

# Venture Minerals Limited

*“Portfolio of multiple battery mineral assets  
with near term iron ore and tin production”*

Paydirt’s Battery Minerals Conference  
March 12 -13, 2019

## **FORWARD LOOKING STATEMENT**

- This presentation may contain certain forward looking statements and projections regarding: estimated, resources and reserves; planned production and operating costs profiles; planned capital requirements; and planned strategies and corporate objectives.
- Such forward looking statements/projections are estimates for discussion purposes only and should not be relied upon. They are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors many of which are beyond the control of Venture Minerals Limited. The forward looking statements/projections are inherently uncertain and may therefore differ materially from results ultimately achieved;
- Venture Minerals Limited does not make any representations and provides no warranties concerning the accuracy of the projections, and disclaims any obligation to update or revise any forward looking statements/projects based on new information, future events or otherwise except to the extent required by applicable laws;

## **COMPETENT PERSONS STATEMENT**

- The information in this report that relates to Exploration Results, Exploration Targets and Minerals Resources is based on information compiled by Mr Andrew Radonjic, a fulltime employee of the company and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Andrew Radonjic has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 and 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Andrew Radonjic consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.
- The information in this report that relates to Ore Reserves is based on information compiled by Mr Denis Grubic, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Grubic is an independent consultant. Mr Grubic qualifies as a Competent Person as defined in the 2004 and 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Grubic consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

## **NO NEW INFORMATION OR DATA**

- All material assumptions and technical parameters underpinning the Minerals Resource and Reserve estimate referred to in previous ASX announcements continue to apply and have not materially changed since last reported. The company is not aware of any new information or data that materially affects the information included in the said announcement.



- Underground Scoping Study underway on the High-Grade Tin-Tungsten Resource at the Mount Lindsay Project, Tasmania;
- Recent improving Iron Prices sees opportunity to reopen Riley Iron Ore Mine - potential funding mechanism for Mount Lindsay;
- VMS (Volcanogenic Massive Sulfide) system confirmed by maiden drill program testing for Copper-Lead-Zinc at the Thor Prospect, Western Australia;
- Acquired strategic landholding along strike to the world class Golden Grove Copper-Zinc-Gold Mine, Western Australia;
- Efficient, highly credentialed and dedicated management team.

## Summary

<b>ASX Code:</b>	VMS
<b>Shares on issue:</b>	520.6m
<b>Options:</b> (15.2m @ A\$0.001, 4m @ A\$0.03, 0.5m @ A\$0.05, 1m @ A\$0.45, 2m @ A\$0.50, 2.5m @ A\$0.55)	25.2m
<b>Market Capitalisation</b> (@ A\$0.021)	A\$10.9m
<b>Enterprise Value</b>	A\$10.0m
<b>Cash</b> (as at 31 December 2018):	A\$0.9m

## Major Shareholders

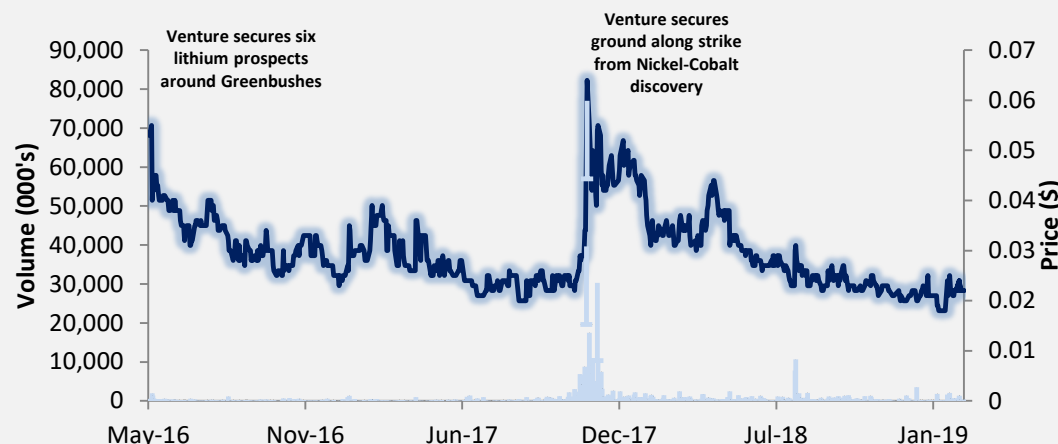
Republic Investment Management	15.8%
Elphinstone Holdings Pty Ltd	7.9%
Molton Holdings Limited	5.1%
Directors & Management	5.0%
Ingalls & Snyder LLC	2.4%
<b>Total</b>	<b>36.2%</b>

**Top 20 Shareholders** **47.0%**

## Capital Raising History

<b>July 2018</b>	Two Tranche Placement of 85.1m shares at A\$0.03 for A\$2.5m;
<b>September 2017</b>	Placement of 95m shares at A\$0.02 for A\$1.9m;
<b>December 2015</b>	Rights Issue of 28.7m shares at A\$0.023 for A\$0.7m;
<b>August 2012</b>	Placement and SPP of 54.9m shares at A\$0.31 for A\$17m (incl. Elphinstone A\$6m);
<b>January 2012</b>	Option conversion of 10.1m shares at A\$0.30 for \$3m (Ingalls and Snyder);
<b>November 2010</b>	Placement (by Petra Capital) and SPP of 53.2m shares at A\$0.44 for A\$23.4m.

## VMS share price and volume



**A dedicated management team with a wealth of experience and credited with a number of discoveries both in Australia and internationally**



**Mel Ashton**  
**Non-Executive Chairman**

- Chairman of Venture Minerals Limited;
- Over 35 years experience as a Chartered Accountant, specialising in Corporate Restructuring & Finance and as a Professional Company Director;
- Held executive directorships with a number of successful ASX listed companies.



**Hamish Halliday**  
**Non-Executive Director**

- Geologist with over 20 years corporate and technical experience in the mining industry, involved in the discovery and acquisition of numerous projects over a range of commodities throughout four continents;
- Founded and held executive and non-executive directorships with a number of successful listed exploration companies including; Blackstone Minerals Limited, Renaissance Minerals, Gryphon Minerals and Adamus Resources Ltd.



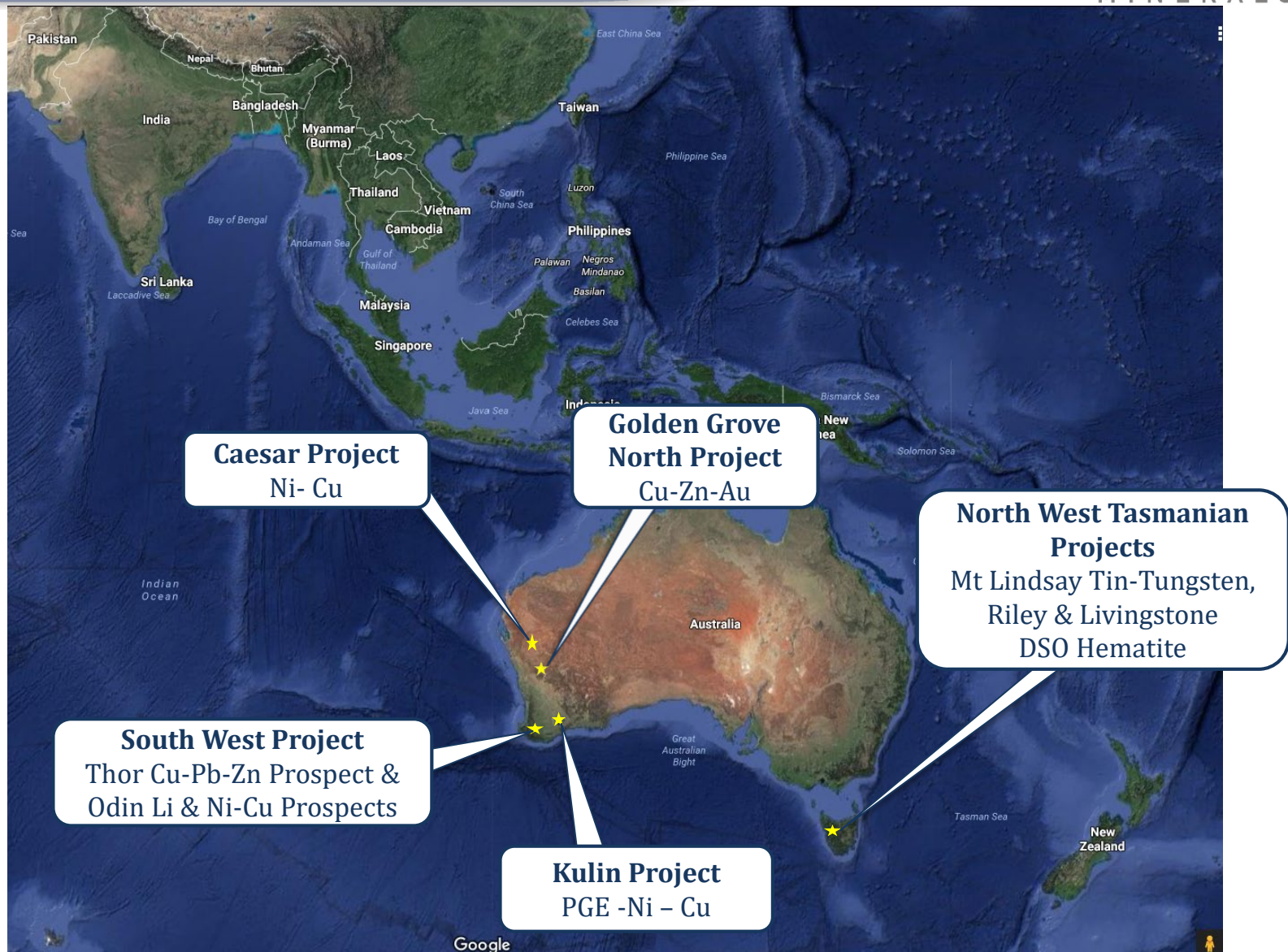
**Andrew Radonjic**  
**Managing Director**

- Mine Geologist and Mineral Economist;
- >30 years experience with a focus on gold and nickel in the Eastern Goldfields of Western Australia;
- Instrumental in three significant gold discoveries north of Kalgoorlie that led to the production of over 1.5 million ounces;
- Co-lead the exploration team during the discovery of the Mount Lindsay Tin-Tungsten-Magnetite deposits, Tasmania;
- Held Managing Director role at Nickelore Limited;
- Co-founded the recent successful listing of Blackstone Minerals Limited.



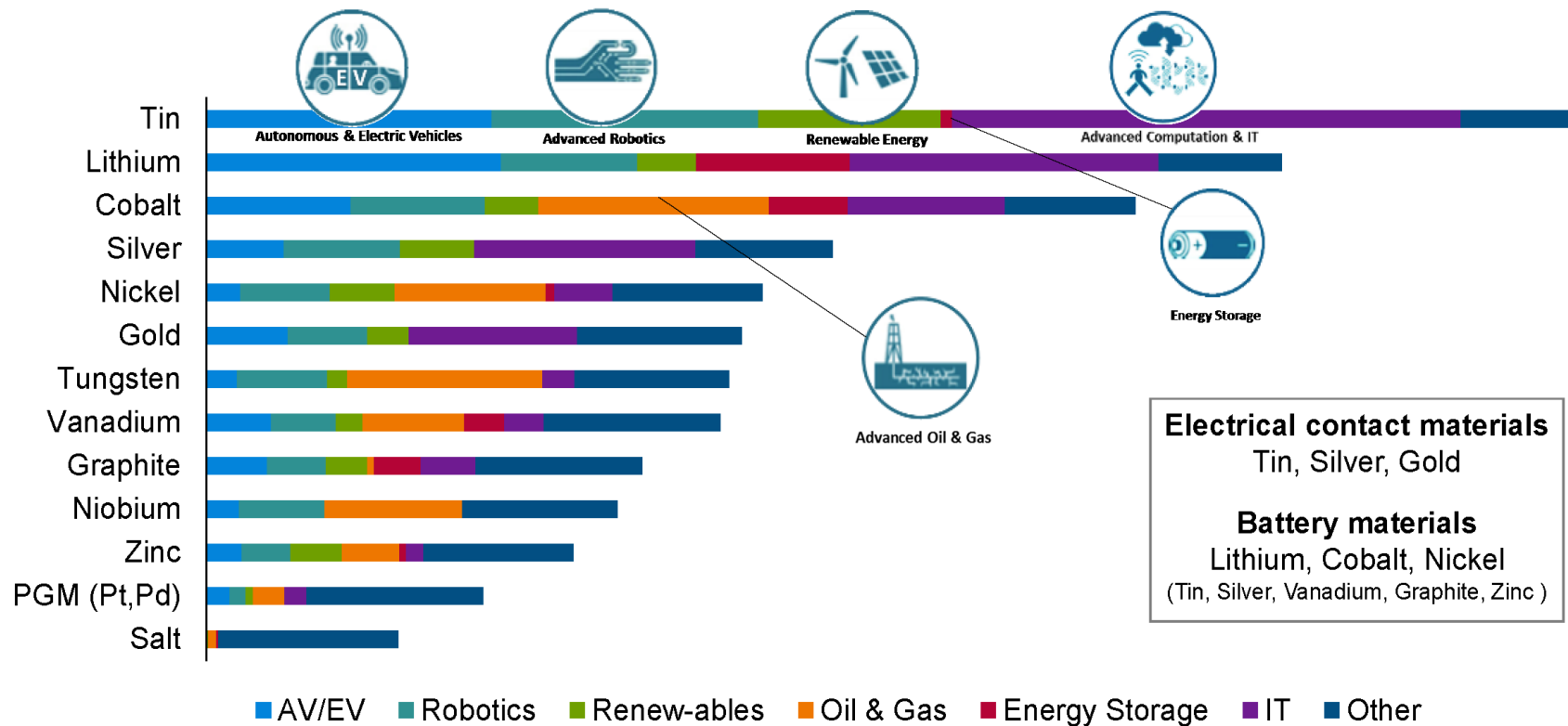
**Dr Stuart Owen**  
**Exploration Manager**

- BSc & PhD in Geology, member of the AIG and over 20 years of experience in mineral exploration which included gold and nickel;
- Senior Geologist in the exploration team that discovered and delineated the Paulsens Gold Deposit in the Ashburton region of WA;
- Exploration Manager in the Adamus team that discovered and delineated the Southern Ashanti Gold Deposits, Ghana;
- Exploration Manager for Venture during the discovery of the Mt Lindsay Tin-Tungsten-Magnetite deposits, Tasmania.





## Metals most impacted by new technology





## Computing and robotics

**Tin focus:** Solder used in mobile phones, computers, tablets and electronic technologies

### Industry developments:

- Smartphone shipments worldwide are projected to add up to around 1.7 billion units in 2020 with 40% of the world's population is projected to own a smartphone by 2021;
- Plans to move to 95% lead-free solder by 2023 will drive and support future tin use in the solder sector



## Autonomous & Electric Vehicles

**Tin focus:** Lead acid batteries & anode electrode lithium ion batteries

### Industry developments:

- Norway & Netherlands to ban combustion vehicles by 2025;
- China has launched a series of quotas to become completely electric by 2030;
- New tin and tin-alloy anodes currently under development.
- Major lithium producer, FMC Corporation has recently patented lithium tin for batteries (July 2018).

## Energy Generation & Infrastructure



**Tin focus:** Solar cells, thermoelectric materials

### Industry developments:

- Measurable impacts of solar photovoltaics (PV) growth through increased use of solder ribbon (for joining solar panels) with ~7,500 tonnes of tin use in 2016. At this rate, the market demand could be set to almost double by 2030.
- A discovery by University of Groningen, Netherlands has shown that tin-based perovskite solar energy materials could more than double solar PV efficiency.

## Energy Storage

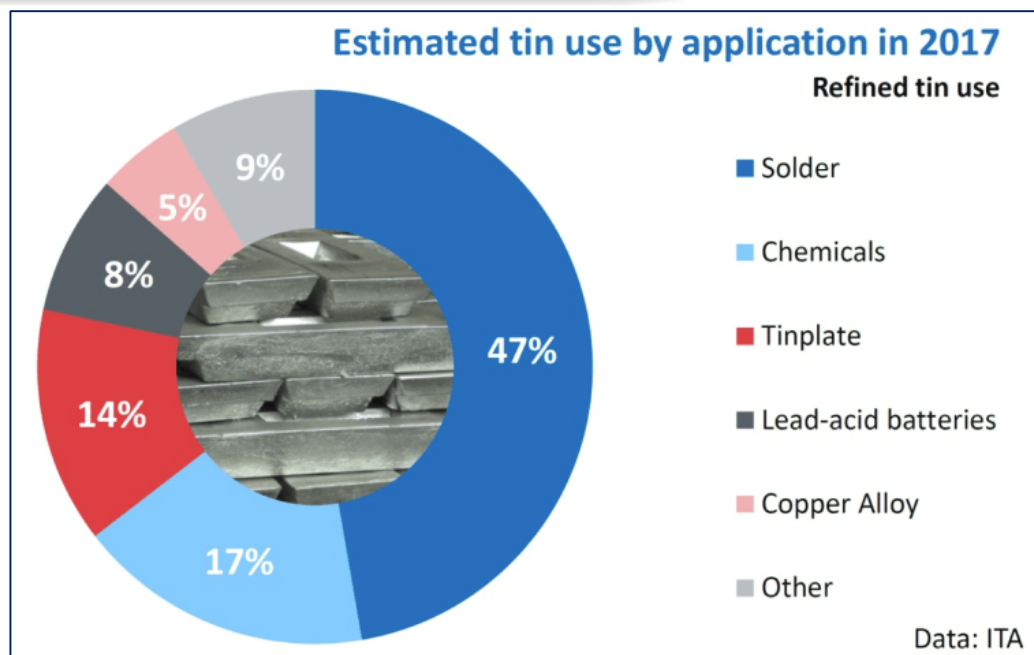


**Tin focus:** Solar storage, supercapacitors, aluminium air, fuel cells

### Industry developments:

- Improved liquid tin bismuth battery for grid-scale energy storage patented by University of Kentucky with testing currently underway;
- 'Remarkable' novel tin phosphate gel material that performs well in fuel cells and can also be a fast-charging lithium ion battery anode currently being researched by scientists.





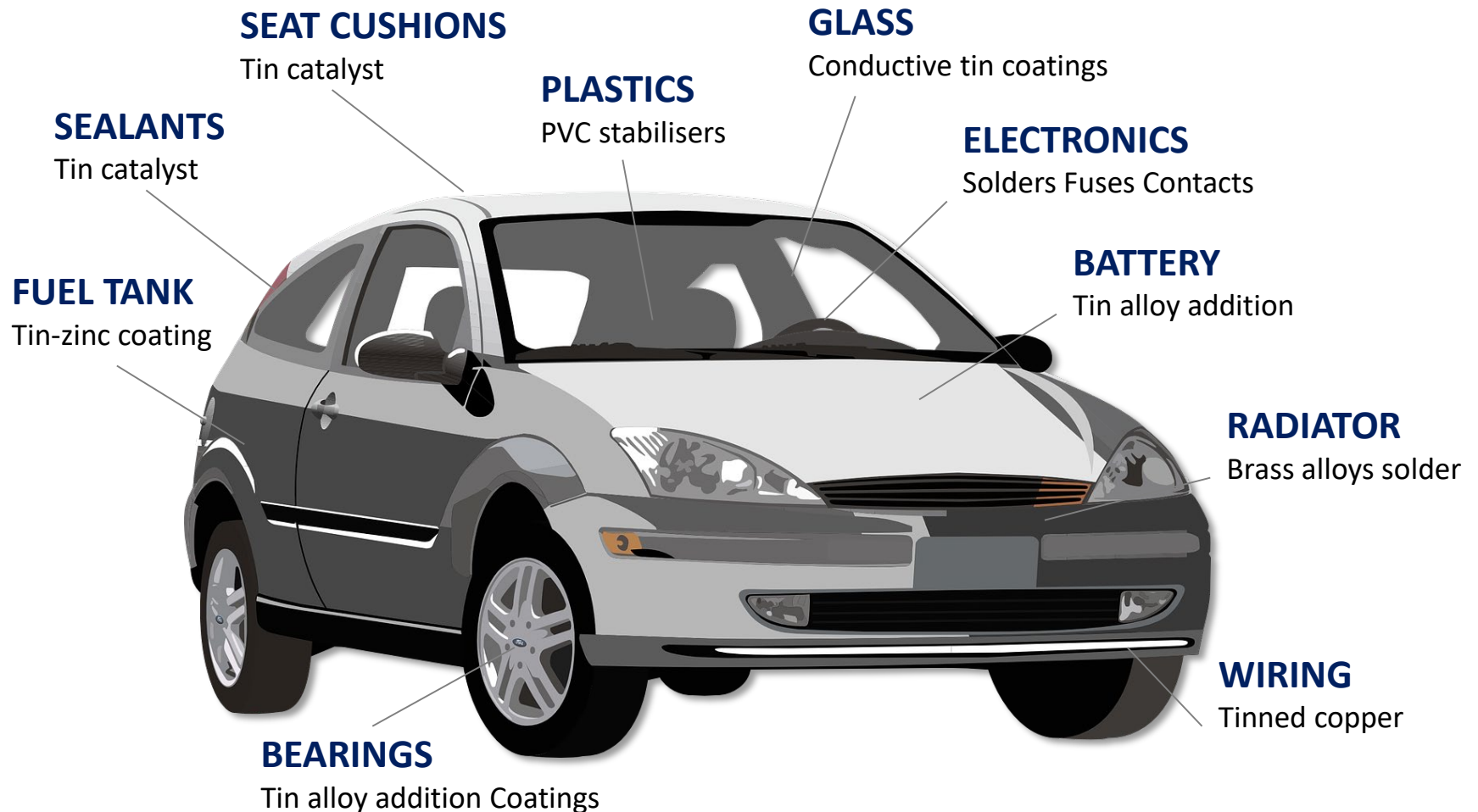
Nearly 50% of tin consumed is in lead-free solder by the consumer electronics industry

While solder drives the current market, significant growth is in chemicals & lead acid batteries

The two most significant uses of tin for EV impact is in electronics and alloys within batteries

Tin use in lead-acid batteries doubled between 2010 to 2016 and is estimated to grow 2-4% per annum till 2025.

# Tin use in conventional combustion vehicles



# Two most significant uses for EV impact

## **ELECTRONICS**

Solders Fuses Contacts

## **BATTERY**

Tin alloy addition





- Tin today at over US\$21,100/t or ~A\$30,000/t but has missed the dramatic rises of its EV metal peers in lithium, cobalt & graphite;
- Visible Tin Stocks near lows.

## World Supply/Demand Balances in Refined Tin '000 tonnes

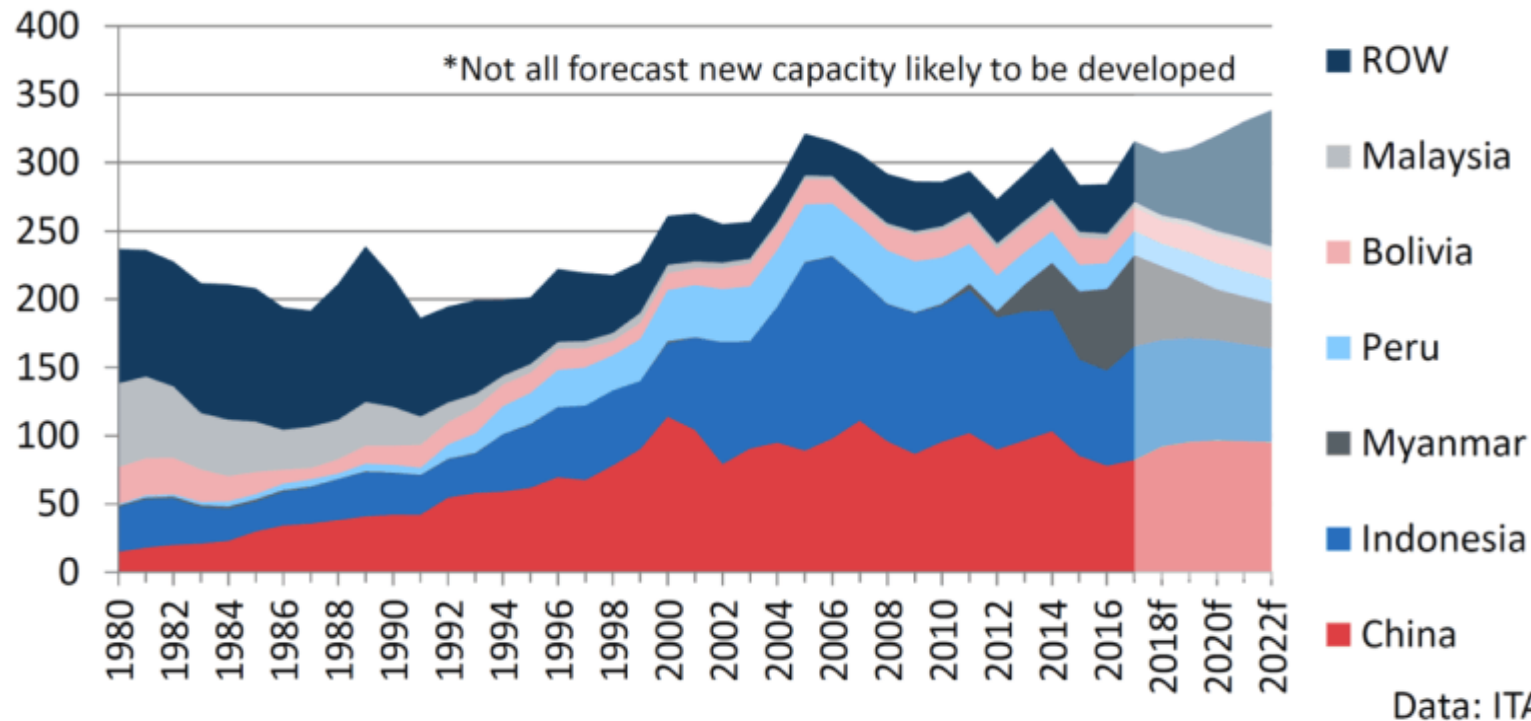
	2012	2013	2014	2015	2016	2017	2018f
<b>World</b>							
World Refined Production	335.4	340.5	370.2	335.0	338.4	362.6	358.5
DLA Sales	0.0	0.0	0.0	0.0	0.0	0.0	0.8
World Refined Consumption	331.8	339.0	350.7	337.5	346.0	357.2	366.3
<b>Global Market Balance</b>	<b>3.6</b>	<b>1.5</b>	<b>19.5</b>	<b>-2.5</b>	<b>-7.6</b>	<b>5.4</b>	<b>-7.0</b>
<b>Reported stocks</b>							
LME	12.8	9.7	12.1	6.1	3.8	2.2	2.0
SHFE	0.0	0.0	0.0	0.8	2.4	4.9	5.0
Producer & Consumer	26.7	24.6	27.0	25.2	22.5	21.1	19.0
<b>Total</b>	<b>39.5</b>	<b>34.3</b>	<b>39.1</b>	<b>32.2</b>	<b>28.7</b>	<b>28.2</b>	<b>26.0</b>
<i>World Stock Ratio</i>							
<i>(weeks consumption)</i>	<i>6.2</i>	<i>5.3</i>	<i>5.8</i>	<i>5.0</i>	<i>4.3</i>	<i>4.1</i>	<i>3.7</i>

Source: International Tin Association

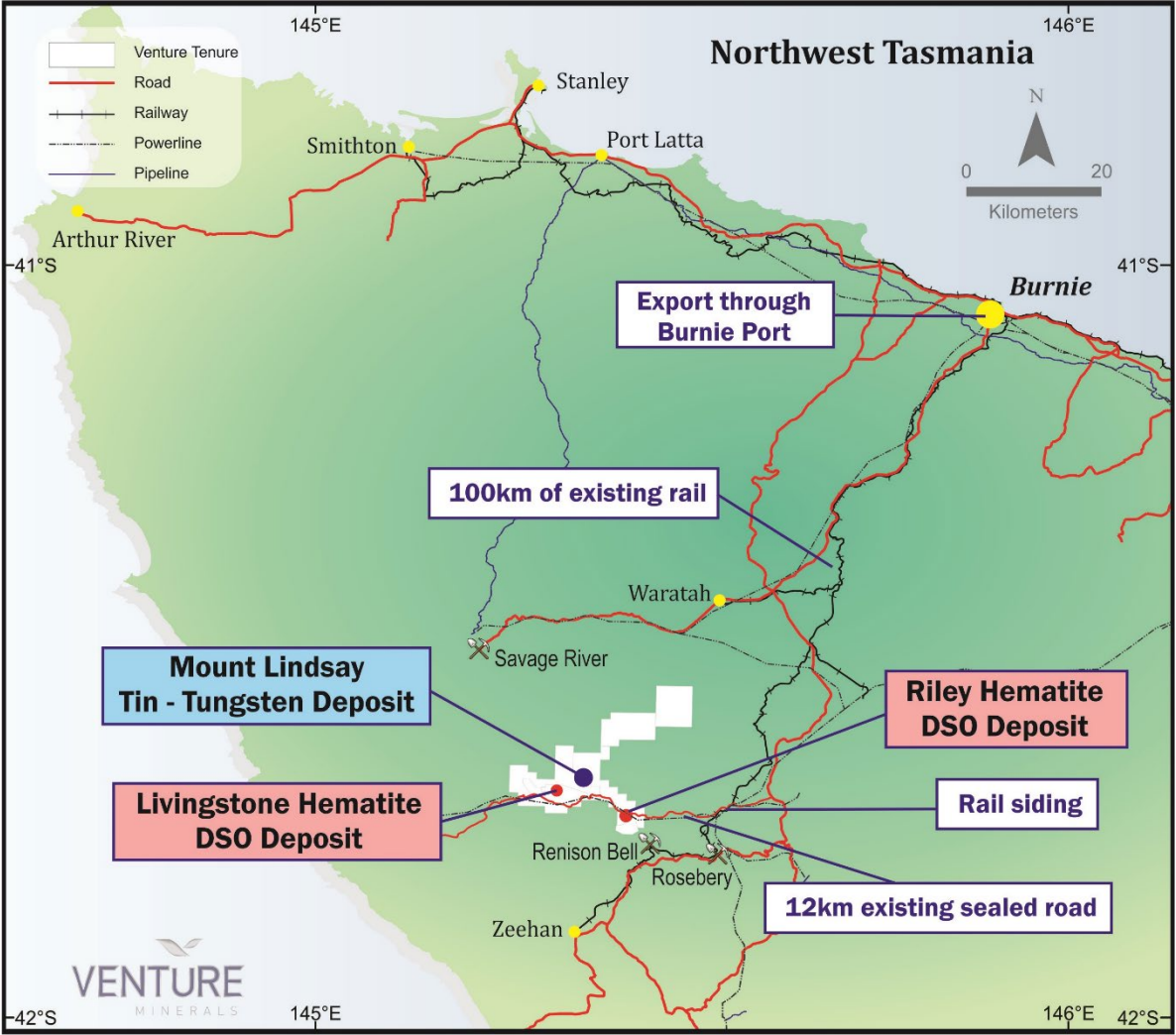
- Supply issues with most of the world's largest tin producers actually producing less;
- Most world tin production still coming from higher risk jurisdictions.

## Shares of world tin mine output

Mined tin output, kt



# Location of Mount Lindsay Tin-Tungsten Deposit





- EV demand drives re-assessment of the high grade tin and tungsten resource base at Mount Lindsay.
- Uniquely positioned with Mount Lindsay being one of the largest undeveloped tin projects in the world, containing in **excess of 80,000\* tonnes of tin metal**.
- Mount Lindsay also hosts, **within the same mineralised body, a globally significant tungsten resource containing 3,200,000\* MTU (metric tonne units) of  $WO_3$** .
- Time to explore new strategies to optimise higher grade portions at Mount Lindsay, which previously reported resources\* included **4.7Mt @ 0.4% Sn & 0.3%  $WO_3$** .

\* Refer to ASX announcement on 17 October 2012.

# Resource Statement – Mount Lindsay Tin-Tungsten Project (as previously announced 17 October 2012)

Lower Cut (Tin equiv)	Category	Tonnes	Tin Equiv. Grade	Tin Grade	Tungsten Grade (WO <sub>3</sub> )	Mass Recovery of Magnetic Iron (Fe) Grade	Copper Grade	Contained Tin Metal (tonnes)	Contained WO <sub>3</sub> (mtu)
0.2%	Measured	8.1Mt	0.6%	0.2%	0.1%	17%	0.1%	18,000	1,100,000
	Indicated	17Mt	0.4%	0.2%	0.1%	15%	0.1%	32,000	1,200,000
	Inferred	20Mt	0.4%	0.2%	0.1%	17%	0.1%	32,000	960,000
	<b>TOTAL</b>	<b>45Mt</b>	<b>0.4%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>17%</b>	<b>0.1%</b>	<b>81,000</b>	<b>3,200,000</b>
0.45%	Measured	4.3Mt	0.8%	0.3%	0.2%	18%	0.1%	12,000	980,000
	Indicated	5.2Mt	0.7%	0.3%	0.2%	15%	0.1%	14,000	810,000
	Inferred	3.9Mt	0.6%	0.3%	0.1%	9%	0.1%	12,000	520,000
	<b>TOTAL</b>	<b>13Mt</b>	<b>0.7%</b>	<b>0.3%</b>	<b>0.2%</b>	<b>14%</b>	<b>0.1%</b>	<b>38,000</b>	<b>2,300,000</b>
0.7%	Measured	<b>2.2Mt</b>	1.1%	0.3%	0.3%	18%	0.1%	<b>8,000</b>	<b>750,000</b>
	Indicated	<b>1.9Mt</b>	1.0%	0.4%	0.3%	11%	0.1%	<b>7,000</b>	<b>480,000</b>
	Inferred	<b>0.6Mt</b>	1.0%	0.5%	0.3%	3%	0.1%	<b>3,000</b>	<b>150,000</b>
	<b>TOTAL</b>	<b>4.7Mt</b>	<b>1.1%</b>	<b>0.4%</b>	<b>0.3%</b>	<b>13%</b>	<b>0.1%</b>	<b>18,000</b>	<b>1,400,000</b>
1.0%	Measured	<b>1.0Mt</b>	1.5%	0.5%	0.5%	19%	0.1%	<b>5,000</b>	<b>450,000</b>
	Indicated	<b>0.7Mt</b>	1.3%	0.5%	0.3%	10%	0.1%	<b>4,000</b>	<b>220,000</b>
	Inferred	<b>0.2Mt</b>	1.4%	0.7%	0.3%	<1%	<0.1%	<b>2,000</b>	<b>70,000</b>
	<b>TOTAL</b>	<b>1.9Mt</b>	<b>1.4%</b>	<b>0.5%</b>	<b>0.4%</b>	<b>14%</b>	<b>0.1%</b>	<b>10,000</b>	<b>750,000</b>

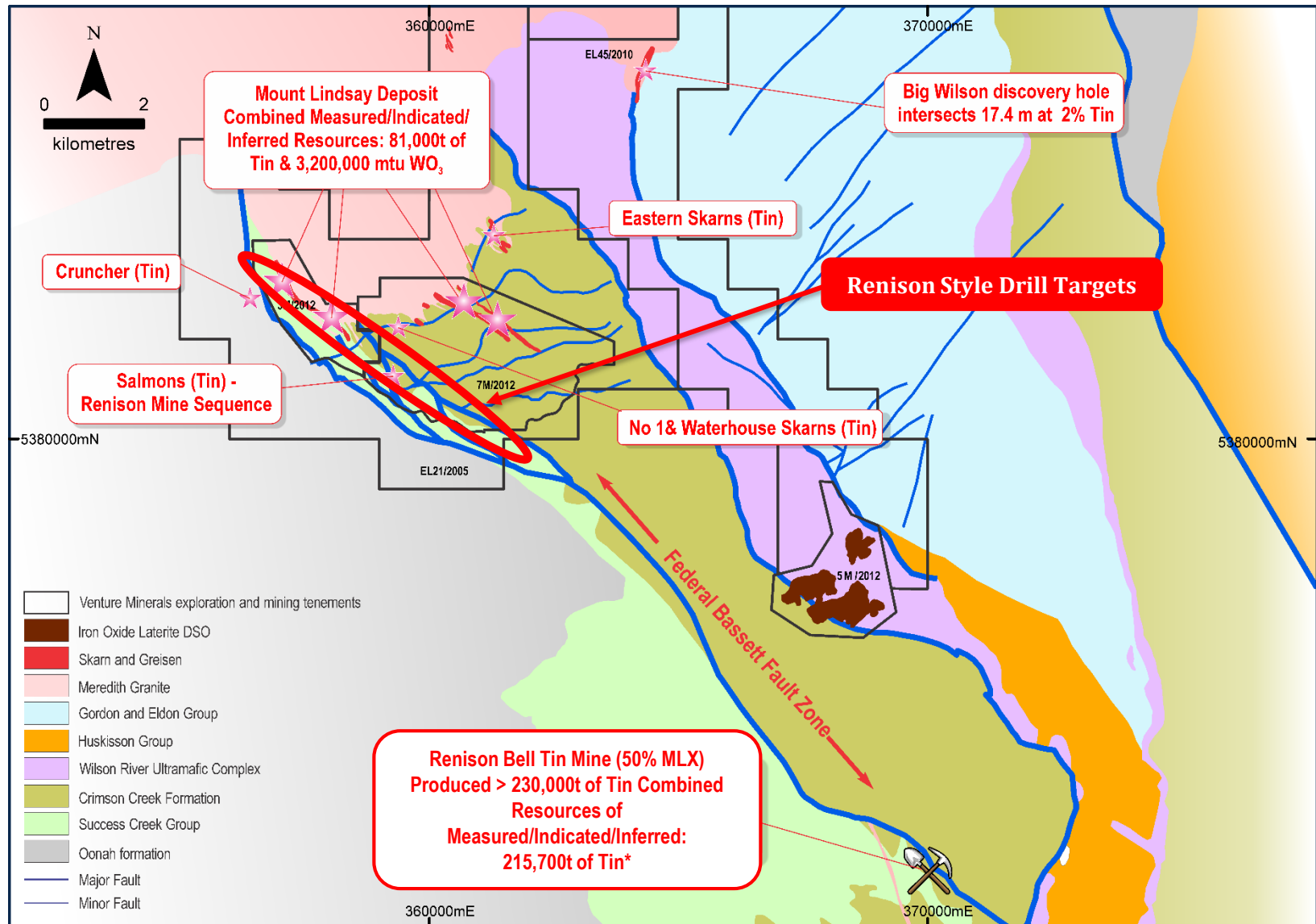
Note: Reporting to two significant figures. Figures have been rounded and hence may not add up exactly to the given totals. Full details of the estimate are in the ASX release for the Quarterly Report on 17 October 2012. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

- Approximately 83,000m of diamond core drilling used to define JORC compliant resources with **+60% in the Measured & Indicated categories;**
- Feasibility Study completed with comprehensive metallurgical test-work, with further post feasibility test-work delivering delivered a very high grade 75% tin concentrate;
- **Tin is at US\$21,100/t** and has increased by 60% since January 2016;
- **Tungsten's APT price is at +US\$270/mtu** and has increased by 60% since February 2016;
- Several High Grade Targets with drill results to follow up including Big Wilson with **17.4m @ 2% tin\***.

\* Refer ASX Announcement 2 August 2012.

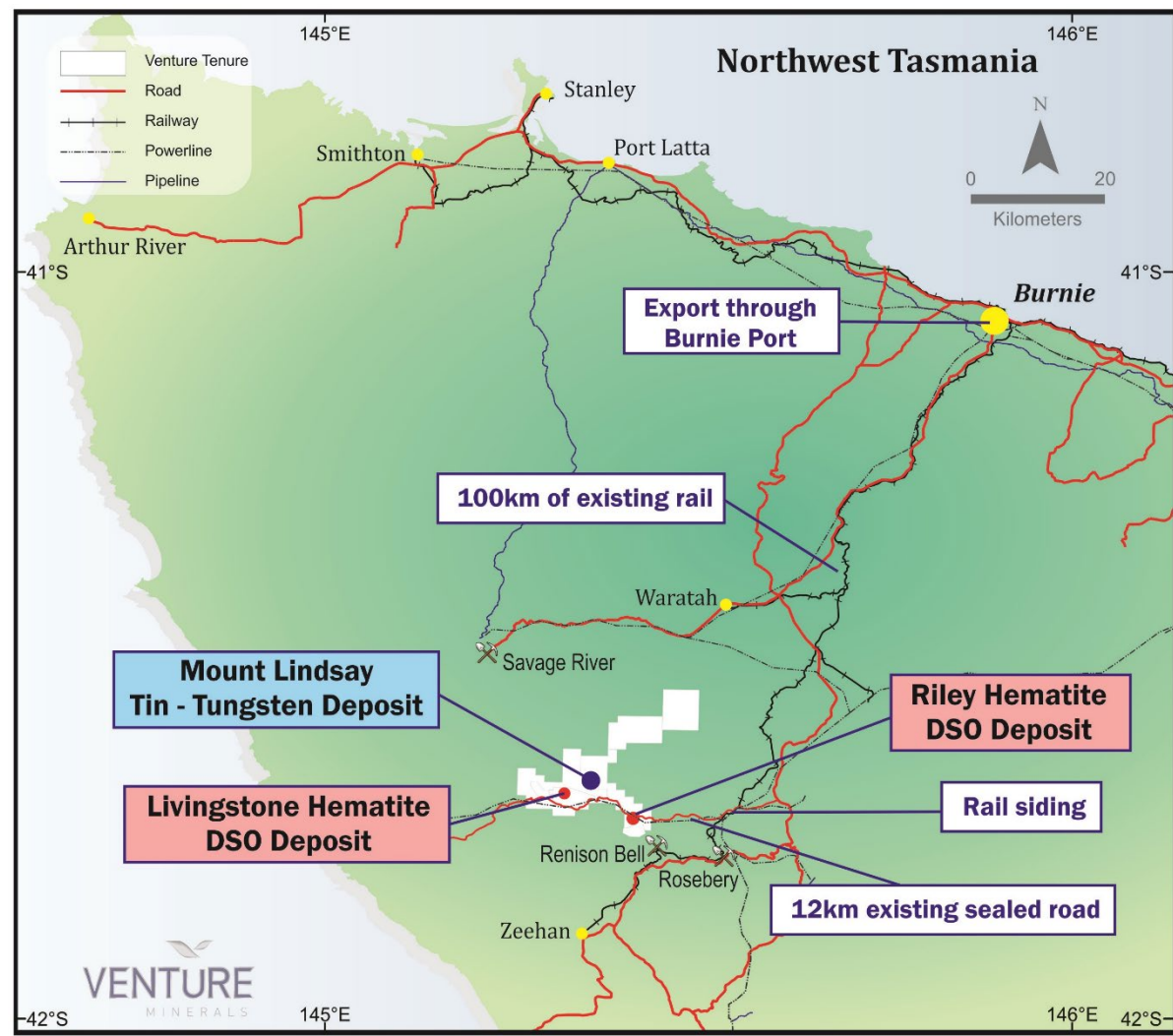


# High Grade Tin-Tungsten Targets



- Underground Scoping Study is underway looking at mining the Higher Grade portions of the Main and No.2 Skarns being respectively the MacDonald and Radford Shoots;
- Underground access to be located further down the side of Mount Lindsay. All waste material to be replaced back into the mine as stope fill to maximize mine recovery;
- Ore Sorting test-work to be completed on the MacDonald and Radford ore types;
- Mill Site to be potentially outside of the Tarkine to further minimise the Mine's footprint;
- The processing facility will be smaller and simpler than designed in the previous Feasibility in order to reduce capex.

# Location of Riley & Livingstone Hematite DSO Deposits









# Riley DSO Hematite Project – review underway to restart mine operations



- Riley is a fully permitted Iron Ore Mine that is positioned to recommence operations within a very short period of time;
- The current price is now more than 20%\* higher in AUD terms than it was upon closing. Since last December, the 62% Fe price has risen almost 40%\* in USD terms and with the recent events at Vales' mines in Brazil the current price levels could be sustained for at least the near term;
- Approximately 90% of the Equipment that was previously purchased is still on hand;
- Riley has Reserves of 1.8Mt @ 57% Fe with low impurities\*\*;
- The Riley DSO deposit is all at surface, located less than 2 km from a sealed road that accesses existing rail and port facilities.

\* Pricing comparisons were done on the 15th February 2019 when the 62% Fe Fines CFR price was US\$87.60 and the rate was 0.71 for A\$123.38c

\*\* Refer to ASX announcement on 26 July 2012

## Resource Statement - Riley DSO Project

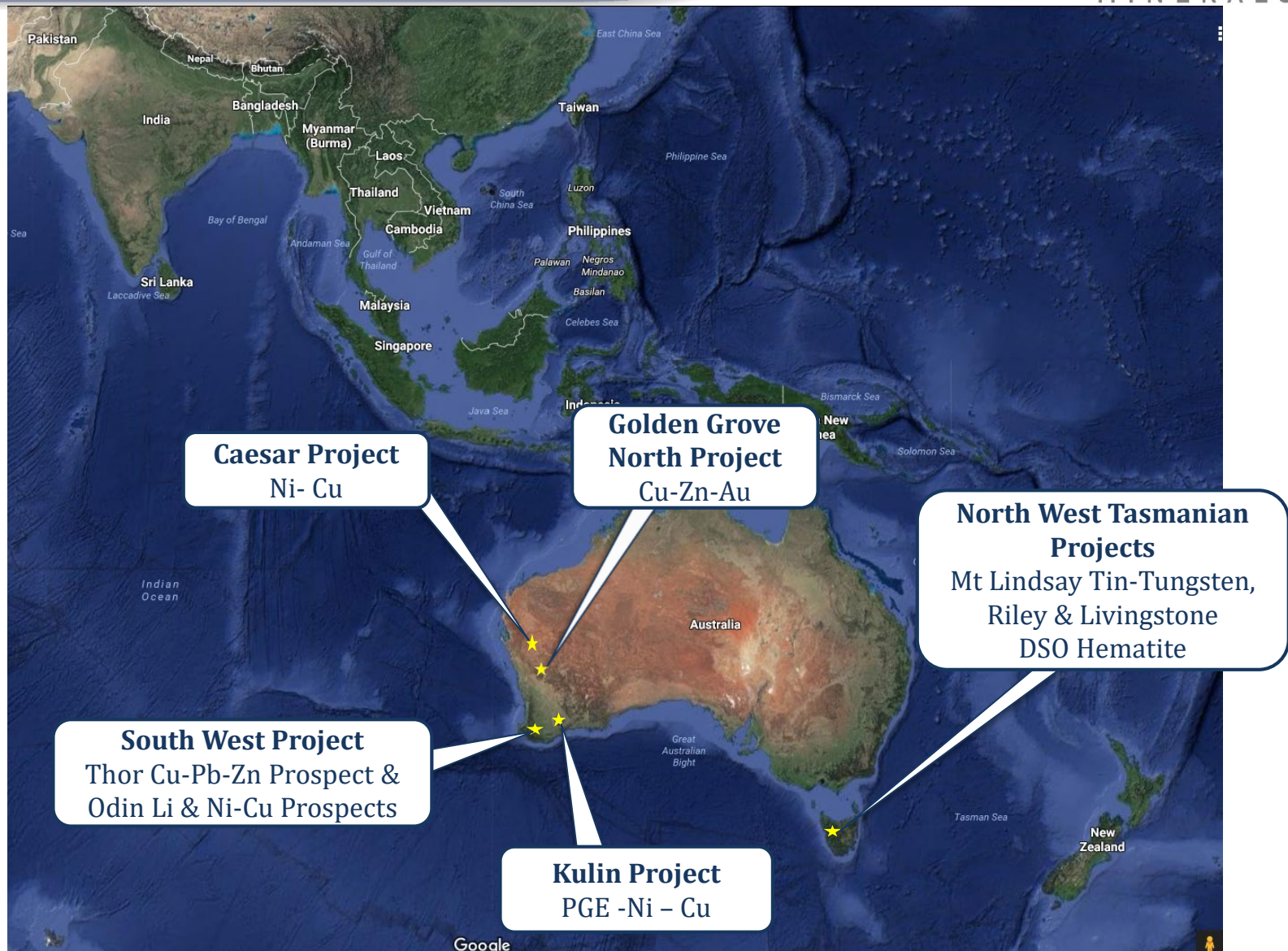
Resource	Tonnes	Fe (%)	Fe (%) Calcined	SiO <sub>2</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	P (%)	S (%)	LOI (%)
Indicated	<b>2.0mt</b>	<b>57</b>	61	3.7	2.6	0.03	0.08	7.7

## Reserve Statement - Riley DSO Project

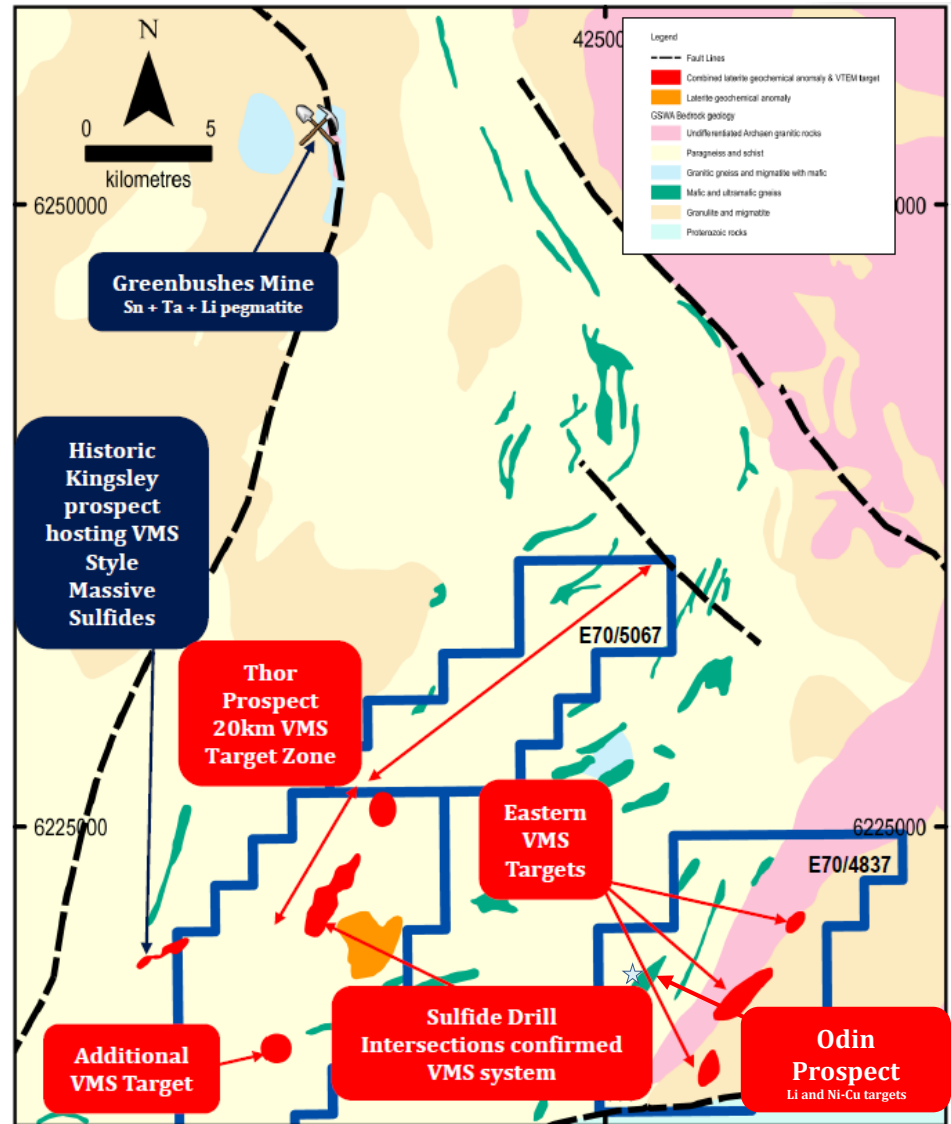
Reserve	Tonnes	Fe (%)	Fe (%) Calcined	SiO <sub>2</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	P (%)	S (%)	LOI (%)
Probable	<b>1.8mt</b>	<b>57</b>	61	3.7	2.6	0.03	0.07	7.8

Note: Refer to ASX announcement on 26 July 2012.

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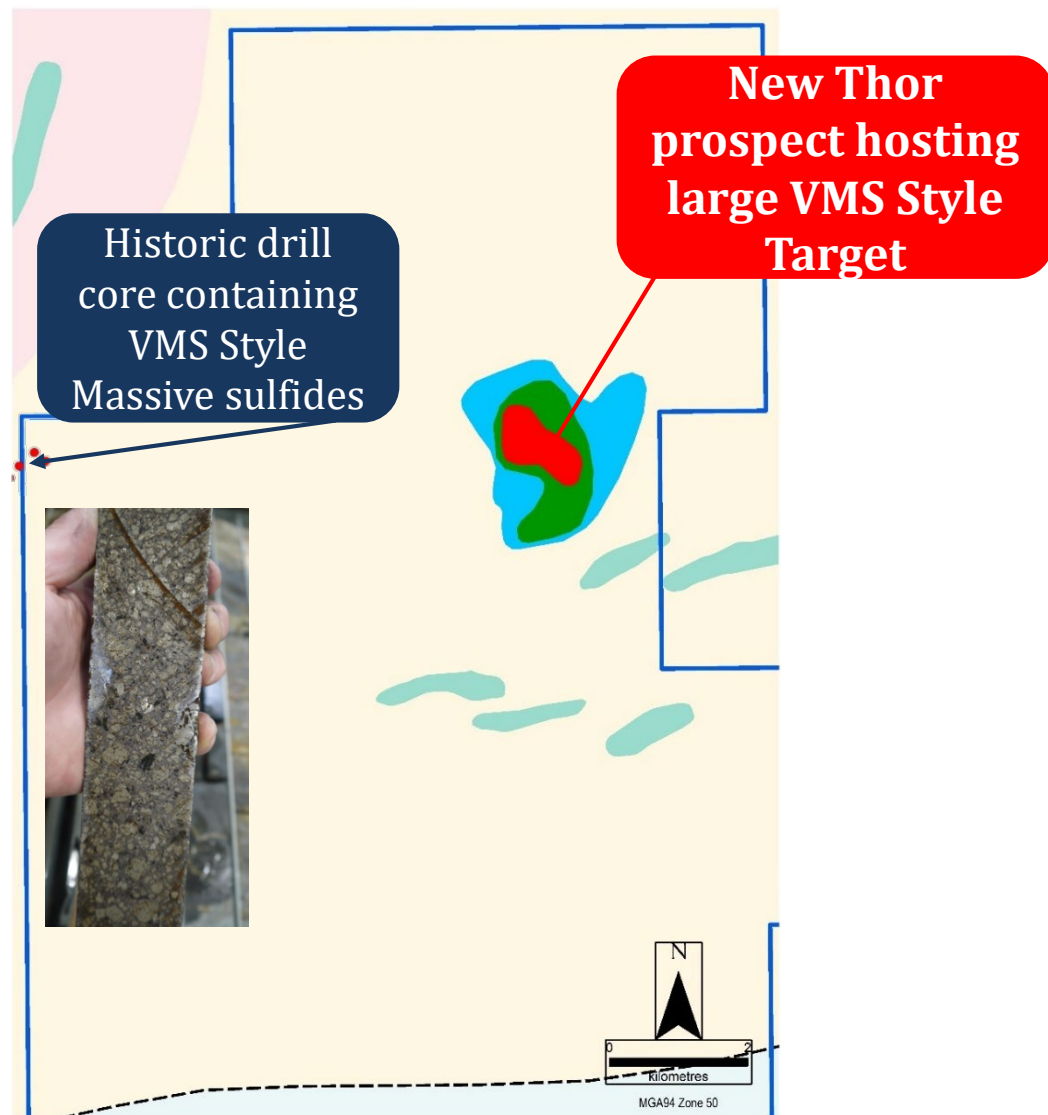
- Venture holds a 281 km<sup>2</sup> land holding within the Greenbushes Mineral District host to the world's largest hard rock lithium mine (produces ~40% of the world's-lithium);
- Several VMS (Volcanogenic Massive Sulfide) targets identified including the Thor Prospect;
- Substantial new Nickel-Copper target recently identified whilst drilling for Lithium at Odin.



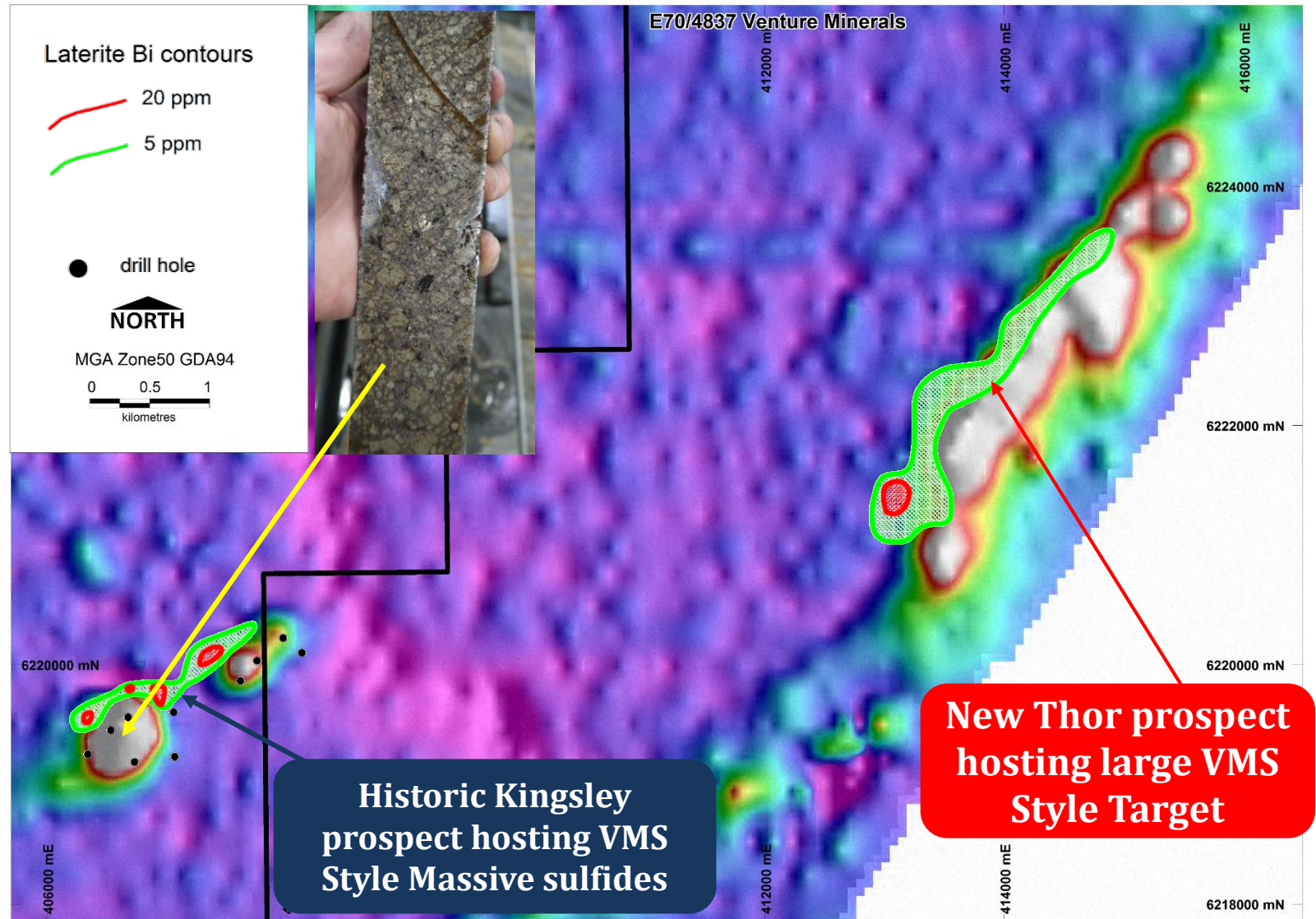


# Thor Prospect – Geochemical Target & Historic Drill Core

- Large geochemical VMS style target identified from surface sampling;
- Massive sulfides identified in historic drill core near Thor Target;
- Portable XRF confirms presence of copper, lead and zinc.



# Thor Prospect – Thor & Kingsley Bi laterite soil contours on VTEM flown in 2005

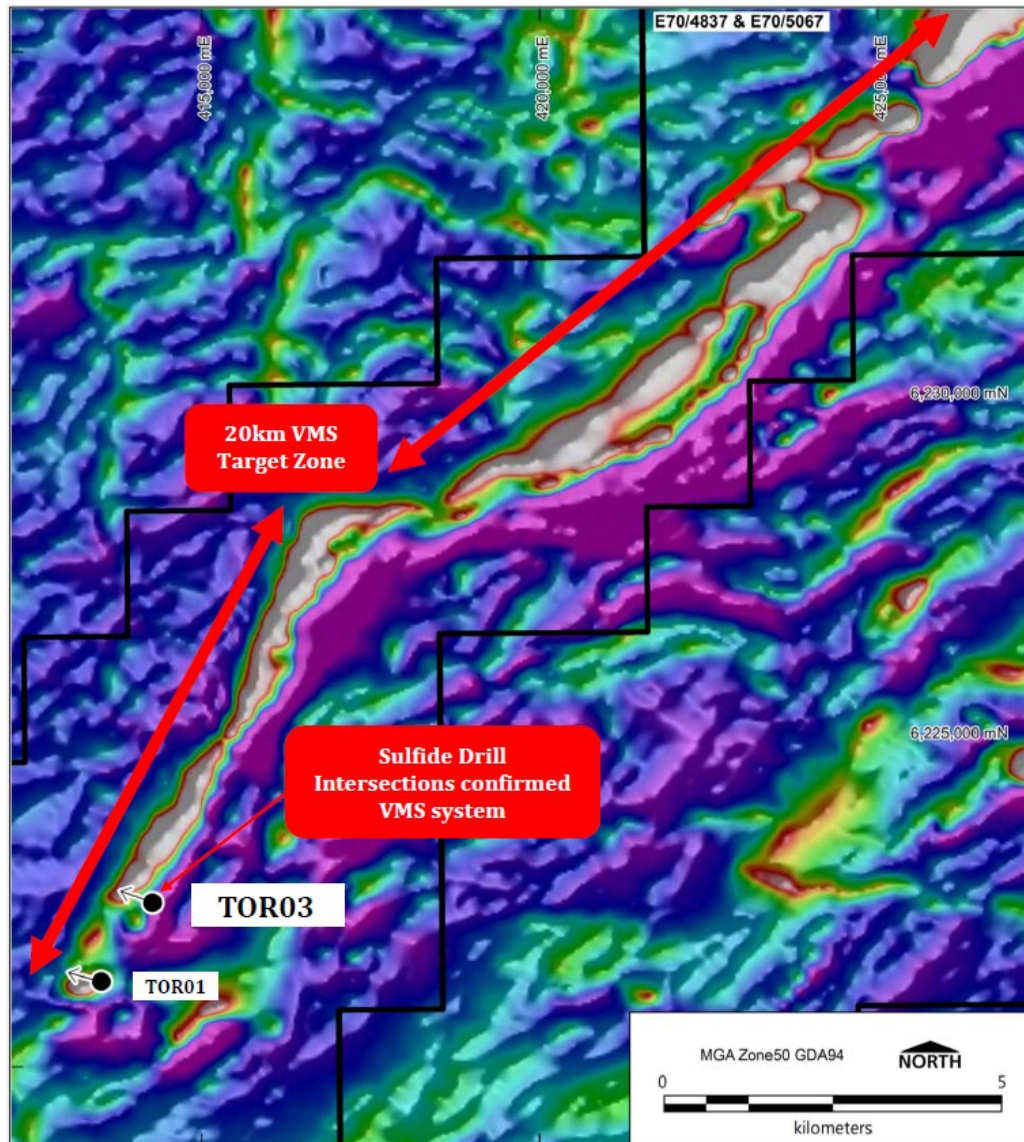


# Massive Sulfide in Core from Maiden Drilling at the Thor Prospect





# Thor VMS Target with drilling on aeromagnetic image

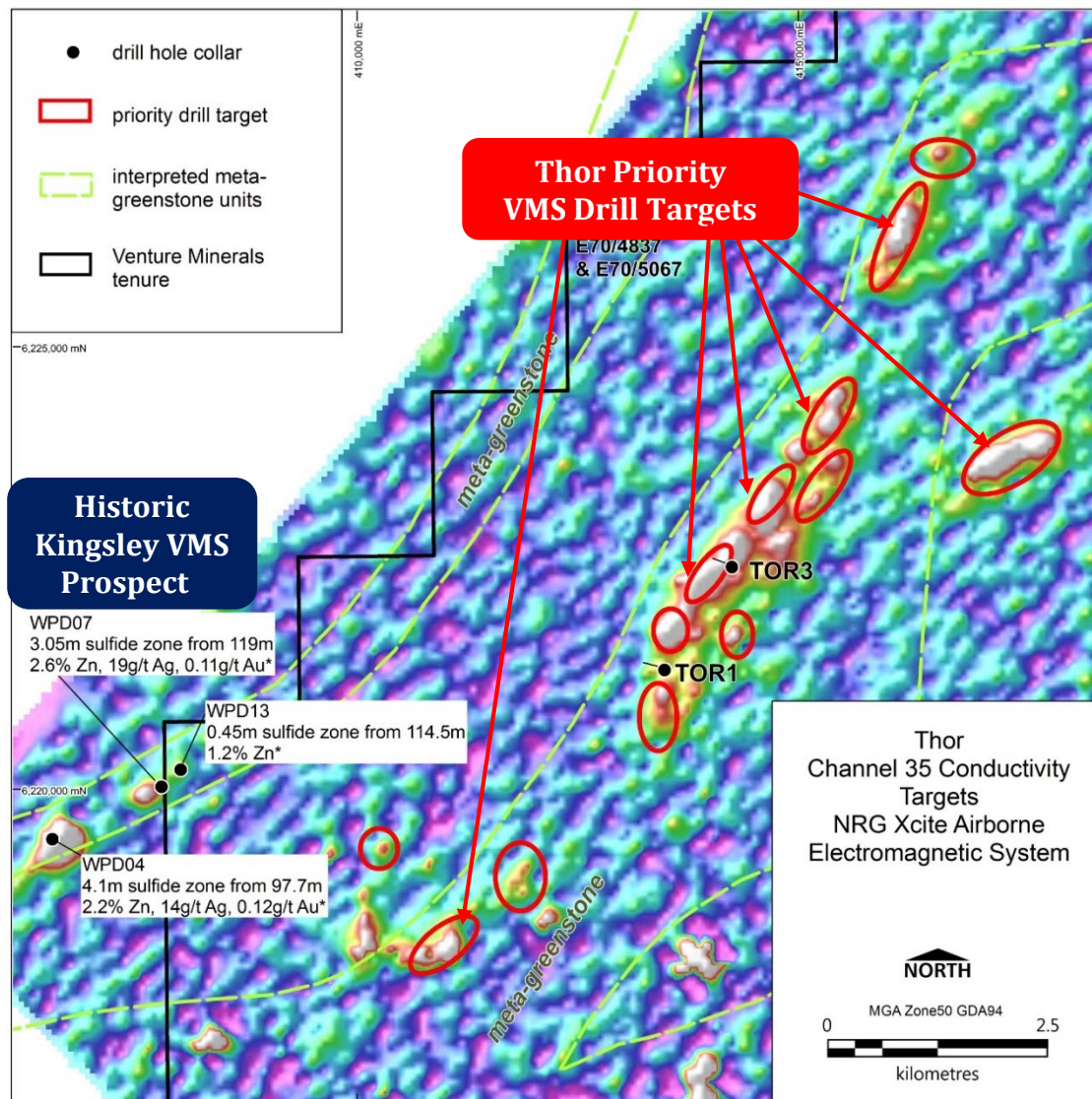




# New Major EM Survey completed at Thor in September 2018



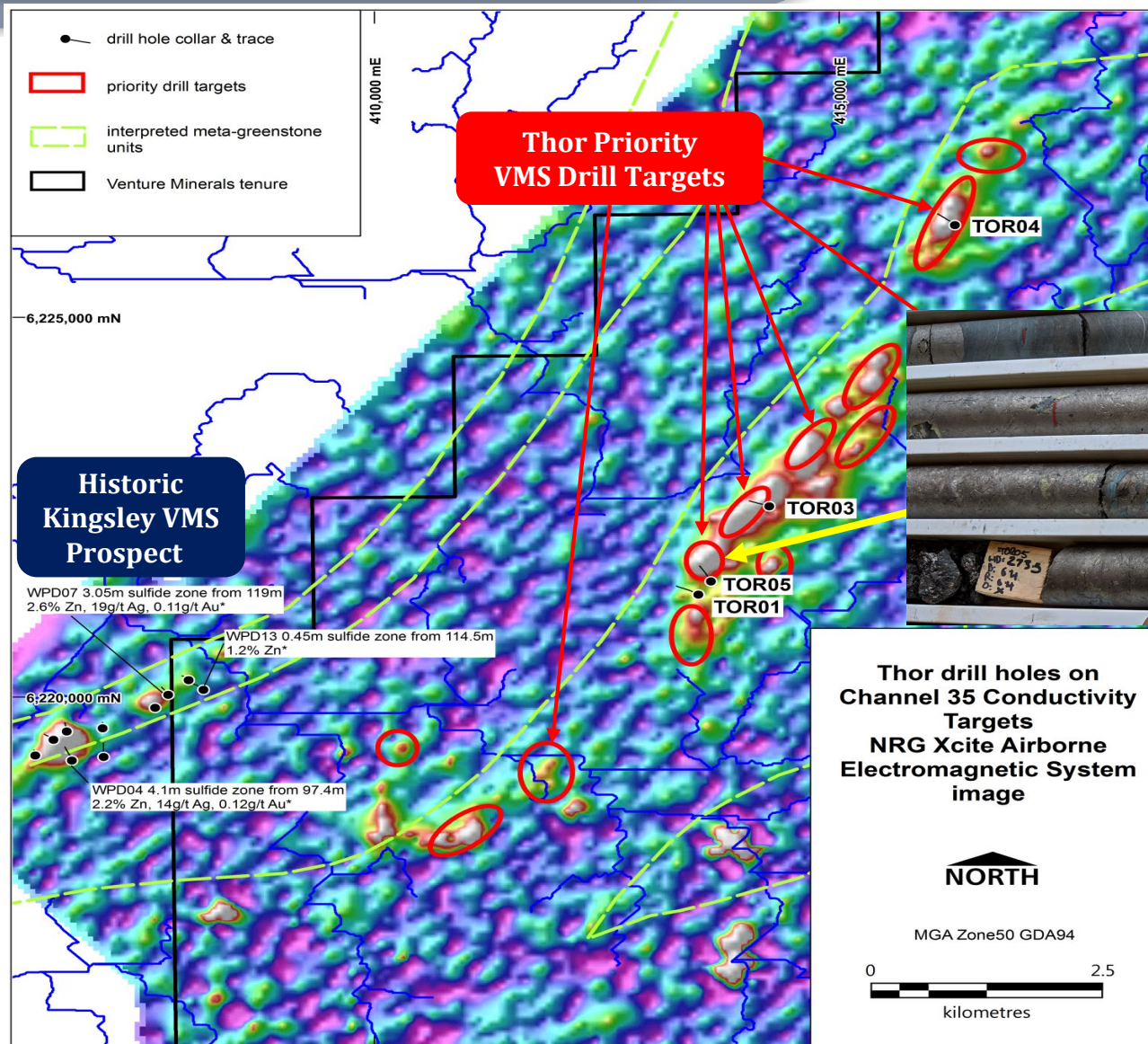
# Final EM survey results confirm Priority Targets for drill testing in December 2018



\*Reference GSWA Record 2017/9: Metamorphosed VMS Mineralization at Wheatley, Southwest, WA by LY Hassan

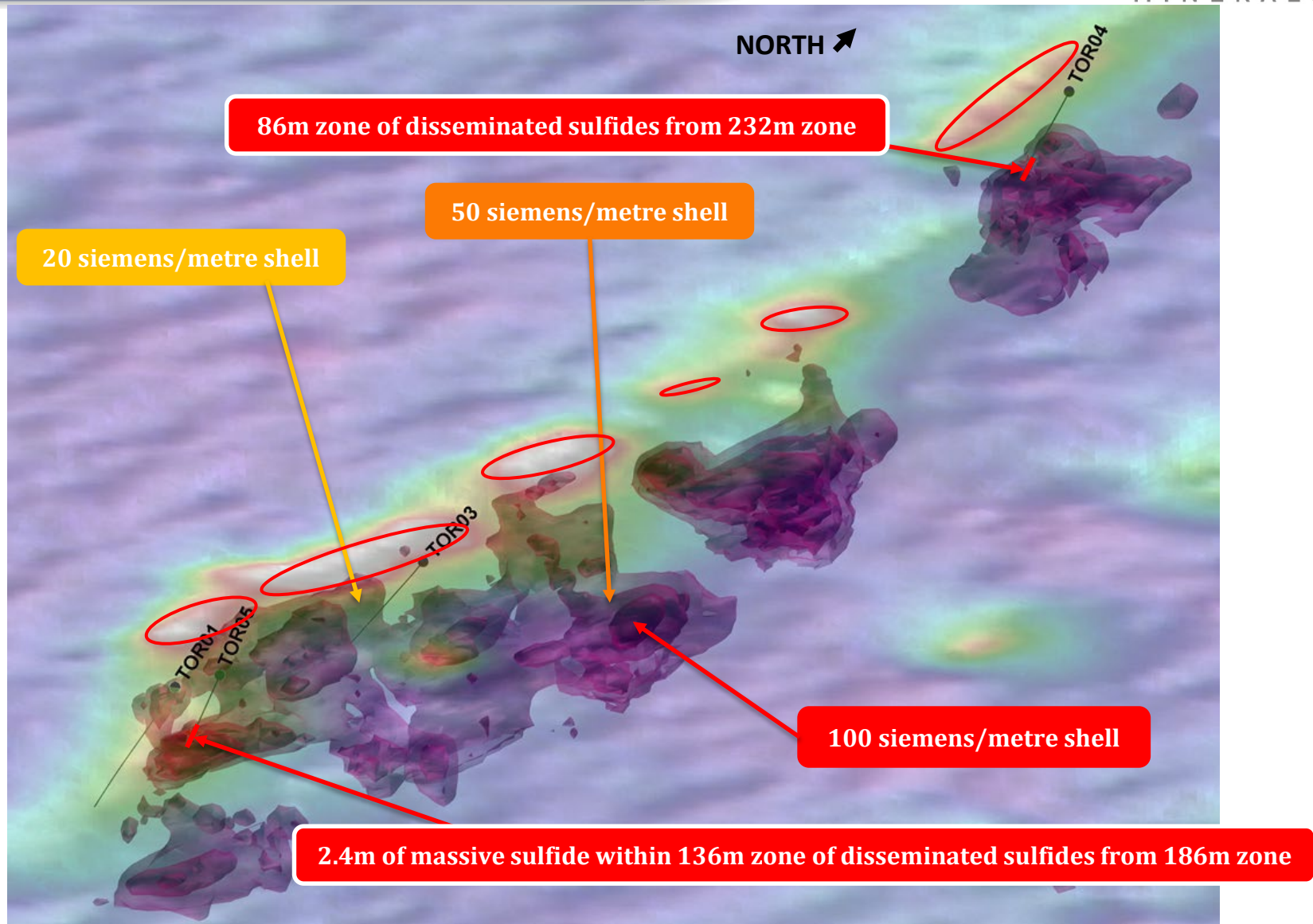


# Drilling intersects further massive sulfides with Copper & Zinc mineralisation

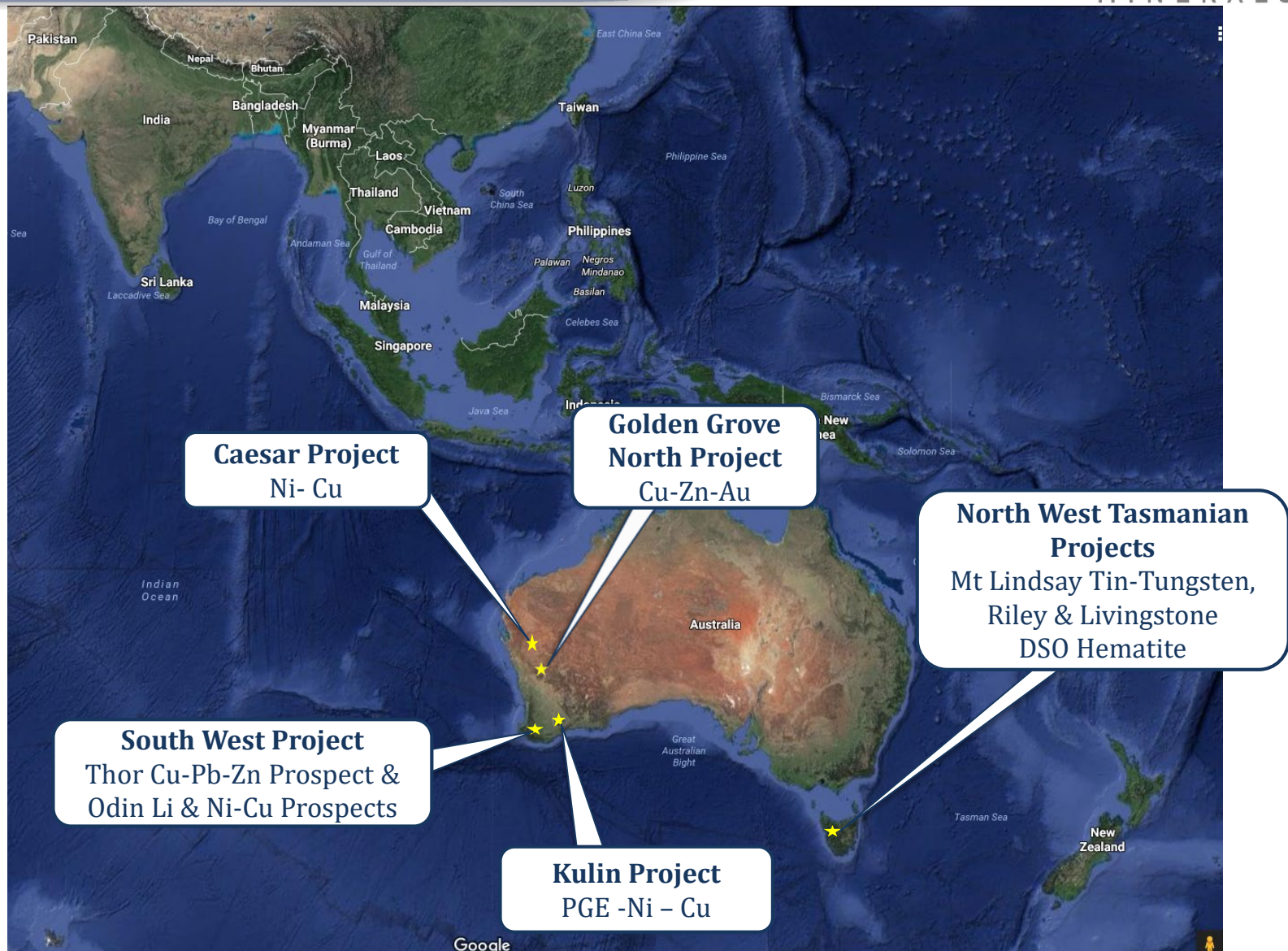


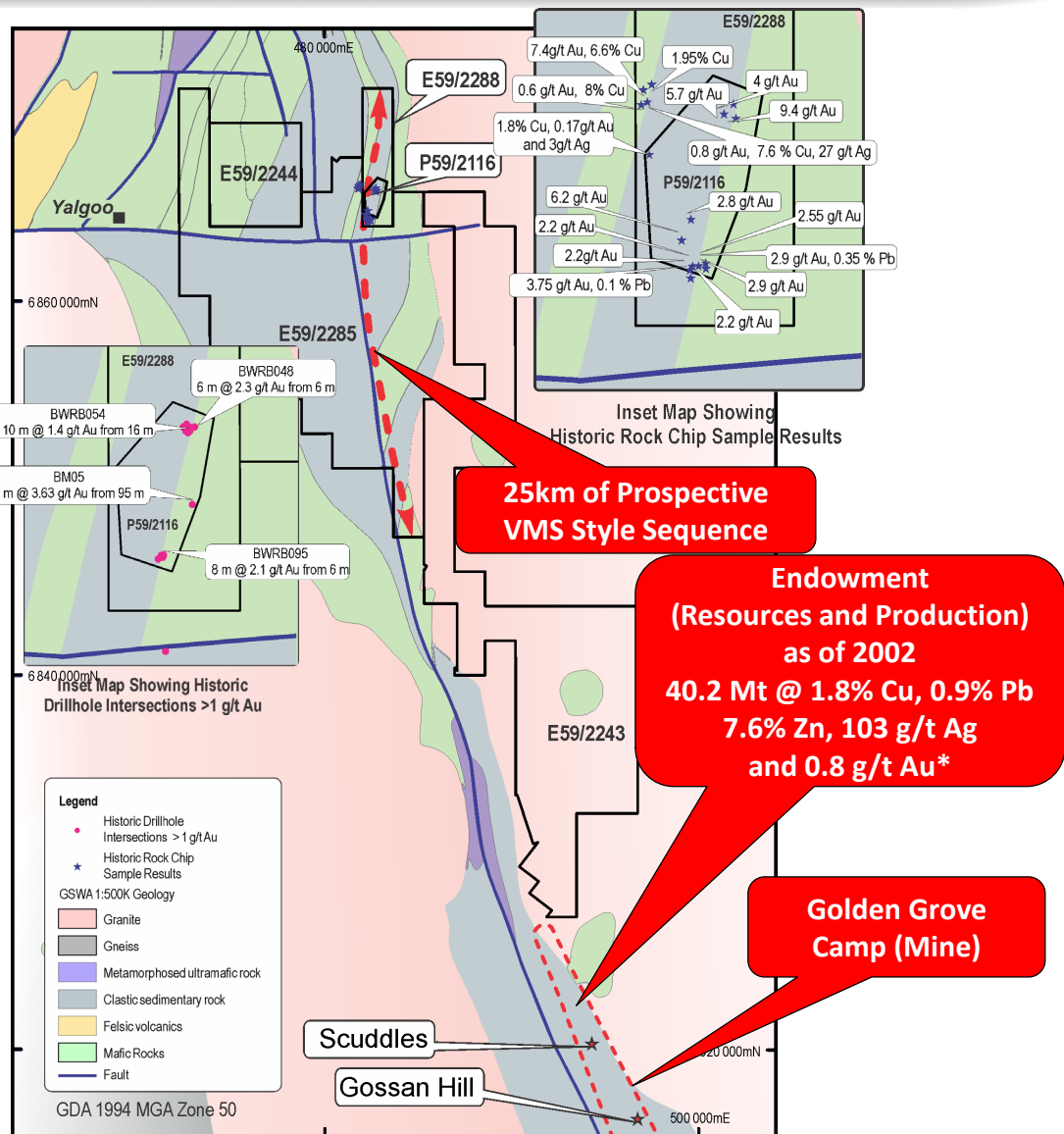
\*Reference GSWA Record 2017/9: Metamorphosed VMS Mineralization at Wheatley, Southwest, WA by LY Hassan

# Oblique View of EM Survey Results with latest drill intersections



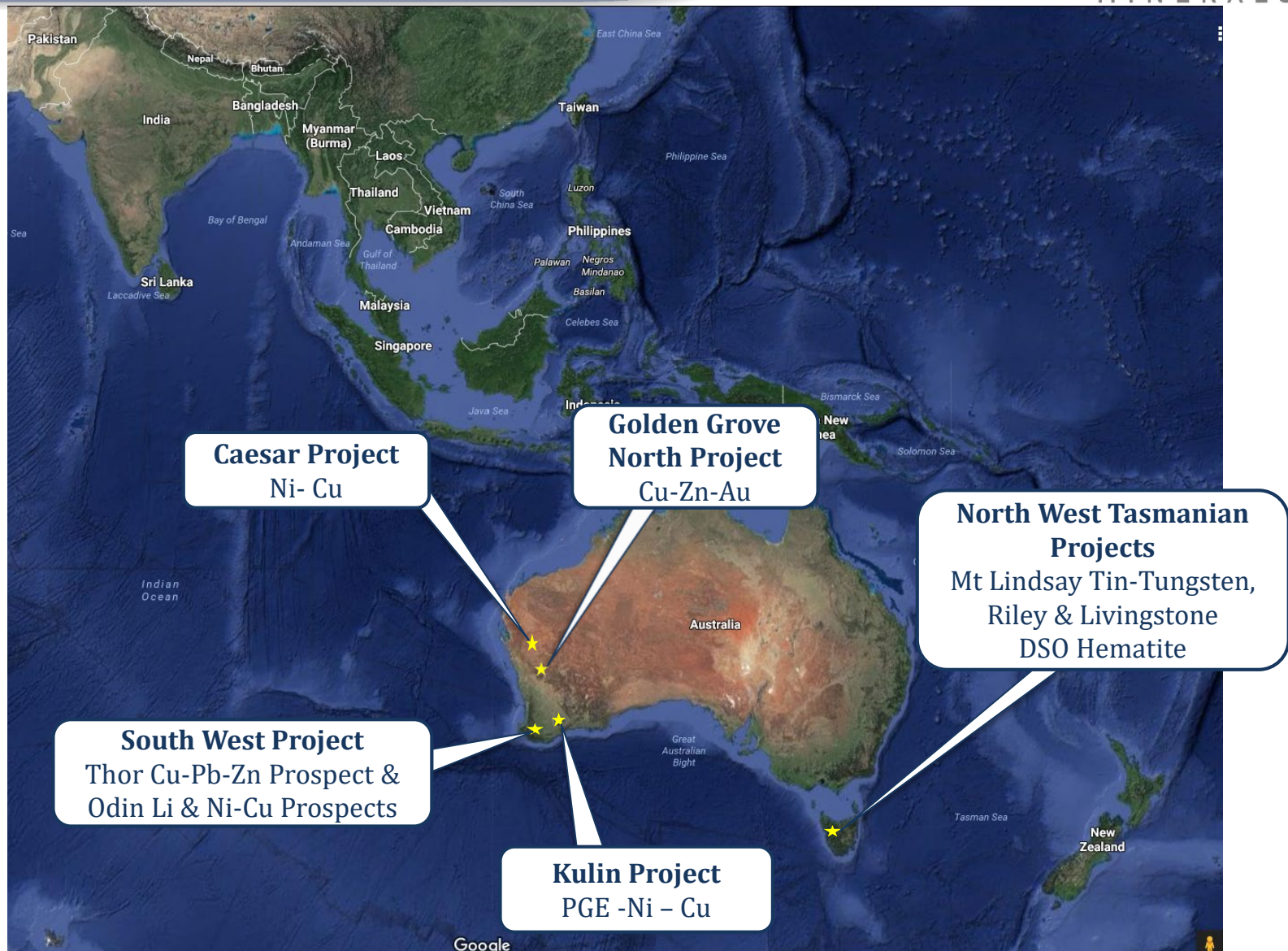






- **374 km<sup>2</sup> located less than 10 kilometres from the Golden Grove Camp (Mine);**
- **25 strike kilometres of a largely untested, prospective sequence for VMS style mineralisation;**
- Historic shallow gold drill intersections including **8 metres @ 2.1 g/t gold from 6 m** and **6 metres @ 2.3 g/t gold from 6 m\***;
- Historic Rock Chip results of **7.4 g/t gold & 6.6% copper** and **7.6% copper & 27g/t silver\***.





- Venture is leveraged to multiple commodities and near term production opportunities over numerous projects;
- Mount Lindsay Tin-Tungsten Project provides exposure to EV metals and near term production;
- Review underway for restarting the production ready Riley Iron Ore Mine;
- Maiden drill program at Thor Prospect intersected massive sulfides confirming the Copper-Lead-Zinc target is a 20km long VMS style system in Western Australia;
- Acquired strategic landholding along strike to the world class Golden Grove Copper-Zinc-Gold Mine, Western Australia;
- Low overheads ensure very high percentage of “dollars in the ground”.





Thank You  
Come and see us at Booth 5