# **Carbine Tungsten Limited**

ASX Code: CNQ



## Market Update March 2017





### **BOARD OF DIRECTORS**

#### CARBINE TUNGSTEN

#### Board Member Experience





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.



#### Jim Morgan, CEO & Managing Director

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.



#### **Roland Nice, Non-Executive Director**

Roland Nice is a metallurgical engineer with over 45 years experience. Mr Nice has a strong track record in mineral processing and metallurgy. Mr Nice has been the Principal of his consulting firm, R. W. Nice and Associates since 1995. Mr Nice has acted as consulting metallurgical engineer in the role of Senior Associate for Behre Dolbear Australia since 1996. For almost 20 years Mr Nice acted 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 and is a member of the Australian Valuers & Appraisers.



### **CONSULTING GEOLOGISTS**

#### CARBINE TUNGSTEN



#### Dr Andrew White - BSc (Hons, Geology) Uni Sydney, PhD UNE

5 years Shell Development, 13 years Comalco (Manager, Exploration), 3 years Poseidon Ltd (Manager, Minerals), 5 years Director, W H Bryan Mining Geology Research Center, UQ, 5 years Director/Chairman Icon Resources Ltd/Carbine Tungsten Limited, and independent geological consulting adding to 54 years' broad exploration, mining geology, mineral development and mining financial evaluation experience. Recipient President's Award, Aus IMM, 1998, author of "Management of Mineral Exploration".



#### Rado Jacob Rebek

Joined CRA Exploration in 1970. Worked in exploration for a range of commodities in all parts of Australia and Papua New Guinea. After CRA merged with RTZ, continued working in Rio Tinto Exploration, the last role being Exploration Director for South America, based in Santiago. Leader of field teams or exploration manager responsible for field teams that made discoveries of gold deposits such as Gold Ridge on Guadalcanal and Wafi-Golpu in New Guinea, as well as Century zinc deposit . After retirement in 2003 worked for small exploration companies and lead the field teams that made discoveries – for example bauxite deposits of Australian Bauxite Ltd. Continues working in Chile – generating new exploration projects .





### **RESOURCE MARKET STATUS**

**CARBINE TUNGSTEN** 





SOURCE: WWW.TRADINGECONOMICS.COM | OTC





SOURCE: WWW.TRADINGECONOMICS.COM | OTC



## **COMPANY DIVERSIFICATION STRATEGY**

## **DEVELOP AND MAINTAIN CNQ ASSETS**

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







### LITHIUM BY END USE (USGS, 2016)

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





## (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. Prices in China, according to Platts, soared to \$25,000 per metric ton in 2016.

Group→1 ↓Period		2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1 H																		2 He
2	3	4 Be												5 B	6 C	7 N	8 0	9 F	10 Ne
3	11 Na	12 Mg												13 Al	14 Si	15 P	16 5	17 Cl	18 Ar
4	19 K	20 Ca		21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
5	37 Rb	38 Sr		39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
6	55 Cs	56 Ba	•	71 Lu	72 Hf	73 Ta	74 W	75 Re	76 0s	77 Ir	78 Pt	79 Au	80 Hg	81 TI	8Z Pb	83 Bi	84 Po	85 At	86 Rn
7	87 Fr	88 Ra	*	103 Lr	104 Rf	105 Db	106 5g	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Cn	113 Uut	114 Fl	115 Uup	116 Lv	117 Uus	118 Uuo
				57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb		
			:	89	90 Th	91 Pa	92	93 No	94	95	96 Cm	97 BL	98	99 5-	100	101 Md	102 No		

 The current upsurge in lithium exploration will undoubtedly show that the earth is awash with lithium.

### STRATEGY

- Carbine's strategy is to position itself 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.



### **COMPETITIVE ADVANTAGE**

Intellectual property developed by Dr Andrew White and Rado Jacob Rebek constituting radical insights into geological habitat of lithium:

- Lithium brines occur in internal drainage basins in continental rifts, and the lithium is one of many metals introduced in solution into the basins as a consequence of rifting.
- Chile encompasses a continental rift of the right proportions, and yet is not recognised as such.
- Whilst Chile is a major producer of lithium from brines that occur in modern internal drainage basins in the Altiplano at elevations >3500m, the existence of lithium brines in geologically older basins at much lower altitude (750-1000m) west of the Altiplano has not been tested.
- These older basins are mostly covered by desert dust, although they have produced nitrates, borates and salt (sodium chloride).





### **COMPETITIVE ADVANTAGE CONT...**

The older basins have several major logistical advantages:

- Evaporation rates are higher for concentration of lithium brines to commercial grades.
- They are closer to modern infrastructure power, sealed roads and ports.

### **EXPLORATION TARGET**

A commercial lithium brine deposit in a favourable production environment.

## **S**TATUS

- Reconnaissance of Atacama Desert region, sampling of existing lithium brine-producing salars as analytical benchmark.
- Applications lodged for 10 exploration concessions (30 square km) over two salars in Chile.







## WHY CHILE?

Chile contains 27% of the global reserves of lithium and contributes to more than 50% of the global production.

All major international miners active in Chile:

BHP Billiton, Anglo American, Rio Tinto, Xstrata, Teck Cominco, Kinross, Phelps Dodge, Barrick Gold and Newmont.

Strategically positioned to service Asia and North America:

- Export orientated country.
- Good access to existing ports road and power.

One of South America's most stable and prosperous nations:

- Over 150 years of mining history with well defined mining and environmental regulations.
- Consistently one of Latin America's fastest growing economies.
- Open market economy, high level of foreign trade and macro-economic stability.



Chile's national flag.



Map showing Chile in relation to South America.



### WHY CHILE CONT...



Sources: KPMG Global Mining Institute (2014).



Sources: Brook Hunt, Codelco and AON Group (2011).



Sources: KPMG Global Mining Institute (2014).



Sources: KPMG Global Mining Institute (2014).



### WHY CHILE CONT....

### **Mining Regime**

- Clear legislation and well-established procedures.
- Favourable mining royalty regime.
- Chilean mining law permits:
  - 100% foreign ownership.
  - Legal protection of mining concessions.
  - Concessions granted on a first come first serve basis.
  - Independent judicial system.
  - Clear foreign investment framework.



Chile's capital city, Santiago.

#### **Knowledgeable Workforce**

La Serena School of Mines, access to high quality and knowledgeable workforce.

### **Taxation Regime**

- Individuals and companies pay 19% VAT on sales and services.
- Small mining companies subject to income tax at a fixed rate.

#### **International Treaties**

 Chile has signed International Treaties that apply to the mining industry including a double taxation treaty with Australia and nearly 90% of Chile's trade is conducted within free trade agreements (KPMG Global Mining Institute).



### **EXPLORATION STRATEGY**

- Test existing applications for lithium brines by shallow (initially 10m) drilling.
- Continue prospecting reconnaissance to sample salars not already sampled.
- Anticipate applications for more ground.
- Expand drill testing and sampling with the intention to outline potentially commercial lithium brines within 12-18 months depending on continued success as for shadowed by the initial reconnaissance.

2017 Budget	AUD\$
Initial Shallow Drilling	120,000
Further Reconnaissance	100,000
Further Applications	40,000
Second Round of Shallow Drilling	120,000
Rent, Travel, Administration Costs	80,000
TOTAL	460,000

#### **OUTCOME:**

Delineation and substantial concession position on one or more lithium brine targets for sampling by deeper drilling (500m) in 2018.

#### TARGET:

Flow of significant announcements through 2017 regarding lithium sampling.



## Lithium Brine Project Chile – Proposed Timeline



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#### Carbine holds two tenements:

- Panama Hat 20km from Broken Hill; and
- Crow Mt 20km from Barraba, north western NSW.

Both logistically well situated.

Both subjected to substantial prior investigation by White and Rebek and comparison with other gold prospects, resulting in their selection as premier prospects.



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.





### **EXPLORATION**

### TARGET:

>500,000 ounce open pit oxide gold at grades of 2-3g/t.

### STATUS:

- Previous drilling and sampling vindicates their selection.
- Fresh geological interpretations ready to be tested.

### STRATEGY:

Confirmation of new geological interpretations by shallow (20m) drilling and rapid confirmation of resource potential. Assuming confirmation, expanded drilling to develop open pit resources in each tenement.

2017 Budget	AUD\$
Drilling	120,000
Geology	80,000
Logistics (landowner compensation,	
compliance, etc)	60,000
TOTAL	260,000

#### **OUTCOME:**

Continuous reporting stream of gold analyses through 2017.

Robust statement of exploration target by end 2017.



### **MT CARBINE MINE - OVERVIEW**

#### CARBINE TUNGSTEN





## TUNGSTEN.... INDUSTRIAL ENABLING METAL WITH STRATEGIC IMPORTANCE

**CARBINE TUNGSTEN** 



Aeronautical & Automobile Manufacturing





Rail & Heavy Earthmoving



Military & Mining



With a density of 19.25 g/cm3, tungsten is also among the heaviest metals.



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



## **TUNGSTEN MARKET**

### The tungsten market has faced significant changes however:

- Geo-political situation favouring price increases.
- The West's diminishing reliance on China.



Source: 2016 ITIA Conference, Stockholm



### **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.





**TUNGSTEN EXPLORATION POTENTIAL** 

### 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.
- Maintaining project ready status.

2017 Budget	AUD\$
Maintaining Permits & Licences	200,000
Exploration	60,000
TOTAL	260,000



**NEW MINERAL PROCESSING TECHNOLOGY** 



### http://www.atomexchangetechnology.com/

**CARBINE TUNGSTEN** 



## **Corporate Overview**

CARBINE TUNGSTEN

CAPITAL	STRUCTURE	BOARD OF DIRECTORS				
ASX Code	CNQ	Russell Krause	Non-Executive Chairma	an		
Shares on Issue	418,876,418	Jim Morgan	Managing Director/CEC	)		
Unlisted Options Expiry 12/11/17	8,000,000	Roland Nice	Non-Executive Director			
Market Cap	~ \$8.4 million					
Share Price (52 Week High/Low)	\$0.013 - \$0.034	ΜΑ	JOR SHAREHOLDERS			
Debt (USD)	~ \$180,000	BNP Pariba S Nominee DRP A/c>	es Pty Ltd <global omni<="" prime="" td=""><td>17.91%</td></global>	17.91%		
R&D Tax Refund	$\sim$ \$1.49 million n.a	Dr Leon Eugene Pretor	ius	8.59%		
Annual Average )	~ \$1.49 million p.a.	Mota Engil Minerals & N	Mining Investments BV	3.82%		
Shareholders	~ 1,154	Baglora Pty Ltd < Mott F	Family Super Fund A/C>	3.78%		
Тор 10	43.65%	TBB NSW Pty Ltd < The	e Watson No 1 A/C>	3.27%		



# Thank-you

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### **Disclaimer**

#### **CARBINE TUNGSTEN**

#### **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.

Given these risks and uncertainties, undue reliance should not be placed on forward-looking statements and intentions which speak only as at the date of the presentation. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, Carbine does not undertake any obligation to publicly release any updates or revisions to any forward looking statements contained in this presentation, whether as a result of any change in Carbine's expectations in relation to them, or any change in events, conditions or circumstances on which any such statement is based.

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.