

## Carbine Tungsten Limited (ASX: CNQ)

Mt Carbine Project – September 2013



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#### **Ore Reserves and Mineral Resources Reporting Requirements**

As an Australian company with securities listed on the Australian Securities Exchange ("ASX"), CNQ 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 CNQ'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 Director of CNQ. 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. 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.



- Well positioned to increase production at flagship Mt Carbine Tungsten Project in Far North Queensland
- Producing ~1500 mtu a month from Tailing Retreatment Plant concentrate shipped to off-take partner Mitsubishi Corporation RtM Japan ("Mitsubishi RtMJ")
- Focus on development of hard rock tungsten stockpiles and former open pit mine (Hard Rock Project)
- Recently secured environmental permitting to commence processing of the hard rock stockpiles
- Development of hard rock stockpiles due to commence in Q4 2013 Strong production upside with 8 year mine life potential
- MOU signed with Mitsubishi RtMJ to provide \$15 million in project funding and off-take
- Simple production process through crushing and gravity separation low CAPEX requirements
- Feasibility study completed with a JORC compliant resource having an NPV of ~\$161 million
- Exploration upside with targets close to existing operation **Exploration target of 25.5Mt**
- Board and senior management with vast experience in development and construction of mining operations

### Increasing Production through development of Hard Rock Project



Board Member	Experience
Russell Krause Non-Executive Chairman	Mr. Krause 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 ASX-listed Oil & Gas producer, Austex Oil Ltd (ASX:AOK), Singaporean registered AuzMinerals Resources Group Pte Ltd, and Novus Capital Ltd.
Jim Morgan Managing Director	Mr. Morgan has over 30 years of 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.
Tony Gordon Non-Executive Director	Mr. Gordon has over 25 years experience in financial markets and has held directorships and senior management positions with a number of Australian stockbroking and financial services companies. Over this time his focus has been the listed resources sector. More recently Mr. Gordon has provided advice to a number of Chinese, South East Asian and North American projects that are held by Australian Listed and un-listed entities.
Roland (Rolly) Nice Non-Executive Director	Mr. 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.

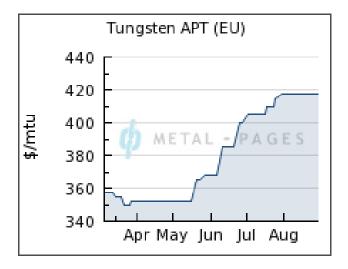


- Two Tungsten bearing minerals are important for industrial use wolframite and scheelite
- Cemented carbides (hardmetals) are the most important usage of tungsten today
- The hardest metal close to diamond
- Hardmetal tools are used to shape metals, alloys, wood, composites, plastics and ceramics
- Use in mining and construction e.g. hydraulic fracturing to fuel increased demand
- Tungsten mill products are either tungsten metal products, such as lighting filaments, electrodes, electrical and electronic contacts, wires, sheets, rods etc or tungsten alloys

### Strategic metal with very strong demand fundamentals



- Other uses of tungsten include:
  - High-strength, high-speed steel for cutting, stamping, casting tools, dies & rock/concrete drilling;
  - Alloy steel armour for military vehicles, warships and specialised armour piercing ammunition;
  - High temperature coating materials in the construction of jet engines;
  - Very specialised surgical instructions.



### **Rising Tungsten Prices**

- APT (Europe) Price has been rising sharply since February 2013
- APT (Europe) Price is currently quoted at US\$410+/MTU (September 2013)

# Mt Carbine Tungsten Project Recent Developments

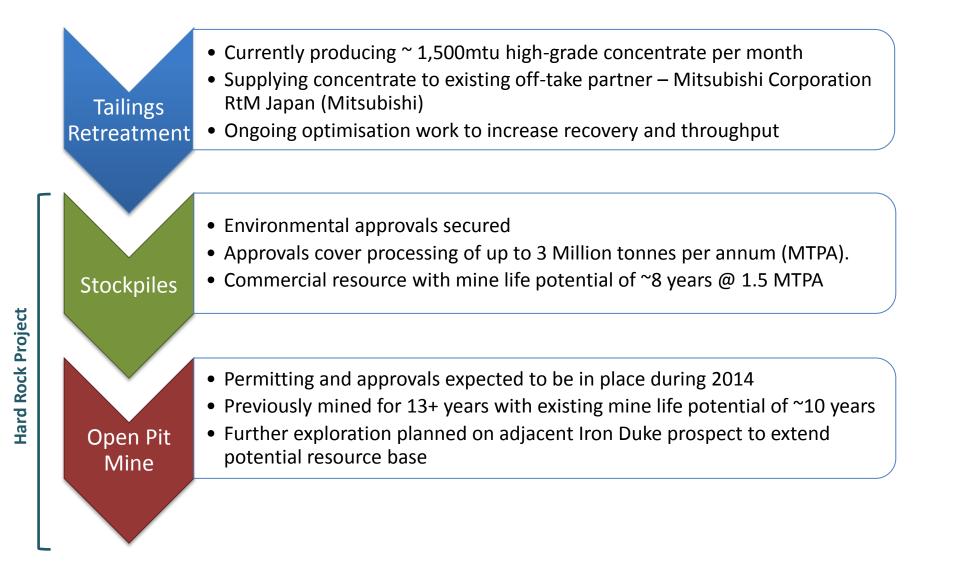


- July 2012 First bulk shipment of Tungsten concentrate dispatched
- August 2012 Feasibility study reveals favourable project economics at Mt Carbine
- August 2012 Mt Carbine Resource estimate upgrade
- September 2012 Low grade stockpile upgraded to Indicated Resource status
- **December 2012** Second off take party LOI for 50-100% of hard rock production.
- **February 2013** Signs MOU with Mitsubishi for Hard Rock Project funding and further off-take
- March 2013 Environmental Management Plan (EMP) submitted covering stockpile processing
- August 2013 Mitsubishi RtMJ undertakes site visit
- August 2013 Awarded Environmental Authority for processing of Tungsten stockpiles



Tailings Retreatment Plant





# Hard Rock Feasibility Study



- Feasibility Study completed in July 2012 confirmed the technical and financial feasibility of the Mt Carbine project
- The scope of the study @ 1 AU\$ = 1 US\$ having significant upside with decreasing AU\$
  - Re-establishment of mining in the open pit
  - Recovery and processing of ore from existing lower grade stockpiles
  - X-ray ore sorting to reject waste rock preprocessing
  - Gravity processing using similar technology to previous operations
  - Recovery of product from fines the previous operation sent all fines to tails
    - Current tailings operation demonstrates viability
    - Further exploration has potential to significantly extend mine life and resource

Mt. Carbine Project Outline		
NPV	\$161 million	
Resources		
Mine	47Mt @ 0.13% WO <sub>3</sub>	
Stockpile	12Mt @ 0.07% WO <sub>3</sub>	
Tailings	2Mt @ 0.1% WO <sub>3</sub>	
Reserves		
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>	>2,61550 MTUpa	
Project capital	\$55M	
Operating costs	130 \$/MTU	
Budget sale price	290 \$/MTU	

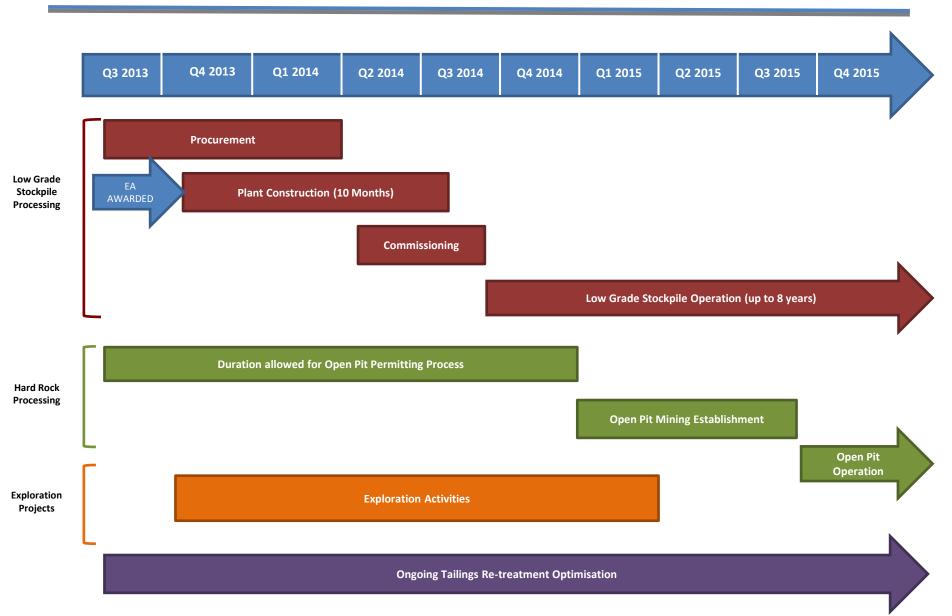


- January 2012 Mitsubishi provides CNQ with LOI to purchase tailings products
- May 2012 CNQ signs bulk product sales shipment contract with Mitsubishi
- September 2012 CNQ signs second off-take agreement with Mitsubishi
- October 2012 15 tonne consignment of Tungsten concentrate shipped to Mitsubishi
- **February 2013** MOU signed outlining Mitsubishi's intention to provide funding for Hard Rock project and continue off-take (see next slide)
- May 2013 Mitsubishi agrees to provide advance production payment of \$400,000 to support ongoing tailings retreatment production operations
- August 2013 CNQ hosts CEO and senior representatives from Mitsubishi RtMJ on site visit



- CNQ announced execution of MOU with existing off-take partner, Mitsubishi, in February 2013, outlining that Mitsubishi will support the development of Carbine's existing hard rock stockpiles and historical open pit tungsten mine
- MOU with Mitsubishi covers both potential funding and collaboration for the development of the Hard Rock Project
- Includes potential off-take consideration for the tungsten stockpiles and 50% of the ore produced from the historical open pit tungsten mine.
- Mitsubishi has stated consideration to fund \$15 million of the capital requirement needed for CNQ to undertake the planned development program of the existing stockpiles – CNQ's immediate focus
- Progression to MOU on Hard Rock Project with Mitsubishi RtMJ demonstrates strong demand for tungsten amongst leading players in the industry

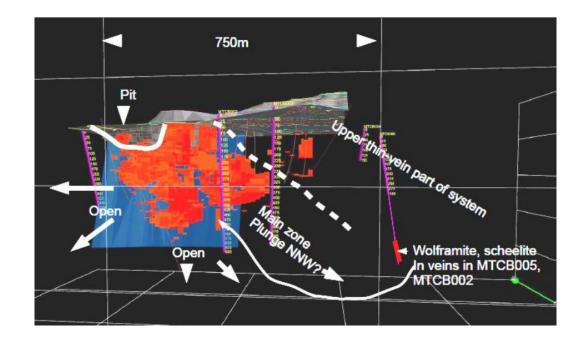




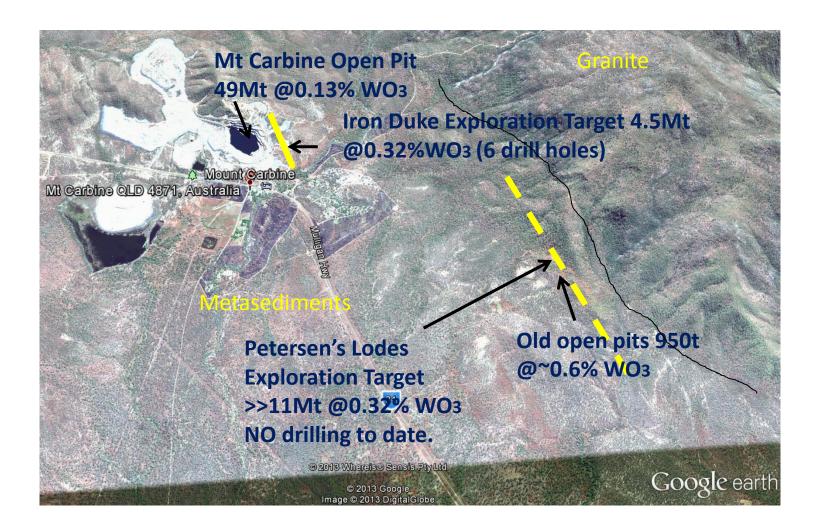
# Exploration Upside Mt Carbine Open Pit Mine



- Pit extension exploration adjacent to existing open pit
- Previous workings and two CNQ drill holes indicate tungsten mineralisation extends north and north west for at least 700m from the open pit
- Main ore body open at depth (drilled to 650m), and to the north and south
- Evidence indicates main wolframite ore body plunges north









### **Iron Duke Prospect**

- Target area is contained within Mining Lease 70m from open pit
- One historical and 5 CNQ drill holes on east side of open pit intersected the Iron Duke lode
- Exploration target based on drilling to date (6 cored holes) and surface mapping and sampling: 4,500,000 tonnes @ high grade 0.32% WO3 in scheelite
- Planned incorporation in the design of the main pit and targeted for initial production

### **Petersens Prospect**

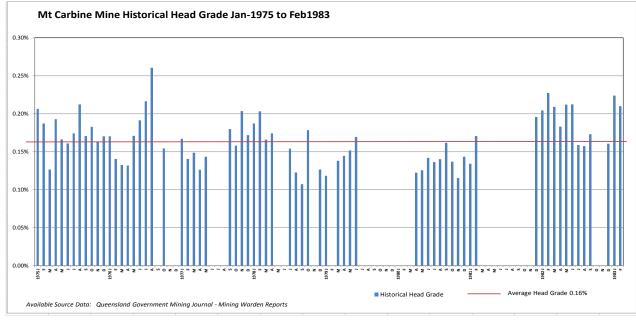
- Petersens Lodes located 2.5km from Mt Carbine
- Exploration target based on surface mapping, sampling and historical production: >>11Mt @ 0.32%WO3 in scheelite
- Contained within CNQ exploration permits pending mining lease & native title

### **Mt Holmes Prospect**

- Located 20km south of Mt Carbine
- Exploration target based on previous drilling, mapping, sampling and historical production:
  ~10Mt wolframite, tin in sheeted quartz vein system (previously mined on small scale)
- Contained within CNQ exploration permits pending mining lease & native title



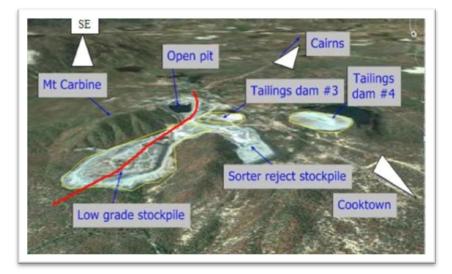
- Open pit mine operated from 1974 to 1987
  - Process: primary crush, hand and optical ore sort, secondary crush, jigs, spirals and tables produced 68-72% WO3 concentrates in ratio 4 wolframite: 1 scheelite
- 1993 study disproved relationship between tungsten grade and quartz vein density
- 2010, 2012, Geostat estimated inferred resource using assayed grades
- CNQ acquired rights to explore project in early 2008
- CNQ opened tailings re-treatment plant in March 2012
- Average recovered grades from remaining government records 1975-1983 is 0.16%



## **Mt Carbine Overview**

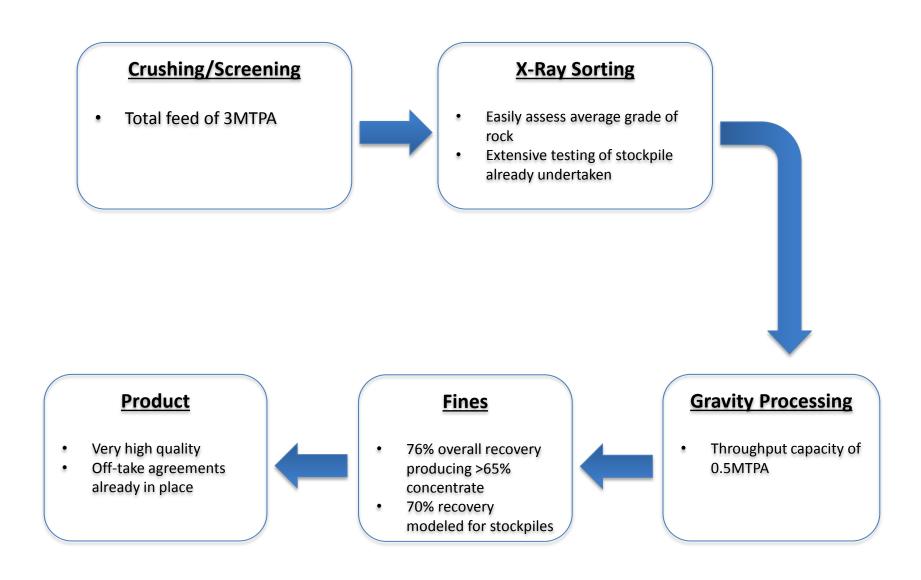


- The Mt Carbine project mining leases cover approx. 367 hectares.
- Previous large scale, open cut mining operation
   operated for 13+ years until 1987
- CNQ has detailed technical information from historical exploration and mining activity
  - Supporting current and planned CNQ activity
- Transport infrastructure in place:
  - The historical Mt Carbine tungsten mine is located 130km by sealed highway from the port of Cairns
  - $\circ$  45 minutes drive from Port Douglas
- CNQ currently producing high-grade Tungsten from tailings re-treatment operation



## Low Cost Processing







- **Transport** project site located within 250 metres of Mulligan Highway leading to Port Douglas and Cairns.
- **Port** Cairns Port located approximately 130km Townsville port 470 km by road from site.
- **Power** Access to grid power.
- Water Existing facilities expected to provide for planned operations.
- **Labour** Surrounding cities and townships provide strong access to labour.
- **Robust** Low risk, low cost, long term Brown Fields Project with flexibility and upside.