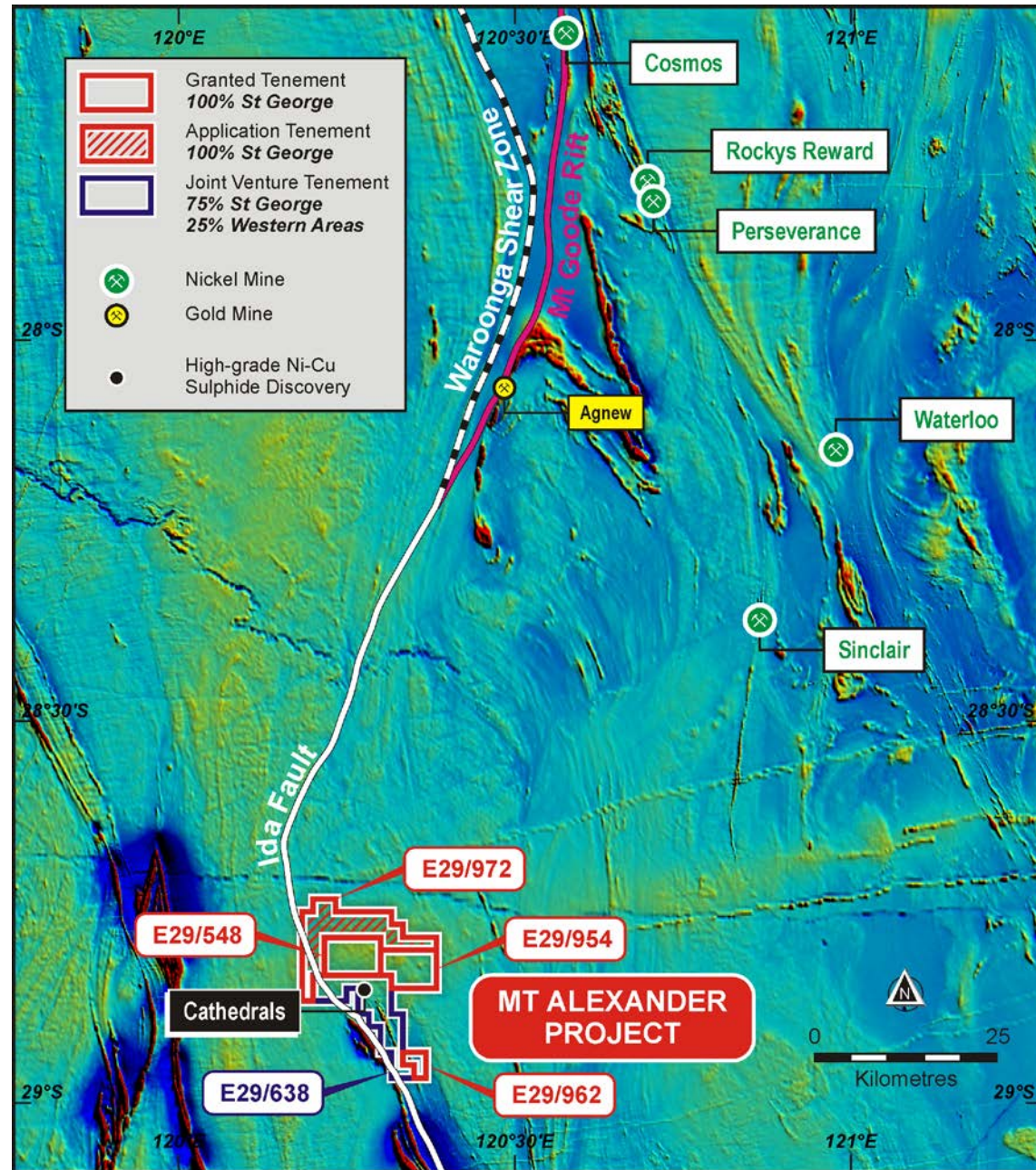
### Underexplored Project

Massive Ni-Cu sulphides first discovered by BHP Billiton in 2008 but project remained under-explored until 2016

### Acquisition by St George

St George gains ownership and control in 2016 and consolidates a dominant tenement package

*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.*





# Mt Alexander

## Pipeline of Targets

### Cathedrals Belt

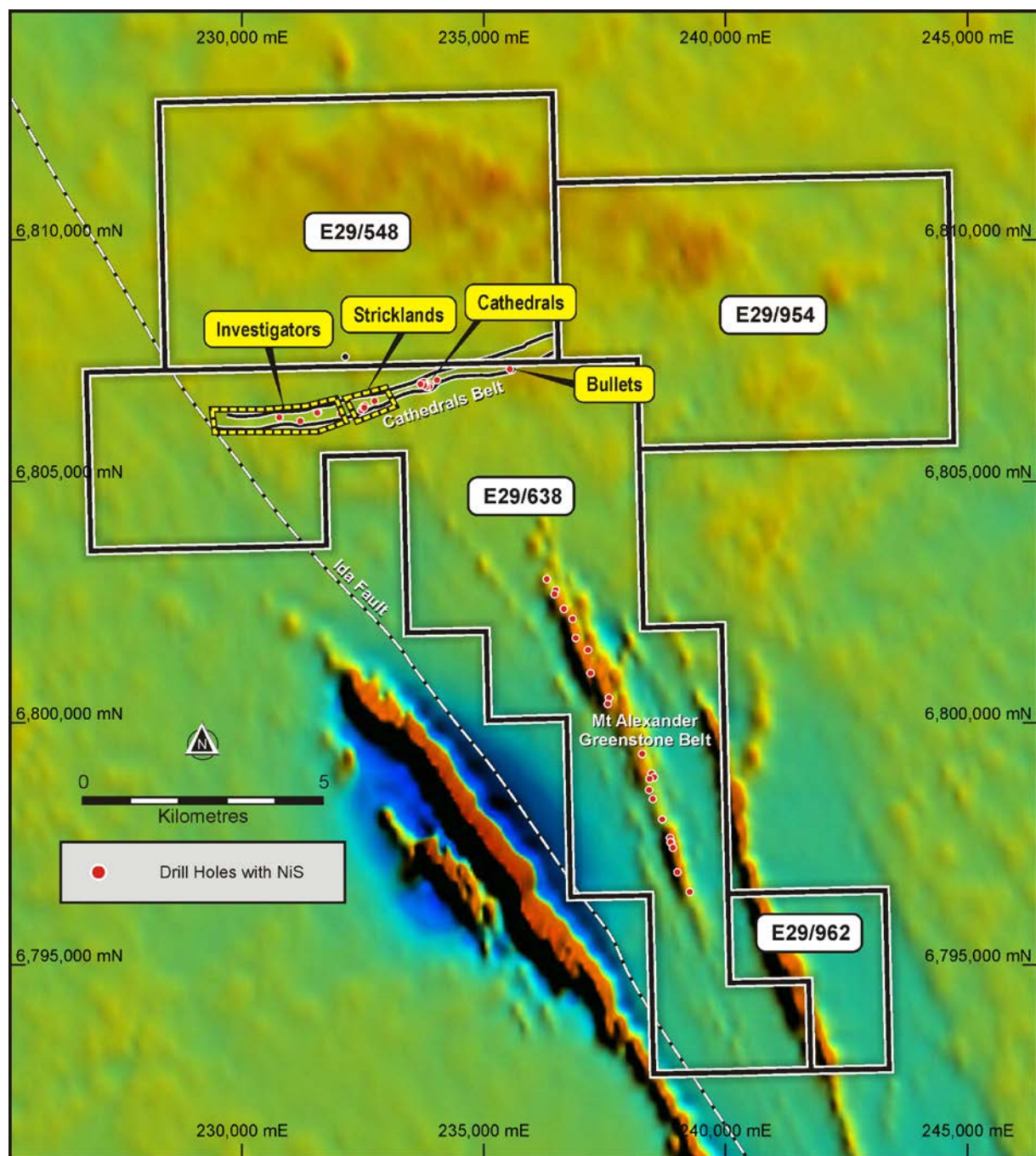
- Exploration focused on the Cathedrals Belt where high grade Ni-Cu sulphides discovered over 3.5km
- Discoveries at Cathedrals Prospect, Stricklands Prospect and Investigators Prospect
- New aeromagnetic survey identifies parallel structures for exploration as well as eastern extension of the Belt

### Mt Alexander Belt

- Multiple historical intersections of massive Ni-Cu but not followed up

### Regional Exploration

- Tenement package over 200 sq km remains largely unexplored  
(*Right: map of four granted project tenements against TMI RTP magnetics*)

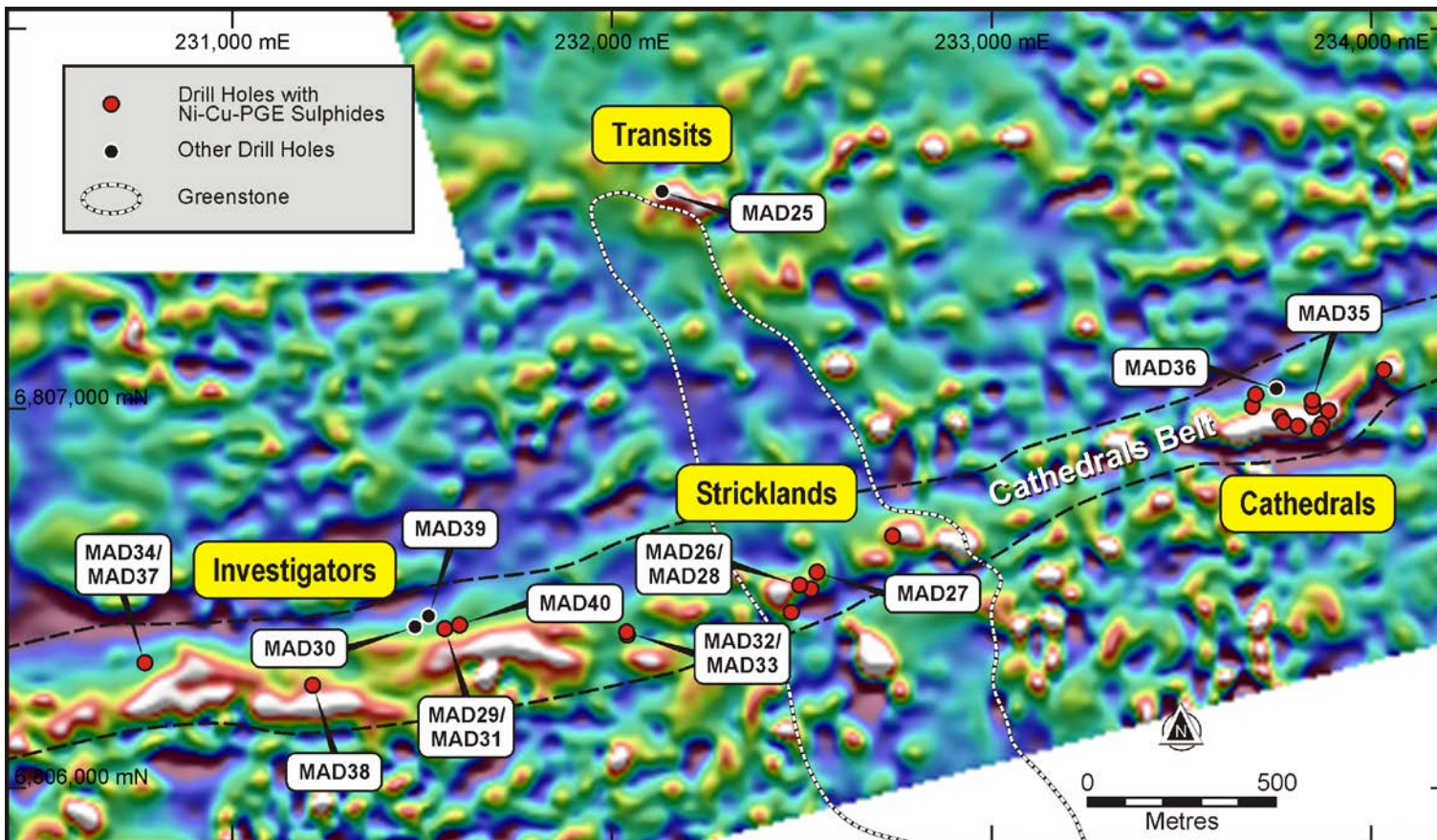




# Cathedrals Belt

## Unique Geological Setting

- East-northeast belt with mineralised ultramafics, not north-northwest orientation which is typical in Yilgarn
- Massive sulphides from 30m below surface and continue at depth
- Reliable EM Targeting - no false positive EM anomalies to date



*Left: a plan view of the Cathedrals Belt (over TMI magnetics) showing the drill hole collar locations for the 2016 nickel-copper-PGE intersections over a strike of 3.5km*

# Primary Magmatic Channels

## Favourable Geology at Cathedrals Belt

- Mineralisation discovered at the three prospects in the Cathedrals Belt is interpreted to be hosted in primary magmatic komatiite channels
- Massive sulphides formed in embayments of the basal contact of these pathways, typical of magmatic systems
- Sulphide mineralisation observed more than 100m from massive sulphide lenses
- Late intrusions of granite and Proterozoic dolerites together with brittle deformation influence the distribution of the mineralised ultramafics
- Parental magma is high MgO basalt which is consistent with higher Cu and PGE concentrations in the magmatic sulphides
- Geological examination indicates that the massive sulphides have been little modified since their igneous formation

***Recognition of primary magmatic channels highlights nickel sulphide system at Mt Alexander***



**Above:** drill core from MAD23 at 57m showing contact of massive nickel-copper sulphides with footwall mafic rocks

# High Grade Mineralisation

## Sample of Significant Intersections



### Cathedrals Prospect:

**MAD12:** 3.95m @ 5.05%Ni, 1.55%Cu, 0.11%Co and 4.44g/t total PGEs from 91.4m  
with a thick halo of stringer and disseminated sulphide mineralisation of  
9.25m @ 0.76%Ni, 0.34%Cu, 0.03%Co and 0.93g/t total PGEs from 81.5m

**MAD15:** 2.09m @ 6.06%Ni, 2.47%Cu, 0.17%Co and 4.41g/t total PGEs from 29.25m  
with a thick halo of stringer and disseminated sulphide mineralisation of  
9.75m @ 0.34%Ni, 0.11%Cu, 0.01%Co and 0.3g/t total PGEs from 47.5m

### Stricklands:

**MAD26:** 4.3m @ 4.26%Ni, 2.02%Cu, 0.19%Co and 3.21g/t total PGEs from 53.9m,

**MAD27:** 2m @ 4.17%Ni, 3.11%Cu, 0.21%Co and 3.35g/t total PGEs from 71.25m,  
and a thick halo of stringer/ disseminated sulphide mineralisation with assays of  
11.15m @ 0.52%Ni, 0.63%Cu, 0.03%Co and 1.69g/t total PGEs from 60.1m

### Investigators:

**MAD31:** 1.57m @ 6.26%Ni, 2.71%Cu, 0.18%Co and 4.91g/t total PGEs from 91.4m

**MAD32:** 1.92m @ 4.58%Ni, 1.52%Cu, 0.14%Co and 3.83g/t total PGEs from 51.6m,  
and a thick halo of stringer/ disseminated sulphide mineralisation with assays of  
7.6m @ 0.44%Ni, 0.19%Cu, 0.02%Co and 0.59g/t total PGEs from 44m



# Metallurgical Testwork

## High Value Concentrate

### Positive Results from Initial Test

Preliminary metallurgical testwork on a sample of massive nickel-copper sulphide indicates that Mt Alexander will produce a high value saleable concentrate that will be sought after

### High Recoveries from Ore

>99% recoveries of Ni and Cu to concentrates

No deleterious elements like MgO or arsenic

*(on right: copper being floated in the metallurgical test completed by Strategic Metallurgy Pty Ltd)*

### High Grades

Nickel grade of 18%Ni (Nova is 13.5%Ni\*)

Copper grade of 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

*\* Nova Optimisation Study announced by IGO in ASX Release dated 14 December 2015*



# Project Value

## Favourable Economics

### Project economics supported by:

- ✓ Shallow depth of mineralisation, likely to be amenable to low cost mining
- ✓ High grades of Ni and Cu with strong credits for Co and PGEs
- ✓ Excellent metallurgy will allow production of a high quality, smelter-friendly concentrate
- ✓ Proximity to existing processing plants
- ✓ Near existing infrastructure (e.g. roads; power)

***Substantial Project value has been created with much more to come***

# Near Term Value Drivers

## 2017 Exploration Programme Underway

- ✓ 19 drill holes planned in Phase 1 of the 2017 drilling programme – more drilling to follow
- ✓ Outstanding potential for further high grade discoveries
- ✓ New EM targets and extensional drilling designed to assess the continuity of mineralisation
- ✓ Drill targets include new EM conductors identified by deep search SAMSON EM survey
- ✓ New EM surveys underway to test for further conductors in important geological positions that are unexplored

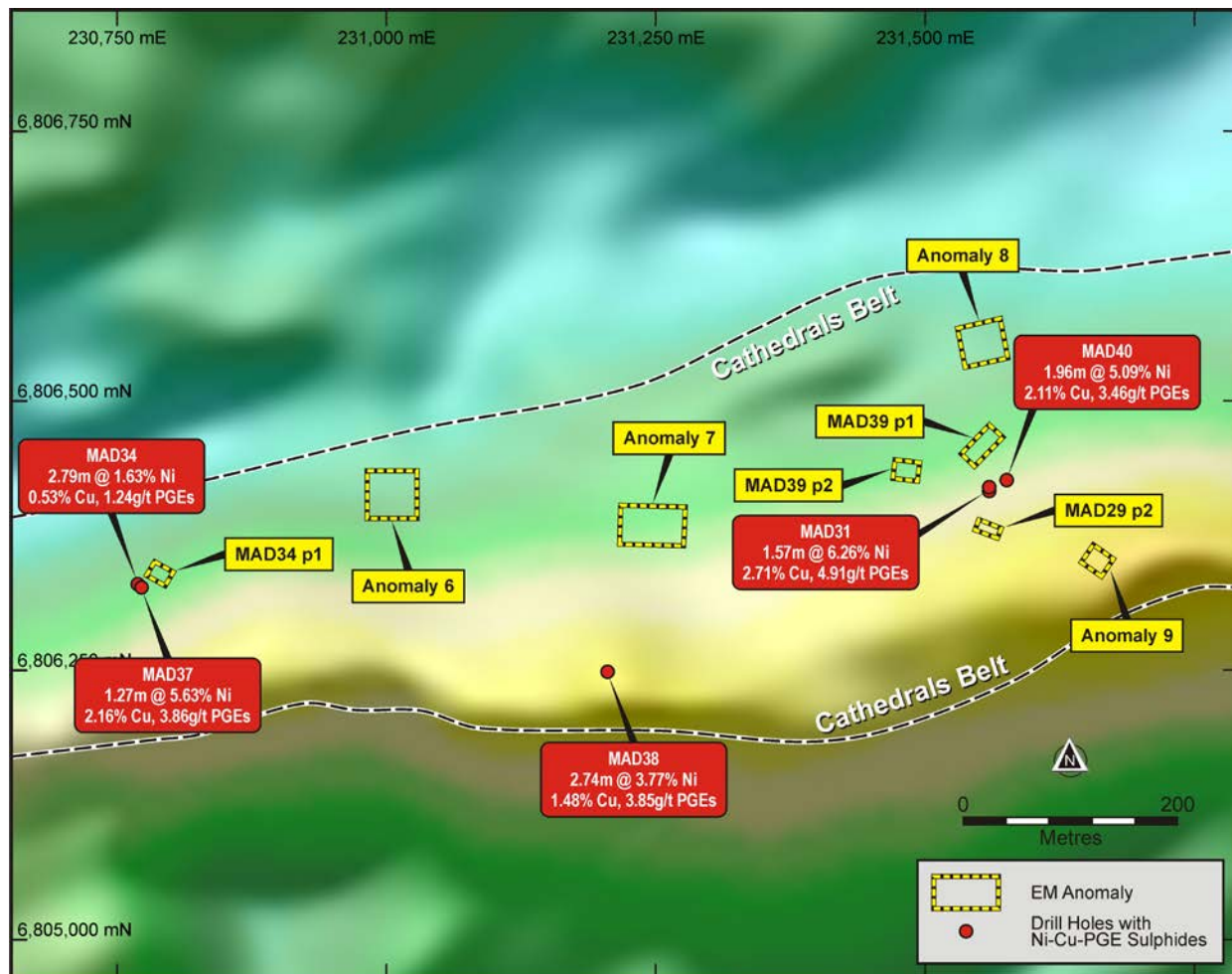
***Current market capitalisation does not reflect project upside  
- Exceptional Growth Opportunity -***



# Phase 1 of 2017 Drill Programme

## New EM Conductors at Investigators

- Large target area over 600m in strike
- New conductors are along strike or down dip to known mineralisation
- Testing both downhole EM targets and new deeper SAMSON EM conductors
- New SAMSON conductors:
  - Anomaly 6 (9,712 Siemens at 247m depth; 46m x 44m,
  - Anomaly 7 (15,000 Siemens at 200m depth; 60m x 37m)
  - Anomaly 8 (24,652 Siemens at 235m depth; 41m x 37m)
  - Anomaly 9 (25,000 Siemens at 100m depth; 20m x 30m)

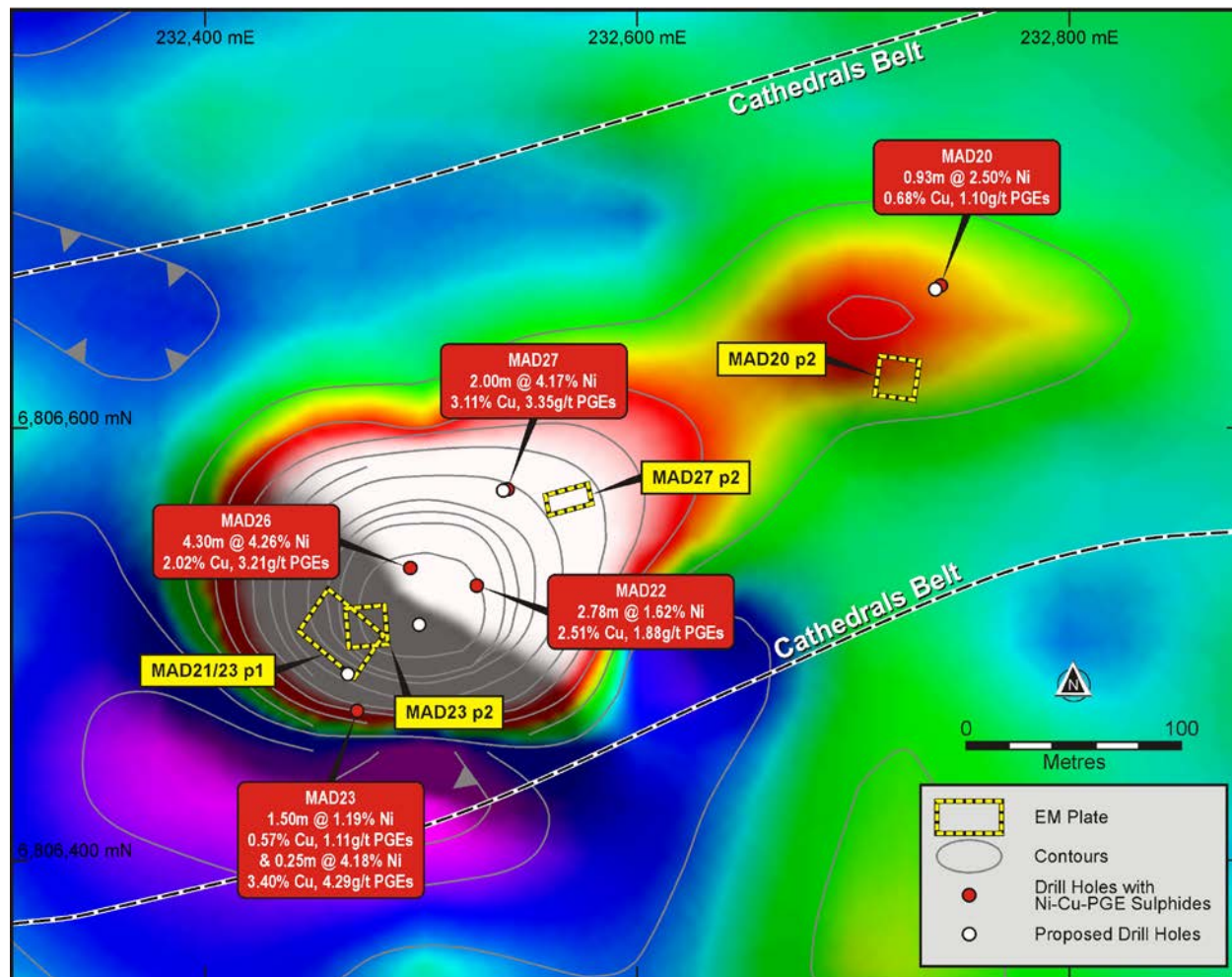


Plan view (against TMI magnetics) of the central area of the Investigators Prospect showing drill holes with massive Ni-Cu sulphides and untested EM conductors. The new SAMSON conductors are Anomalies 6, 7, 8 and 9. The other EM plates shown were detected by DHEM surveys in drill holes completed by St George in 2016.

# Stricklands Prospect

## Large SAMSON EM Anomaly

- Large SAMSON EM anomaly over 170m strike
- Only 5 drill holes to date at Stricklands with all intersecting massive Ni-Cu sulphides
- Testing strong downhole EM (DHEM) responses within the large SAMSON EM anomaly:
- MAD20 P2 (7,000 S at 100m depth)
- MAD21/23 P1 (5,000 S at 51m depth)
- MAD23 P2 (9,124 S at 50m depth)
- MAD27 P2 (16,555 S at 60m depth)



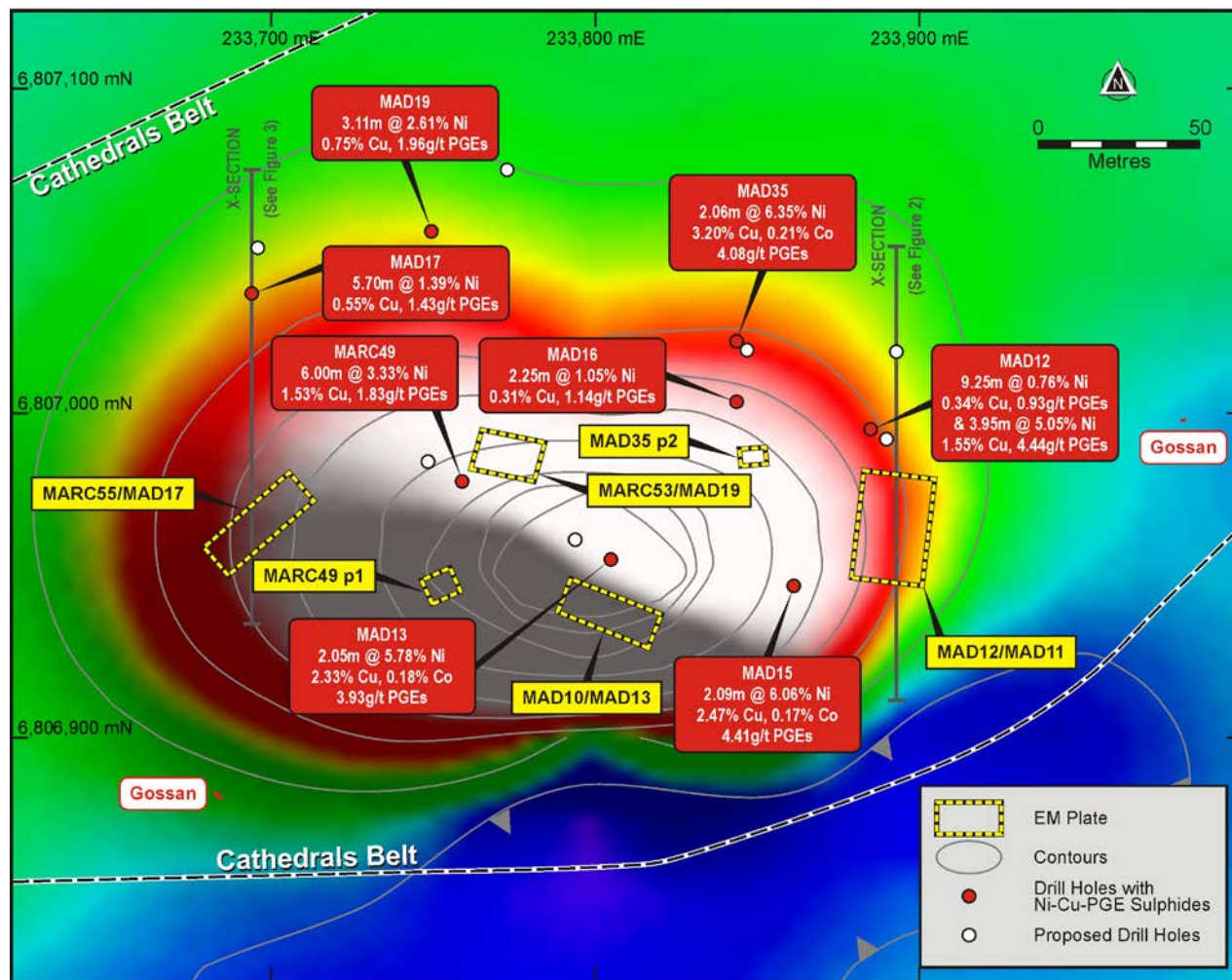
Plan view of the Stricklands Prospect showing the large SAMSON total field EM anomaly (white/red colours) in Channel 18 (44ms). The contours shown are 0.05pT/A which highlight the stronger electromagnetic field over the Stricklands Prospect. The 2016 drill holes with massive nickel-copper sulphides are shown together with planned 2017 drill holes and target EM plates.



# Cathedrals Prospect

## Extension Targets

- Large SAMSON EM anomaly over 200m strike
- Testing strong downhole EM (DHEM) responses within the large SAMSON EM anomaly:
  - MAD10/MAD13 (21,310 S at 54m depth)
  - MAD12/MAD11 (7,000 S at 78m depth)
  - MARC49 (39,000 S at 51m depth)
  - MARC53/MAD19 (5,000 S and 148 depth)
  - MARC55/MAD17 (4,120 S at 143m depth)
  - MAD35 Plate 2 (7,000 S at 55m depth)



Plan view of the Cathedrals Prospect showing the large SAMSON total field EM anomaly (white/red colours) in Channel 18 (44ms). Drill holes with massive nickel-copper sulphides are shown together with planned 2017 drill holes and target EM plates. The contours shown are 0.05pT/A which highlight the stronger electromagnetic field over the Cathedrals Prospect.



# Nickel – Reversal of Long Term Trend

## **The Producer /Trading House says: Glencore, February 2017:**

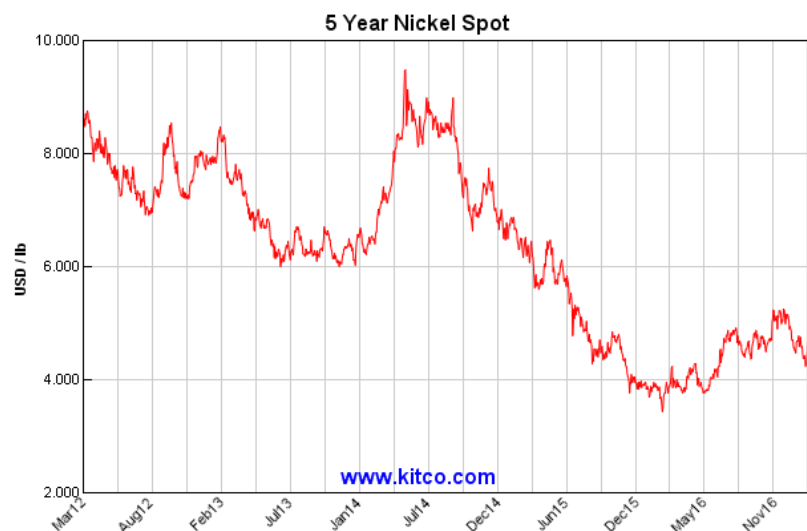
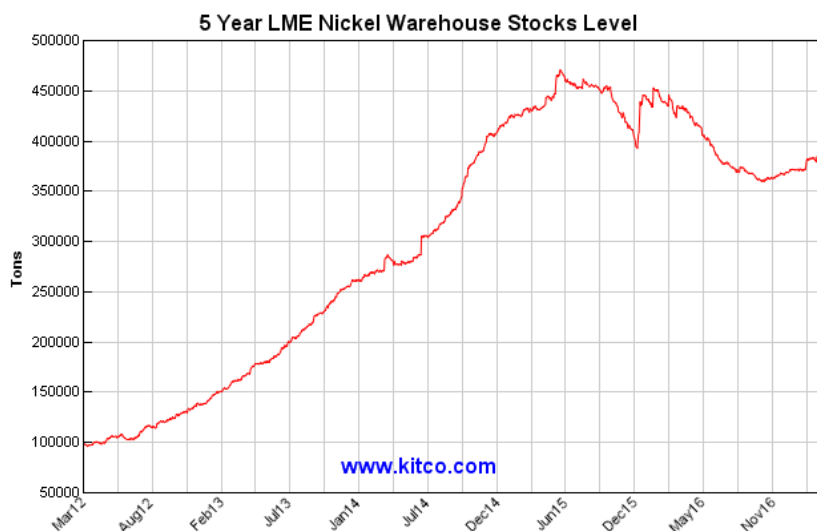
“The market entered its first material deficit since 2010 enabling global inventories to fall. The outlook is for continued deficits and further draws in primary nickel inventories as demand remains strong.”

## **The Banker says: UBS, August 2016:**

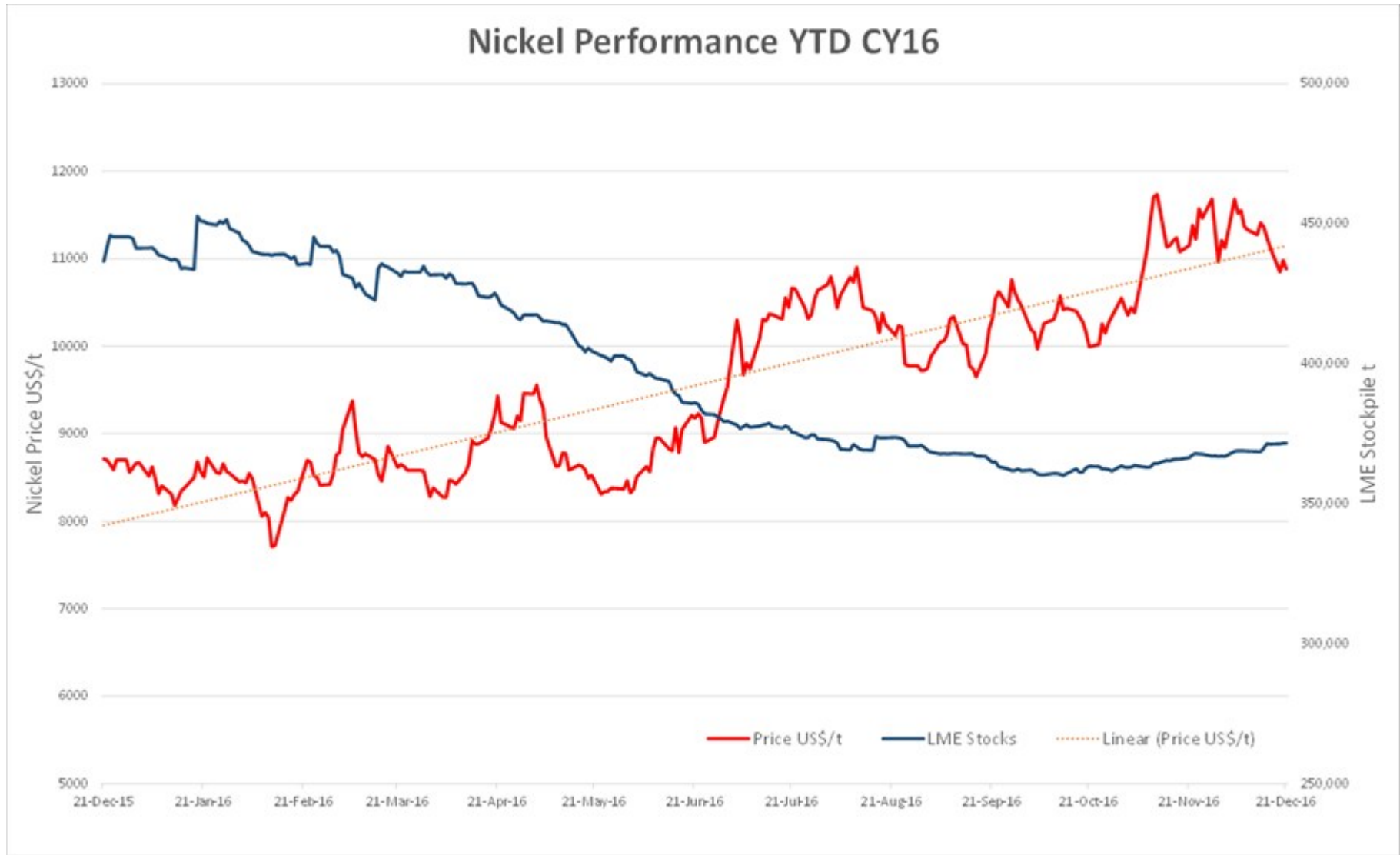
“UBS sees prices at US\$11,023 next year, US\$13,228 in 2018 and US\$19,621 by 2020 after the market flipped from a surplus last year to what’s expected to be a run of shortages.”

## **The Analyst says: Wood Mackenzie, December 2016:**

“By 2020 there will be a need for new project development. We estimate that the promise of a **long-term nickel price of US\$22,000/t (US\$10.00/lb)** should be enough to incentivise those new projects.”



# Nickel – Time to Take a Position



# New Areas of Demand

## A Lithium Driven Boom for Nickel ?

### Elon Musk, CEO of Tesla on lithium-ion batteries:

“...lithium is 2% of the cell mass of our batteries..... really, our batteries should be called nickel graphite batteries as they are mostly nickel and graphite ....”





# Gold Exploration

## East Laverton Project

### Important Regional Location

Near the two most recent world class gold discoveries in WA – Tropicana +8MozAu and Gruyere +6MozAu

### Underexplored for Gold

Shallow drilling has identified widespread anomalous gold confirming prospectivity

### Favourable Structural Features

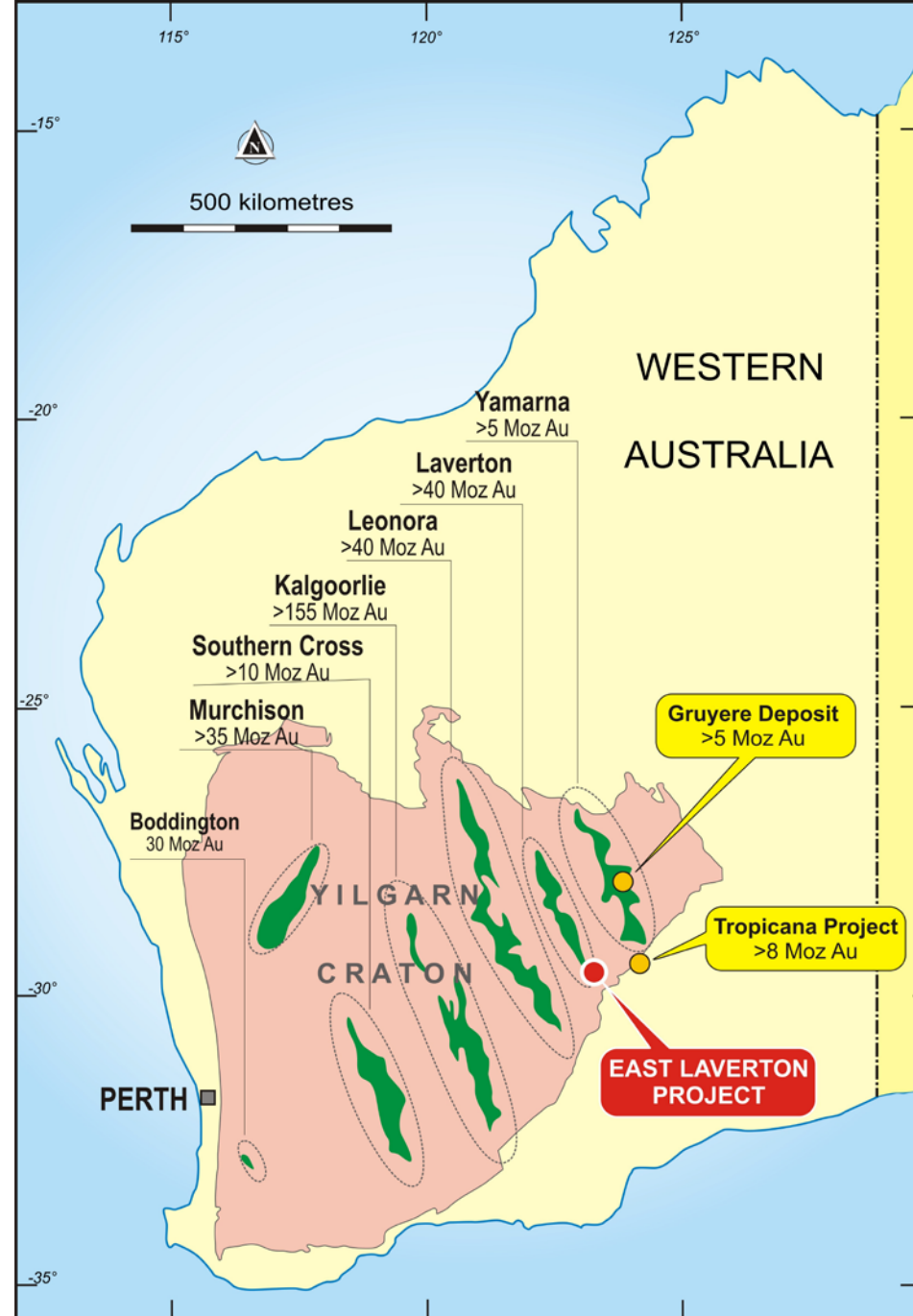
Fundamental structures/faults that control gold mineralisation are prominent

### Large Scale Potential

Early stage targets have 'company maker' potential

### Pipeline of Targets

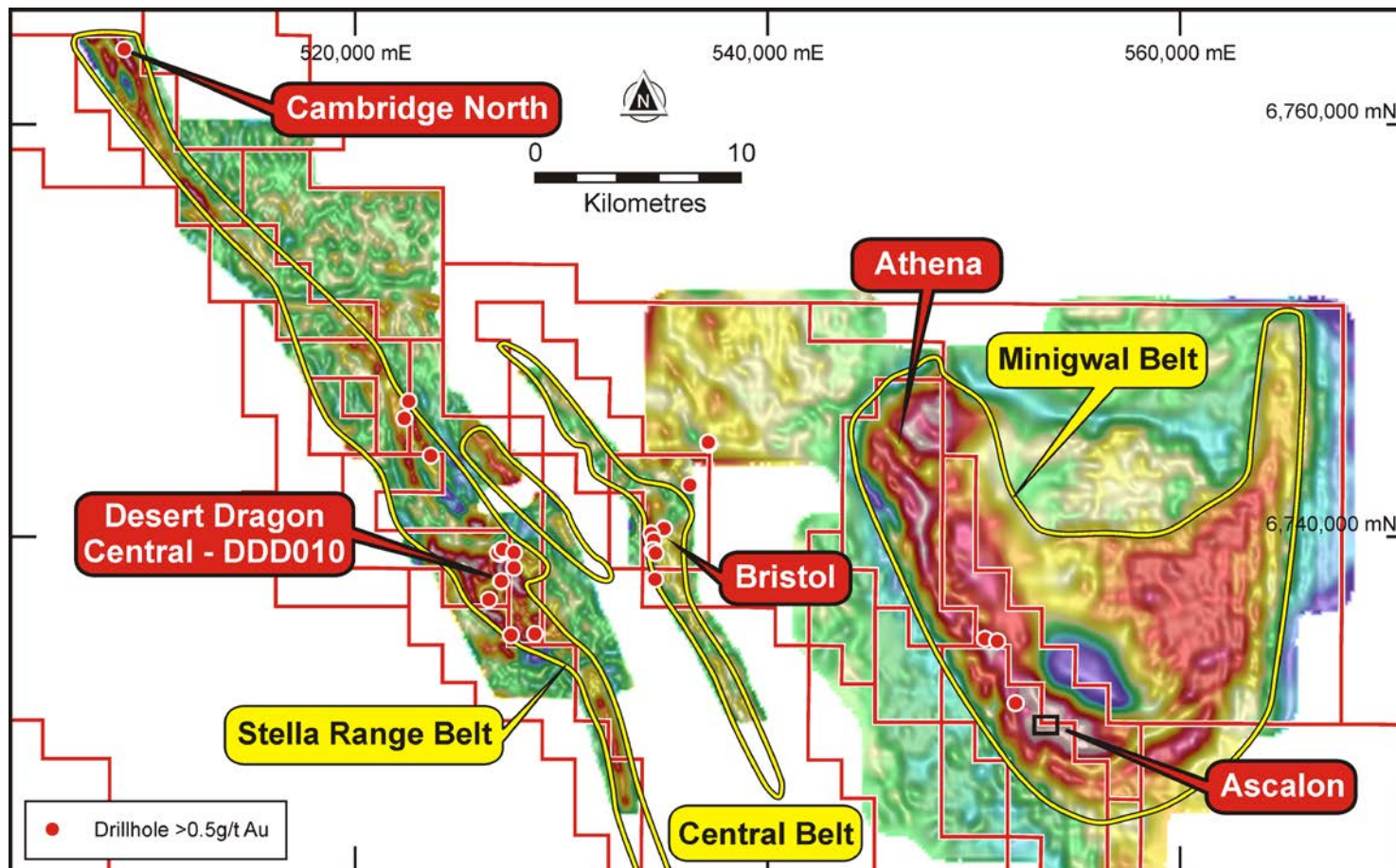
Multiple gold targets have been generated with the highest priority targets now being tested



# Gold Drill Programme

## High Priority Targets

- 2017 drill programme will test our best gold targets
- Gravity survey has identified thick greenstone belts and structures controlling mineralisation, supporting the prospectivity for gold deposits at East Laverton



*Left: the East Laverton tenements against FVD Bouguer gravity data with the high priority gold targets highlighted.*

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- 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.

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## **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 Tim Hronsky, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Tim Hronsky is employed by Essential Risk Solutions Ltd which has been retained by St George Mining Limited to provide technical advice on mineral projects.

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves regarding the Hawaii and Mt Alexander Projects is based on information compiled by Mr Matthew McCarthy, a Competent Person who is a Member of The Australasian Institute of Geoscientists. Mr McCarthy is employed by St George Mining Limited.

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):

- 25 May 2016 *Gold Drill Programme at East Laverton*
- 16 June 2016 *Assays Confirm High Grade Mineralisation at Mt Alexander*
- 29 June 2016 *Nickel-Copper Sulphide Discovery at Stricklands*
- 1 August 2016 *Nickel-Copper Sulphides Discovered at Investigators*
- 22 September 2016 *Assays Confirm Significant Nickel-Copper Mineralisation*
- 20 October 2016 *Strong Results Continue at Mt Alexander*
- 22 November 2016 *Compelling Survey Results at Mt Alexander*
- 25 November 2016 *Gold Drilling at East Laverton*
- 8 February 2017 *SAMSON Survey Lights Up New Targets at Mt Alexander*
- 15 February 2017 *Massive Nickel Sulphide Targets at Stricklands*
- 22 February 2017 *Priority Targets for Cathedrals Prospect*
- 28 February 2017 *EM Survey over New Target Areas at Mt Alexander*

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.



# *St George Mining:* *creating shareholder wealth* *through exploration success*

