



ALLIANCE MINERAL  
ASSETS LIMITED

INVESTOR PRESENTATION - SEPT 2016

This document contains certain forward-looking statements that are not statements of historical fact. Investors can identify some of these statements by forward-looking items such as 'expect', 'believe', 'plan', 'intend', 'estimate', 'anticipate', 'may', 'will', 'would', and 'could' or similar words. However, you should note that these words are not the exclusive means of identifying forward-looking statements. These statements are based on current expectations, projections and assumptions about future events. Although Alliance Mineral Assets Limited believes that these expectations, projections, and assumptions are reasonable, these forward-looking statements are subject to risks, uncertainties and assumptions about its business operations. As such, the forward-looking events referred to in this document may not occur and actual results may differ materially from those expressly or impliedly anticipated in these forward-looking statements. Investors are advised not to place undue reliance on these forward-looking statements. This document does not constitute or form part of any opinion on any advice to sell, or any solicitation of any offer to purchase or subscribe for, any shares nor shall it or any part of it nor the fact of its document form the basis of, or be relied upon in connection with, any contract or investment decision. Alliance Mineral Assets Limited does not intend, and does not assume any obligation, to update any industry information or forward-looking statements set forth in this document to reflect subsequent events or circumstances.



# ALLIANCE MINERAL ASSETS LIMITED

## AMAL is engaged in the development and exploitation of Tantalite Mineral Resources in Western Australia

- Bald Hill Project (WA), comprises:
  - 461.5km<sup>2</sup> granted tenements with a further 319km<sup>2</sup> under application
  - Tantalum Mineral Reserves of 1.69Mt @ 303ppm Ta<sub>2</sub>O<sub>5</sub> and Mineral Resources of 1.74Mt @ 326ppm Ta<sub>2</sub>O<sub>5</sub><sup>1</sup> (Lithium Grade Unknown) with significant exploration upside for Tantalum and Lithium ore.
- Bald Hill Tantalite Mine:
  - Complete processing and beneficiation treatment plant
  - Infrastructure and working licenses
  - Ready to commence Operations
  - Produced 6.7% Li<sub>2</sub>O Spodumene Concentrate as by-product from Tantalum trial production
- AMAL has signed a binding conditional term sheet with a Lithco No 2 Pty Ltd for the establishment of an unincorporated joint venture
- Lithco will focus on undertaking exploration and feasibility for lithium and other minerals with the aim of forming a joint venture with AMAL on the Bald Hill Project<sup>2</sup>



<sup>1</sup> As at 31 Mar 2016

<sup>2</sup> Subject to certain terms and conditions

# Corporate Snapshot

Alliance Mineral Assets Limited (AMAL) is an Australian incorporated company listed on the Catalist Exchange of the Singapore Exchange Securities Trading Limited ("SGX-ST") on 25 July 2014

## Corporate Overview

SGX Code	40F
52 week high – low	S\$0.156 - S\$0.05
Shares on issue	480,763,760
Cash @ 30 June 2016	S\$5.4m
Market capitalisation (at \$0.093)	S\$44.7m

## 12 Month Historical Share Price

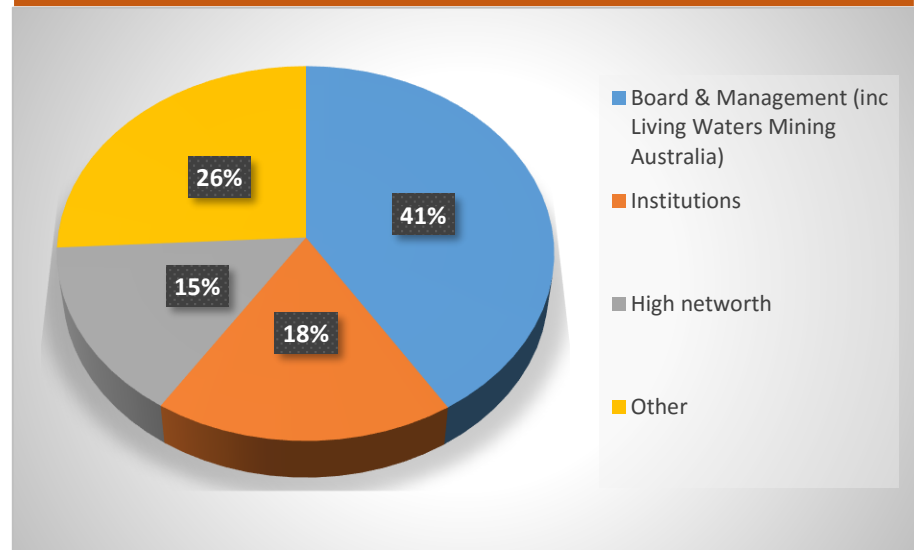


## Majority Shareholders

Living Waters Mining (Australia) Pty Ltd	40.81%
Credit Suisse, Investment Banking and Securities Investments	8.45%
Regal Funds Management Pty Ltd	6.55%
Tribeca Investment Partners Pty Ltd	6.43%
OCBC Securities Private Limited, Securities Arm	5.76%

Source : [www.SGX.com](http://www.SGX.com) dated 26<sup>th</sup> August 2016

## AMAL Shareholding Profile



# Board & Management

**Pauline Gately** joined our Company in March 2011 and was appointed *Independent Non-Executive Chairman* in 2014. Pauline started her career in CitiBank, Hong Kong as Vice-President and Senior Economist for the Asia Pacific Region. Subsequently she took on the role of General Manager and Head of Research and Equity Investment at BNP International Financial Services. Pauline was appointed as Director and Head of Investment Strategy for Asia at Merrill Lynch Hong Kong. Pauline also currently sits on the Board of a Western Australian Charity providing practical and emotional support to families dealing with cancer.

**Suen Sze Man** joined our Company on 6 December 2010 as an *Executive Director*. As a founder of our Company, she procured, mobilised and organised relevant experienced staff and resources for the setting up of our business and operations. She is currently responsible for devising the business direction of our Company and overseeing the management of mining proposals and Tenements in relation to the Bald Hill Project

**Mahtani Bhagwandas** joined our Company on 2 May 2014 as an *Independent Director*. He has been practising as an advocate and solicitor of the Supreme Court of Singapore since 1993. Mahtani is currently a partner of Legal Standard LLP, a law firm in Singapore. His area of practice is primarily in commercial litigation. Mahtani is currently the Independent Director of GKE Corporation Limited, SBI Offshore Limited and GRP Limited, companies listed on the SGX-ST

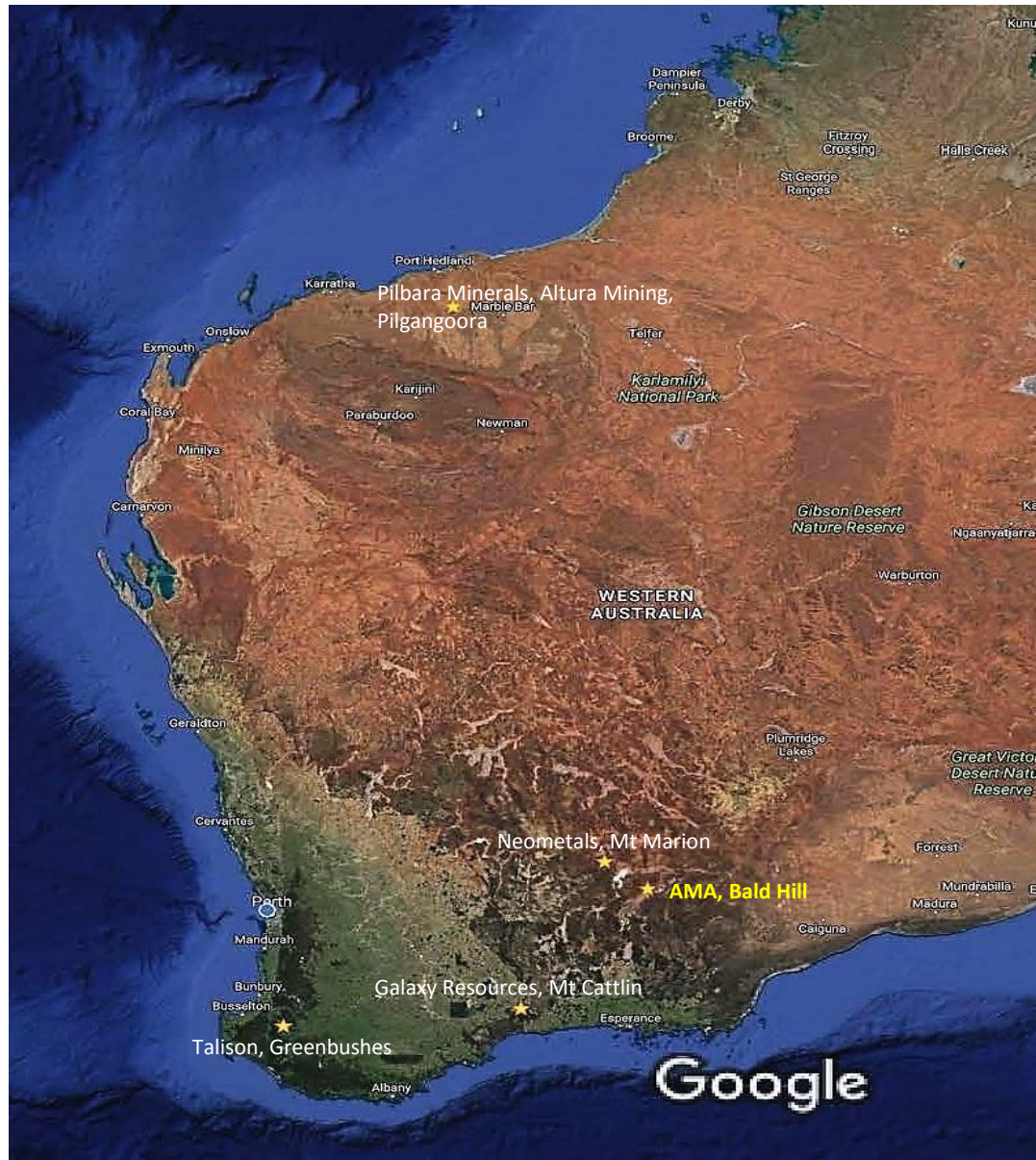
**Ong Kian Guan** joined our Company on 20 June 2014 as an *Independent Director*. He has been an Audit Partner with Baker Tilly TFW LLP since 2005, where he is currently the Head of its Assurance and Capital Market practices. He was the Chief Financial Officer of Medtecs International Corporation Limited. Ong Kian last position held was a Senior Audit Manager with Arthur Andersen LLP, Singapore. He is also the Independent director and Chairman of audit committees of Serrano Limited and Weiye Holdings Limited which are listed on SGX-ST, and China XLX Fertilisers Ltd, a company listed on Hong Kong Stock Exchange. He is a fellow of the Institute of Singapore Chartered Accountants (“ISCA”). He was formerly a member of the Auditing and Assurance committee of ISCA

**Tjandra Pramoko** joined our Company in 2014 as a Chief Executive Officer. He founded our Company in 2010 to engage in the business of exploration and exploitation of the Bald Hill Project. From 2009 to present, Tjandra Pramoko was appointed as a Director of Living Waters Mining, the Controlling Shareholder. In 2010, he founded the Company together with Suen Sze Man

**Mark Gell** joined our Company in 2015 as Mine site Manager. Mark has over 30 years’ experience as a mining engineer covering every part of a mine’s lifecycle and all areas of a typical mining operation. He has expertise both building and commissioning new mining operations and turning around underperforming mines. His previous roles include: General Manger Operations (GMO) for Cliffs Natural Recourses, which achieved a 226% improvement in productivity and 55% decrease in cash costs of goods sold; GMO Karara Mining Ltd ;and GM of Karara Rail where he built and commissioned the 32Mt/p.a Karara Iron Ore project. Mark holds a degree in Mining Engineering as well as a Master’s in Business Administration (MBA).

**Fiona Leaw Mun Ni** was appointed as Company Secretary on 21 May 2014. She is a member of the Australian Certified Practicing Accountants. During 2009-2010, Fiona worked with the Department of Environment and Conservation and Department of Agriculture, divisions of the Government of Western Australia performing accounting roles within their IT and Procurement departments. From 2010 to early 2014, Fiona was solely in charge of all preparation of financial accounts for our Company for audit.

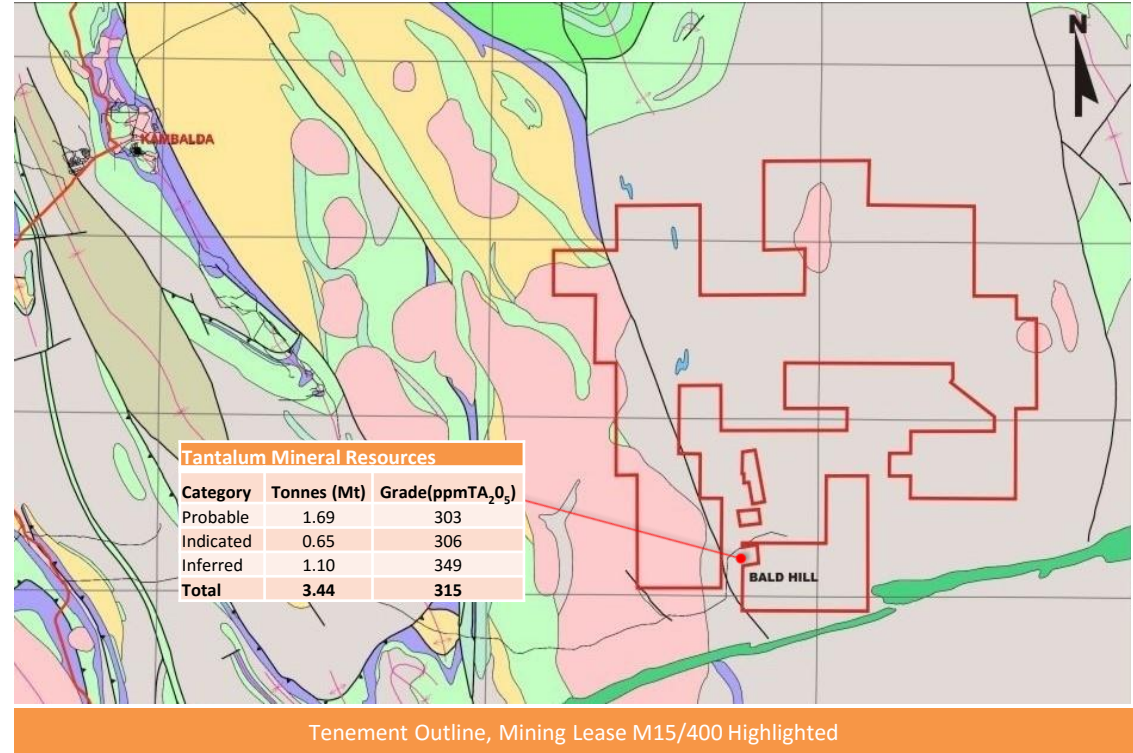
# Lithium Companies in Production or Near Term



- Talison Lithium is considered to be the largest Spodumene Concentrate producer in Australia
- Galaxy Resources and Neometals are also expected to produce Spodumene Concentrate in 2016
- Pilbara Minerals, Altura Mining and AMAL are next in line to produce Spodumene
- AMAL has ready infrastructure including a current Tantalum treatment plant
- AMAL also has the necessary licenses and approvals to commence mining operations
- Estimated Schedule, from October 2016 to Dec 2017, Lithco will aggressively drill to increase resources for Lithium and Tantalum
- AMAL & Lithco to fast-track this initiative by commencing Metallurgical and Engineering studies to retrofit Spodumene Circuit to the existing treatment plant. Estimated time 6-8 months
- AMAL & Lithco, could be producing spodumene concentrate ( $\text{Li}_2\text{O}$ ) by the end of 2017 according to current plans

# AMAL has Successfully Re-Established the Bald Hill Tantalite Mine

- History of proven production of ~ 1.5Mt processed pegmatite ore at a rate of 400,000tpa, about 212,000lbs/pa Contained Ta<sub>2</sub>O<sub>5</sub> produced (extracted from historic production data)\*
- Successful commissioning, mining campaign and trial production
- Premium Grade Tantalum produced and scrutinised by Mitsubishi RTMj with first concentrates delivered in Dec 2015
- Completed infrastructure and working licenses in place to commence mining operations
- Tantalum Mineral Reserves of 1.69Mt @ 303ppm Ta<sub>2</sub>O<sub>5</sub> and Mineral Resources of 1.74Mt @ 326 ppm Ta<sub>2</sub>O<sub>5</sub> as at 31 Mar 2016
- 461.5km<sup>2</sup> project with further 319km<sup>2</sup> under application with significant exploration potential



Tantalite and Lithium bearing Pegmatite Bodies are relatively shallow and visible

\*Historic Haddington Production Records

## Joint Venture With Lithco

- Lithco is an Australian company whose founders and management team are well credentialed mining industry professionals
- Mark Calderwood, is a Director of Lithco. Mark is a leading authority on Pegmatites in Western Australia and will be a key advisor in the JV
- Lithco will have joint exploration and prospecting rights for lithium and other minerals on AMAL tenements
- The binding conditional term sheet with Lithco is subject to shareholder approval at the EGM (15<sup>th</sup> September 2016)
- Lithco's earn-in basis requires the company to undertake exploration and feasibility for lithium. Lithco's expenditure commitment to do this is A\$7.5m. Upon completion of the spend, Lithco shall be entitled 50% of all rights to lithium minerals
- Lithco then can participate to further Capital Expenditure of A\$12.5m. When the aggregate sum of A\$20m is committed, Lithco will acquire the earn-in 50% entitlement of the Bald Hill Project
- AMAL and Lithco will form an unincorporated 50:50 JV to develop of the larger project ("Project JV"). Until the Project JV is formed, AMAL will still retain 100% rights to all other minerals on its tenements





## IMMEDIATE AND FUTURE PLANS

- Significant drilling programs are starting with A\$7.5m to be spent by Lithco as part of its earn-in
- Geologists continuing to map and survey the exploration potential for Lithium
- Undertake initial metallurgical test-work to produce Spodumene Concentrate
- Fast-track Engineering to design future retrofit of spodumene circuit
- Continue discussion with potential off-take customers for Lithium and Tantalum
- Re-schedule existing pits design to accommodate increased production rates
- Aiming to fast-track production subject to exploration success



## THE BALD HILL Treatment Plant

- The Bald Hill Tantalite Project was previously operated by Haddington Resources Limited from 2000 to 2005. Historic throughput was a total of about 1.5Mt @ 60tphr and recoveries of 75% of tantalite \*
- The refurbished plant has been commissioned. It produces a premium grade Tantalum concentrate, 25% Ta<sub>2</sub>O<sub>5</sub>
- Primary and beneficiation treatment plant extracted significant quantities of non-magnetic +500um Spodumene concentrate grading 6.7% Li<sub>2</sub>O as by-product during AMAL's commissioning stage
- AMAL & Lithco will be working together on Metallurgy and Engineering to retrofit a spodumene circuit to increase recoveries and the production volume of Spodumene in addition to Tantalum
- The studies will aim to increase throughput rates significantly



Spodumene concentrate, up to 6.7% Li<sub>2</sub>O

\*Historic Haddington Production Records

# Flow Sheet & Progress

Separation processes have been installed in the Primary Process Plant and stockpiled ore is currently being used to commission process plant.



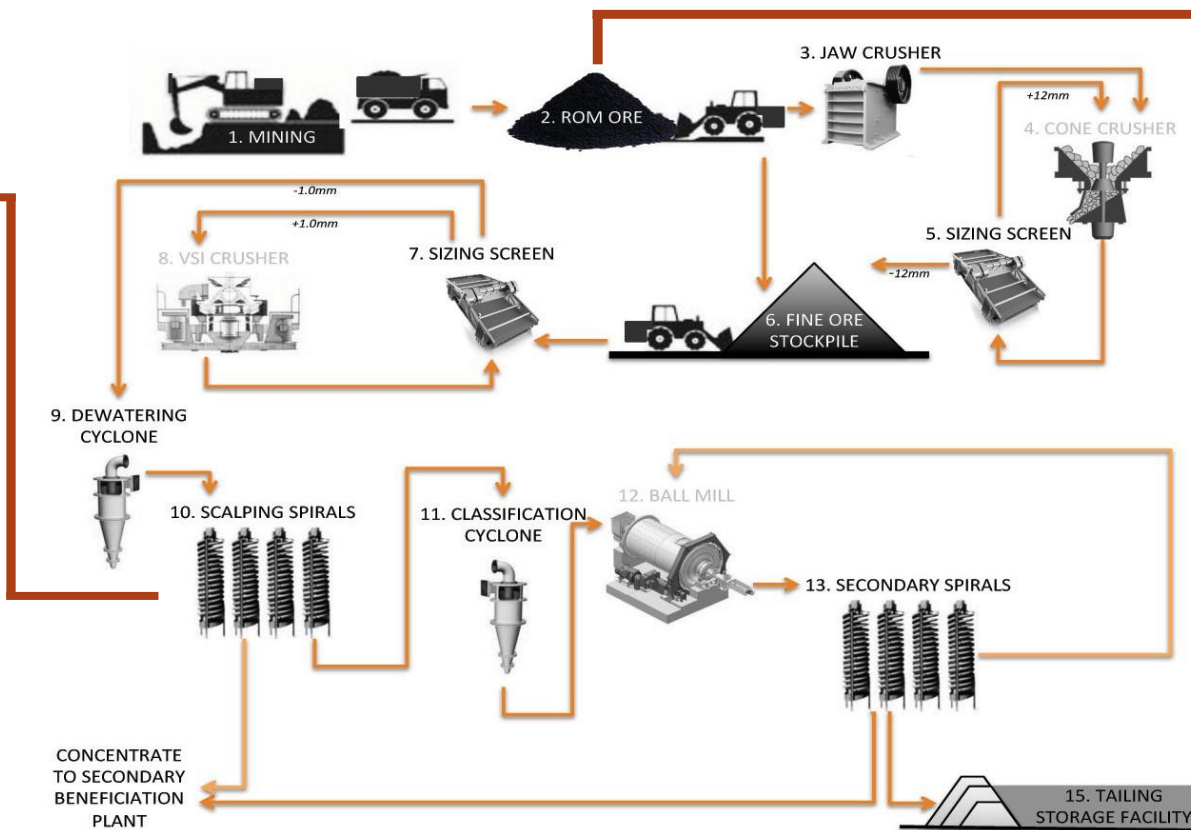
Spirals (Aug 2014)



Spirals installed in Process Plant (Feb 2015)



Scrubber



The Run of Mine (ROM) pad is complete & stockpile of mined has commenced



The completed ROM pad



Mined ore stockpile for processing

Supporting infrastructure is complete.



Accommodation for mine crew



Process Dam Water



Expansion of Tailing Storage Facility



Mining ore at Boreline



Beneficiation Facilities  
Moved to Bald Hill



Washing Trommel



Kason Screens



Air Tables



Rapid Magnets

## Final Beneficiation

### Beneficiation facilities to upgrade the Tantalite Concentrate in house

- AMAL produces premium high grade tantalum concentrate, with 98% recoveries
- AMAL & Lithco will look at expanding the facilities to produce high grade lithium concentrates
- AMAL was able to extract 6.7% Li<sub>2</sub>O from final beneficiation



6.7% Li<sub>2</sub>O



Various Grades of Ta<sub>2</sub>O<sub>5</sub> Blend

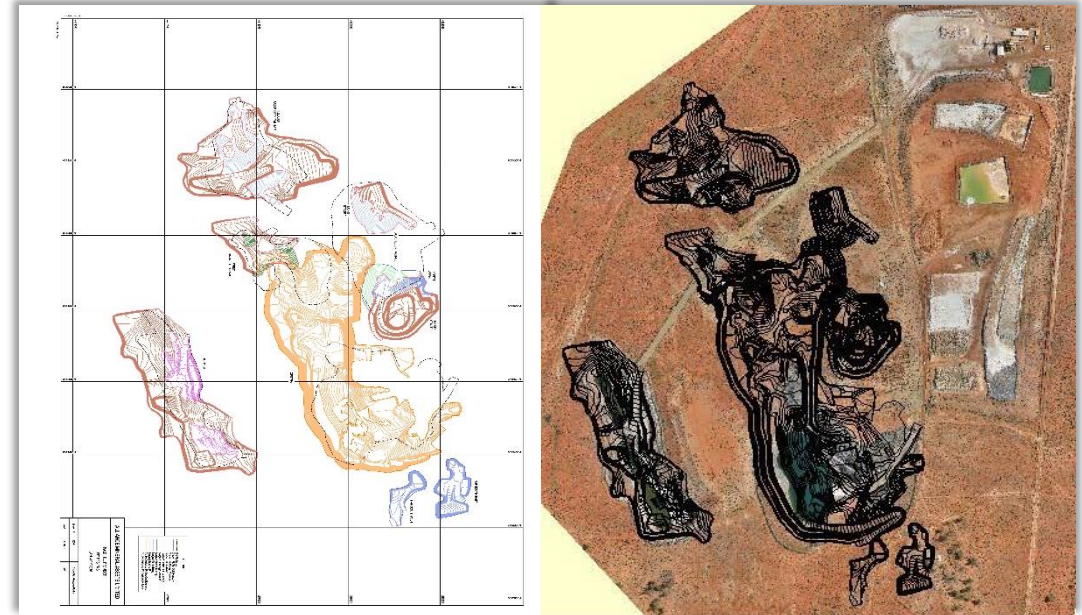


Various Products Extracted from Beneficiation

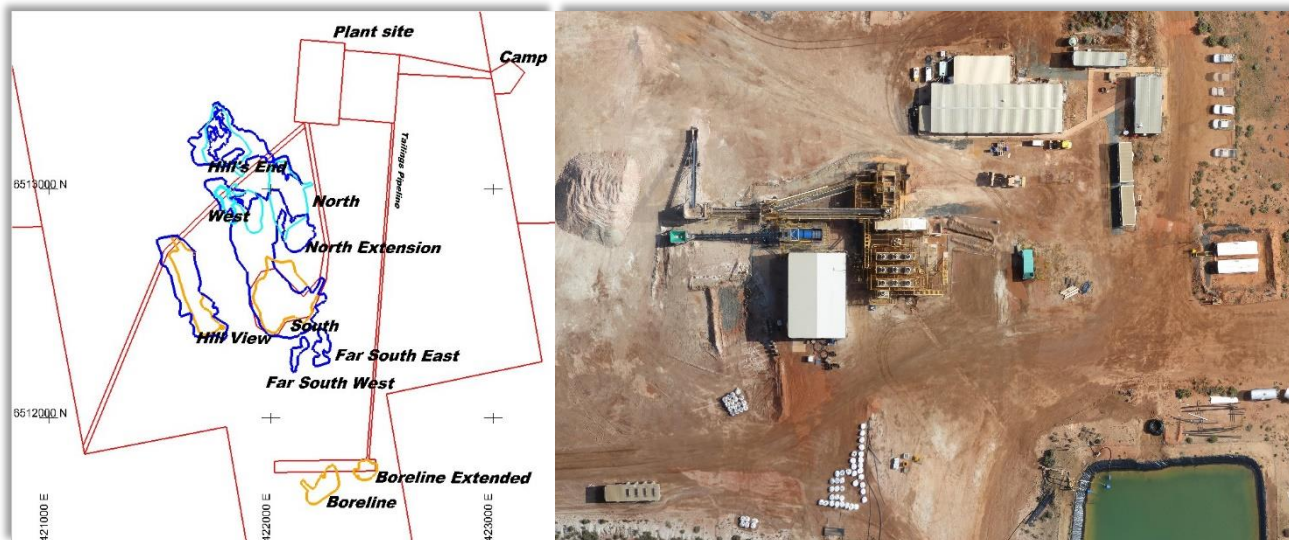
# Current Pits Optimisation

## BALD HILL current Mining Pits

- AMAL's current Pits Optimisation for the recovery of tantalum
- (Below) Pits optimisation extension will be conducted once the planned drilling program around the mining lease is completed
- Exploration for Spodumene will most likely increase the size of the pit designs



Bald Hill M15/400 Pit Optimisation Plan on Aerial Photo

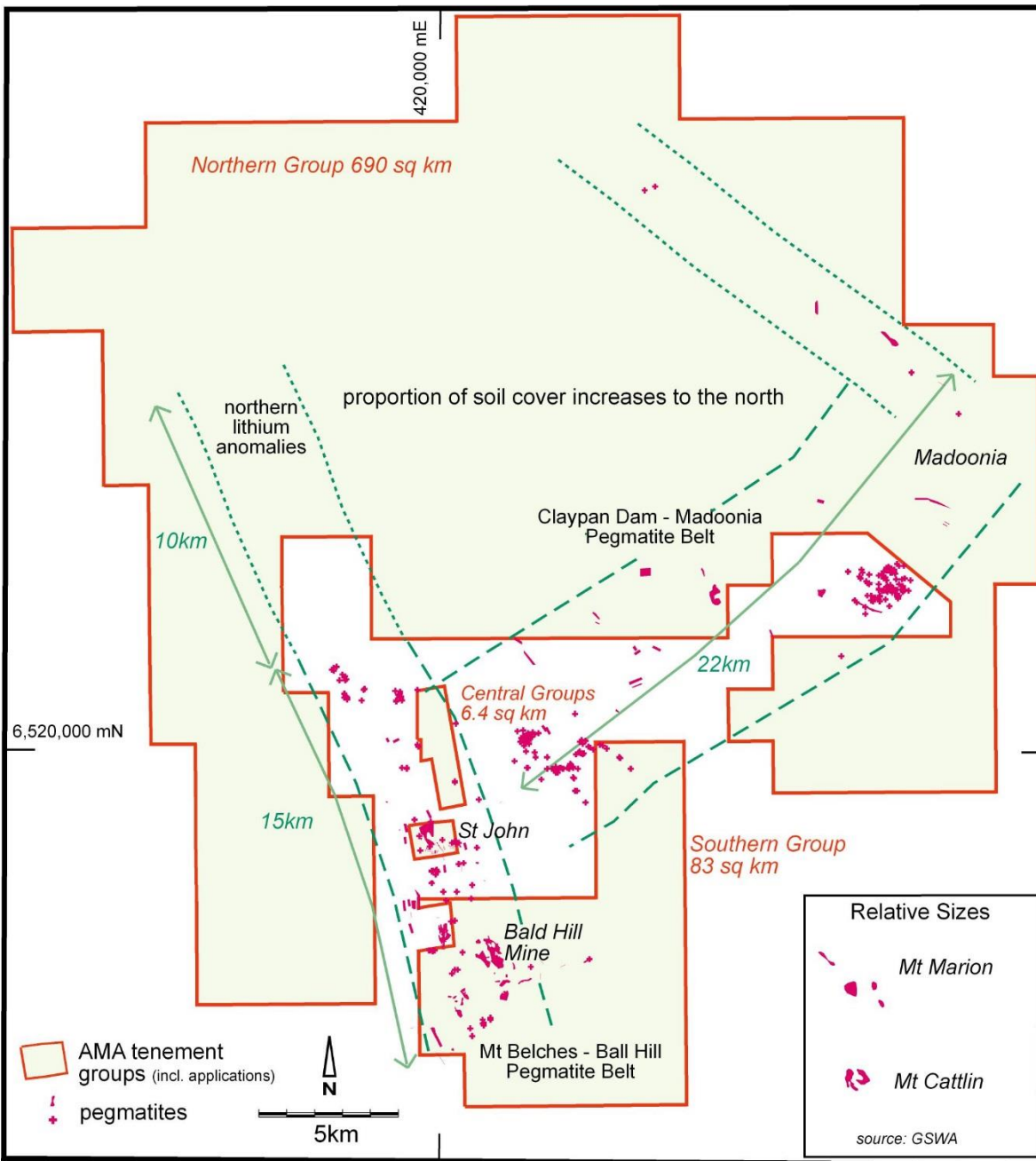


Bald Hill Main Mining Lease M15/400 Outline and Plant Aerial Photo

# Lithium & Tantalum Exploration

## Extensive LCT Pegmatites Belts

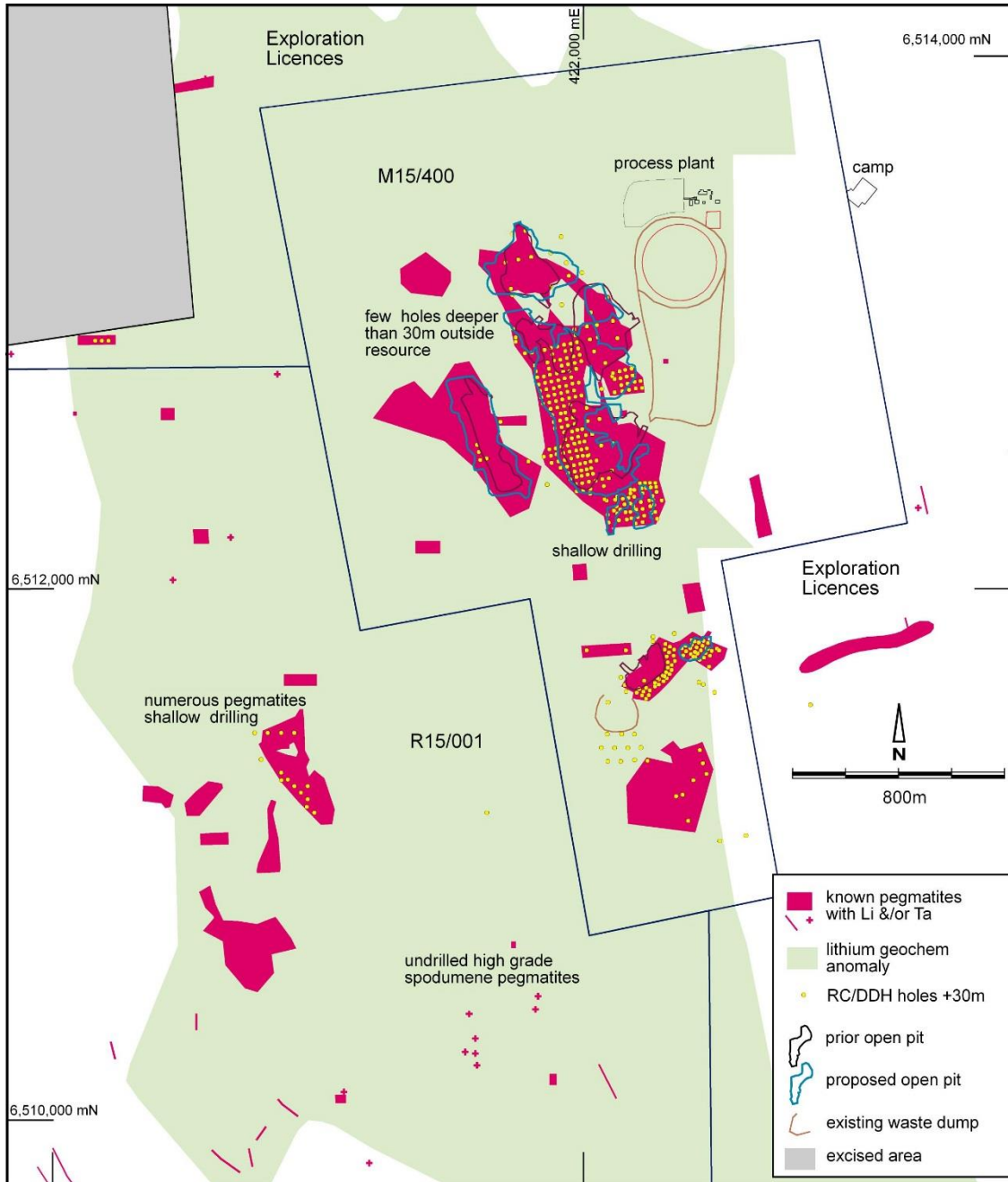
- Exploration by Lithco is expected to commence Sept-Oct 2016 with redrill and expansion of resource that support existing Reserve pit design
  - Extensive exploration scheduled to be completed over 12-18 months, numerous drill-ready targets
  - Significant exploration target for Tantalum and Spodumene
  - *By way of example, ore at 300ppm Ta<sub>2</sub>O<sub>5</sub> and 0.8% Li<sub>2</sub>O, has recoverable value of about A\$130/t\* of ore feed*
- Assuming 75% recovery of contained Ta and 85% recovery of Li. And USD\$60/lb for contained Ta<sub>2</sub>O<sub>5</sub> and USD\$600/t for 5.5% Li<sub>2</sub>O spodumene concentrate



# Lithium & Tantalum Exploration

## Numerous Drill Ready Targets

- Numerous pegmatites located in prior shallow drilling, most are open along strike and down dip
- Highest grade outcropping lithium pegmatites remain undrilled
- Extensive lithium geochemical anomalies point to potentially large pegmatite swarm



# CONCLUSION

## AMAL is well positioned to deliver substantial value for its shareholders

- Target production of Tantalum and Spodumene by the end of 2017
  - Bald Hill Project (WA) has completed infrastructure and current tantalum treatment plant which can be retrofit to capture Spodumene ( $\text{Li}_2\text{O}$ )
  - Necessary approvals in place to commence mining operations
- Large tenement position with 461.5km<sup>2</sup> granted tenements with a further 319km<sup>2</sup> under application
- Tantalum Mineral Reserves of 1.69Mt @ 303ppm Ta<sub>2</sub>O<sub>5</sub> and Mineral Resources of 1.74Mt @ 326ppm Ta<sub>2</sub>O<sub>5</sub><sup>1</sup> (Lithium Grade Unknown) with significant exploration upside for Tantalum and Lithium ore.
- Farm-in agreement with Lithco will focus on exploration and feasibility for lithium and other minerals with the aim of forming a joint venture with AMAL on the Bald Hill Project<sup>2</sup>
- Substantially lower cost of production, should boost revenue streams from future Spodumene and Tantalum production

<sup>1</sup> As at 31 Mar 2016

<sup>2</sup> Subject to certain terms and conditions



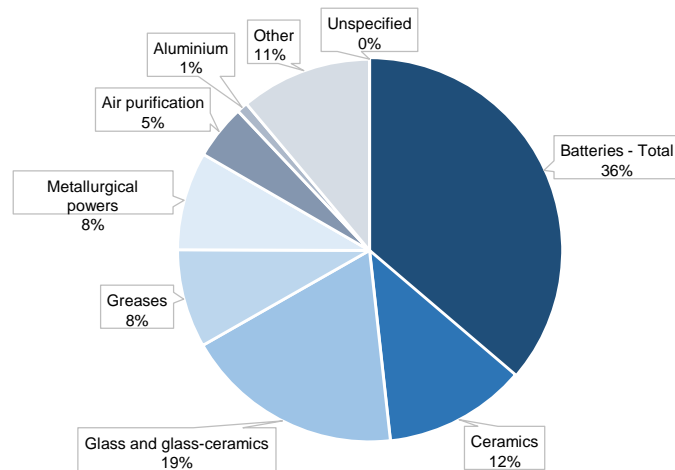
# APPENDICES



# What Is Lithium ?

Lithium ("Li") is a soft, silver-white metal belonging to the Alkali group of metals, which under normal conditions is the lightest of all metals and the least dense solid element. Lithium has a number of unique properties including high electrochemical reactivity, a low thermal expansion co-efficient and high specific heat capacity.

It is these properties which allow Lithium to be used in a wide range of industrial applications (Figure 5) including ceramics, lubricants and glass, but the largest (and highest growth segment) of the global lithium market is its use in the manufacture of Lithium-ion (Li-ion) batteries



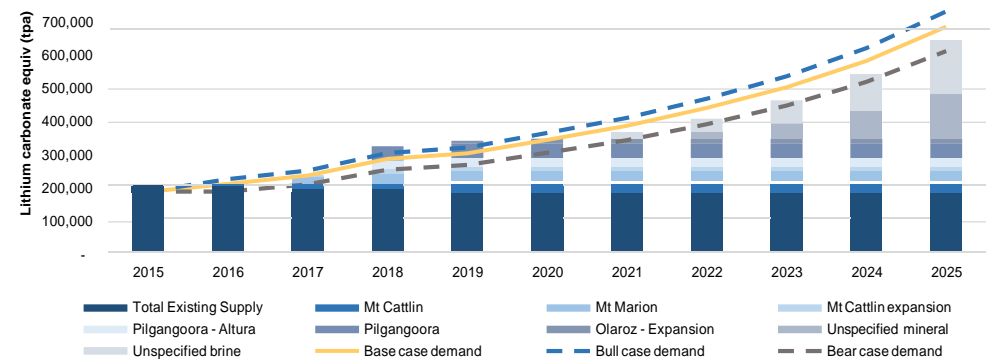
Source: signumBox, Canaccord Genuity estimates

**Hard rock spodumene deposits:** Spodumene is a lithium-bearing, aluminium silicate mineral which mostly occurs in lithium-rich pegmatites (granite-like igneous rock composed of quartz, feldspar and mica). Spodumene is usually recovered through conventional open pit mining methods and beneficiated via gravity techniques where the ore is concentrated from 1-2% Li<sub>2</sub>O to a grade of ~6% Li<sub>2</sub>O. This concentrate product is then converted to Li<sub>2</sub>CO<sub>3</sub> (>99.5% purity) through intensive thermal and hydrometallurgical processing (roasting > leaching > ion exchange) conducted at chemical converter plants mostly located within China.

**Lithium-ion (Li-ion) batteries forecast to drive significant demand growth for lithium:** Canaccord forecast the lithium market to grow by 81% to 347kt lithium carbonate equivalent (LCE) by 2020, and by 259% to 687kt LCE by 2025, representing a CAGR of 14% across all demand sectors. It is anticipated Li-ion battery-based electric vehicles (passenger vehicles & electric buses) to be a key driver of demand over the next decade, accounting for 38% of all lithium demand by 2025 (from ~6% in 2015). Similarly, it is also anticipated that significant demand for lithium from the grid storage sector, which is forecasted to account for 13.6% of all demand by 2025.

**Increasing lithium price forecasts:** based on our supply/demand modelling, we forecast lithium carbonate prices to rise from US\$6,000/t in 2015 to US\$10,500/t in 2025, with spodumene concentrate prices expected to experience a similar increase from US\$450/t in 2015 to US\$725/t in 2025. Under our "bull" case demand scenario, we forecast lithium carbonate prices to rise to US\$12,000/t and spodumene concentrate to US\$870/t by 2025.

Figure 1: Lithium supply/demand curves



Source: Company reports, signumBox 2015, Canaccord Genuity estimates



Raw Form Tantalum



Surgical Instruments



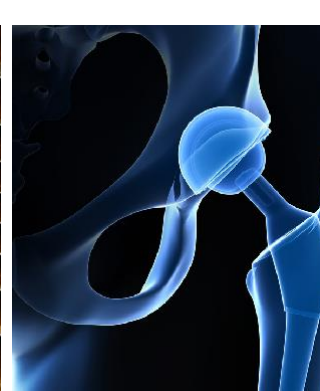
Mobiles and Tablets



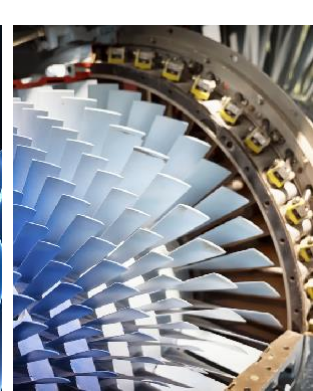
Computer Data



Aerospace Technology



Surgical implants



Engine Turbines

## TANTALUM Qualities and Significant Uses

- A rare, non-radioactive metal which is ductile & easily fabricated
- Highly resistant to corrosion by acids, a good conductor of heat and electricity, and has a high melting point
- Tantalum is immune to bodily fluids
- Ideal for use in surgical instruments and in the fabrication of chemical process equipment
- Also used for furnace parts, air and land-based turbines, X-ray films, electrical generation and camera lenses
- Widely used in the electronics industry for automotive electronics, laptop computers, mobile phones and tablets
- Alloyed with other metals, tantalum is also used in making carbide tools for metalworking equipment and in the production of superalloys for jet engine components

# GLOBAL TANTALUM OUTLOOK

- Australia has the second largest global resource of tantalum
- The AMAL Bald Hill Tantalite Project is one of a select few Tantalum projects in Australia
- Australia's Tantalum supply was previously severely impacted by the rise in production in Congo & other conflict minerals areas
- Dodd-Frank Conflict Minerals legislation has led to a de-facto embargo on Tantalum from the Congo
- Australia can emerge as a leading geopolitically stable source of high grade Tantalum concentrate

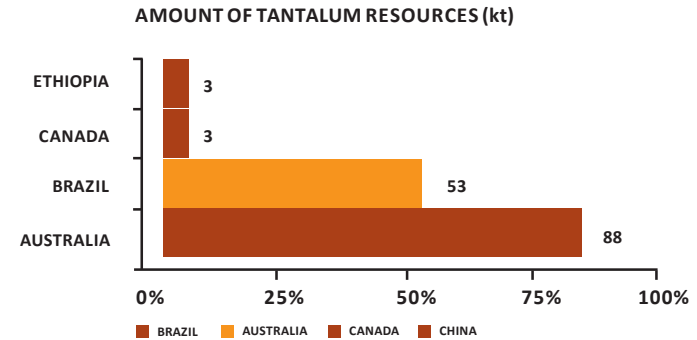
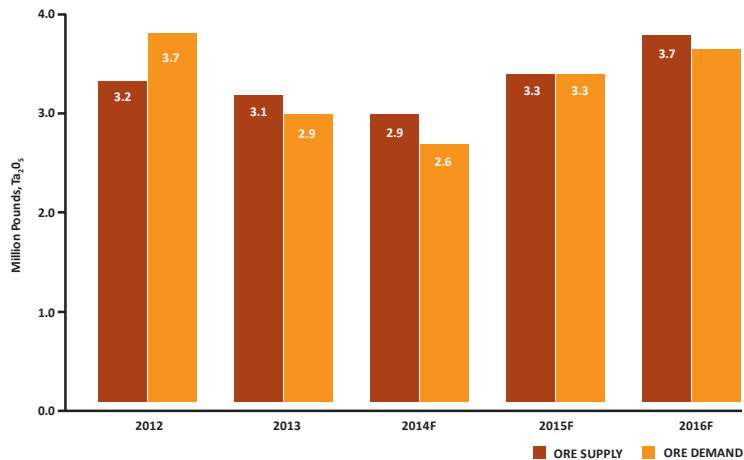
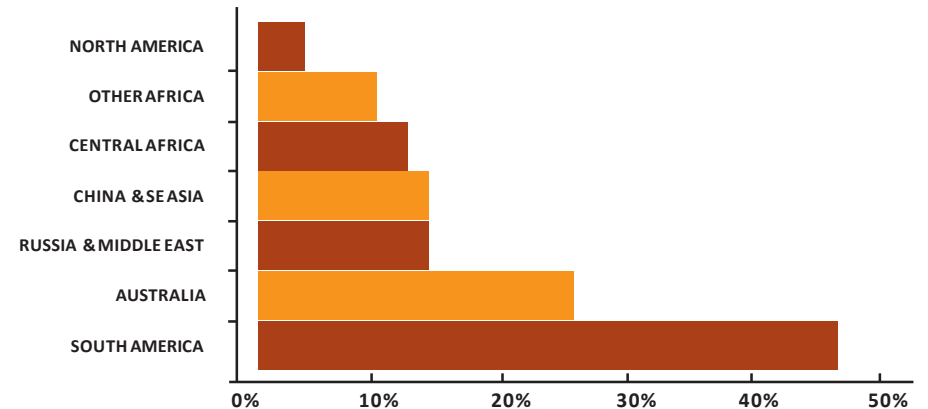


Chart: World resources of Tantalum in 2012  
Source: U.S. Geological Survey, 2013, Mineral Commodity Summaries 2013

FORECAST OF GLOBAL SUPPLY AND DEMAND (SOURCE: ROSKILL INFORMATION SERVICES)



TIC ESTIMATED LIKELY TANTALUM RESOURCE





PO Box 1502 Subiaco WA 6904 Address Unit 6, 24 Parkland Rd, Osborne Park WA 6017 Telephone 08 9388 8826 Facsimile 08 9388 8837 Email [admin@alliancemineralassets.com.au](mailto:admin@alliancemineralassets.com.au)

[www.alliancemineralassets.com.au](http://www.alliancemineralassets.com.au)