



# RIU Explorers Conference

**25-26 February 2015**

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# STAVELY MINERALS



ASX Code – SVY

Share Price - \$0.18

Cash (31/12/14) - \$1.2M

*Excludes Titeline Drilling agreement\**

Shares on Issue – 80.8M

Market Cap - \$14.5M

## Directors

Bill Plyley

*Non-executive Chairman*

Chris Cairns

*Managing Director*

Jennifer Murphy

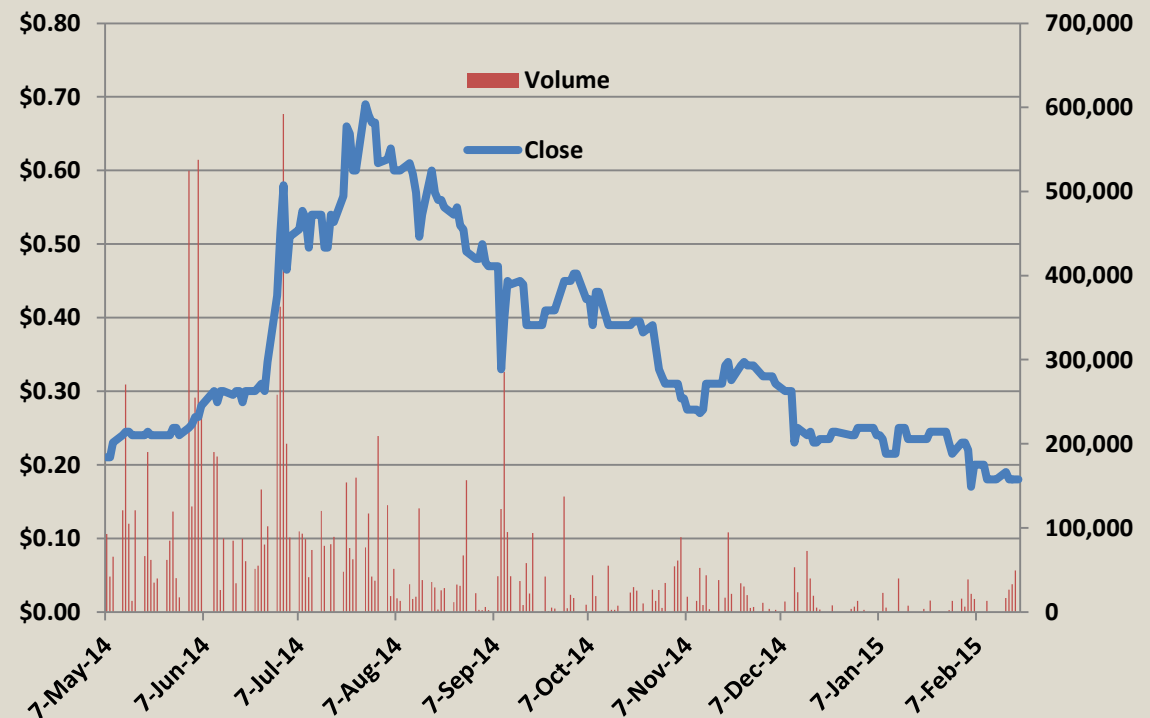
*Technical Director*

Peter Ironside

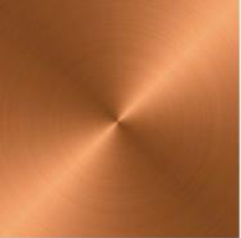
*Non-executive Director*

Amanda Sparks

*Company Secretary*

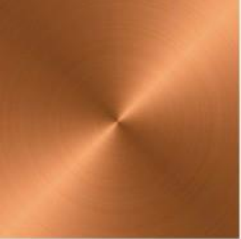


\*\$2m share subscription agreement with Titeline Drilling Pty Ltd announced to the ASX on 7 October 2014



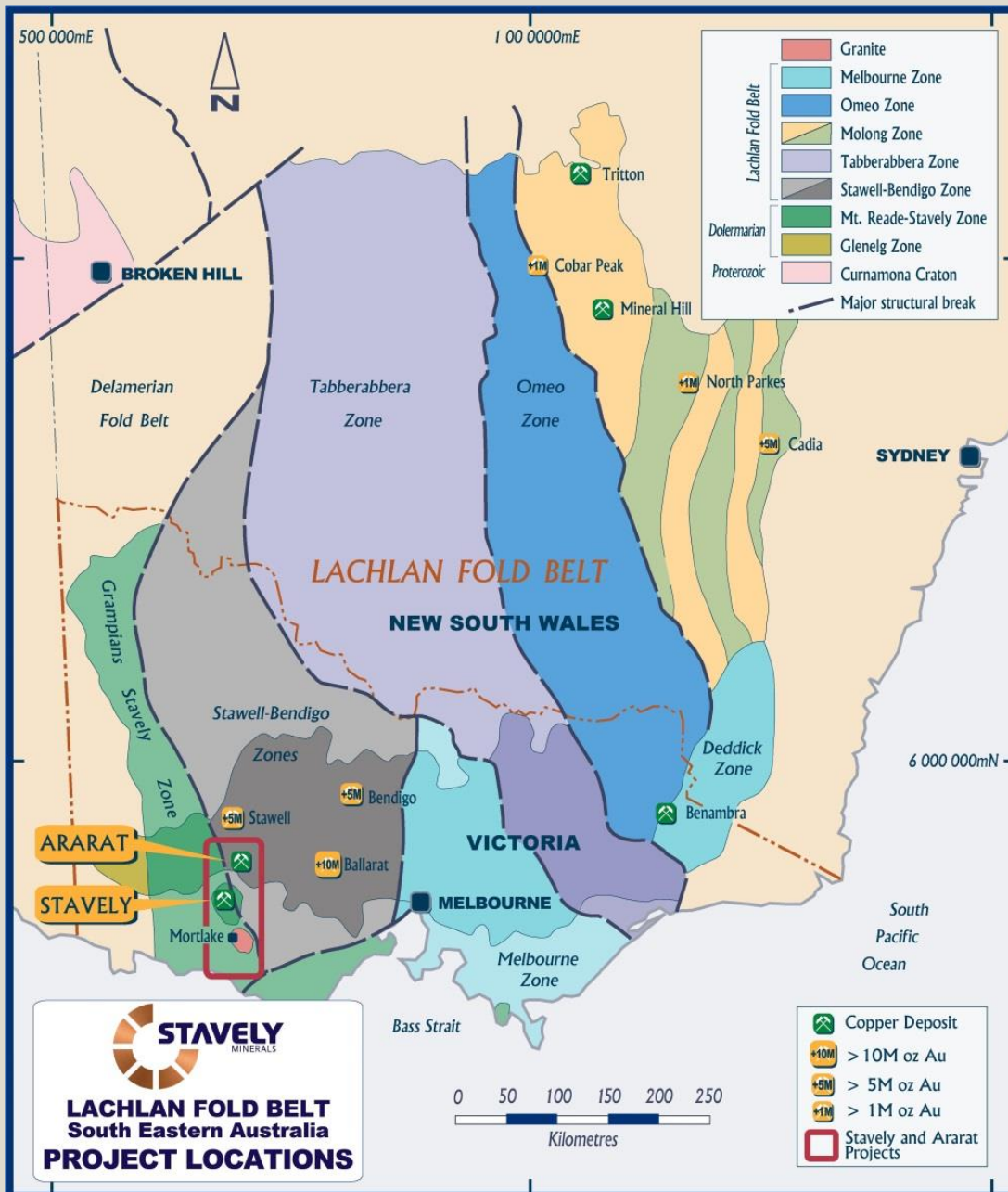
# OUR STRATEGY

1. Acquire copper-gold / base metals projects with quality Mineral Resources with two key attributes:
  - i. The known mineralisation is not sufficient to develop
  - ii. There is excellent exploration upside
2. Implement an intensive exploration programme to discover further mineralisation / add to the Mineral Resources
3. When the project has sufficient Mineral Resources defined to an appropriate level of confidence, commence scoping / feasibility studies towards demonstrating the economic case for development
4. Develop the asset



# PROJECTS

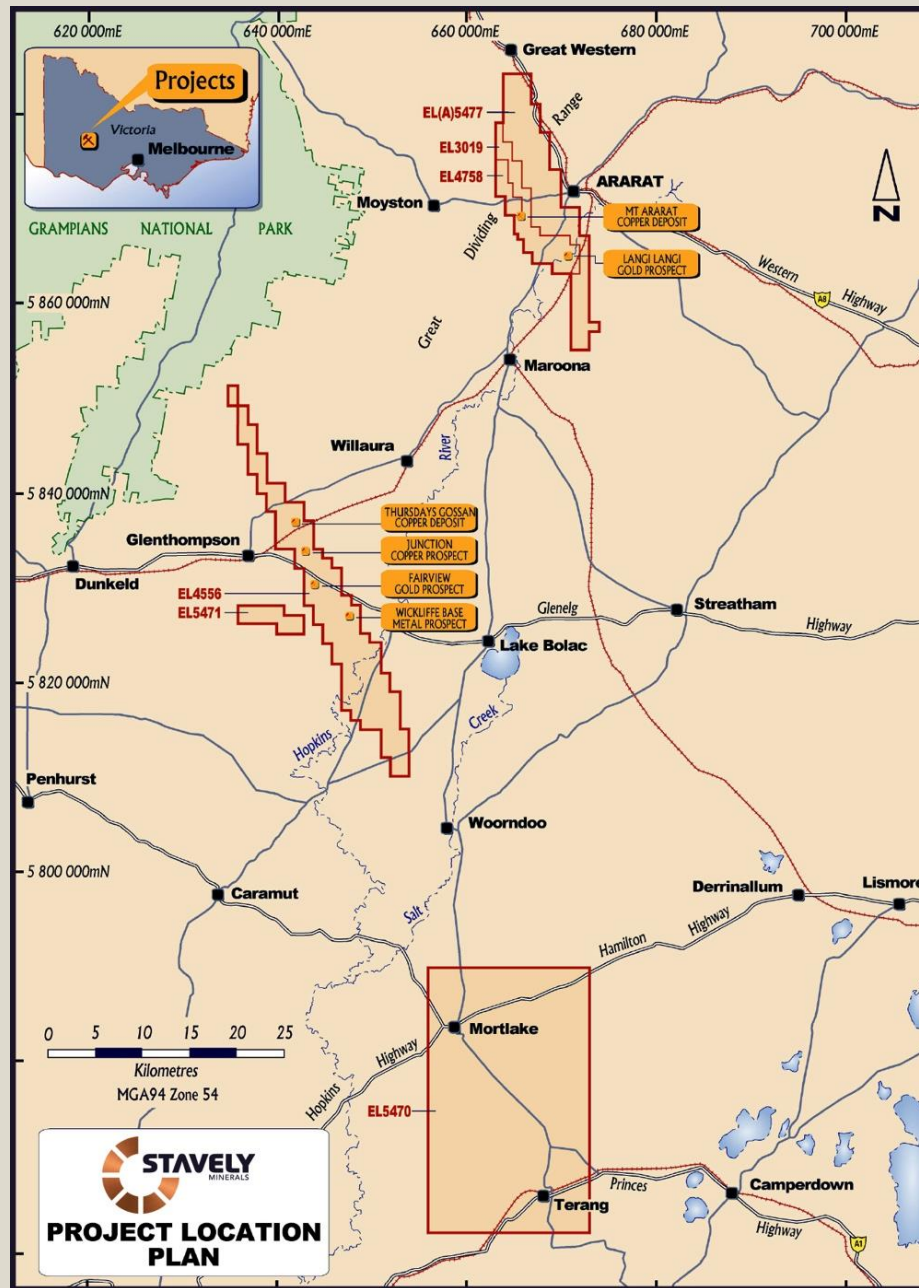
# PROJECT LOCATION



The Mount Stavely Volcanic Complex is considered a northern extension of the Mt Read Volcanics in Tasmania



# PROJECT LOCATION



Total area owned and  
applied for tenure:  
**770 square kilometres**



At the Ararat Project, hosted in Besshi-style VMS:

- Inferred Mineral Resources of 1.2Mt at 2.0% copper, 0.5 g/t gold, 0.4% zinc and 6 g/t silver for 30kt of contained copper

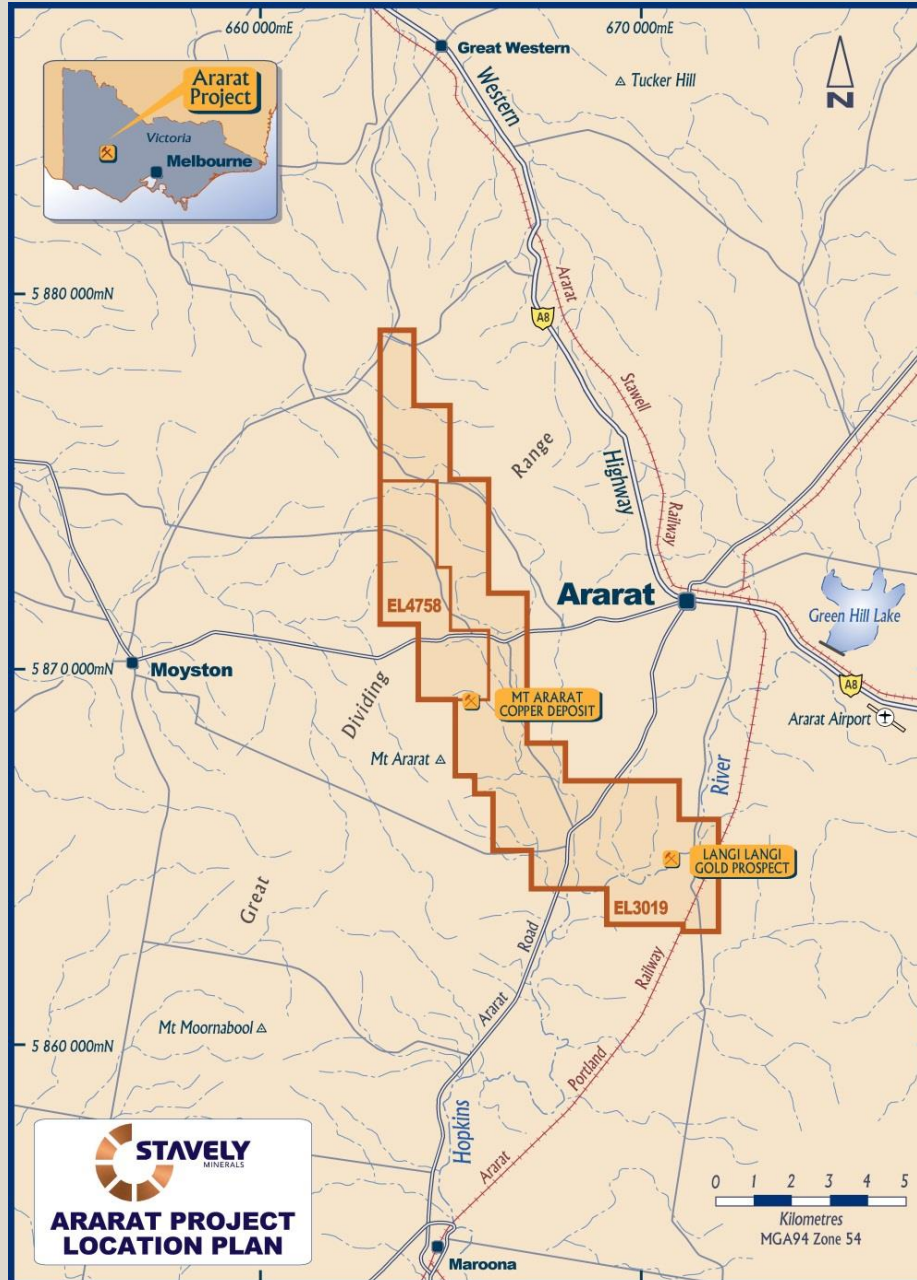
At the Stavely Project hosted in a secondary chalcocite enriched blanket:

- Inferred Mineral Resources of 28Mt at 0.4% copper for 110kt of contained copper

<sup>1</sup> reported in compliance with JORC 2012, see Stavely Minerals Prospectus dated 17 March 2014 and available from [www.stavely.com.au](http://www.stavely.com.au)

# ARARAT PROJECT

# ARARAT PROJECT



Hosts the:  
Mt Ararat Besshi-style  
copper-gold VMS

and the

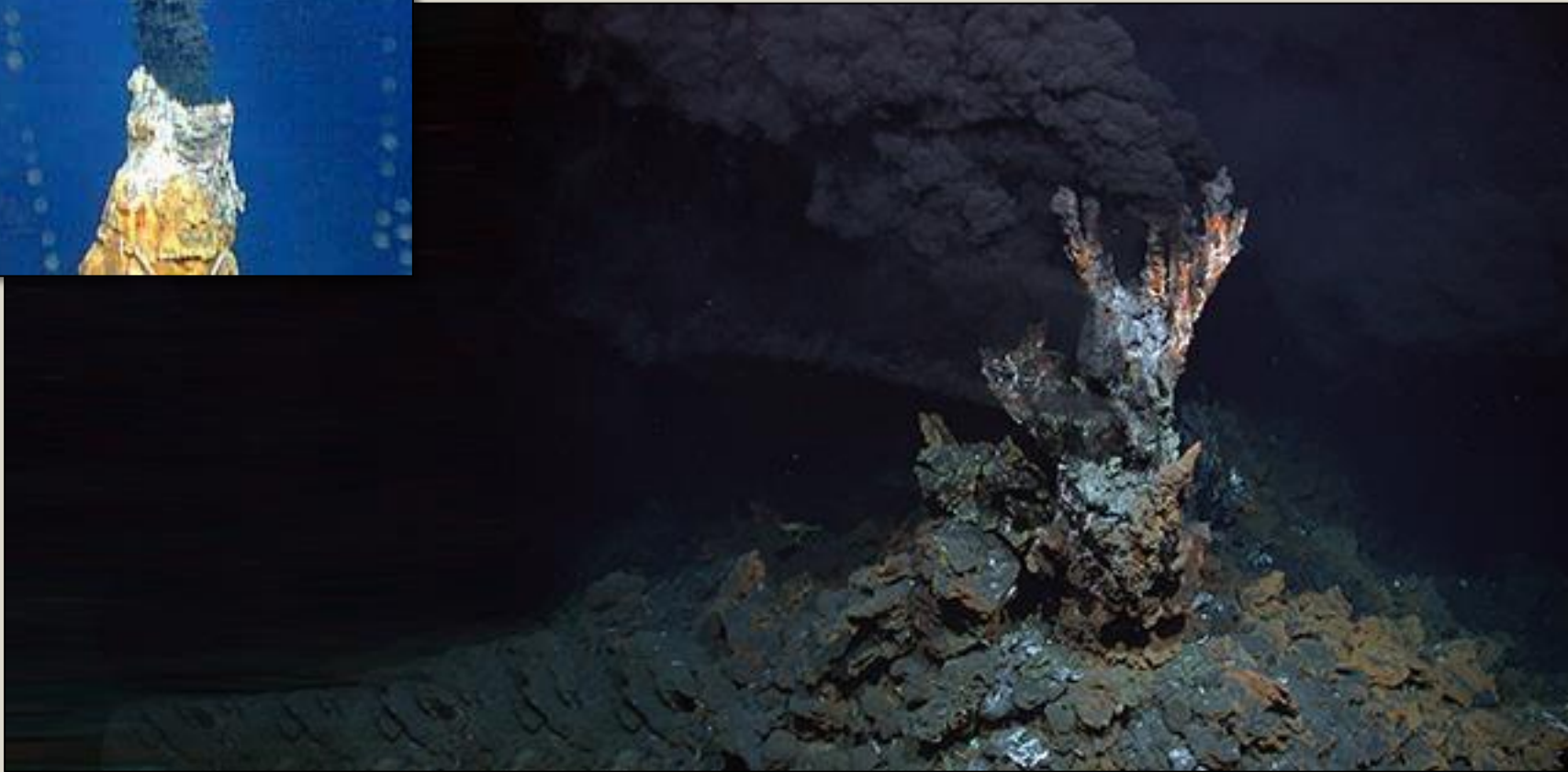
Langi Logan - Stawell Gold  
Mine look-alike target

# MOUNT ARARAT VMS

# ARARAT PROJECT



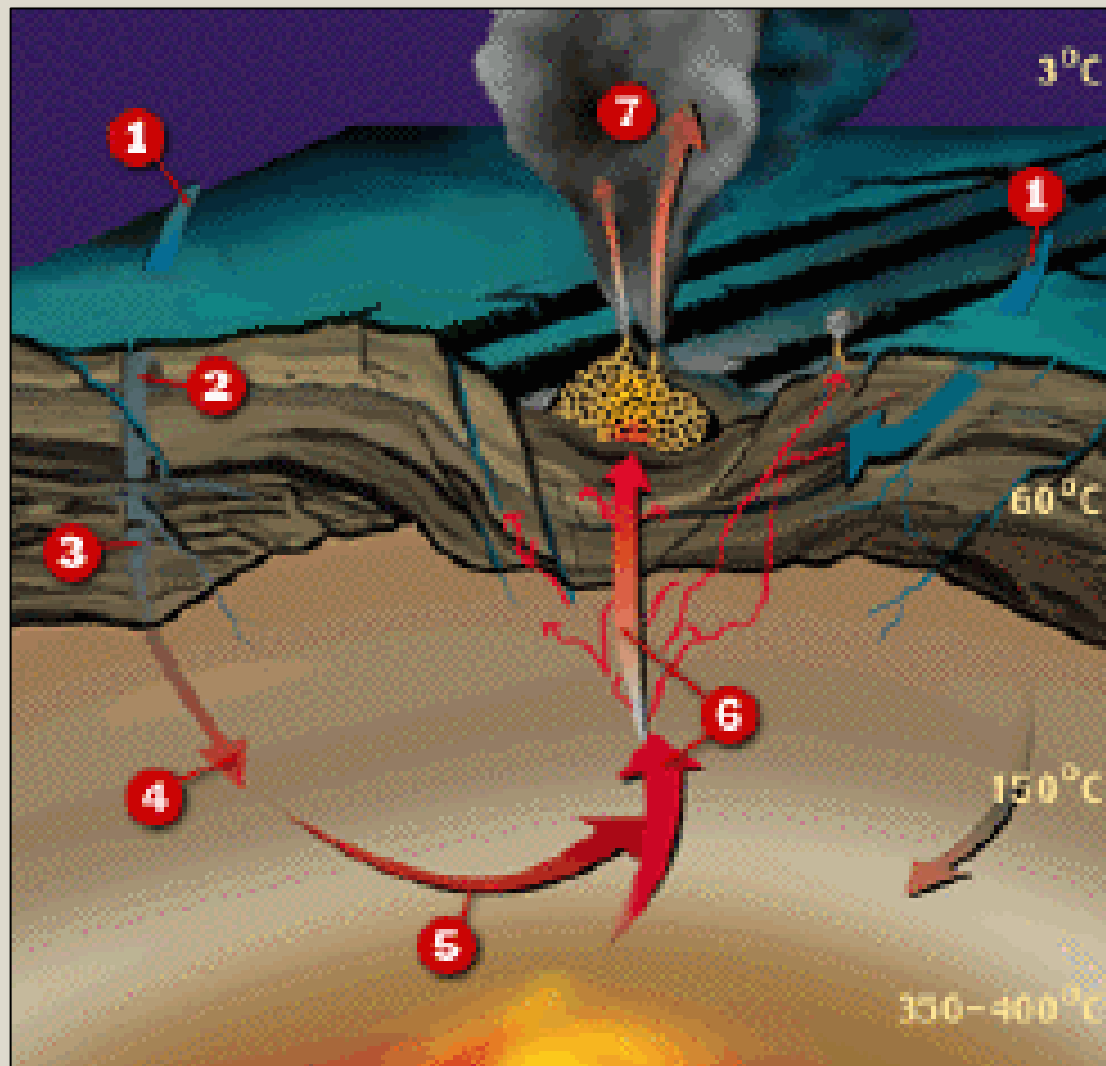
Mt Ararat Besshi-style copper-gold VMS is an ancient sea-floor 'black smoker'



# ARARAT PROJECT



Mt Ararat Besshi-style copper-gold VMS is an ancient sea-floor 'black smoker' – they tend to occur in clusters of typically 6-8 deposits

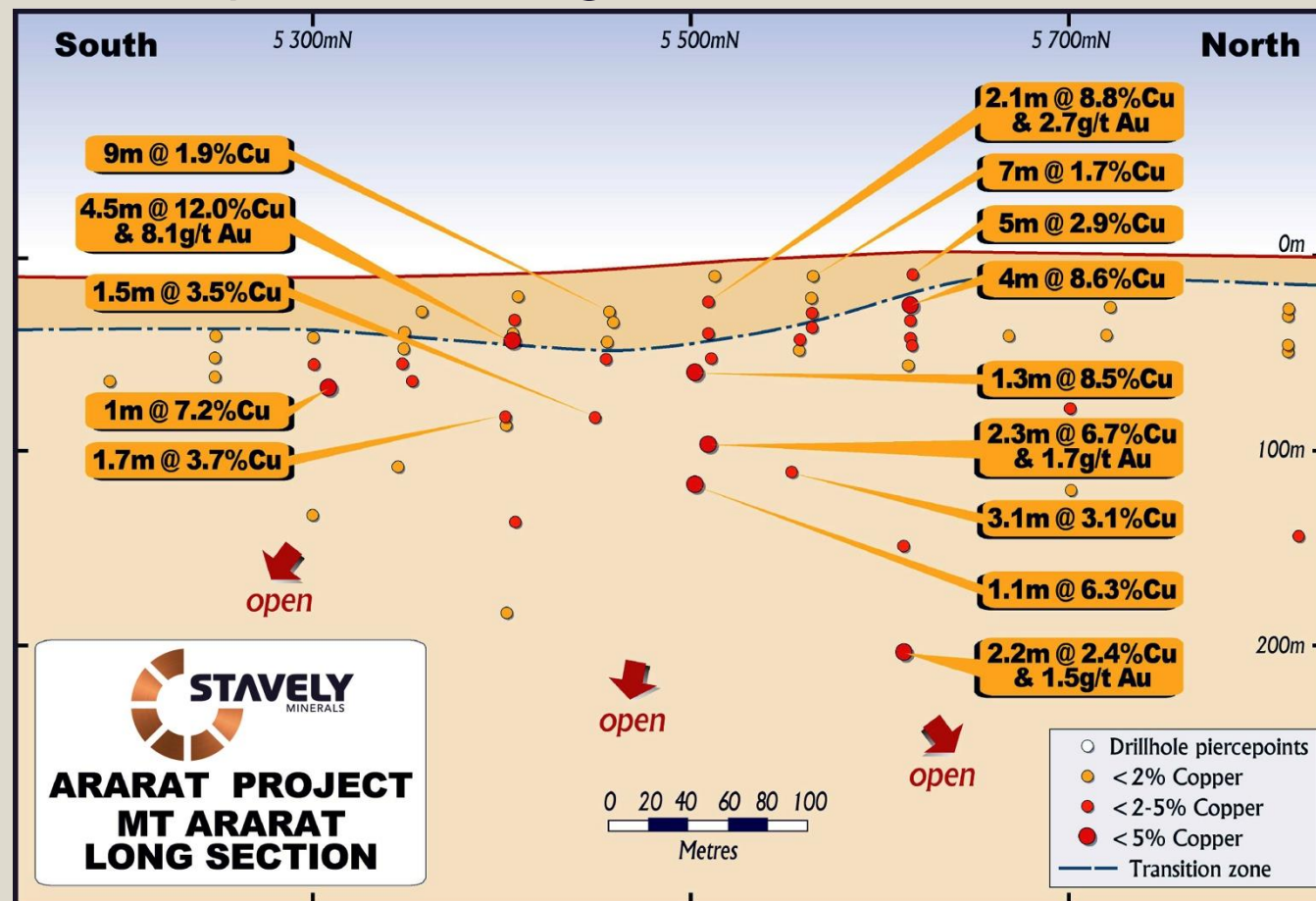




# ARARAT PROJECT



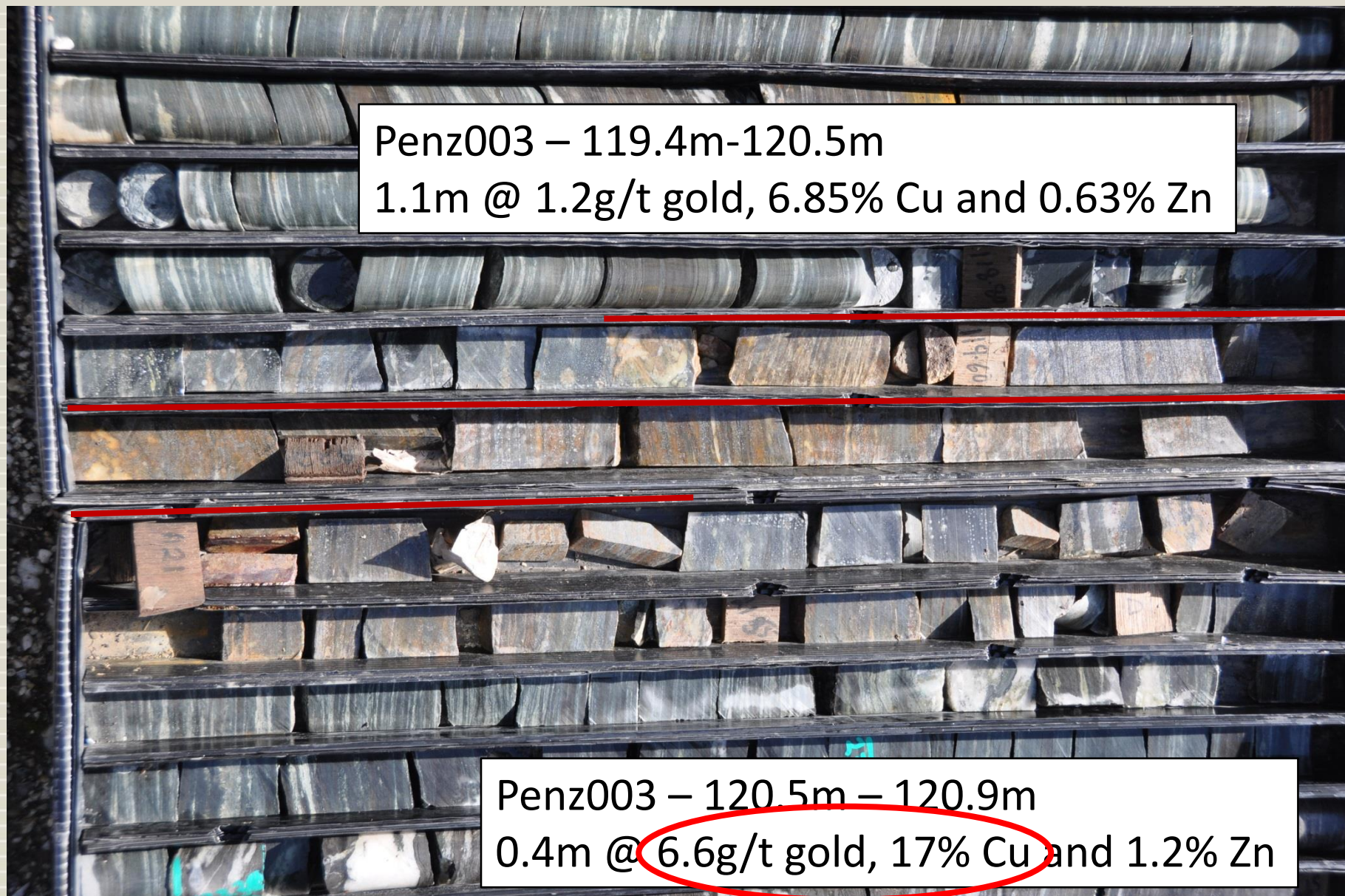
- Mt Ararat Besshi-style VMS – Inferred Mineral Resource of 1.2Mt at 2.0% copper, 0.5g/t gold, 0.4% zinc and 6g/t silver
- The Degruusa deposit is considered a Besshi-style VMS
- Open at depth and along strike



# ARARAT PROJECT



Known mineralisation looks distal but can be very good tenor when massive



Penz003 – 119.4m-120.5m

1.1m @ 1.2g/t gold, 6.85% Cu and 0.63% Zn

Penz003 – 120.5m – 120.9m

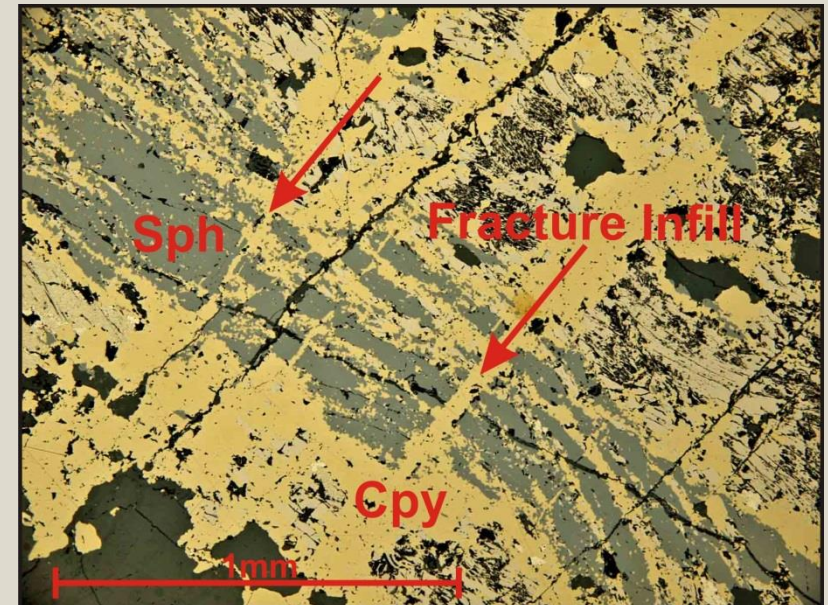
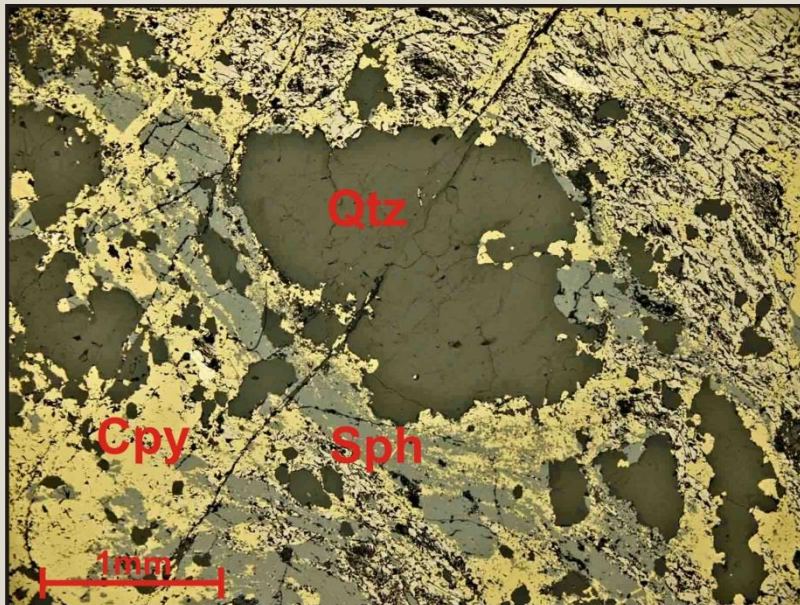
0.4m @ 6.6g/t gold, 17% Cu and 1.2% Zn



# ARARAT PROJECT

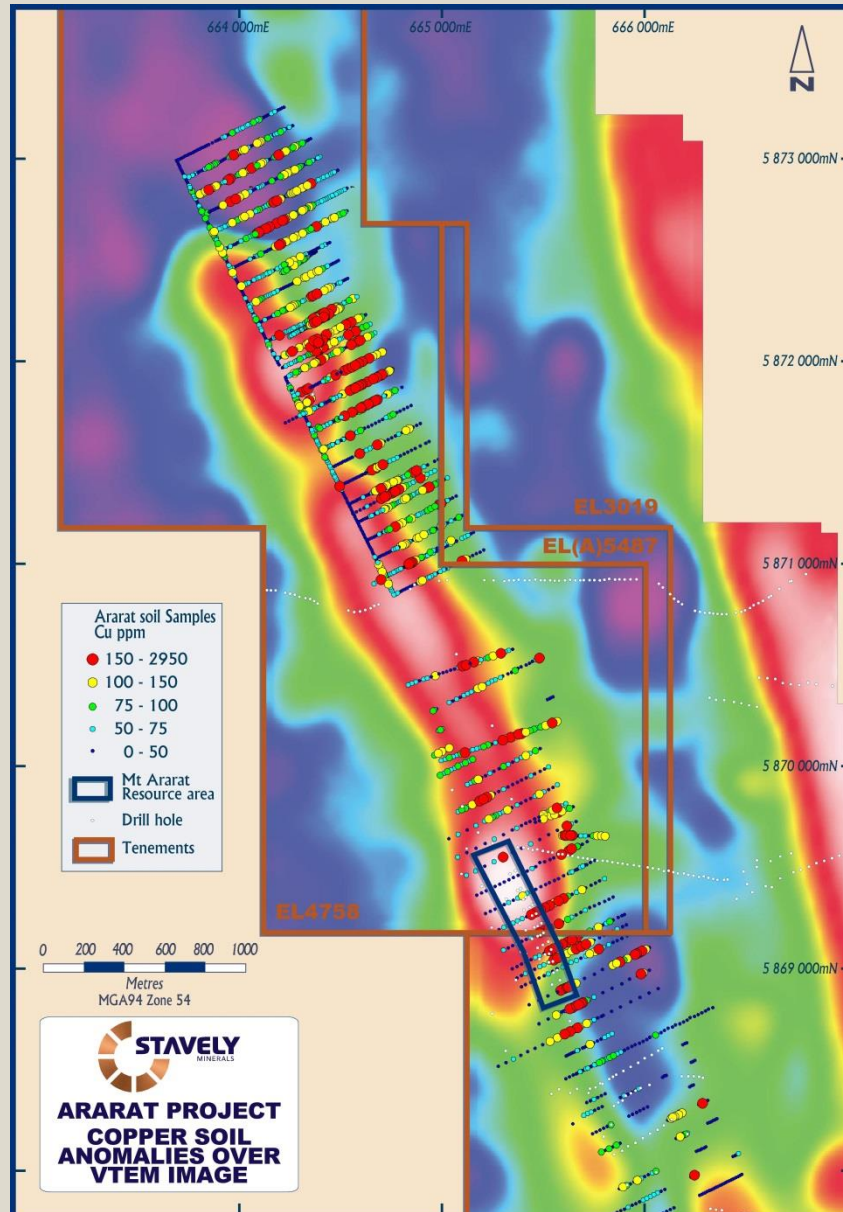


- Known mineralisation expressed as fine sulphide laminations interlayered with pelitic sediments – quiescent distal interpretation
- More massive zones can have exceptional grades:
  - ✓ MA28 – 4.45m at 8.1g/t gold and 12% copper from 32.25m
- **The prize is the thicker massive sulphide ‘outflow’ zone**



\*see Stavely Minerals Limited Prospectus 17 March 2014

# ARARAT PROJECT



Mt Ararat Mineral Resource is over 350m strike extent at the southern end of a 4 kilometre long airborne VTEM conductor and coincident soil copper-zinc anomalism (gold not analysed).

Ground EM confirms significant undrilled extensions to the north of the existing resource with noted gossans and historic copper workings.



## Recent RC drilling results<sup>1</sup> from northern extensions to the Mt Ararat Mineral Resource:

- 5m at 2.10% copper, 0.56 g/t gold, 0.48% zinc and 9 g/t silver, including
  - 2m at 3.37% copper, 0.73 g/t gold, 0.47% zinc and 14 g/t silver
- 3m at 2.64% copper, 0.17 g/t gold, 0.31% zinc and 3 g/t silver
- 1m at 5.89% copper, 0.55 g/t gold, 2.31% zinc and 17 g/t silver

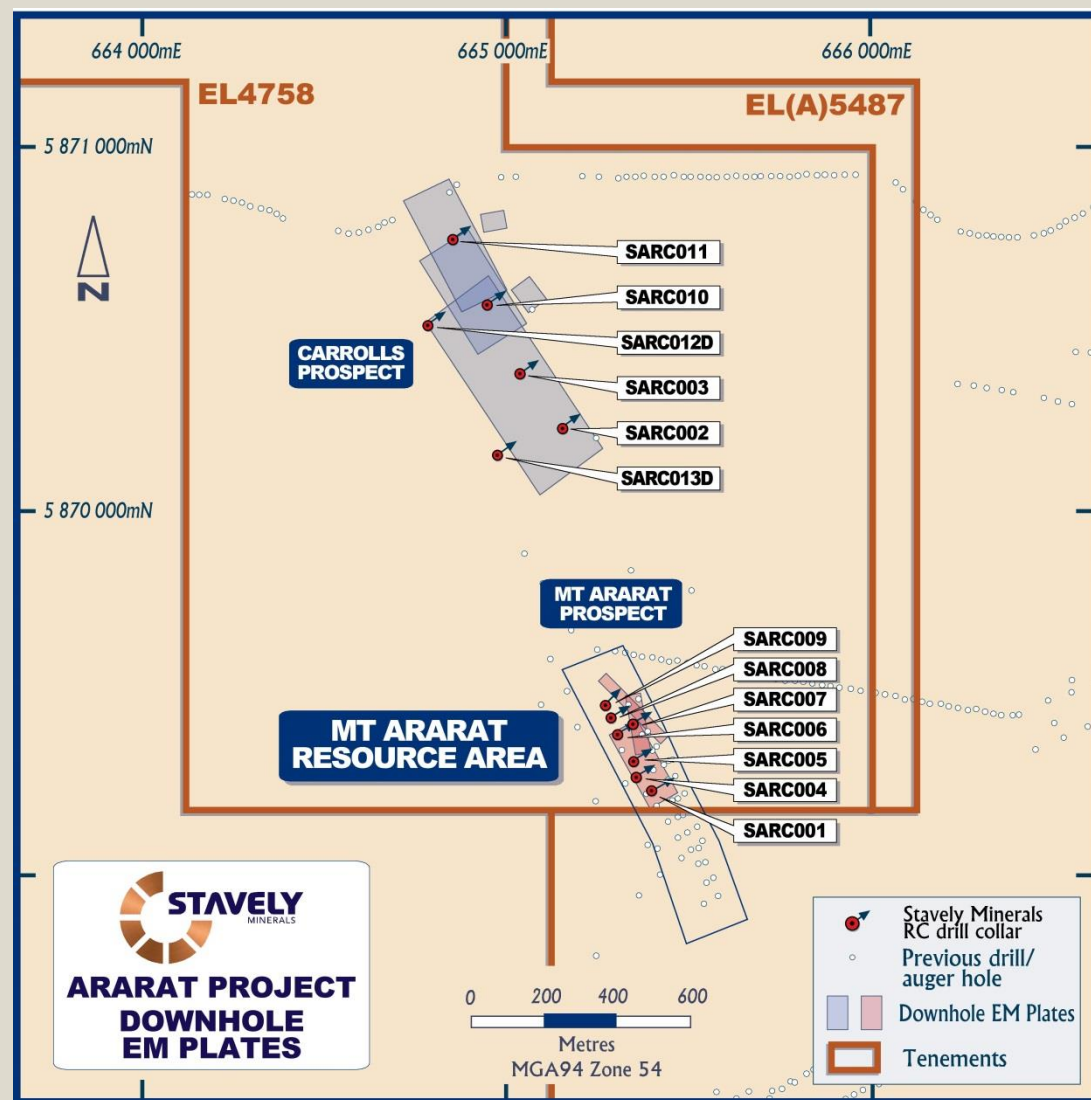
**At the Carroll's prospect, RC drilling and diamond tails set the platform for DHEM surveying**

<sup>1</sup> see ASX announcement dated 10 September 2014 and available from [www.stavely.com.au](http://www.stavely.com.au)

# ARARAT PROJECT

## Mt Ararat VMS DHEM conductor plates

- Mt Ararat has additional conductors at the north end of the deposit (red).
- Carroll's prospect (blue) has weaker DHEM conductors



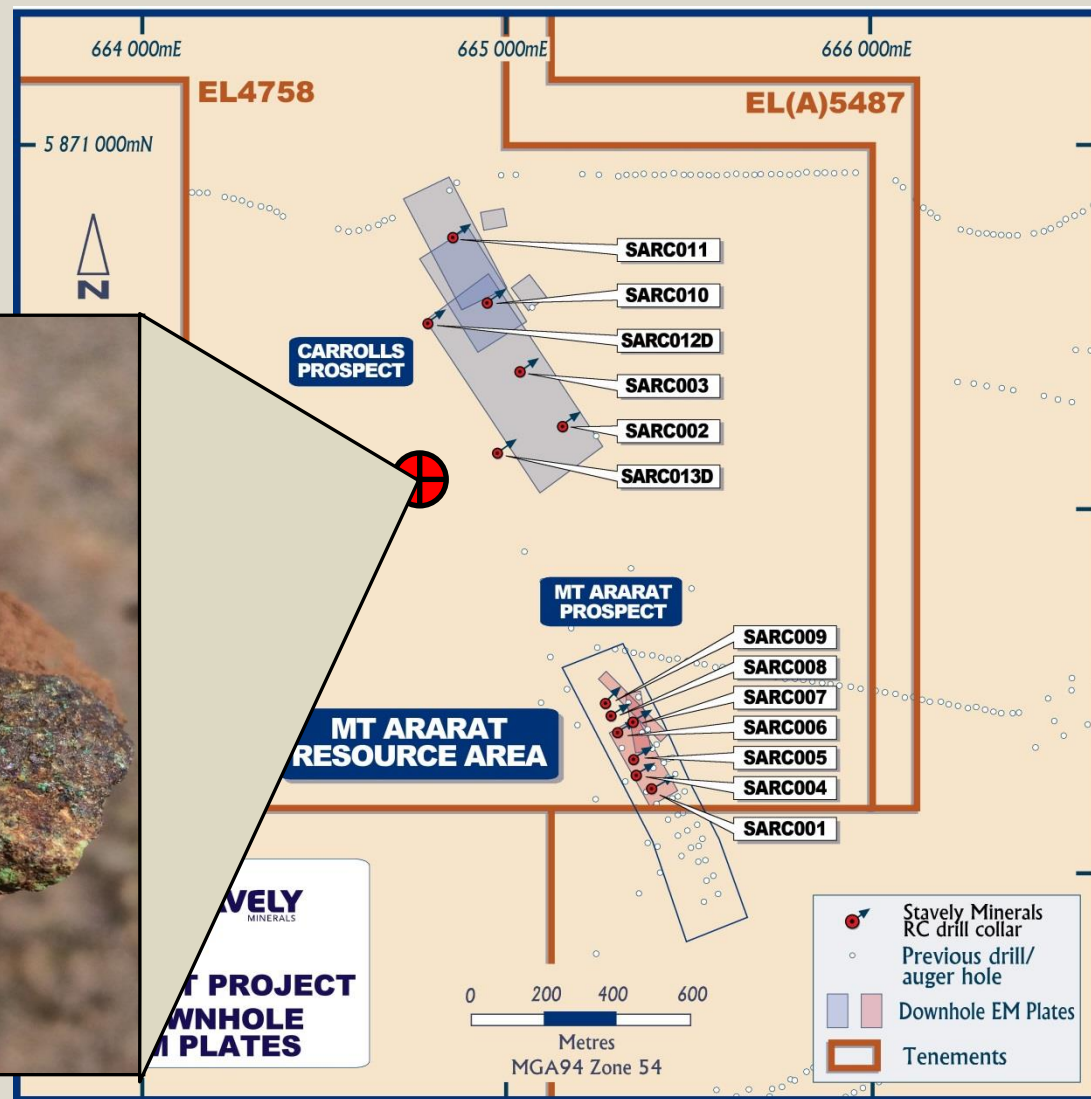


# ARARAT PROJECT

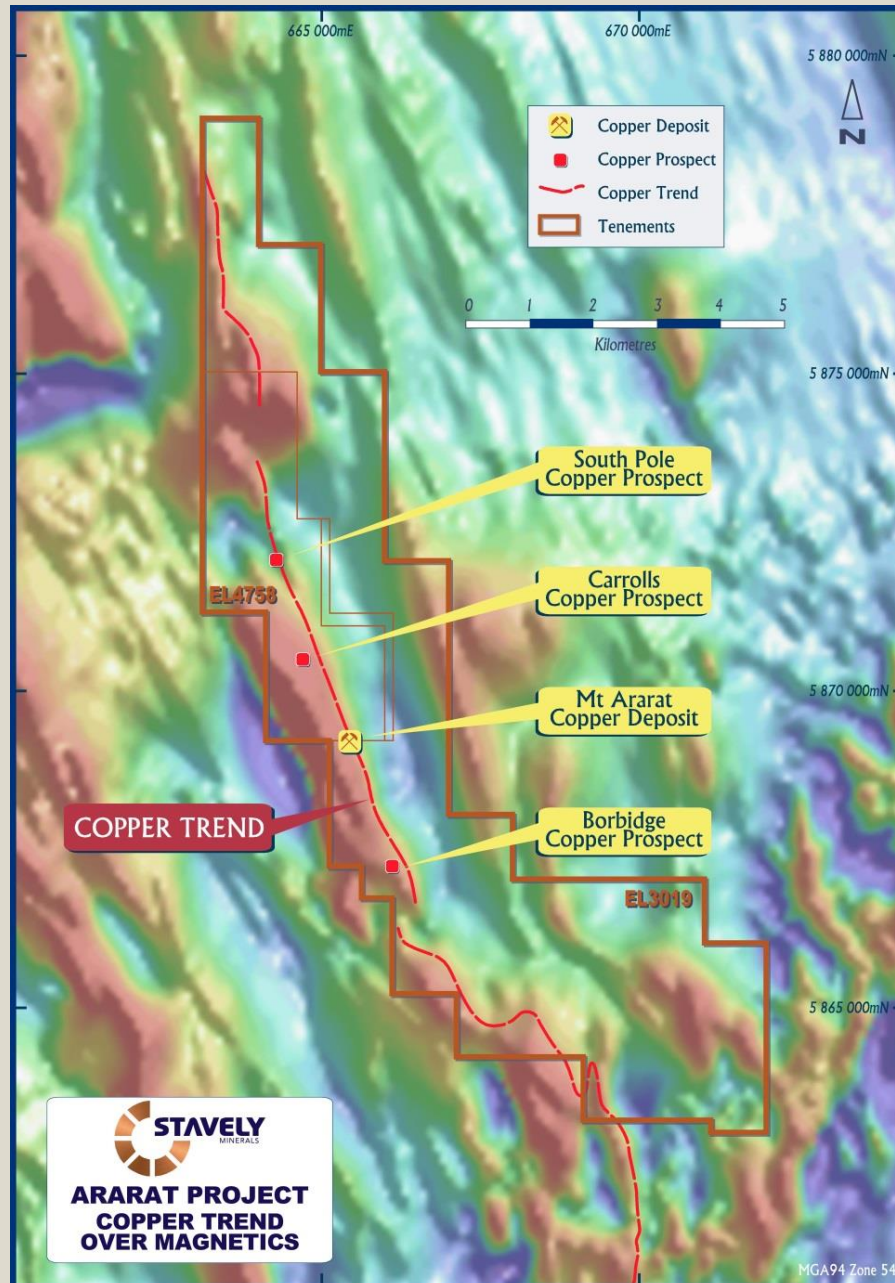


## Mt Ararat VMS

- ✓ Multiple mineralised horizons confirmed with Carroll's Copper prospect rediscovered



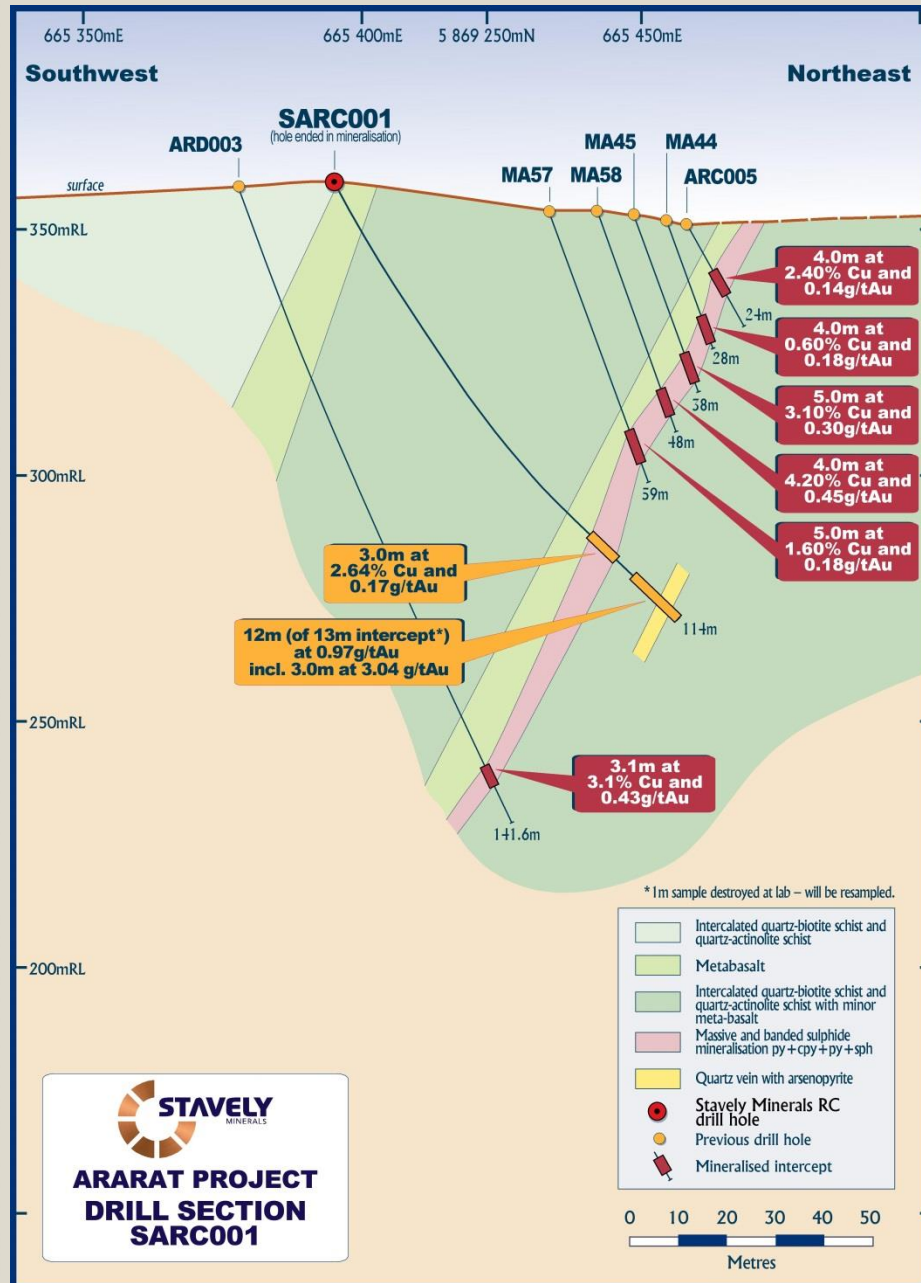
# ARARAT PROJECT



- Prospective VMS copper-gold horizon extends over 15 kilometres within Stavely Minerals tenements.
- Very little exploration under shallow cover.



# ARARAT PROJECT



## Stawell-style gold potential

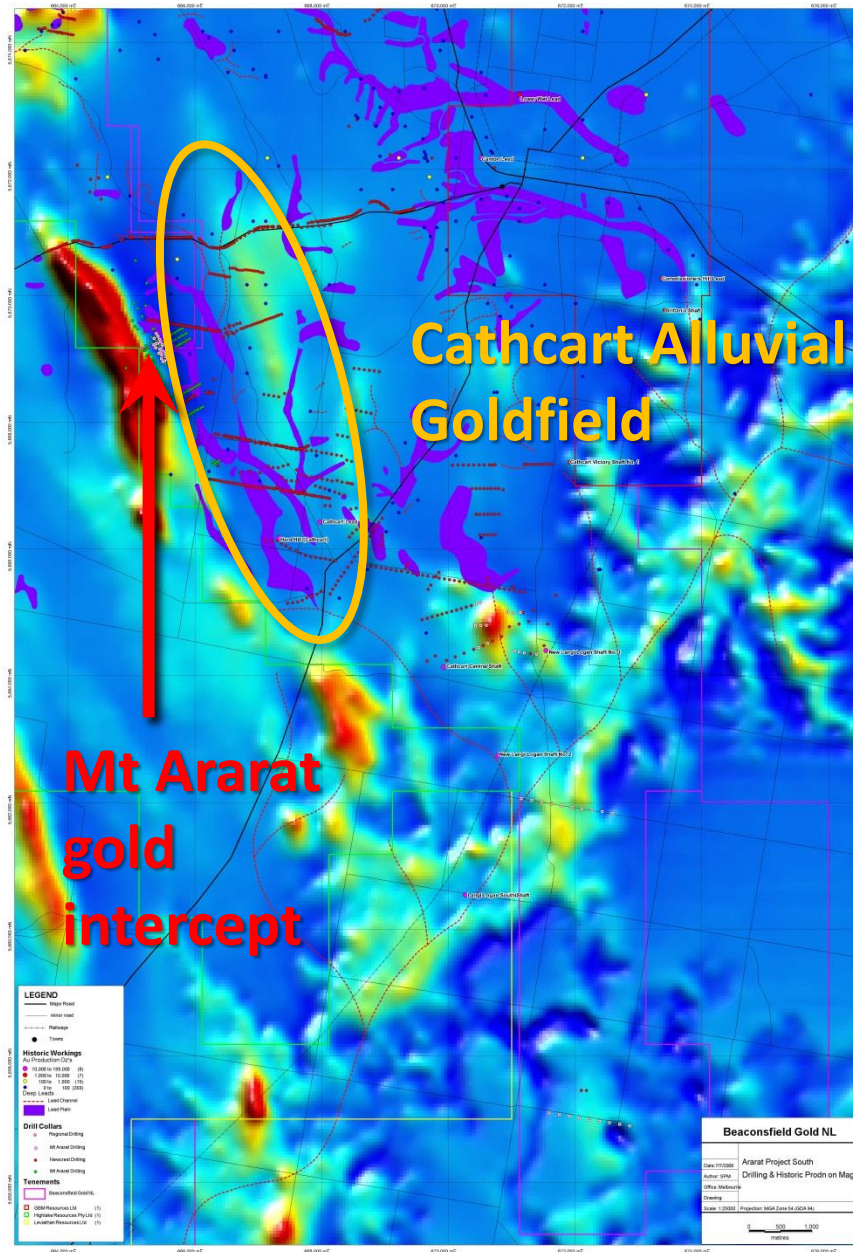
Unexpectedly, drill hole SARC001 also intersected 12m @ 0.97 g/t gold (to EoH) within a broader 13m interval\*, including a significant higher grade zone of:

- 3m at 3.04 g/t gold

\*one x 1 metre sample was destroyed at the lab and is being re-sampled to allow the grade of the full 13m interval to be re-quoted. EoH = end of hole

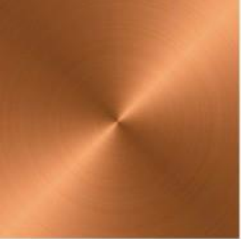
<sup>1</sup> see ASX announcement dated 10 September 2014 and available from [www.stavelly.com.au](http://www.stavelly.com.au)

# ARARAT GOLDFIELD



## Stawell-style gold potential

- Produced +600,000oz from alluvials and deep leads
- No hardrock source identified.



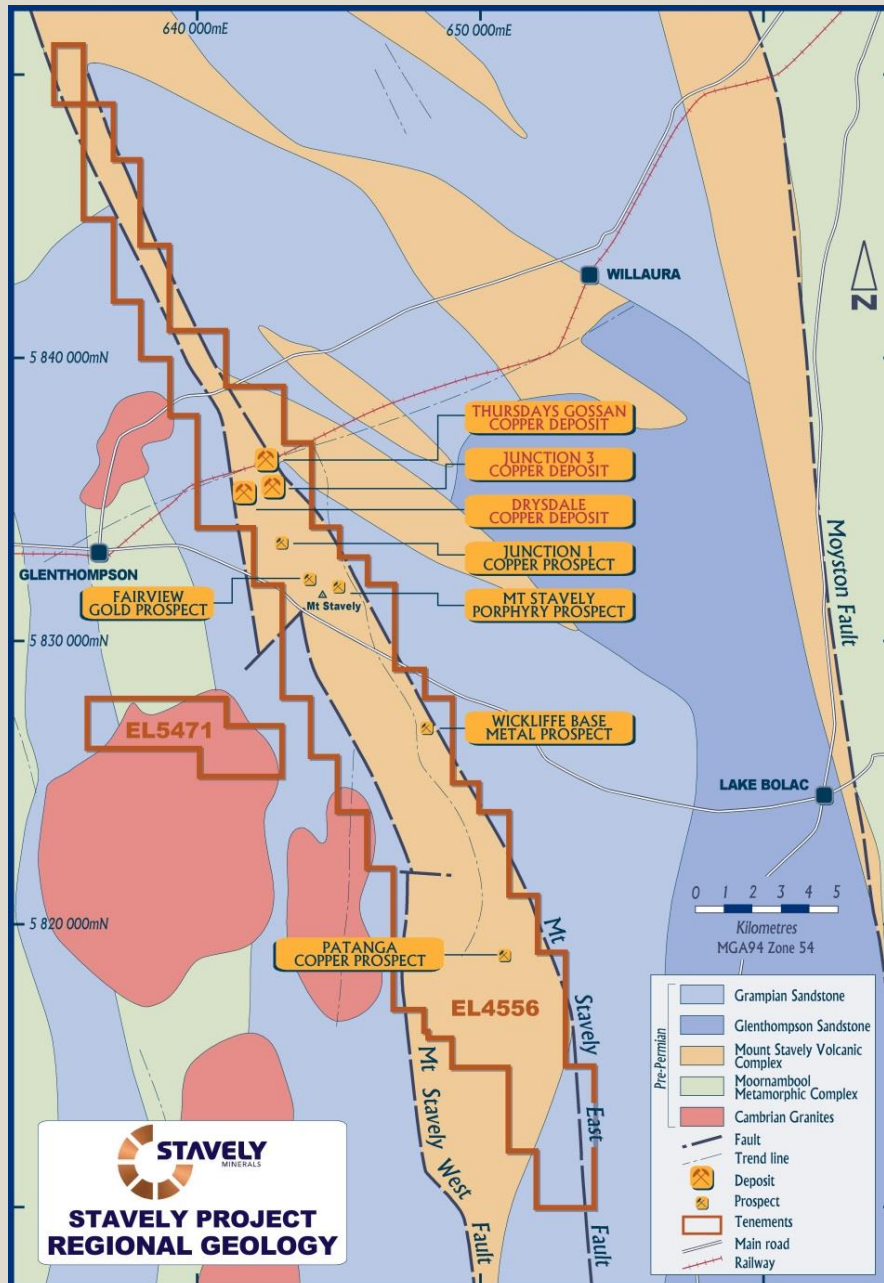
# STAVELY PROJECT

## Why look for porphyries in western Victoria?

- Porphyries are the major deposit type for global copper production
- Porphyries are large metal systems with a well understood alteration zonation typically an order of magnitude larger than the deposit itself – ie. The ‘hydrothermal system’ has a large footprint that has a recognisable zonation from cooler outer alteration to hotter inner alteration
- There are several types of porphyries – copper, copper-molybdenum, copper-gold, molybdenum etc
- Many are operated as large open pits but a special class are attractive as underground ‘block cave’ operations – those deposits are alkalic copper-gold porphyries typically with higher copper and/or gold grades and this is what we are looking for!

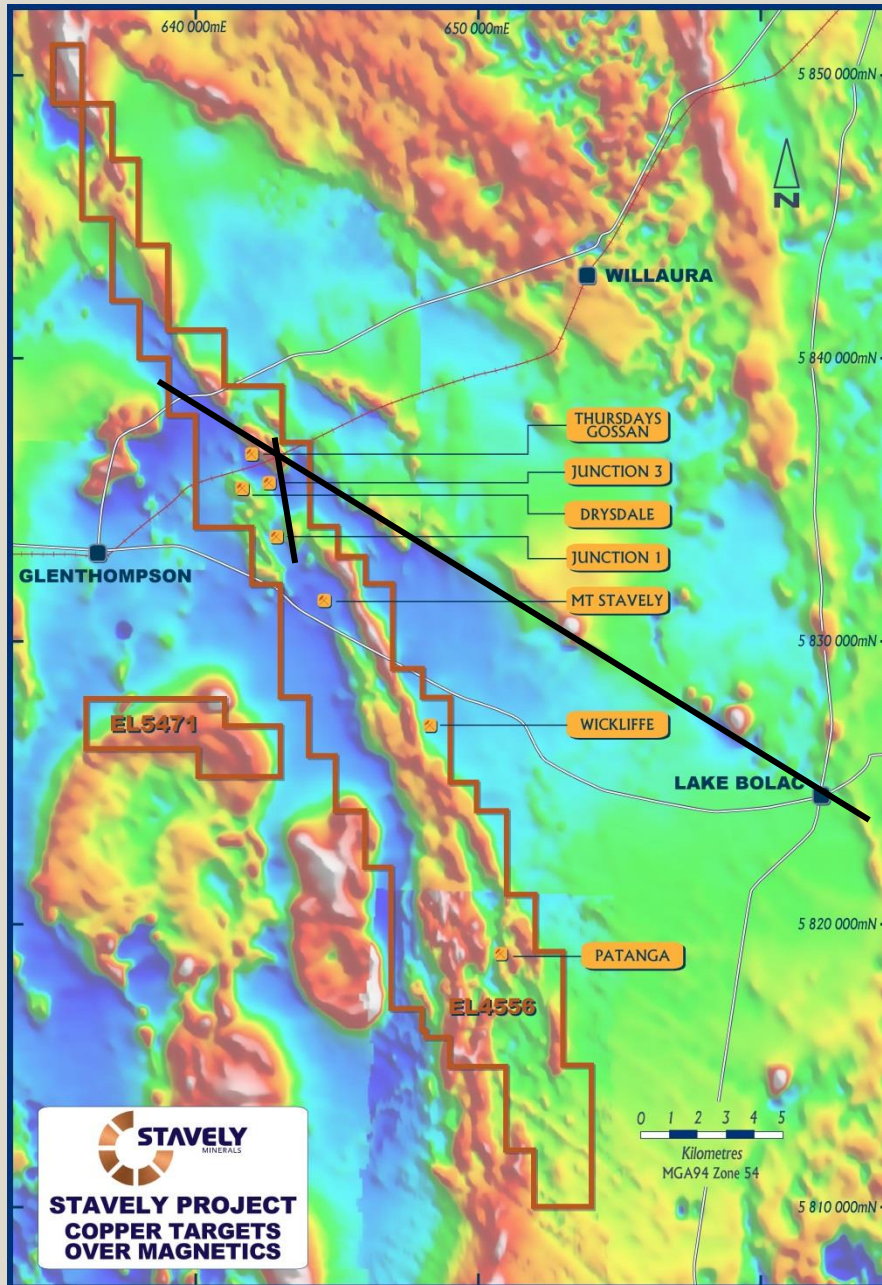


# STAVELY PROJECT



- Thursday's Gossan chalcocite enriched blanket – Inferred Mineral Resource of 28Mt at 0.4% copper containing 107kt copper
- Thursday's Gossan porphyry
- Junction porphyry
- Newly interpreted Mt Stavelly porphyry
- Fairview Gold prospect
- Wickliffe VMS prospect
- Patanga porphyry prospect

# STAVELY PROJECT



- Mt Stavely Volcanic Complex considered the northern extension of the Mt Read Volcanics in Tasmania – demonstrated by Tony Crawford.
- MRV hosts the Mount Lyell, Rosebery, and Henty copper-gold deposits.
- In the Thursday's Gossan area a very major intersection of N-S and NW oriented structures.



# STAVELY PROJECT



Thursday's Gossan chalcocite blanket (red) and location of porphyry intrusion at depth (blue) controlled by long-lived structures – regional structural controls expressed at local scale.

# STAVELY PROJECT

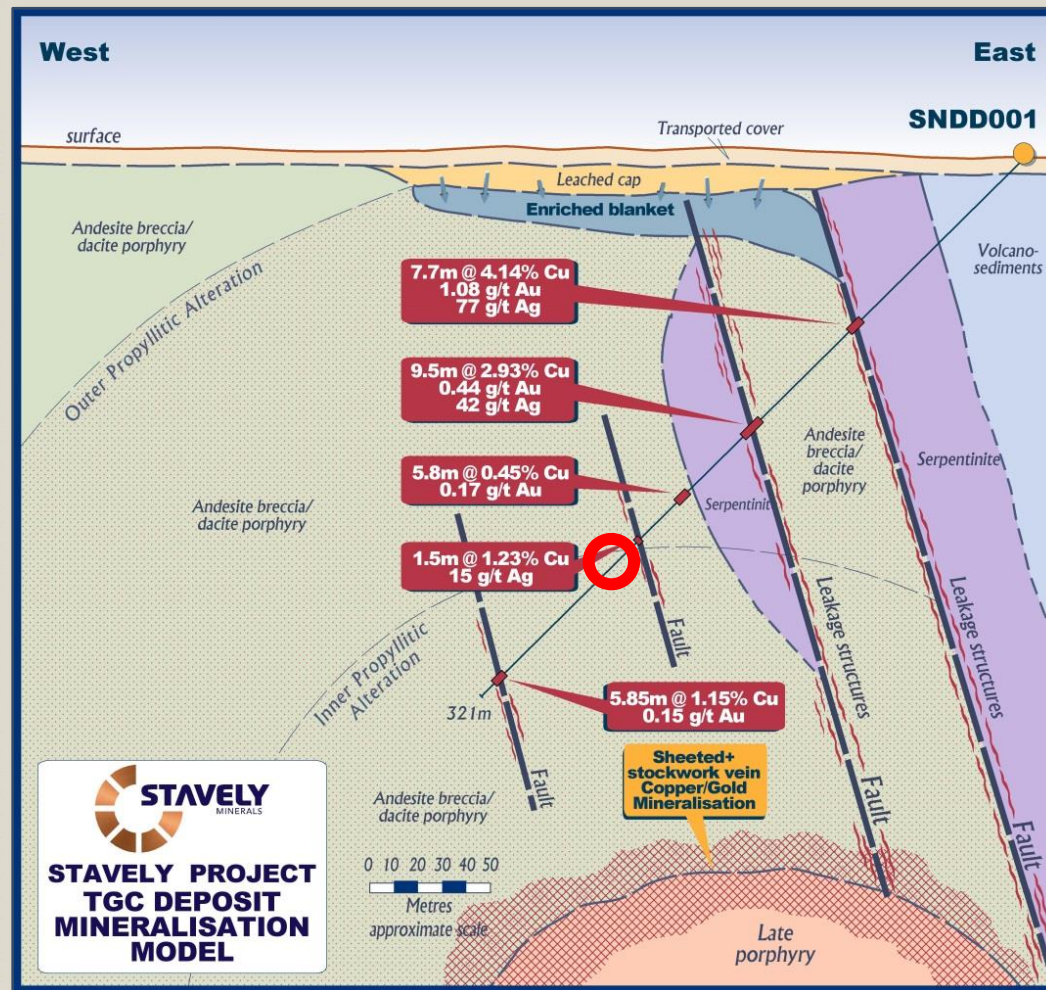


- Stavely bought these projects primarily for the exploration upside.
- Stavely's premise was that previous explorers had failed to recognise the high-level of exposure – ie. The porphyry was down deeper than existing drilling.





# STAVELY PROJECT



Significant drill intercepts into 'leakage' structures:

- 'D' veins in the porphyry terminology of Gustafson and Hunt, 1975
- 7.7 metres at 4.14% copper, 1.08 g/t gold and 77g/t silver
- 9.5 metres at 2.93% copper, 0.44g/t gold and 42 g/t silver

## But what evidence that the Stavely Volcanic Belt hosts alkalic copper-gold porphyries?

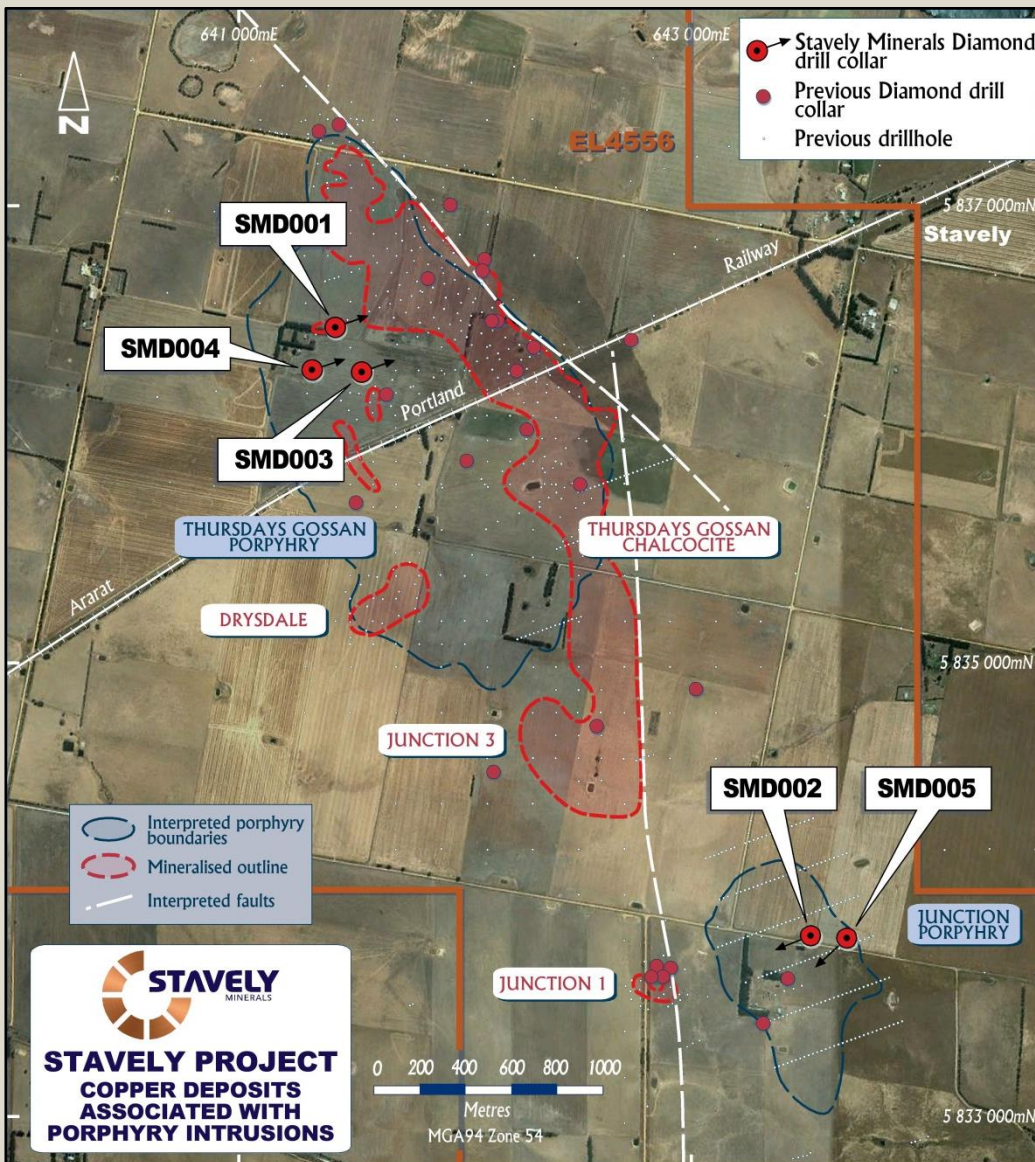
- Zones of pervasive hematite alteration
- Strongly negative  $\delta^{34}$  sulphur isotope values
- Metal ratios – gold and silver rich
  - 5m @ 1.4% copper, 0.25g/t gold and 11 g/t silver from the Junction deposit
  - D-veins from Thursday's Gossan
    - 7.7 metres at 4.14% copper, 1.08 g/t gold and 77g/t silver
    - 9.5 metres at 2.93% copper, 0.44g/t gold and 42 g/t silver
- Geochemical similarity with alkalic 'switch' in the Mt Read Volcanics – Tony Crawford



# STAVELY PROJECT



## 2014 deep drilling programme



Three deep diamond drill holes at Thursday's Gossan and two deep diamond drill holes at Junction.

# STAVELY PROJECT



First drill holes into the Thursday's Gossan prospect intercepted broad intervals of low-level 'wall rock' copper mineralisation in phyllic over propylitic alteration:

- *82.3m at 0.12% copper*
- *45.9m at 0.19% copper, and*
- *196m at 0.13% copper*

First drill hole into the Junction prospect also intercepted broad intervals of low-level copper mineralisation in phyllic over propylitic alteration:

- *62m at 0.17% copper*
- *44.8m at 0.15% copper, and*

In potassic alteration:

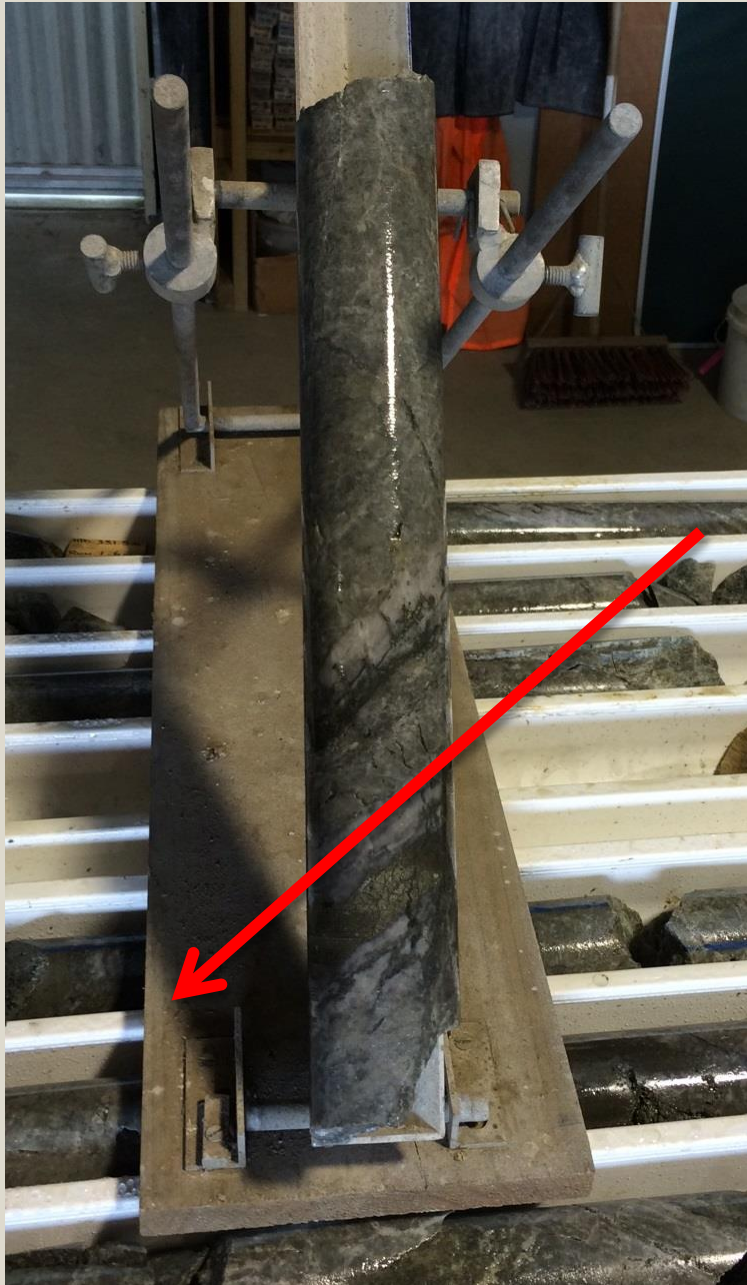
- *5m at 1.4% copper, 0.25g/t gold and 11g/t silver*



see ASX announcements dated 28 August 2014 and 29 September 2014 and available from [www.stavely.com.au](http://www.stavely.com.au)

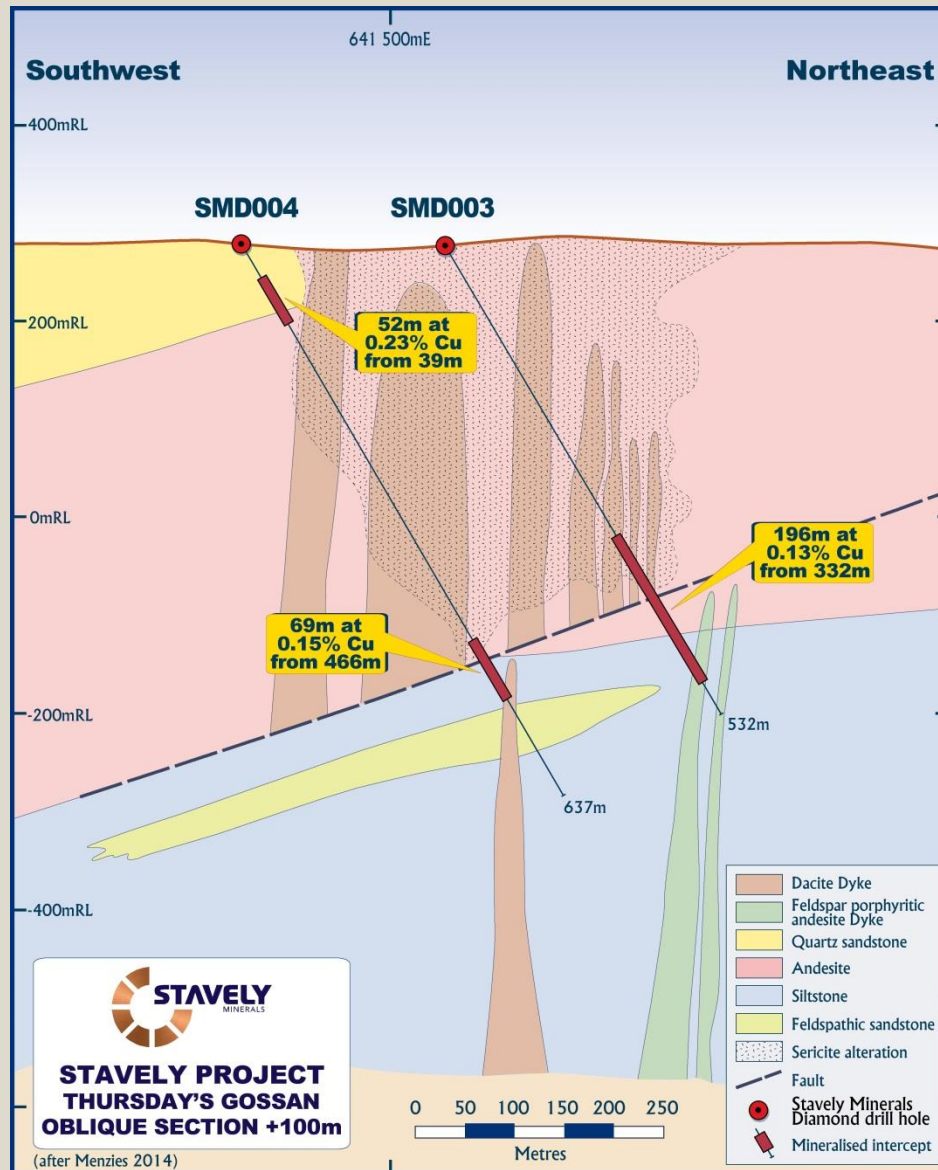


# STAVELY PROJECT



- ✓ Drill hole SMD004 at Thursday's Gossan was providing an excellent 'vector' towards the porphyry core at depth to the south but this would be disrupted by the low-angle structure at ~420m depth
- ✓ We were very close, now to use every piece of evidence we can get to indicate the direction of offset on the structure and then pursue the porphyry beneath the structure

# STAVELY PROJECT



- ✓ Drilling intercepted low-angle structure at ~400m depth
- ✓ Alteration and sulphides were indicating close proximity to target potassic core
- ✓ Challenge can be overcome with good geology – we have the tools we need

see ASX announcements dated 28 August 2014 and 29 September 2014 and available from [www.stavely.com.au](http://www.stavely.com.au)

## Results to date

### Thursday's Gossan

- ✓ Very positive results from drilling the IP chargeability anomaly – increasingly intense alteration, very 'busy' drill core, low-grade copper mineralisation in peripheral alteration
- ✓ Intercepted a low-angle structure at ~400-480m depth – now using alteration zonation, geochemistry, marker units, 3D structural interpretation and geophysics to vector beneath the structure

### Junction

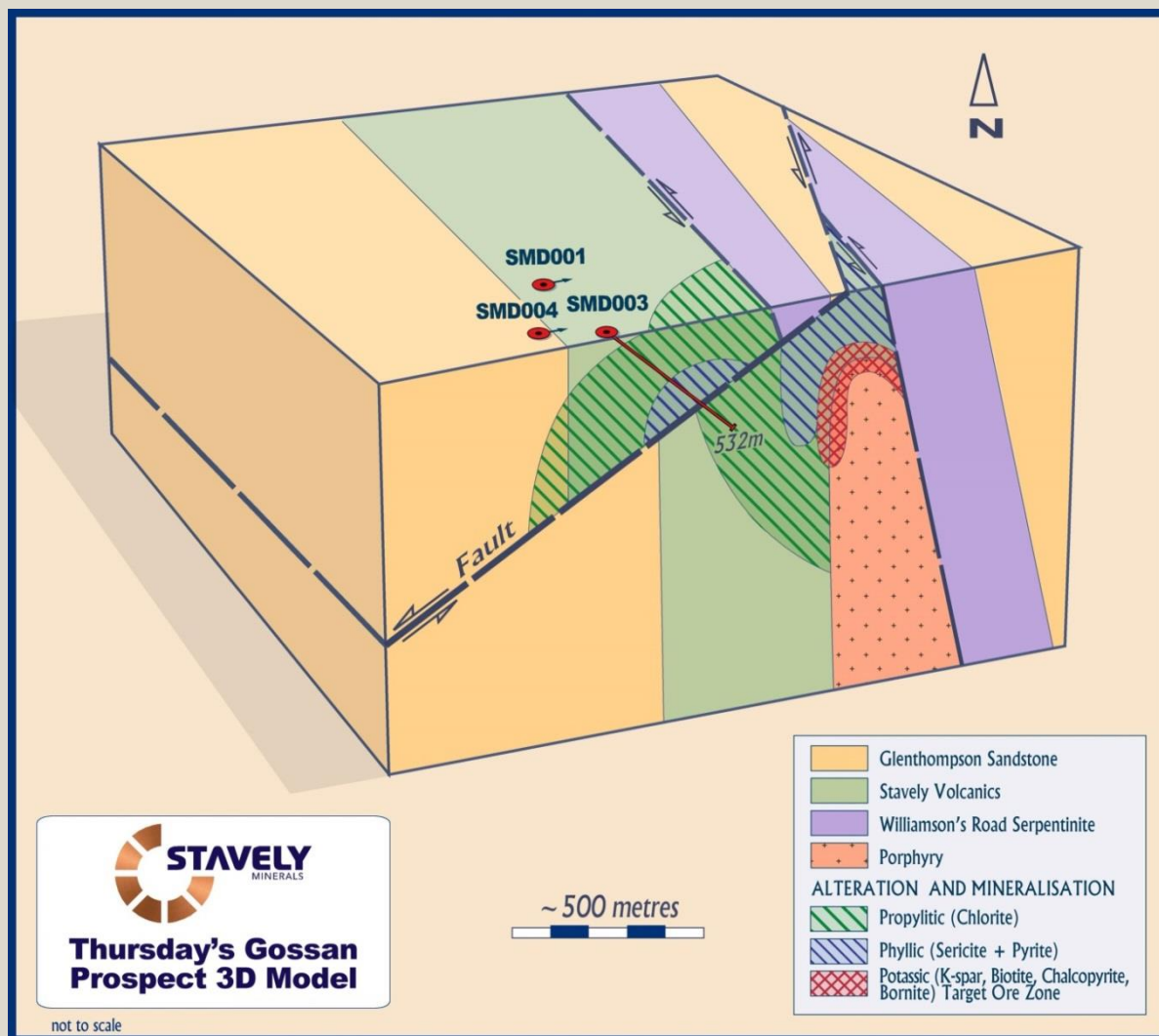
- ✓ Short interval of good grades intercepted, need much bigger intervals. Considering geophysics in this area given the success of IP at Thursday's Gossan



# STAVELY PROJECT



Stavely has become the first company to recognise the influence of a major low-angle structure at Thursday's Gossan. We believe the target zone to have been offset into an untested position to the north / east.



see ASX announcements dated 27 January 2015 and available from [www.stavely.com.au](http://www.stavely.com.au)

## Stavely has compelling exploration potential

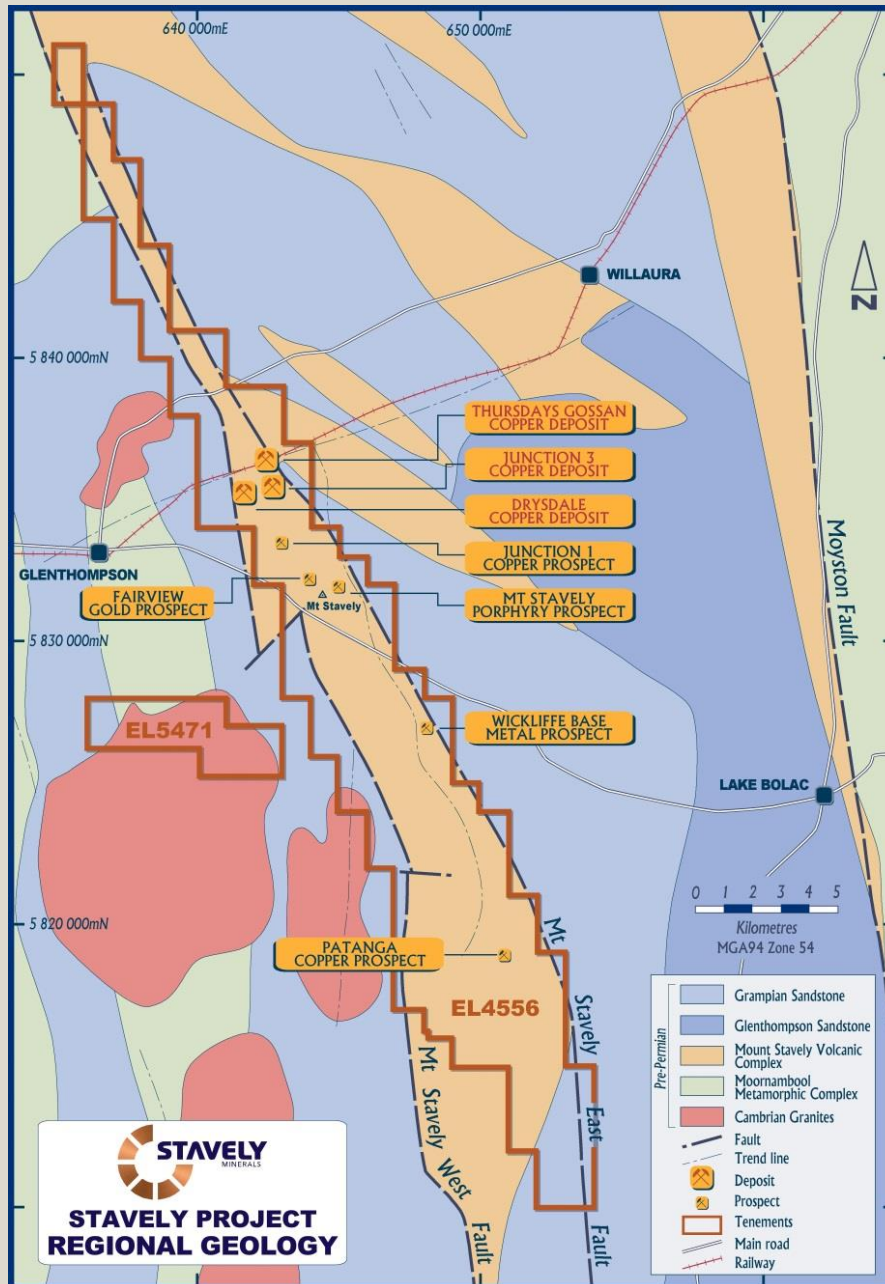
Confirmed porphyry targets with:

- ✓ Well-developed low-grade copper mineralisation in peripheral phyllic and propylitic alteration
- ✓ IP chargeability anomalies correlate well with phyllic alteration
- ✓ Alteration mineralogy indicating high-level of exposure in porphyry system
- ✓ Sulphur isotope values consistent with magmatic source – importantly, sparse data indicates Thursday's Gossan IP chargeability anomaly could be close to mineralised 'core'
- ✓ Haematite alteration - a possible indicator of a fertile copper-gold 'alkalic' system
- ✓ Attractive metal ratios

## Main 'take-away' messages:

- Thursday's Gossan demonstrates the attributes of an alkalic porphyry copper-gold system
- We are the first to recognise the impact of a major low-angle structure
- We believe the 'core' of the porphyry – which we expect to be much better mineralised than what has been seen to date – to have been offset to the north / east
- This would bring the target zone closer to surface and into an area very lightly explored
- The potassic altered 'core' of this system has yet to be seen, and should be well mineralised given the huge metal budget in the peripheral alteration styles
- We are in the hunt and closing in

# STAVELY PROJECT



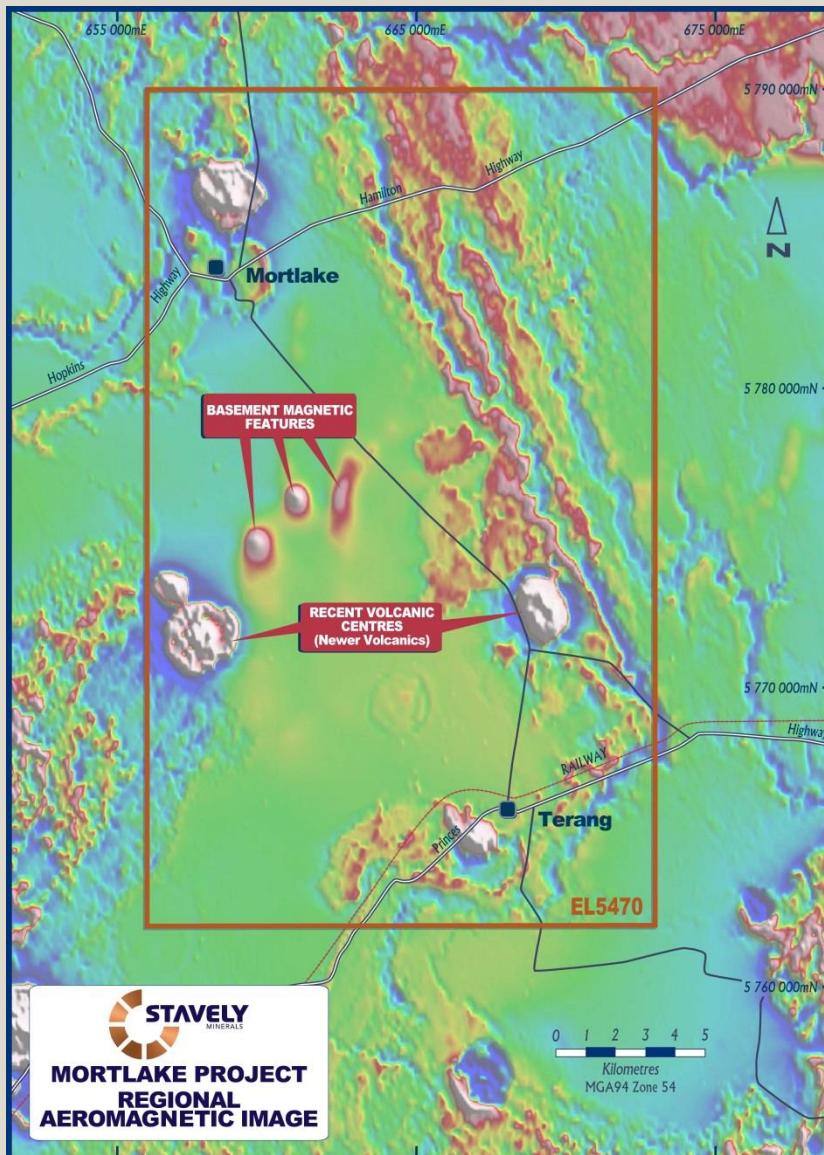
## Other targets:

- Patanga porphyry target – drill intercept of 10 metres at 0.32% copper and 0.4 g/t gold
- Wickliffe VMS target – drill intercept of 3.15 metres at 2.27 g/t gold, 4.9% zinc, 0.2% copper and 7 g/t silver



# MORTLAKE PROJECT

# MORTLAKE PROJECT



## Extension of the Stavely Volcanics

- Southern extension of the Stavely Volcanics under shallow basalt cover
- Unexplained and untested basement magnetic features
- IP surveys to commence in early March

# WORK PROGRAMMES



## Work programme for the Ararat Project

- At Mt Ararat, additional surface geochemistry and geophysics to identify additional copper–gold mineralised horizons and follow-up targeting of the Stawell-style gold intercept
- Soil geochemistry over the 15 km copper-gold VMS prospective horizon
- Follow-up of other gold targets in the region

## Work programme for the Stavely Project

- At Thursday's Gossan, extend IP survey to the north and east in conjunction with surface mapping and geochemistry
- In the region, follow-up of other gold and copper-gold opportunities

## Work programme for the Mortlake Project

- IP surveys over the 3 unexplained magnetic features



## Thank You

Contact Us:

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