

# Investing in the energy storage future with Australian Vanadium

Mining Indaba Investment Battlefield

Vincent Algar

**Managing Director**

# Disclaimer

The views expressed in this presentation contain information derived from publicly available sources that have not been independently verified. No representation or warranty is made as to the accuracy, completeness or reliability of the information.

## Comment

It is common practice for a company to comment on and discuss its exploration in terms of target size and type. In addition surface sampling assays and drill sample results may also be discussed in the context of information describing the presence of anomalous metal content. The information relating to an Exploration Target should not be misunderstood or misconstrued as an estimate of Mineral Resources or Mineral Reserves. Hence the terms Resource(s) or Reserve(s) have not been used in this context. The potential quantity and grade is conceptual in nature, since there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource.

## COMPETENT PERSON REFERENCES

### Competent Person Statement – Blesberg Exploration program

The information relating to the Blesberg Lithium-Tantalum Project exploration program reported in this announcement is based on information compiled by Mr Vincent Algar. Mr Algar is a Member of The Australian Institute of Mining and Metallurgy (AusIMM) and a full-time employee of the Company. Mr Algar has more than 25 years' experience in the field of mineral exploration. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr. Algar consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears.

### Competent Person Statement – Mineral Resource Estimation

The information relating to the Gabanintha Project 2015 Mineral Resource estimate reported in this announcement is based on information compiled by Mr John Tyrrell. Mr Tyrrell is a Member of The Australian Institute of Mining and Metallurgy (AusIMM) and a full time employee of AMC (AMC Consultants Pty Ltd). Mr Tyrrell has more than 25 years' experience in the field of Mineral Resource Estimation. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and in resource model development to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr. Tyrrell consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears.

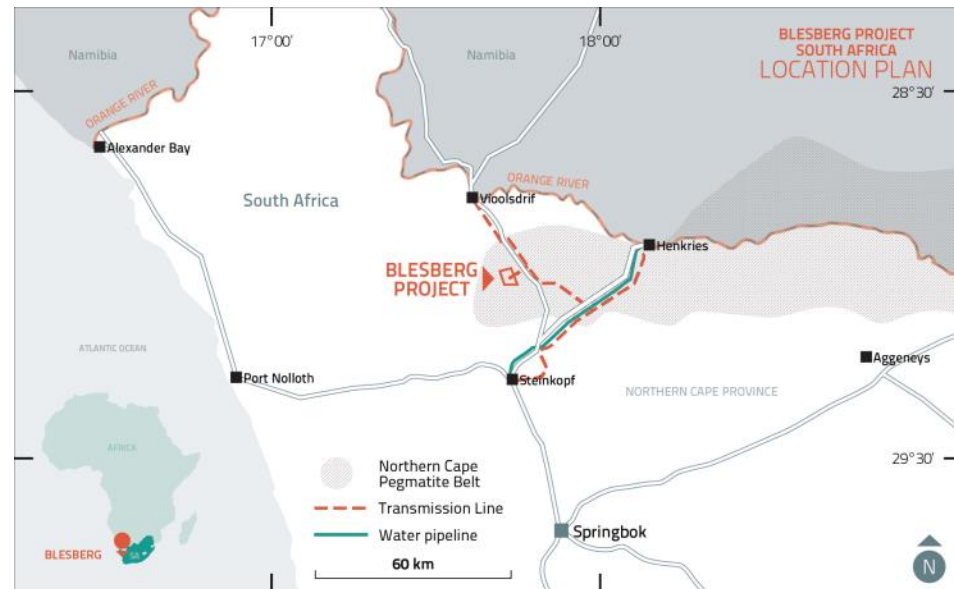
The information is extracted from the report entitled "Substantial high-grade vanadium resource highlights Gabanintha's world-class potential" released to ASX on 10 November 2015 and is available on the company website at [www.australianvanadium.com.au](http://www.australianvanadium.com.au). The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resource or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the competent person's findings are presented has not been materially modified from the original market announcement.

## Forward Looking Statements

This announcement may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to Resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes. For more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Companies other filings. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward looking statement" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

# AVL is an integrated Battery Metals Company

- Battery metals focused ASX listed company
- Active evaluation of a new, long-life vanadium project (Gabanintha) in Western Australia with significant grade and resource base
- South African Lithium project (Blesberg) option offers further leverage to energy storage strategy
- Blesberg pegmatites well located with significant exploration upside. Drilling in March 2017
- AVL offers investors exposure to entire vanadium energy storage value chain through Battery Sales subsidiary
- Focus offers leverage to rising energy storage metal prices and new applications in energy storage



# Corporate Snapshot (ASX:AVL)

Continuous Listing on ASX since February 2007

## Key Statistics (as at 2-2017)

Ordinary shares on issue	1,178m
Options on issue (ex at 1.47c expire Dec 2017)	174.1m
Listed Options (ex at 2.c exp Dec 2018) AVLO	235.8m
Share price	AUD \$0.018
Market capitalisation (undiluted)	A\$21m (Cash ~A\$2.5m)
Shareholders	2,935

## Substantial Shareholders

## % holding

PET FC Pty Ltd	4 %
Management	7 %

## Board of Directors

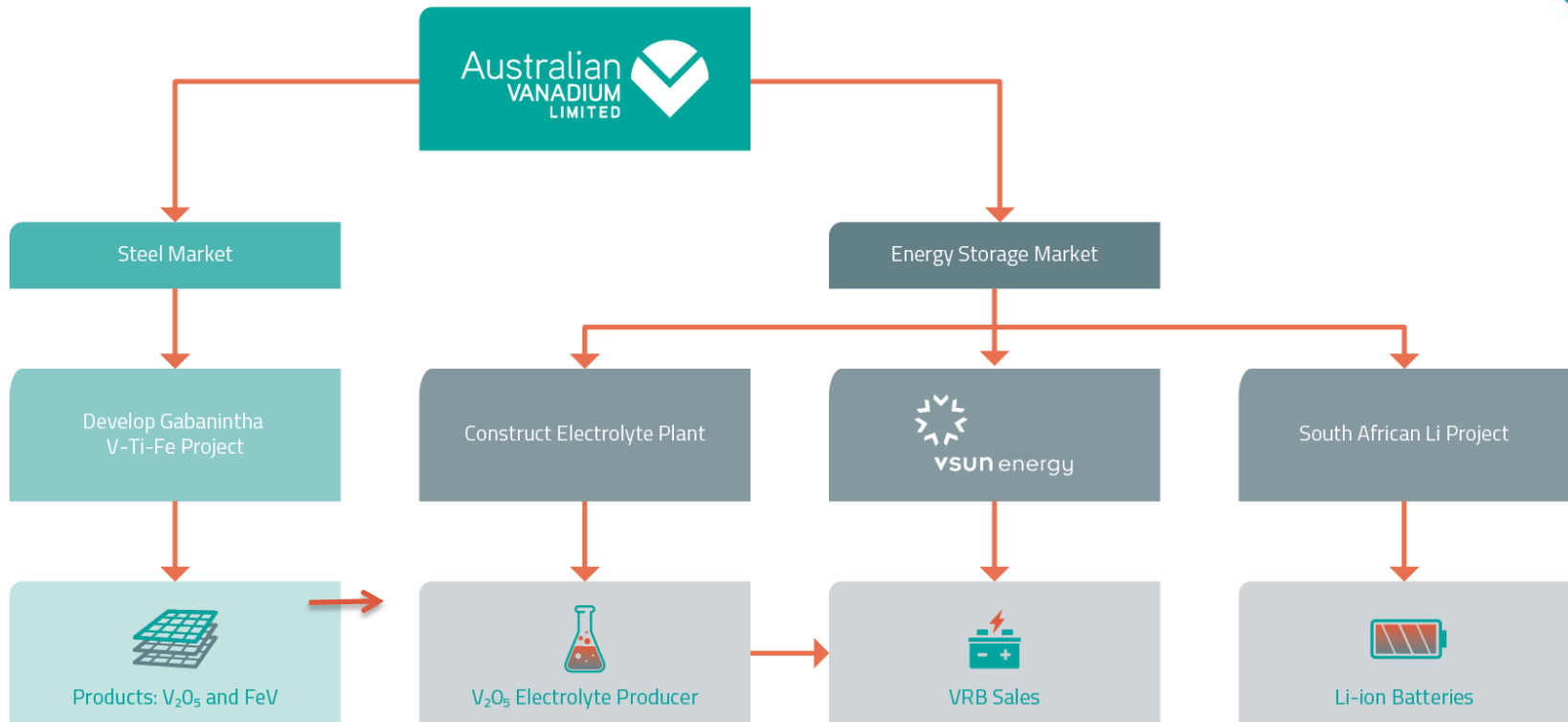
## Title

<b>Vincent Algar</b> Bsc(Hons) Geol, MAusImm	Managing Director
<b>Leslie Ingraham</b>	Executive Director
<b>Brenton Lewis</b> MBSc., BBS.(Hons)	Non Executive Chairman
<b>Daniel Harris</b> BSc Chem Eng	Non Executive Director

## AVL Share Price History

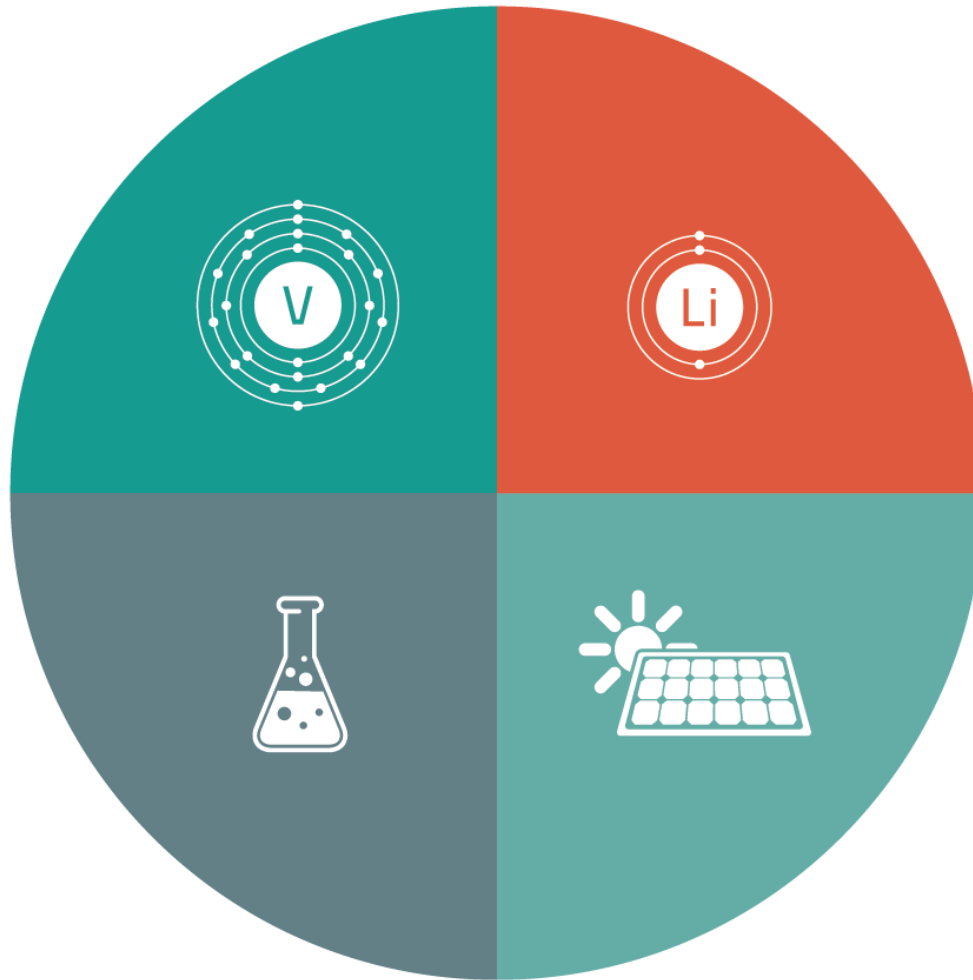


# AVL Vertical Integration Strategy



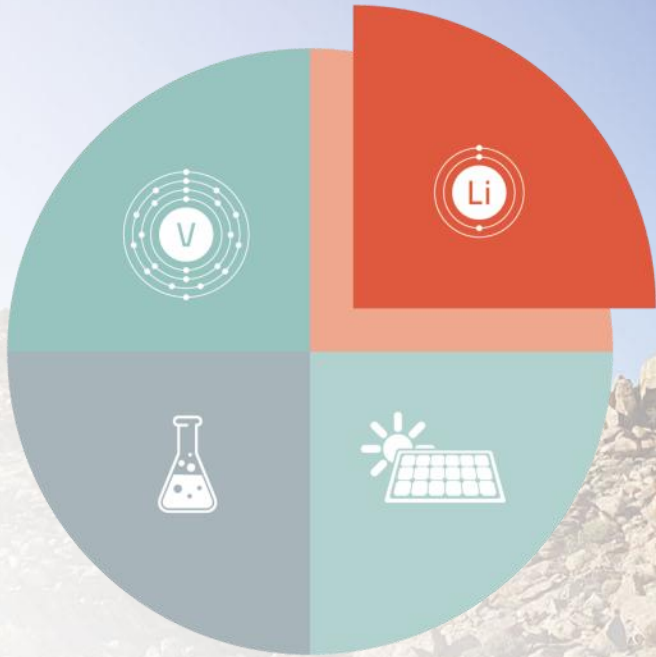
# Integrated Strategy

Diversified Action to Maximise Opportunity



-  Gabanintha Vanadium Project – Australia
-  Electrolyte Plant Development
-  VSUN Flow Battery Sales and Market Development
-  Lithium Project Development – Africa





# Lithium-Tantalum Project

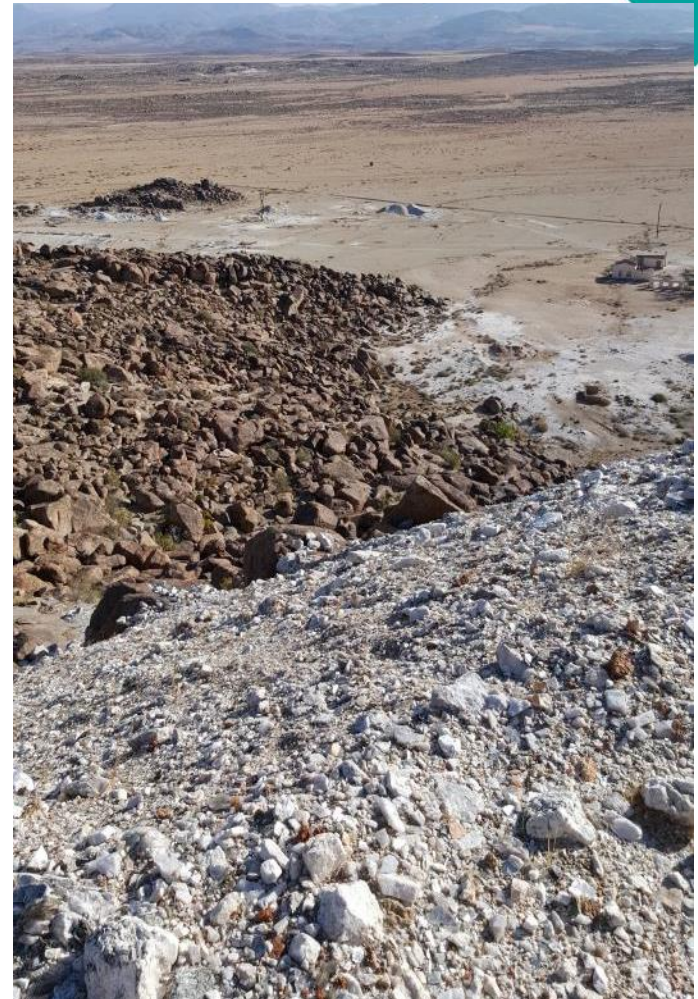
African Lithium project to add diversity to AVL and extend battery metal focus



# Blesberg Lithium-Tantalum Project Acquisition

AVL broadens its focus on energy storage minerals

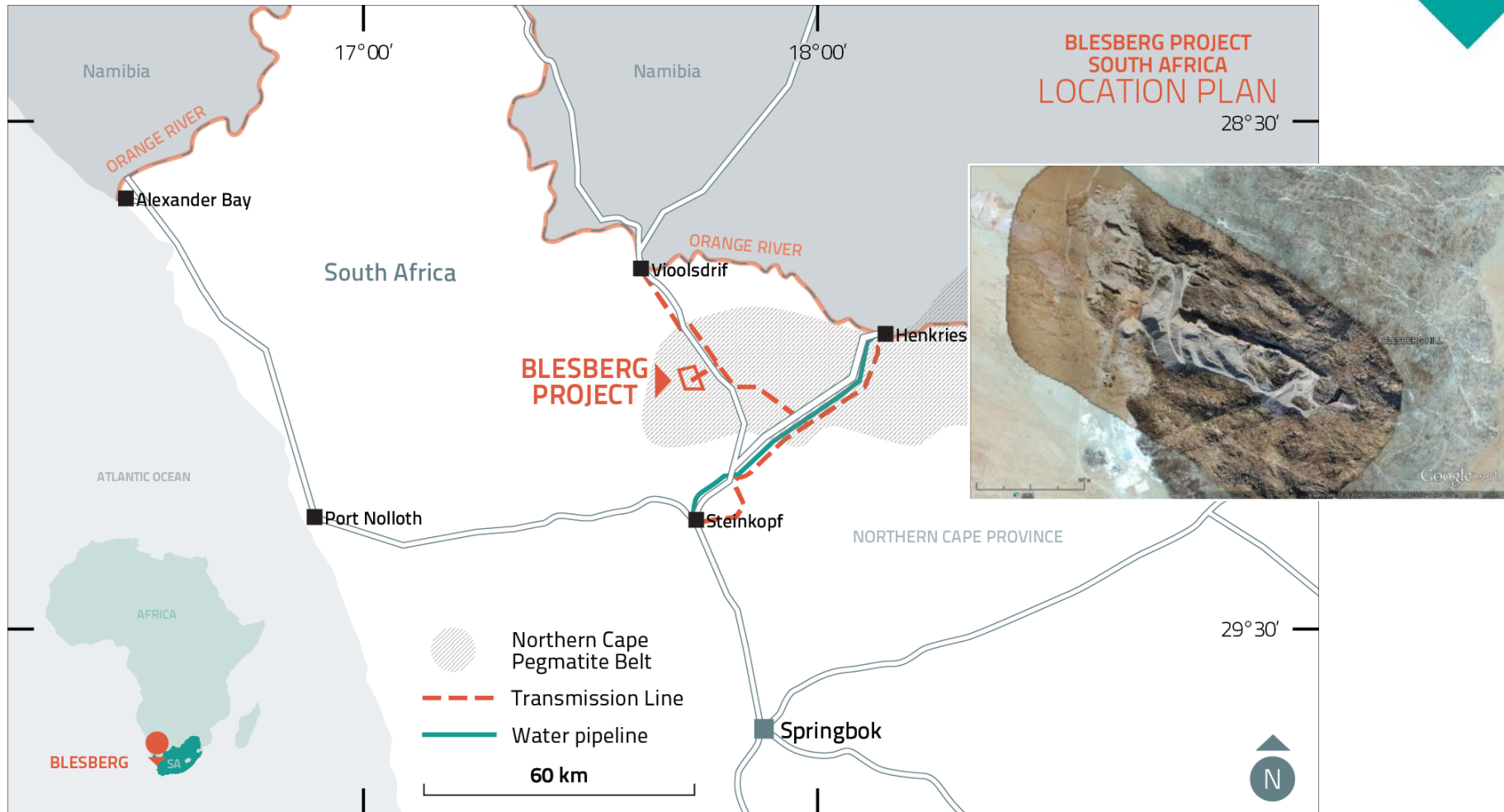
- » option to acquire a minimum 50.03% interest in the Blesberg Lithium-Tantalum Project in South Africa.
- » AVL interest in the project may be increased to 74%.
- » Project acquisition includes the historic Blesberg Mine.
- » Blesberg Mine is one of the largest known mineralised pegmatite deposits in the Northern Cape pegmatite belt.
- » Historic production from Blesberg Mine includes spodumene concentrate (containing lithium), tantalite, feldspar, bismuth, beryl and mica.
- » Limited production information available however a 1960's feldspar shipment of 150 tons assayed 1.74%  $\text{Li}_2\text{O}$ .
- » Historical samples collected from Blesberg Mine open cut in 2013 assayed between 2.19% and 6.51%  $\text{Li}_2\text{O}$ .
- » Mine is located close to sealed highway access & is connected on-site to grid power.
- » First drilling programme at Blesberg Mine to be undertaken in March 2017.
- » Exploration on main pegmatite extensions underway





# The Blesberg Project

AVL broadens its focus on energy storage minerals



# The Blesberg Lithium Project

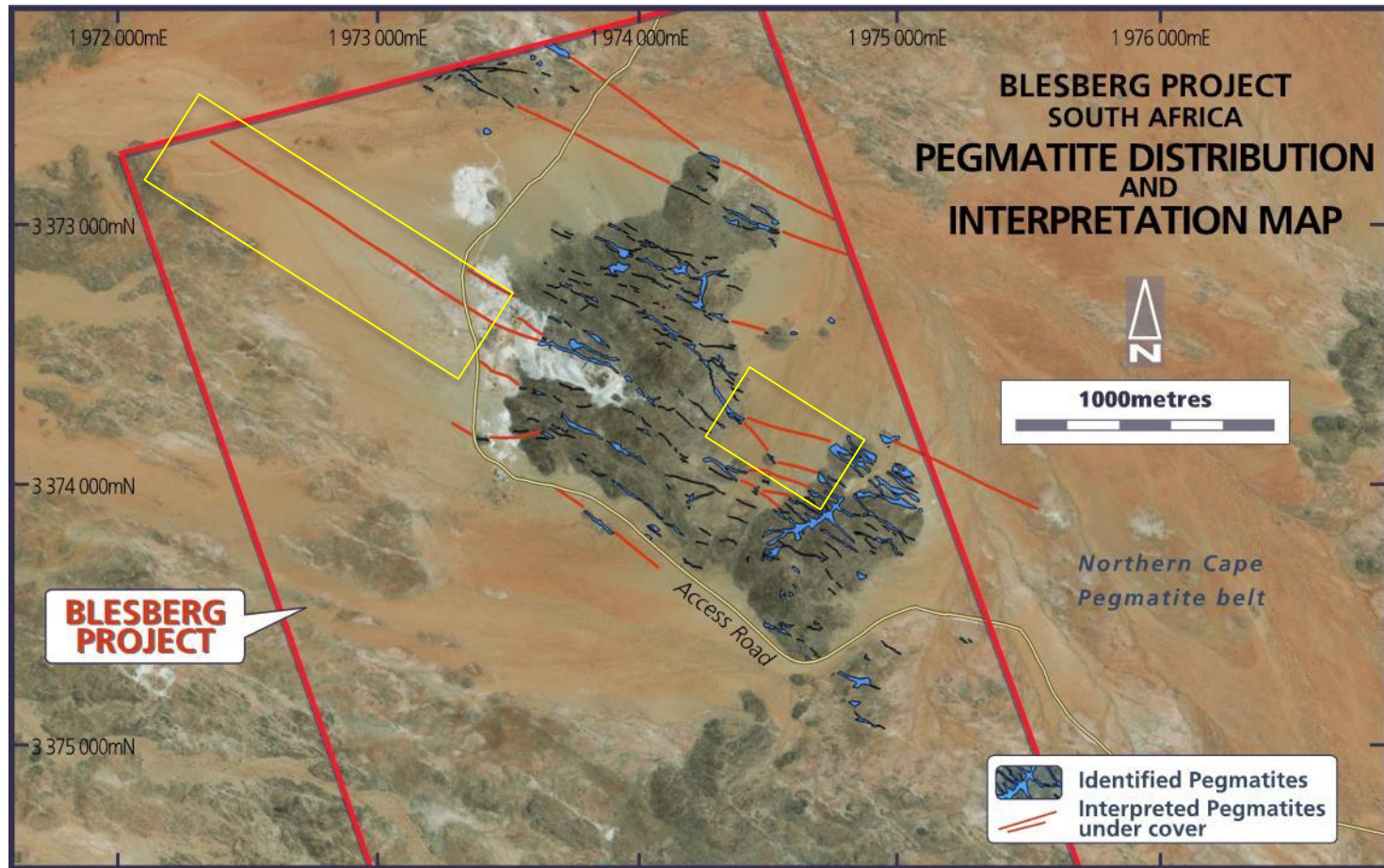
Significant Exploration Upside – Pegmatite extensions identified over 3km strike – No modern exploration outside of historical excavation





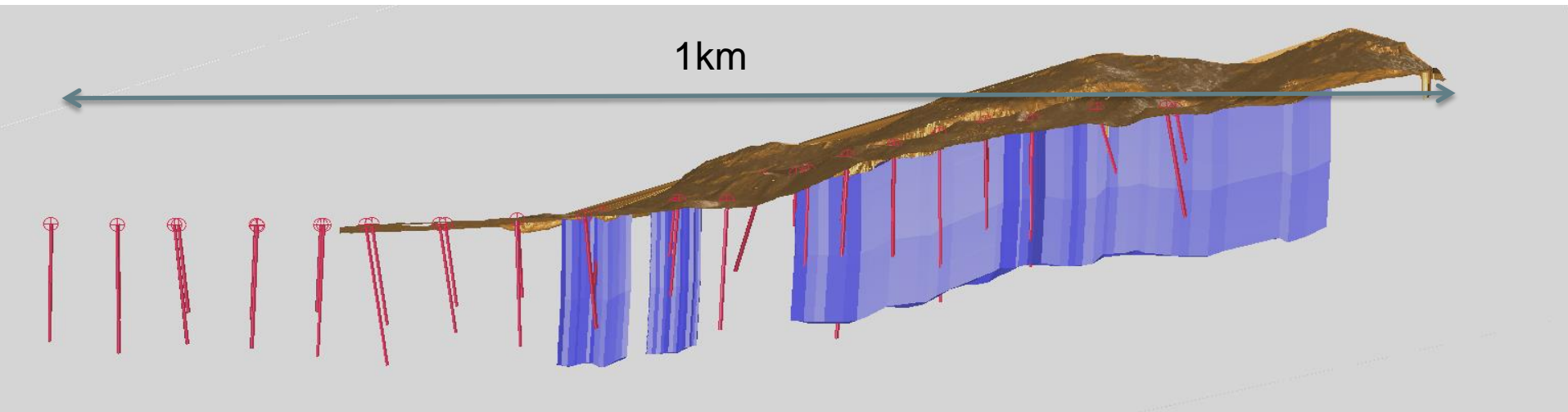
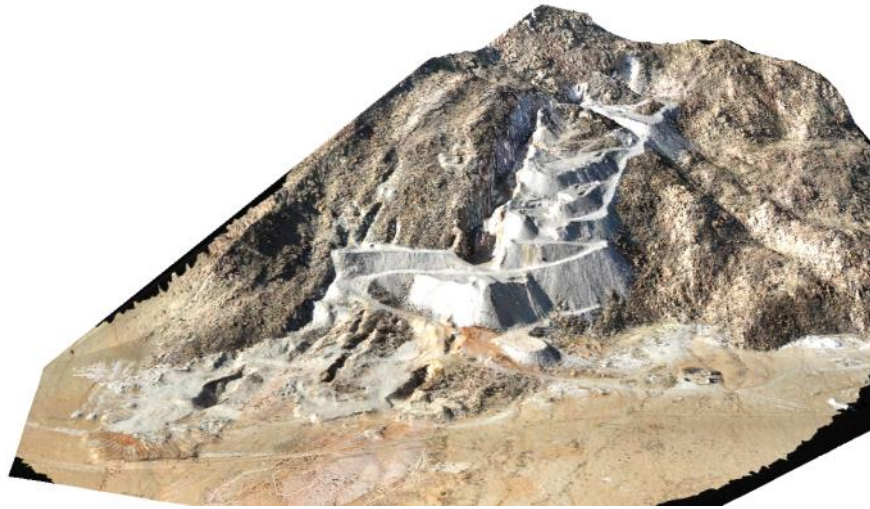
# The Blesberg Project

Exploration Commenced using soil sampling and mapping to identify Pegmatite extensions



# The Blesberg Project

Drilling Contract Awarded to conduct 4,000m RC and 500m Diamond drill program commencing March 2017



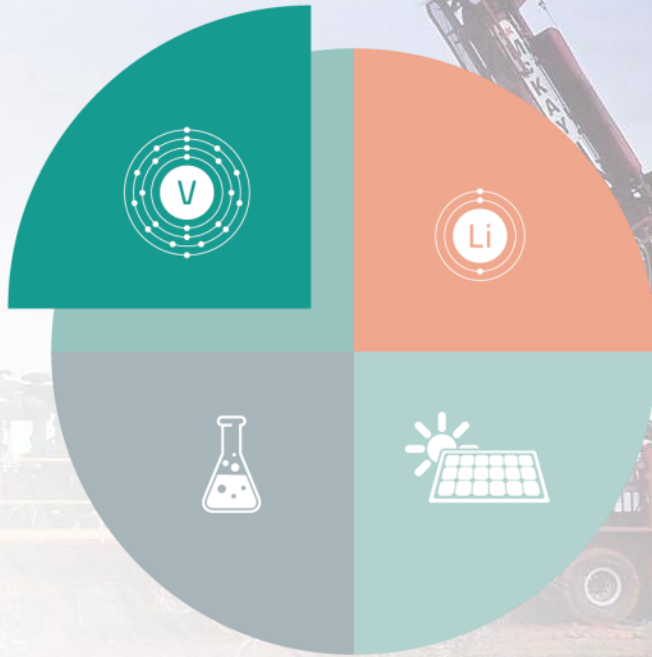


# Blesberg Lithium-Tantalum Project Acquisition

Exploration Drilling Commencing in March 2017 will test significant exploration upside along strike up to 3km length







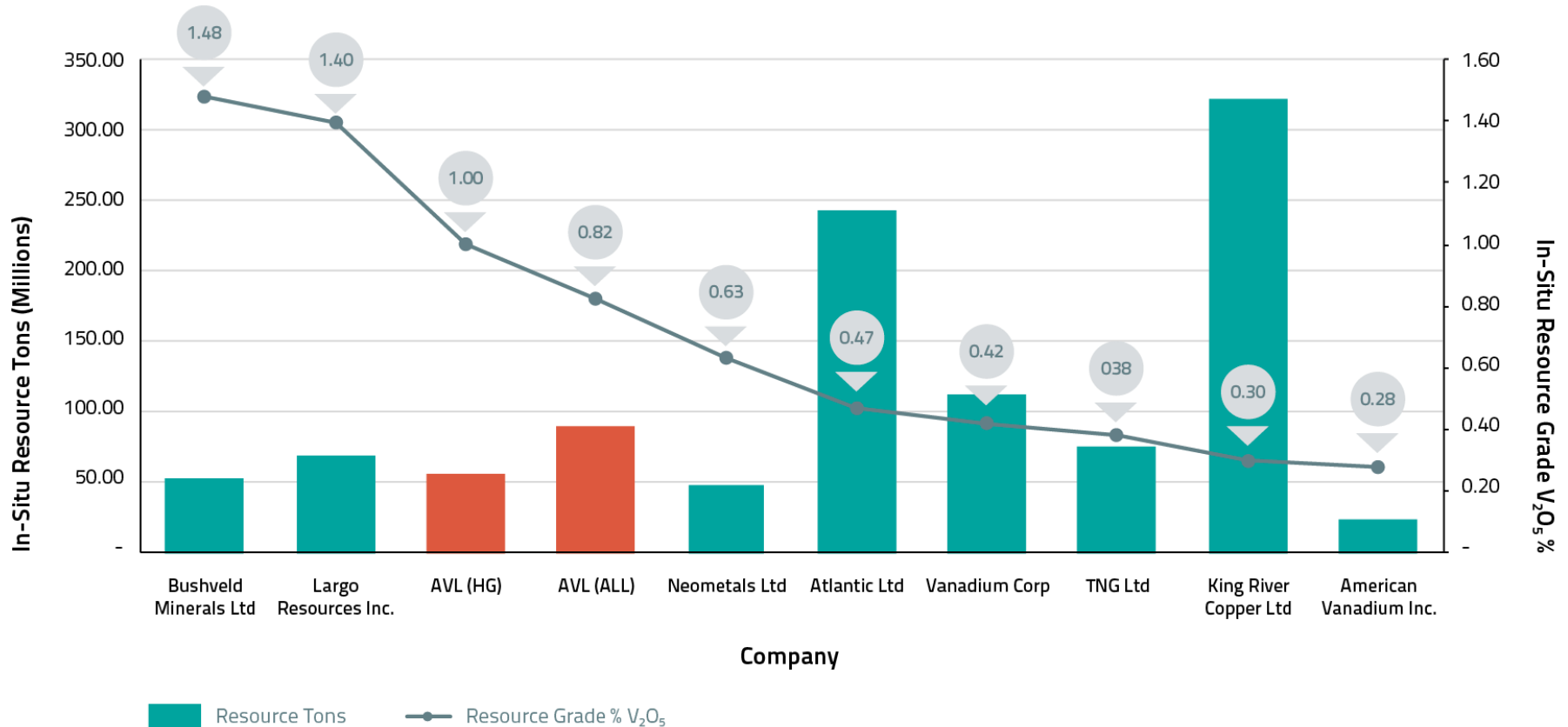
# Globally Significant Vanadium Project

Gabanintha Vanadium Project in Western Australia

# Vanadium Peer Comparison

Gabanintha a globally significant deposit on grade and tonnage basis.

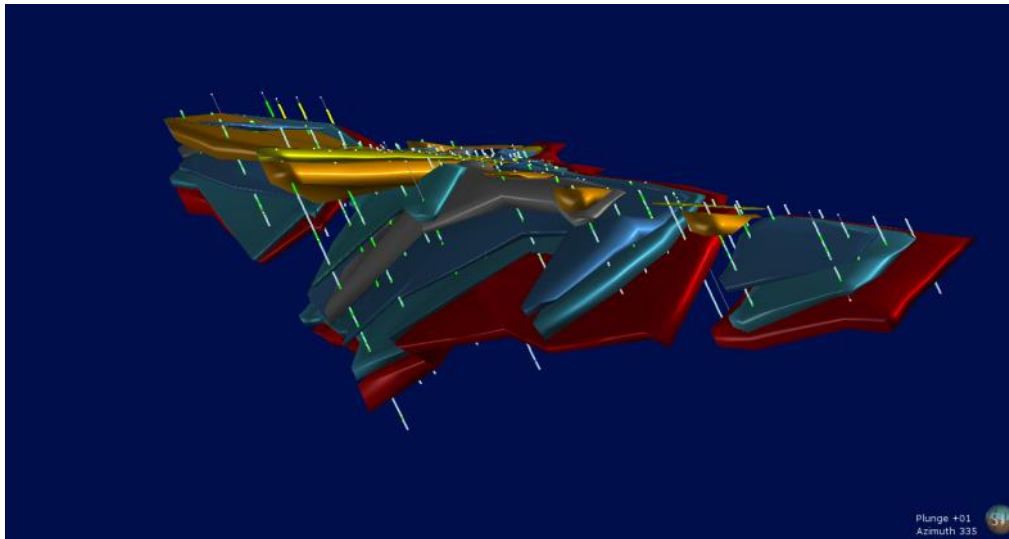
Peer Comparison in tonnage and grade very favourable in terms upside of share price and market capitalisation



# Gabanintha Vanadium Project

High grade resource in favourable mining jurisdiction in Murchison of WA

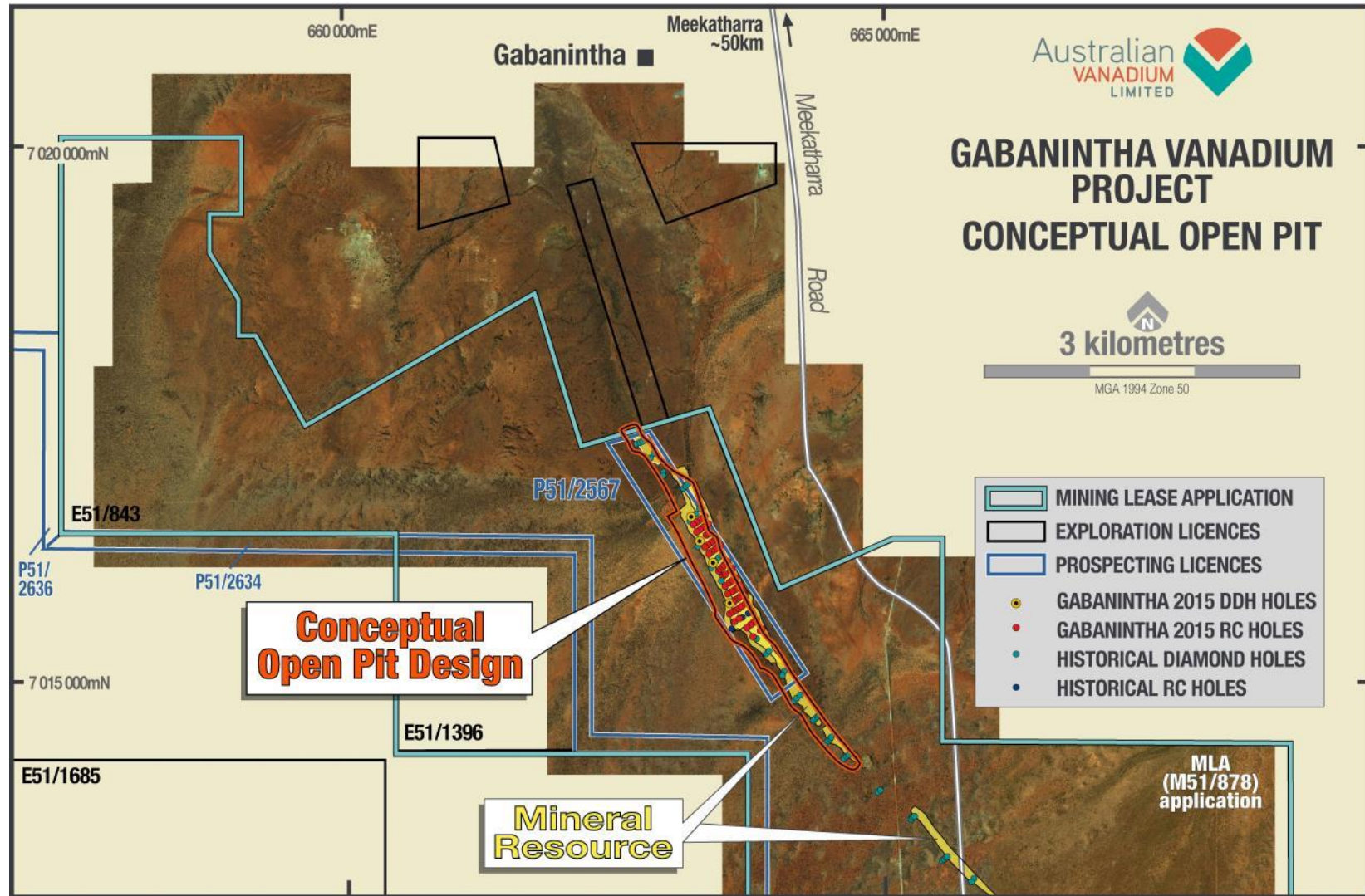
- » One of the highest-grade vanadium deposits currently being advanced globally;
  - › JORC 2012 compliant with Measured Resources of 7Mt, Indicated Resources of 17.8Mt and Inferred Resources of 66.7Mt, a total of 91.4Mt, grading 0.82%  $V_2O_5$ , 10%  $TiO_2$  and 35% Fe
  - › Separate high-grade Measured Indicated & Inferred Resource of 56.8Mt @ 1.0%  $V_2O_5$ , 11%  $TiO_2$  and 42% Fe
- » Deposit is at surface suitable for open pit operation and open at depth





# Gabanintha Vanadium Project

First pass internal optimisation shows significant potential



# AVL Project Timelines

Updated Engineering Study at Gabanintha and Drilling at Blesberg to move Company Forward

AVL ACTIVITY DESCRIPTION	MONTH									
	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17
<b>Gabanintha Vanadium Project</b>										
Resource Update										
Mine Design										
Metallurgical Test Program										
Water Supply & Hydrology Studies										
Environmental Studies										
Environmental & Permitting Review										
Marketing and Offtake negotiations										
<b>Blesberg Lithium Project</b>										
Drilling Program and Maiden Resource										
Exploration										
Project Evaluation and Mining Right Approvals										

# Australian Vanadium:

An active company advancing a unique integration strategy focused on energy storage

## Highlights

- » Quality, grade and tonnage of Gabanintha resource moving towards project development.
- » Detailed concept engineering study shows outstanding results to support project advancement. Key studies underway
- » Targeting vanadium steel producers and battery manufacturers for offtake and project involvement.
- » A commercial scale vanadium electrolyte plant is being considered for 2017 construction. Pilot plant commissioned in January 2017.
- » Sales agreement executed with global leader in Vanadium Battery Manufacturer – GILDEMEISTER Energy Storage GmbH.
- » Collaboration with a leading Australian commercial solar installer.
- » Significant interest and demand identified for commercial scale solar and vanadium battery storage solutions in Australian urban and rural environments.
- » Lithium Project adds further to Storage strategy and exploration potential – Drilling in March 2017





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