

# Carbine Tungsten Limited

ASX Code: CNQ



Technology

Battery &  
Speciality Metals

Lithium

Gold

Tungsten

Jim Morgan, Managing Director & CEO

## 2016 Annual General Meeting

24 November 2016





CARBINE TUNGSTEN

# 2016 ANNUAL GENERAL MEETING

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## DISCLAIMER

### Forward Looking Statements

Some statements in this presentation relate to the future and are forward looking statements. Such statements may include, but are not limited to, statements with regard to intention, capacity, future production and grades, projections for sales growth, estimated revenues and reserves, targets for cost savings, the construction cost of new projects, projected capital expenditures, the timing of new projects, future cash flow and debt levels, the outlook for minerals and metals prices, the outlook for economic recovery and trends in the trading environment and may be (but are not necessarily) identified by the use of phrases such as “will”, “expect”, “anticipate”, “believe” and “envisage”. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and may be outside Carbine Tungsten Limited’s (“Carbine” or “the Company”) control. Actual results and developments may differ materially from those expressed or implied in such statements because of a number of factors, including levels of demand and market prices, the ability to produce and transport products profitably, the impact of foreign currency exchange rates on market prices and operating costs, operational problems, political uncertainty and economic conditions in relevant areas of the world, the actions of competitors, activities by governmental authorities such as changes in taxation or regulation.

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Certain statistical and other information included in this presentation is sourced from publicly available third party sources and has not been independently verified.

### Ore Reserves and Mineral Resources Reporting Requirements

As an Australian company with securities listed on the Australian Securities Exchange (“ASX”), Carbine is subject to Australian disclosure requirements and standards, including the requirements of the Corporations Act and the ASX. Investors should note that it is a requirement of the ASX Listing Rules that the reporting of ore reserves and mineral resources in Australia comply with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the “JORC Code”) and that Carbine’s ore reserve and mineral resource estimates comply with the JORC Code.

### Competent Person’s Statement

The information in this document relating to Exploration Targets, Exploration Results, Mineral Resources, Production Targets and Ore Reserves is based on information compiled by Dr Andrew White, who is a Fellow of the Australian Institute of Geoscientists and a Consultant to Carbine. Dr White has sufficient experience relevant to the style of mineralisation, mining and processing the 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” (the JORC code). Dr White consents to the inclusion of matters based on his information in the form and context in which it appears in this presentation. The potential quantity and grade of exploration targets is conceptual in nature. Where Exploration Targets are stated, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.



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# AGENDA

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1. Chairman's Welcome
2. Housekeeping
3. Notice of Meeting to be Read or Taken as Read
4. Minutes of 2015 AGM
5. Chairman's Address
6. Resolutions
7. Managing Director / CEO Report
8. Other Business
9. Meeting Close



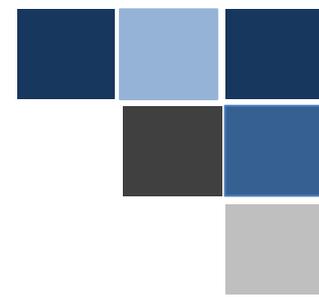
# CHAIRMAN'S INTRODUCTION

## Board of Directors

Board Member	Experience
	<p><b>Russell Krause, Non-Executive Chairman</b></p> <p>Mr Krause was appointed Non-executive Chairman on 30 June 2013 and has over 25 years' Executive Management and Director level experience in a range of corporate advisory, stockbroking, and investment banking roles with some of Australia's leading financial services firms. Mr Krause also has extensive experience in the resources sector providing equity capital markets, capital raising and corporate advisory services to a range of ASX listed mining and energy companies. Mr Krause is currently a Director of Austex Oil Limited (ASX:AOK), ELK Petroleum Limited (ASX:ELK) and Novus Capital Limited.</p>
	<p><b>Jim Morgan, CEO &amp; Managing Director</b></p> <p>Jim Morgan has over 30 years experience in the Australian and international mining and construction industries, most recently as General Manager - Project Development for ASX-listed Paladin Energy Ltd. Before joining Paladin, he held senior positions and played key roles in the mine development of Lafayette Mining Limited (Owner's Representative), Rapu Rapu mine in the Philippines and Ticor (Owner's Representative) at the Richards Bay mineral sands mining and titanium smelter project in South Africa.</p>
	<p><b>Roland Nice, Non-Executive Director</b></p> <p>Roland Nice is a metallurgical engineer with over 45 years experience. Mr Nice has a strong track record in mineral processing and metallurgy, most recently as a consulting metallurgical engineer in the role of Senior Associate for Behre Dolbear Australia. Prior to this, Mr Nice was the Principal at technical consulting firm, R. W. Nice and Associates, which followed approximately 20 years in a range of roles with Pancontinental Mining Limited. Mr Nice has a B.Sc (Metallurgical Engineering) from Queen's University, Canada, and is a member of the Australian Institute of Engineers and the Canadian Institute for Mining, Metallurgy and Petroleum, and a fellow of the Australian Institute of Mining and Metallurgy.</p>



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# WHERE ARE WE IN THE CYCLE?

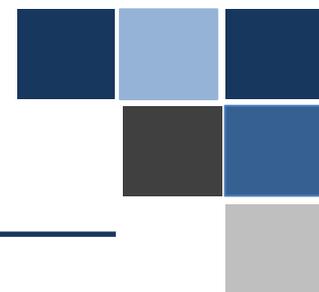
## IS TRUMP THE WAKE UP CALL –

### ARE WE FIVE MINUTES TO BOOM-TIME?





# RESOURCE MARKET STATUS



COPPER

## Copper



SOURCE: WWW.TRADINGECONOMICS.COM | OTC

IRON ORE

## Iron Ore



SOURCE: WWW.TRADINGECONOMICS.COM | OTC

GOLD

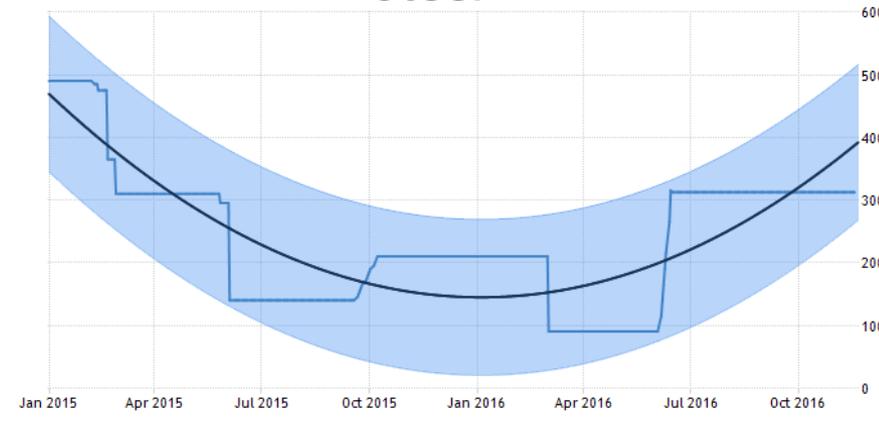
## Gold



SOURCE: WWW.TRADINGECONOMICS.COM | OTC

STEEL

## Steel



SOURCE: WWW.TRADINGECONOMICS.COM | OTC



# COMPANY DIVERSIFICATION STRATEGY

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## DEVELOP AND MAINTAIN CNQ ASSETS:

- **Tungsten**
- **Gold**
- **Lithium**
- **Technology**
- **Geology**
- **Project Development**
- **Speciality Metal Marketing**
- **ASX Publicly Listed Company – New Rules 20 Dec 2016**



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# COMPANY STRATEGY

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Major Resource  
Companies  
*Too big to invest in small  
to medium project  
interests*

**OPPORTUNITY FOR CNQ – SPECIALITY METALS, BATTERY METALS,  
NEW TECHNOLOGY, SMALL TO MEDIUM PROJECTS**

Projects too small to be  
listed, difficult IPO's and  
diminished small cap  
mining companies  
*(restricted by new ASX  
Listing Rules, 20 Dec '16)*



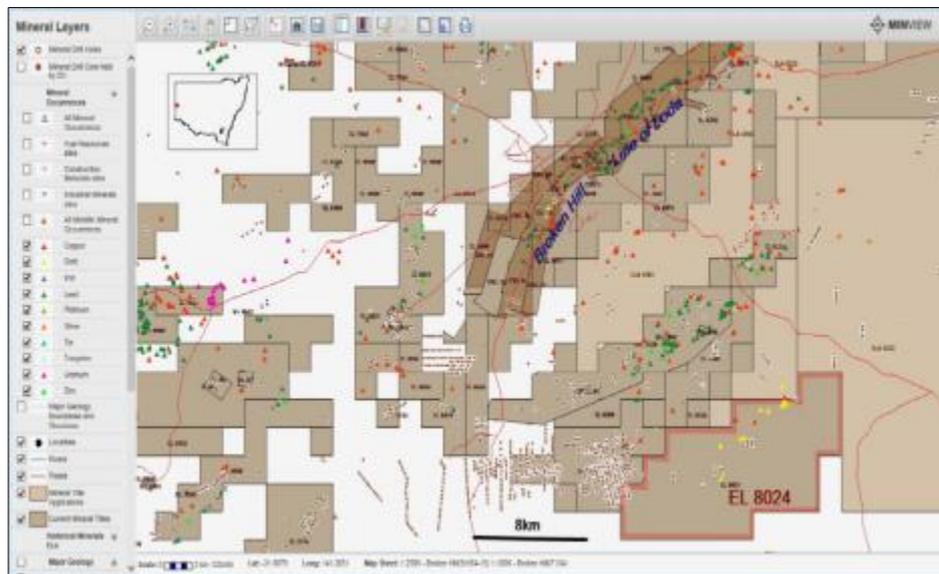
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# DIVERSIFICATION ACTIVITIES

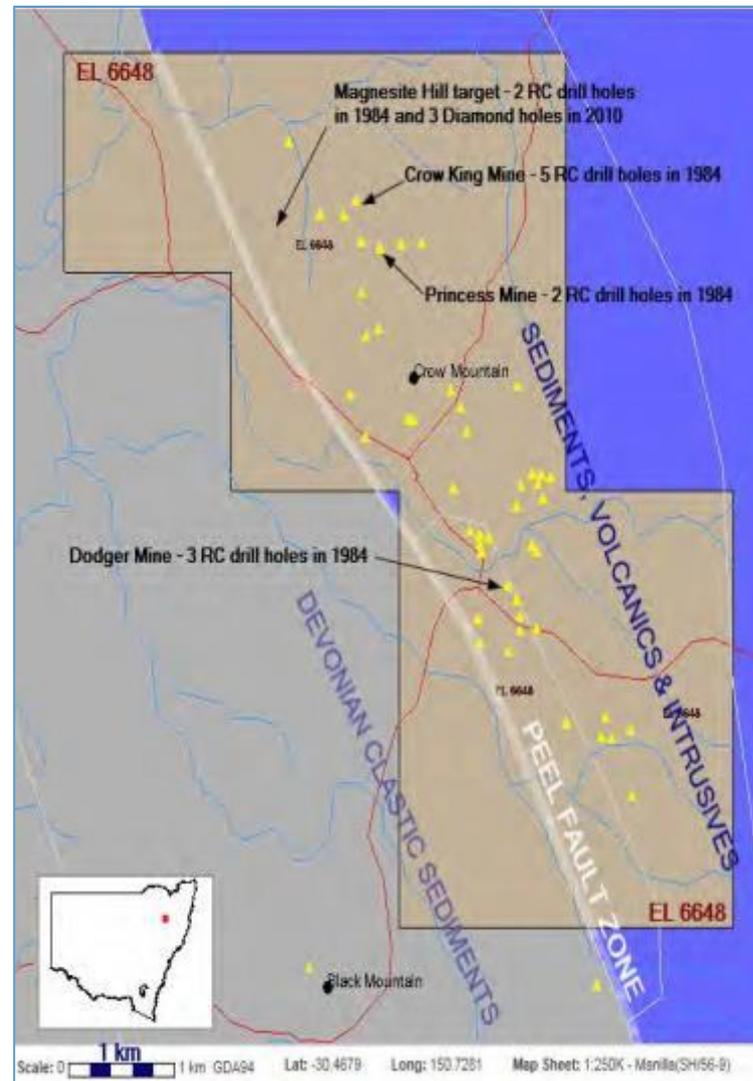
## GOLD

As part of its diversification strategy Carbine Tungsten Limited acquired two gold prospects in New South Wales during September 2016:

- Exploration Licence 6648 – Crow Mt.
- Exploration Licence 8024 – Panama Hat



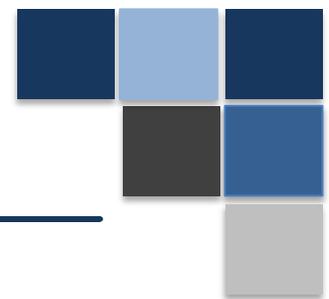
Above map shows maximum gold values obtained by rock chip or mineralised rocks by previous explorers on EL 8024.



Location of EL 6648, showing historical gold workings (yellow triangles) adjacent to the Peel Fault.



# DIVERSIFICATION ACTIVITIES



## GOLD – EL 6648 CROW MT.

- Approximately 20km south east of Barraba in northern NSW.
- Straddles part of the Peel Fault, a major structure that geologically separates the New England Province from the Tamworth Trough to the west.
- Contains numerous historical shallow gold workings dating from 1868 with historical records indicating that high to bonanza grade gold occurred in quartz veins up to 38cm wide and 12m long.
- In modern times the licence has been partly investigated by 3D-IP survey, drilling and surface sampling.

This licence was previously held by Carbine’s precursor company, Icon Resources Ltd, who drilled three holes in the Magnesite Hill target in 2010, with the following results:



Drill hole	From (m)	To (m)	Interval (m)	Au g/t
ICK 001	76.3	78.45	2.15	1.85
	117.4	172	54	0.45
Including	140	148	8	1.27
ICK 002	113.4	119.4	6	0.67
Including	119	121	2	1.19
	137	151	14	1
Including	139	141	2	3.69
ICK 003	113.6	117	3.4	1.2



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# DIVERSIFICATION ACTIVITIES

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## **GOLD – EL 8024 PANAMA HAT**

- About 30km south east of Broken Hill and covers ~80% of the historical gold workings in the Broken Hill district.
- Workings mostly date from 1931-1935 and occur along an arcuate line of quartz veining with associated iron oxides.
- Sericitic alteration of the host metamorphic rocks accompanies the quartz veining.
- The iron oxides are interpreted to result from weathering of sulphide mineralisation at depth.
- Hand-picked iron oxide-bearing quartz samples were recorded as assaying up to 34g/t, and this has been confirmed by recent sampling as part of Carbine's due diligence study of the licence.
- Previous exploration in modern times includes an MMR/EIP geophysical survey and several percussion drill holes.

**CARBINE IS OF THE OPINION THAT THE LICENCE AREA IS UNDEREXPLORED**



# DIVERSIFICATION ACTIVITIES

## LITHIUM (SYMBOL LI)

- Previous main application in glass manufacture ~ \$200/t lithium carbonate or direct shipping ore (>4.5% Li).
- Major growth potential in lithium batteries: price spike to \$20,000 per tonne.
- The current upsurge in lithium exploration will undoubtedly show that the Earth is awash with lithium.
- Best business strategy is therefore to position the company as a very low cost lithium producer, using our key geological insights into the discovery of lithium brines.
- Carbine's link with the AXT process holds the potential to produce lithium metal directly from brines.

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													*	89	90	91	92	93	94	95	96	97	98	99	100	101	102	
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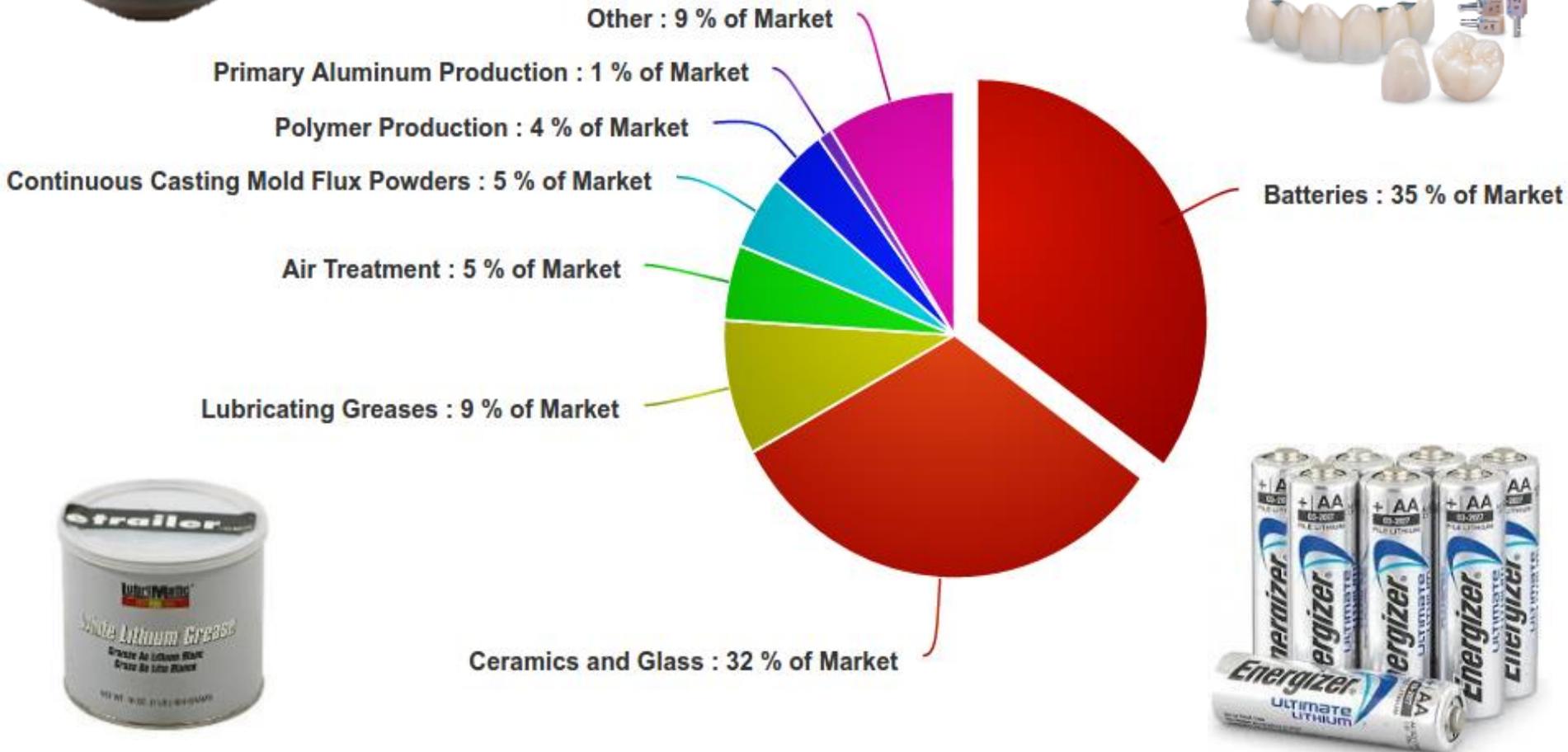


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# DIVERSIFICATION ACTIVITIES

## LITHIUM BY END USE (USGS, 2016)

Source: <http://minerals.usgs.gov/minerals/pubs/commodity/lithium/mcs-2016-lithi.pdf>





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# DIVERSIFICATION ACTIVITIES

## Lithium

- Occurs in ancient hard rock deposits (Li feldspars and micas).
- Occurs in geologically young continental rift systems as brines in sedimentary deposits in closed sedimentary basins.
- The brines are partly due to evaporation of ground water in these closed basins.
- About a third of the world's present lithium supply comes from brines.
- Production of lithium from brines is typically lower cost.





## Lithium Strategy

- Look for brine resources in modern continental rifts.
- Look in mining-friendly and technically competent countries.
- Anticipate the AXT process may enable precipitation of Li metal from brines at very low cost = huge competitive advantage.
- Progress: early prospecting produced very encouraging results.
- Applications for 10 exploration tenements over free ground in areas A and B in northern Chile.
- Next step is to drill and sample brines.





## MT CARBINE, QUEENSLAND

- Two prospects, Iron Duke and Petersen's Lode, exist within EPM 14871 and 14872 and in the case of Iron Duke, the mining leases.
- These prospects are dominated by scheelite mineralisation.
- Mapping and sampling indicate both prospects have extensive strike length.
- Work is underway to prepare these prospects for exploration drilling.

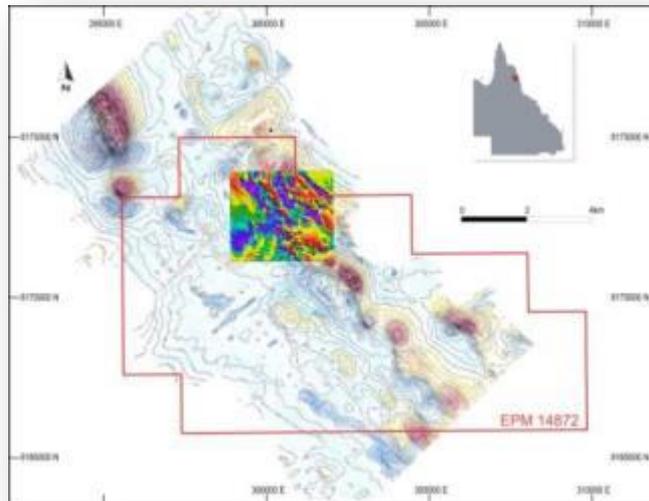


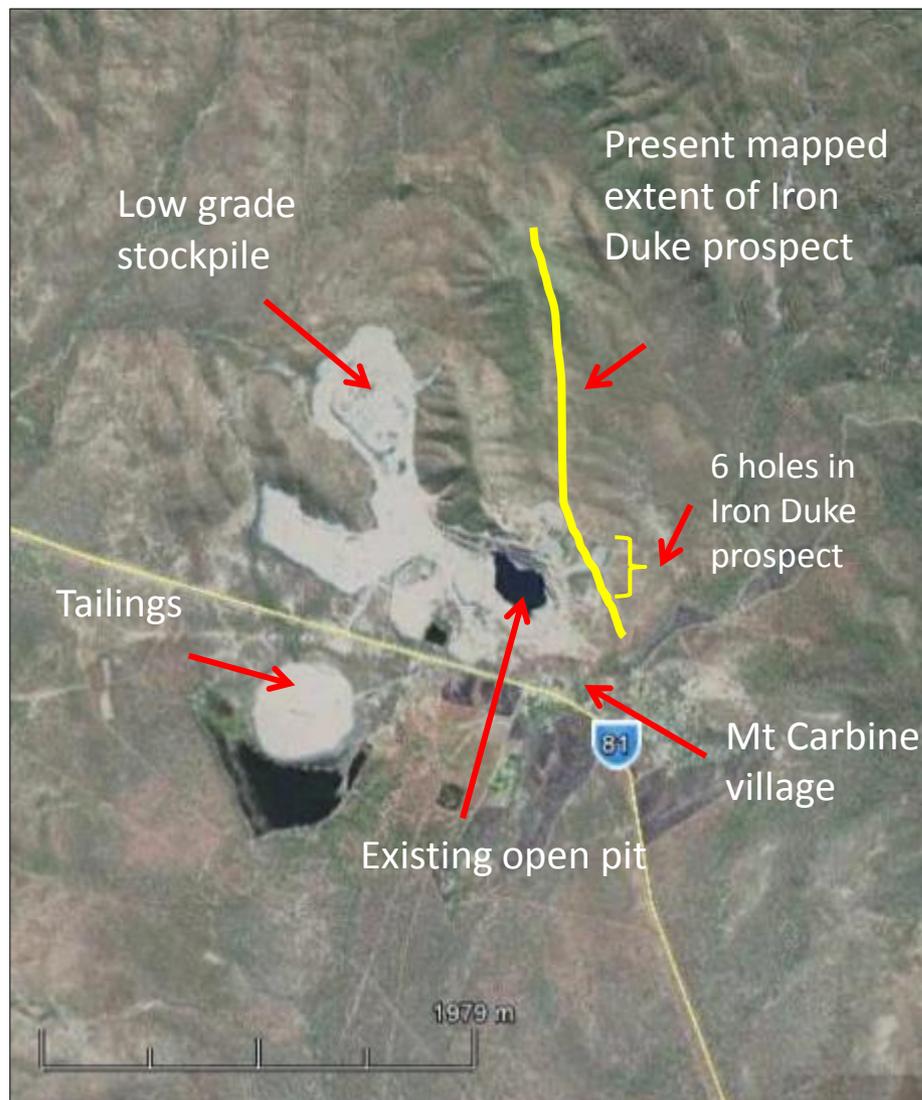
Figure 1 - Diagram of stitch of 1986 airborne magnetic survey data (contours) with high resolution Helimag survey data acquired from Kangaroo Metals Ltd in 2010.



# EXPLORATION ACTIVITIES - TUNGSTEN

## IRON DUKE - MT CARBINE EPM 14872

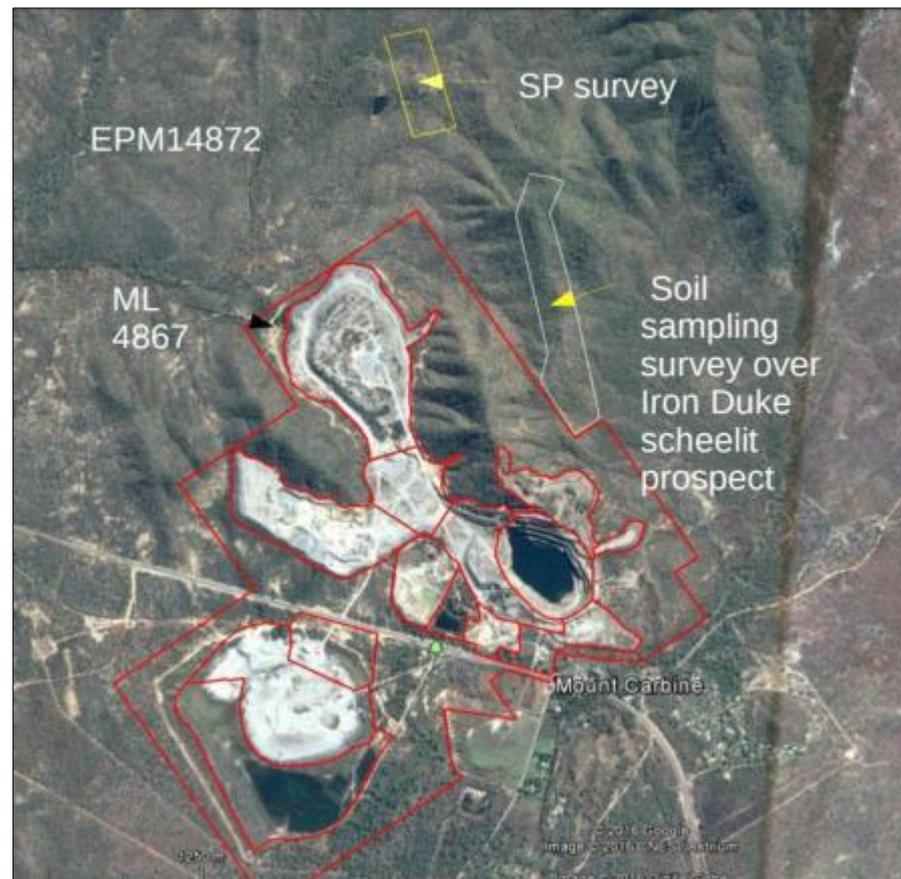
- Present resource estimate does not include any Iron Duke mineralisation.
- Lies within the planned open-cut envelope.
- Average true width 8m from 6 drill holes with an average weighted grade of .32% WO<sub>3</sub>.
- Mapping indicates a strike length of at least 2.2km.
- Drilling is planned to establish the resource prior to the commencement of open-cut mining.





## IRON DUKE - MT CARBINE EPM 14872

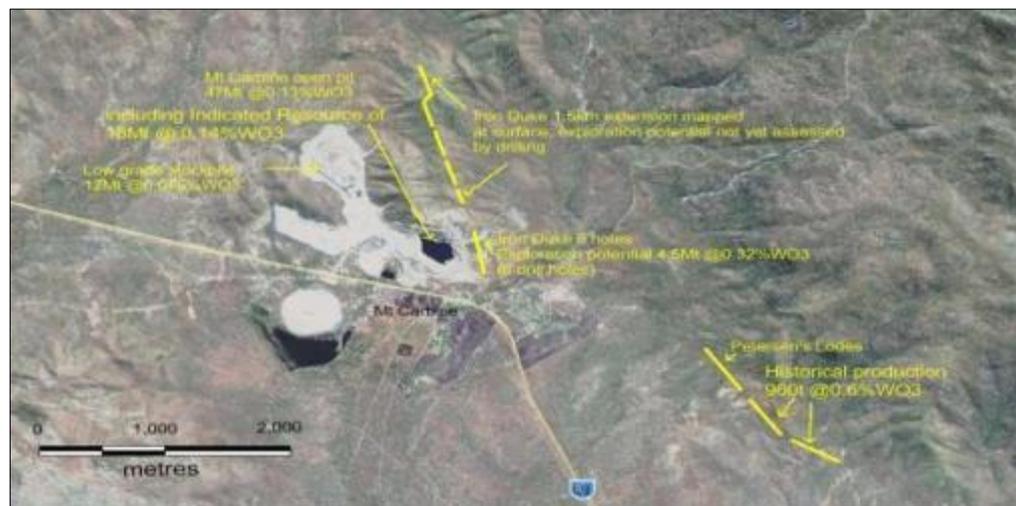
- Soil sampling confirms that the Iron Duke scheelite prospect is mineralised over 1km strike length.
- 6 cored drill holes at the southern end of the prospect averaged 0.32%  $WO_3$  over 8m true width.
- A self potential survey over a gossan concealed beneath mine waste north of Carbine Hill revealed a substantial anomaly with a total strike length of 160m and open to the north east.
- This anomaly comprises a future drilling target to test for copper-zinc mineralisation.





## PETERSEN'S LODES - MT CARBINE, QLD

- Lies within EPM 14872 and is ~1-2km south-east of Mt Carbine.
- Sub-vertical zone of scheelite mineralisation hosted by sheared and altered metasediments traced for 1.3 km along the strike.
- More detailed exploration is planned.
- Only record of production is 950 tonnes of scheelite concentrate from ore with a grade of 0.6%  $WO_3$ .





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# TUNGSTEN... INDUSTRIAL ENABLING METAL WITH STRATEGIC IMPORTANCE



Aeronautical & Automobile Manufacturing



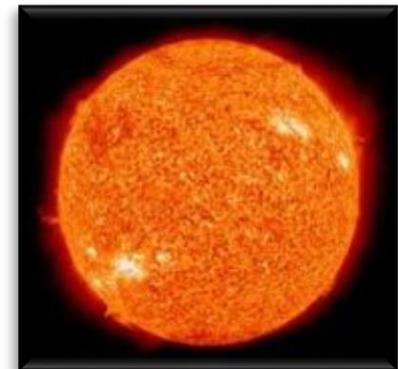
Rail & Heavy Earthmoving



Military & Mining



With a density of  $19.25 \text{ g/cm}^3$ , tungsten is also among the heaviest metals.

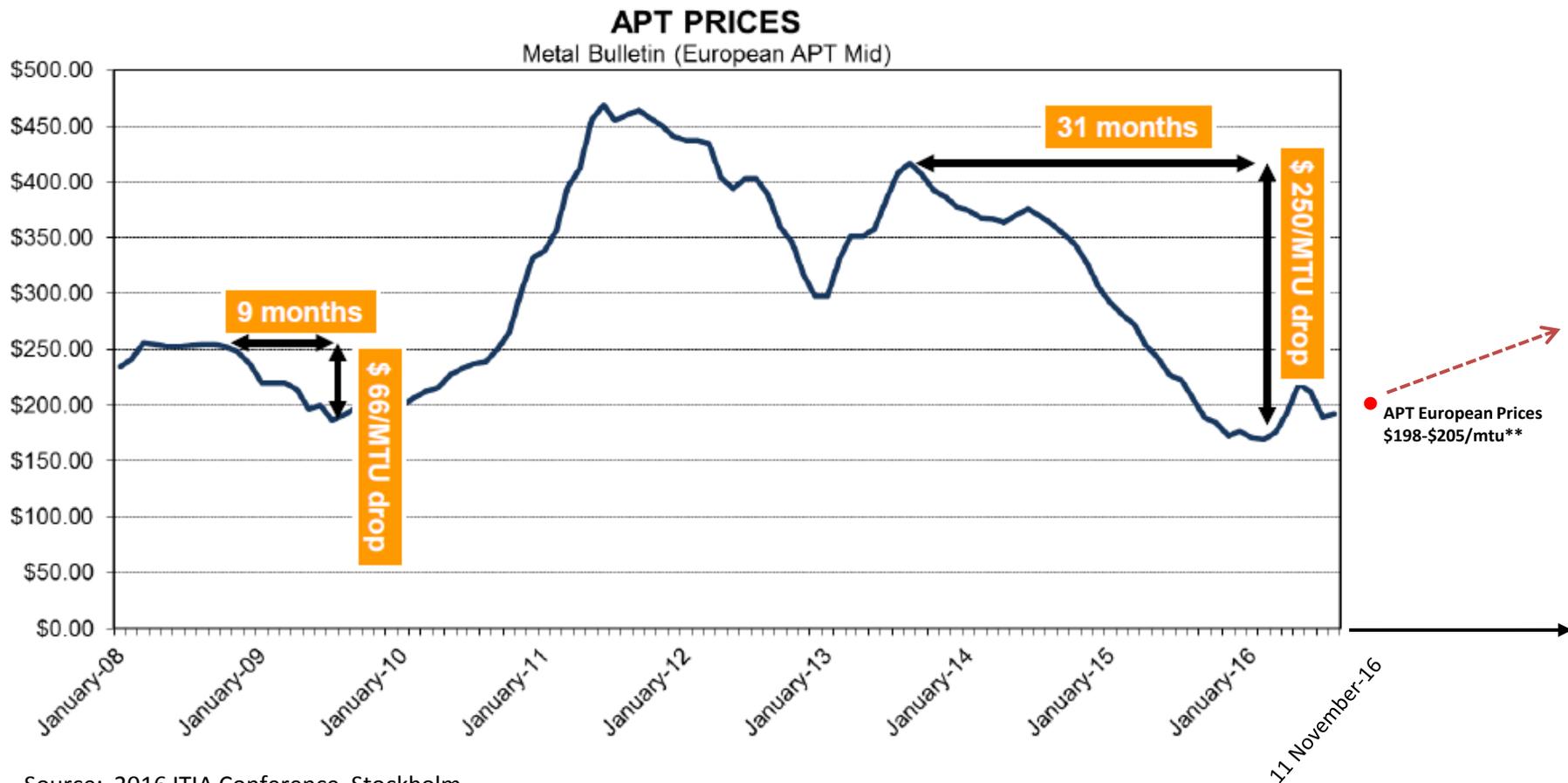


Highest melting point of all metals at  $3,422 \pm 15 \text{ }^\circ\text{C}$  and a boiling point which corresponds approx. to the temperature of the sun's surface,  $5,700 \pm 15 \text{ }^\circ\text{C}$ .



# TUNGSTEN MARKET

The tungsten market has faced significant changes:



Source: 2016 ITIA Conference, Stockholm

\*\* SP Angel Report



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# TUNGSTEN MARKET

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- Despite APT and tungsten concentrate prices increasing approximately 25% from their historical lows, the margins currently being realised do not warrant bringing additional supply to an already price constrained market.
- High cost tungsten producers (predominantly western world mines) will be facing very thin margins or be in a loss making situation which may result in some of them ceasing operations. Some reports estimate that approximately 25% of all tungsten mines are currently operating at a loss.
- The following factors have contributed to the price constrained market conditions with APT prices trending at/or below break-even of the current operating costs for many producing mines:
  - Two significantly-sized new mines, one located in Vietnam and the other in the United Kingdom recently entered production. One of these mines is experiencing ongoing financial pressures reportedly due to the current low pricing levels.
  - A decline in overall tungsten consumption due to it closely tracking the global gross domestic product (“GDP”) figures.
  - Reported increase in the percentage of recycled tungsten in the USA has also impacted the market demand for new mine supplied material.



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# TUNGSTEN MARKET

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- Carbine's market strategy, with its relatively short-time to production, is to improve on the project's cost efficiencies whilst remaining ready to take advantage of any upturn in the market which is possible should current high-cost mines begin to close.
- Carbine will continue to closely monitor the market to ensure that prudent development decisions are made in relation to the Mt Carbine Tungsten Project.
- The Board still strongly believe the Mt Carbine Tungsten Mine with its past, proven, low operating cost and historically successful operating credentials represents the best solution for secure, profitable, long-term western tungsten supply.



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# MT CARBINE MINE - OVERVIEW



Mt Carbine Mining Leases cover ~367 hectares.

The historical Mt Carbine tungsten mine is located 130km by sealed highway from the port of Cairns in North Queensland, Australia.





# Mt CARBINE TUNGSTEN PROJECT - OVERVIEW

## Key Findings Recapped

- 2012 Feasibility Study confirmed the technical and financial feasibility of the Mt Carbine Project.
- Pre-tax Internal Rate of Return (IRR) of 60%.
- Net Present Value (NPV) AUD \$161 million using a discount rate of 8% and an average product concentrate sales price of USD \$290 per metric tonne unit (MTU).
- Payback period 1.5 years.
- Includes previously stockpiled material readily available at the surface (~12 million tonnes at 0.075% WO<sub>3</sub>).
- Capital Requirements = \$55 Million

Feasibility Study findings reported in ASX announcement 28/08/2012. 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

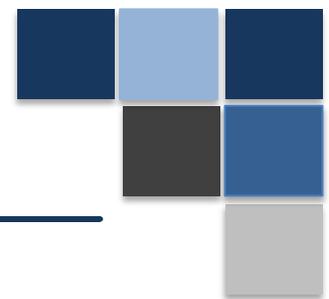
The resource estimates for the Mt Carbine tungsten deposit were updated to comply with the 2012 JORC Code for reporting of resources in November 2013 (Carbine ASX announcements 22/11/2013; 04/12/2013 and 13/01/2014). Carbine is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant announcements continue to apply and have not materially changed.

Mt Carbine Project Outline	
NPV	\$161 million
Resource	
Mine	47Mt @ 0.13% WO <sub>3</sub>
Stockpile	12Mt @ 0.075% WO <sub>3</sub>
Tailings	2Mt @ 0.1% WO <sub>3</sub>
Mine	18Mt @ 0.14% WO <sub>3</sub>
Rock Feed Rate	3 Mtpa
Rock Feed Grade	0.12% WO <sub>3</sub>
Ore Sorted Feed Rate	350 ktpa
Ore Sorted Feed Grade	0.7% WO <sub>3</sub>
Processing Recovery	76%
Production WO <sub>3</sub>	>2,000,000 MTU
Project Capital	\$55M
Operating Costs	130 \$/MTU
Budgeted Sale Price	290 \$/MTU



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# HARD ROCK STOCKPILE PROJECT



## Project Ready Status Maintained

- ✓ **Funding:** Technical due diligence phase of the funding negotiations with Mitsubishi RtMJ completed in April 2014. US\$15 million secured loan (including prepayment fund of previous US\$1 million loan) approved by Mitsubishi RtMJ Board in late September 2014.

Loan agreement to be finalised upon:

- completion of conditions precedent; and
- an improvement in tungsten market conditions.

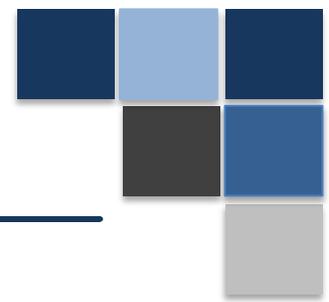
- ✓ **Off-take:** MoU in place with Mitsubishi for 80% off-take of the stockpiles' output.
- ✓ **Environmental:** Environmental Authority for EPML00956913 issued August 2013.
- ✓ **Bonds and Permits:** Plan of Operations (2015-2016) approved by Department of Environment and Heritage Protection. Financial assurances in place.





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# OUR COMMITMENT TO: ENVIRONMENT, SAFETY & COMMUNITY



- Policies and procedures continually modified to keep pace with the Company's changing operational activities.
- Carbine endeavours to engender and promote the values of a safe work place and work culture for all its employees and contractors.
- Responsible environmental management is a basic and fundamental principle of Carbine's current and future business activities.
- Engages locally based staff and contractors where possible.
- Aims to fairly spread the economic benefits of its future growth with the local and regional communities within which it operates.

## 2015– 2016 Safety Statistics (Mt Carbine)

Total Hours Worked	Lost Time Injuries
6,396.50	0





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# PROPOSED ACQUISITION UPDATE

## MT CARBINE & MOSSMAN QUARRIES

- Memorandum of Understanding entered into for the potential acquisition of the Mt Carbine and Mossman Quarries in 2015.
- Established business operating for over 20 years within the Mt Carbine Mining Leases. Mossman quarry located close to coast road and Port Douglas.
- Mt Carbine Quarries has a stockpile of mined rock that has been processed through an optical ore sorter amounting to ~6Mt, plus access to the mined rock in the Low Grade Stockpile (~12Mt), of which approximately 90% will be available for future quarry feed after processing by Carbine Tungsten.
- Material can be drawn from this stockpile to sort, crush and screen as required to fill orders for local construction projects and maintaining council and state roads as well as remote communities.
- Due Diligence process stalled due to the inability or lack of desire on behalf of the Quarry owner to provide sufficient information. Carbine will persist in its efforts to complete this transaction.





# 2015-2016 FUNDING ACTIVITIES

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## CAPITAL RAISING ACTIVITIES

- \$636,200 was raised via a Non-Renounceable Entitlements Offer of one (1) new ordinary share for every (4) shares held which resulted in the placement of 25,447,969 fully paid ordinary shares at an issue price of \$0.025.
- Lanstead Capital LP's ("Lanstead") share placement raised, in aggregate, A\$1,875,000 through the issue of 83,000,000 shares at the placement price of \$0.025 per share. As part of these placements, Carbine retained A\$281,250 of the aggregate A\$1,875,000 subscription and the balance of A\$1,593,750 was invested in a Sharing Agreement with Lanstead enabling Carbine to secure much of the potential upside from share price appreciation over the 18 month term. R&D Tax Incentive Refund - \$769,717.

## COST OPTIMISATION

- ✓ Cairns office operations located to the Mt Carbine Mine Site;
- ✓ Registered Office address relocated to Melbourne;
- ✓ Non-essential staff and contractor arrangements terminated;
- ✓ Leased accommodation arrangements terminated;
- ✓ On-site activities at Mt Carbine minimised; and
- ✓ Director and employee remuneration capped at current levels.



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# NEW MINERAL PROCESSING TECHNOLOGY

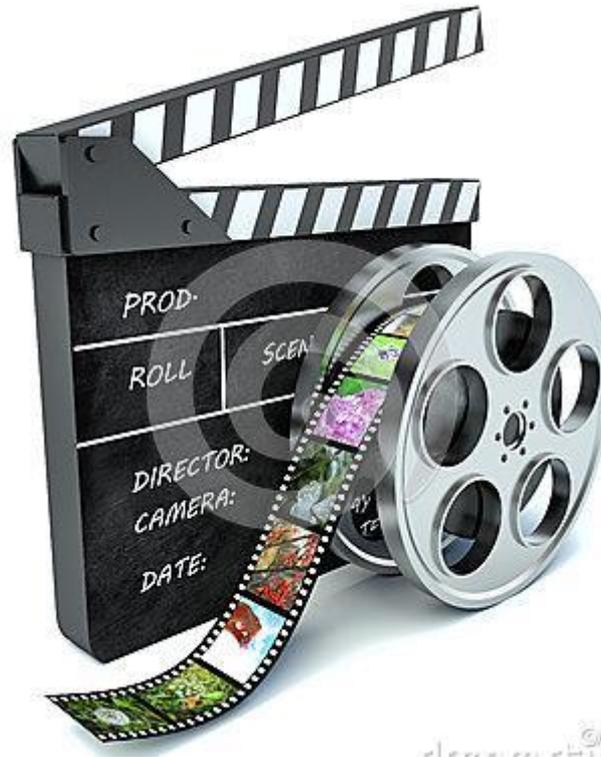
## ATOM EXCHANGE TECHNOLOGY (AXT)

- In September 2016 Carbine engaged a specialist minerals technology provider to conduct preliminary test work on tungsten scheelite concentrate samples from its Mt Carbine Tungsten Project.
- Test work will utilise a novel and unique processing technology, which may present significant cost and environmental advantages to Carbine and its current tungsten project.
- This technology is also being assessed to determine its suitability for potential future use by Carbine who is seeking to co-operate with the provider to include certain aspects of the technology's development into Carbine's ongoing research and development program.
- Carbine is also exploring opportunities with the technology provider to hold agency rights for its distribution within Australia, New Zealand and Papua New Guinea in relation to the other potential advantages it offers in the extraction and production of copper and gold.



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# NEW MINERAL PROCESSING TECHNOLOGY



<http://www.atomexchange.com/>



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## 2016 - 2017 OUTLOOK

- Resource market conditions improving;
- Commodity prices improving;
- Sophisticated investor interest appetite returning;
- Broader asset portfolio achieved;
- Positioned for market upturn;
- In discussions with sophisticated investors and funders;
- Actively seeking further growth opportunities.



# Thank-you

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