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## CARBINE RESOURCES

LIMITED

## Mount Morgan Gold & Copper Project

Investor Presentation:
Progressing Final Feasibility & Drilling for JORC Upgrade

## DISCLAIMER

#### Mineral Resources

The Indicated and Inferred Resources referred to in this presentation were presented by Norton Gold Fields Limited at the Mining 2009 Resource Convention (Brisbane). The presentation was released to the ASX on 28 October 2009 and is available for viewing on the Norton Gold Fields website (www.nortongoldfields.com.au). The resources were stated to have been prepared in accordance with the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Competent Person Troy Lowien, Resource Geologist, of consultants Coffey Mining Pty Ltd.

#### **Exploration Targets**

Carbine has identified an Exploration Target at the site comprising low grade mullock dumps, slag dumps and retreated tailings from previous operations. In the Exploration Target table of this presentation a range of approximate tonnage and grade has been compiled from extensive review of historic reports and studies by previous owners. Carbine has not yet completed any exploration activity on the Exploration Target. The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The basis for the estimates of tonnage and grade include historic production records, various topographic and volume surveys, drilling by various methods, grab and channel sampling and small scale bulk sampling. Carbine proposes to further evaluate the Exploration Target during the next year by drilling and possible bulk testing to provide material for additional metallurgical test work and to verify tonnage and grade.

#### **Competent Person Statements**

The information in this report that relates to the recently completed exploration results is based on and fairly represents information compiled by Dr Marat Abzalov, who is a geological consultant to Carbine Resources Limited. Dr Abzalov is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM) and he has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking 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". Dr Abzalov consents to the inclusion in the report of the matters based on information in the form and context in which it appears. Previous results were released to the ASX on 16 March and 20 April 2015 and have not materially changed since last reported.

The information in this report that relates to the Exploration Target is based on information compiled by Lance Govey, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Lance Govey is an independent geological consultant and has no association with Carbine Resources Limited other than being engaged for services in relation to the preparation of parts of this report. Lance Govey has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Lance Govey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This was initially release to the ASX on 13 November 2014 and has not materially changed since it was last reported.

The information in this report that relates to the Mineral Resources of the Mount Morgan Mine project was prepared in accordance with the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Troy Lowien, Resource Geologist, of consultants Coffey Mining Pty Ltd, who is a Member of The Australasian Institute of Mining and Metallurgy ("AusIMM") and has a minimum of five years of experience in the estimation, assessment and evaluation of Mineral Resources of this style and is the Competent Person as defined in the JORC Code. Troy Lowien conducted the geological modelling, statistical analysis, variography, grade estimation, and report preparation. This report accurately summarises and fairly reports his estimations and he has consented to the resource report in the form and context in which it appears. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated to comply with the JORC Code 2012 on the basis that the information has not materially changed since last reported on 28 October 2009.

## **CARBINE SNAPSHOT**

Experienced board & management, quality major shareholders

### **Share Price History**



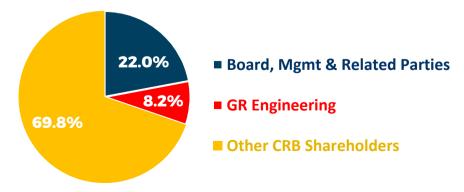
#### **Board & Management**

Patrick Walta	Executive Director
Evan Cranston	NED
Tom Bahen	NED
Stephen Dobson	NED
Terry Moylan	Chief Operating Officer
Rod Smith	Chief Metallurgist
Russell Dann	Project Specialist

#### **Capital Structure**

Shares (ASX: CRB)	152 Million
Unlisted Options (\$0.05 - \$0.10)	25 Million
Market Capitalisation (@ \$0.075/share)	\$11.5M
Cash & Deposits (10 Jan 2016)	\$3.0M

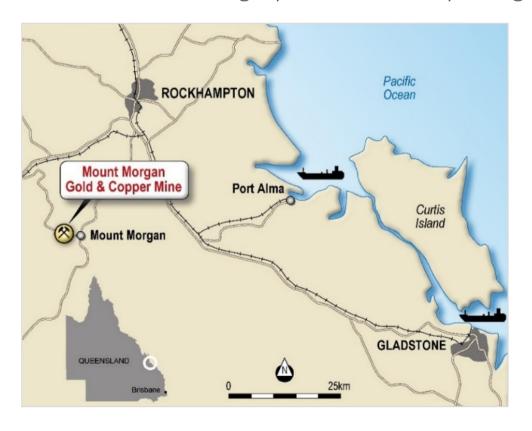
### **Significant Shareholders**

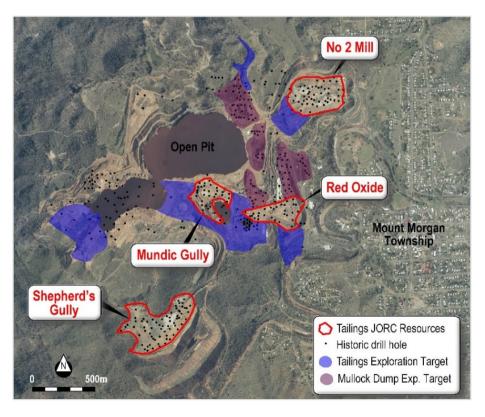


## **MOUNT MORGAN MINE**

#### Overview

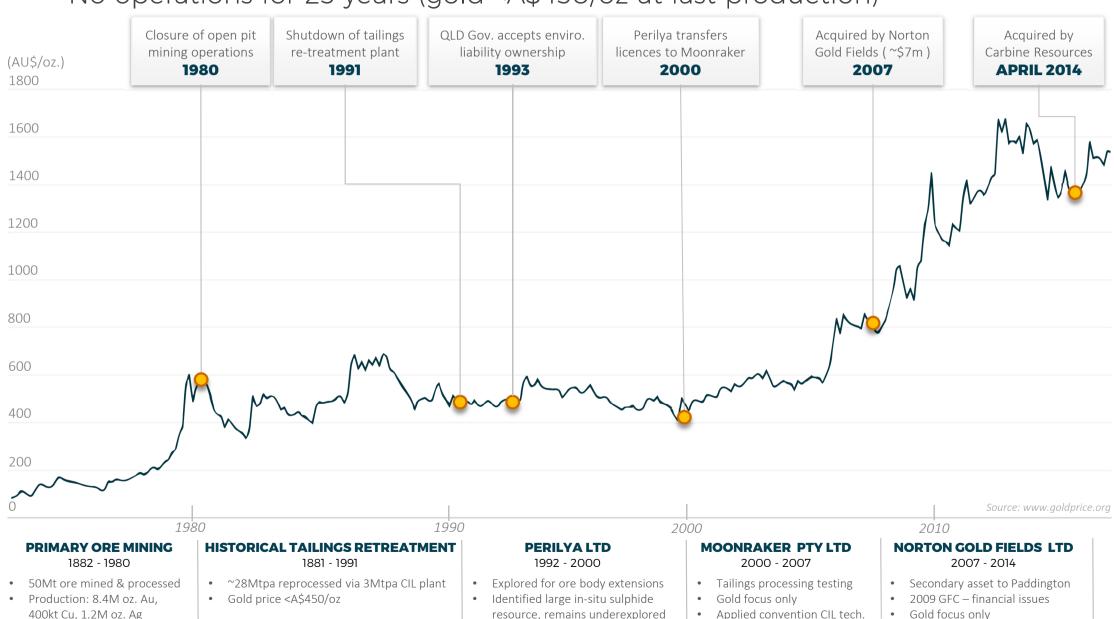
- Historic QLD gold mine close proximity to infrastructure, cities, ports & rail
- Primary deposit mined for ~100 years (8.4Moz Gold, 400kt Copper)
- Mineralised Tailings: ~40Mt deposited on site
- Environmental legacy 100% owned by QLD government





## **MINING HISTORY**

No operations for 25 years (gold <A\$450/oz at last production)

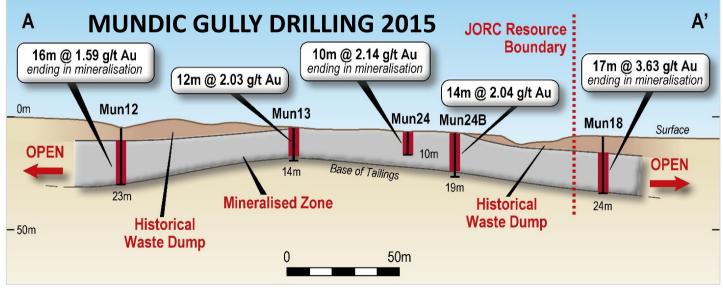


## SIGNFICANT RESOURCE BASE

Tailings resource: Deposit at surface, already crushed & ground

Resources		Tonnes	Au (g/t)	Cu (%)	Au (oz)	Cu (t)
JORC RESOURCES		8.4 Mt	1.23	0.15%	329,000	12,300
NON-JORC HIGH GRADE RESOURCES (Exploration Target)*	Low	4.7 Mt	1.54	0.12%	231,000	5,700
	High	5.8 Mt	1.81	0.17%	336,000	9,800
TOTAL RESOURCES*	Low	13.1 Mt	1.34	0.14%	560,000oz	18,000t
	High	14.2 Mt	1.46	0.16%	665,000oz	22,100t



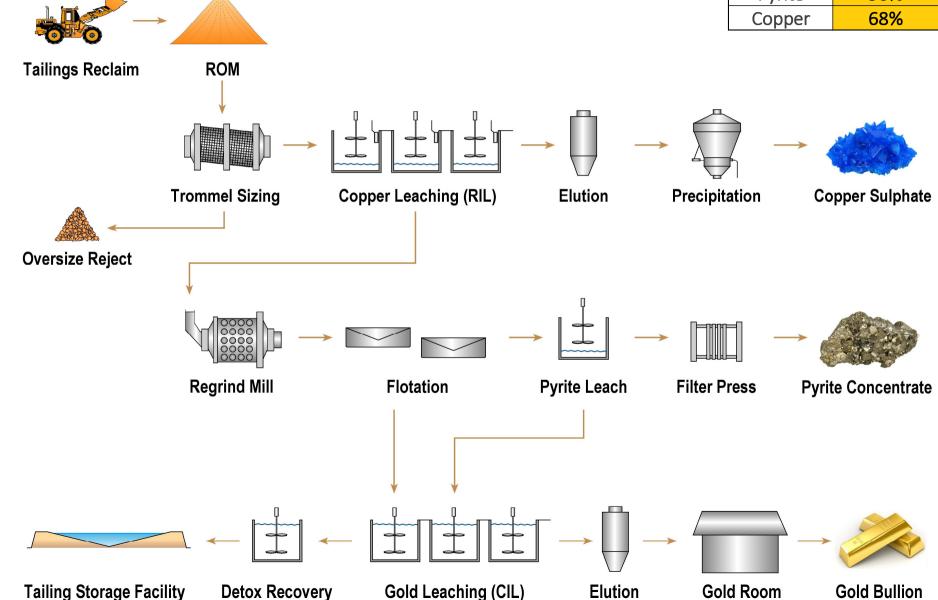


<sup>\*</sup> The potential quantity and quality in these exploration targets are conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource

## PROCESS FLOWSHEET

Multiple by-products = low all-in sustaining costs

Metal Recovery	Carbine PFS
Gold	76%
Pyrite	90%
Copper	68%



## **PRE-FEASIBILTY STUDY RESULTS**

Completed by GR Engineering



<b>Production Parameters</b>	Value	Notes		
Mine Life (minimum)	8 years	JORC resources only (<30% of known mineralisation)		
Annual Throughput	1,000,000 t/yr	Based on available JORC resources		
Average Production	31,200 oz/yr 3,200 tpa 211,000 tpa	Gold Copper Sulphate Pyrite Concentrate		
Average Gold Eq. Production	46,500 oz/yr	Inc. >58,000oz/yr Au eq. in years 1 - 3		

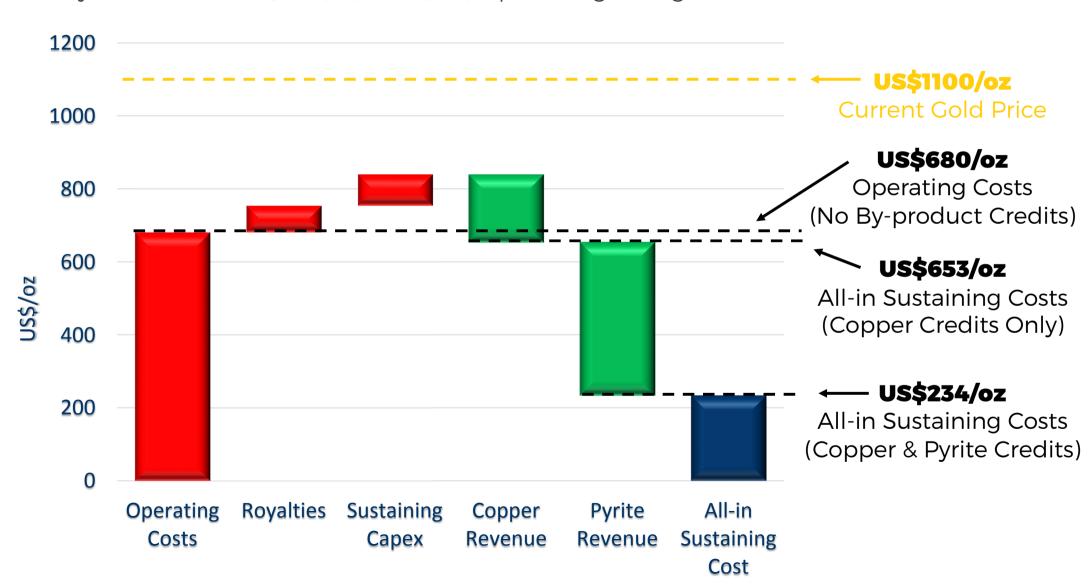
<b>Financial Parameters</b>	Value	Notes
Capital Costs	A\$ 63.3M	Assumed new plant construction
Operating Costs	A\$ 29.2/t	
All-in Sustaining Costs	US\$ 234/oz	Life of mine

\*Note: Metal prices Gold US\$1,125/oz.; Copper US\$5,100/t; Pyrite US\$60/t. Exchange rate \$0.75.

Potential to become one of the lowest cost gold operations in Australia.

## **ALL-IN SUSTAINING COSTS**

Projected US\$866/oz (A\$1,230/oz) operating margin



## SECURED BY-PRODUCT OFFTAKES

Pyrite & copper underpin low cost operation

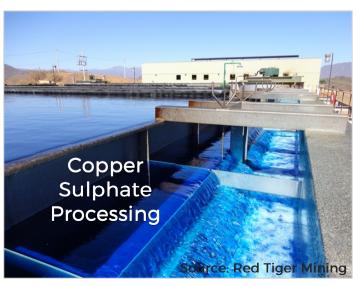
#### **Pyrite Concentrate**

- Four year contract up to 225,000tpa
- Sale price: US\$80/t FOB Gladstone Port
- 90% payment at mine gate, letter of credit terms
- Revenue base of up to ~A\$25 Million per annum

#### **Copper Sulphate**

- Three year contract up to 5,000tpa
- Sale price: formula relative to LME Cu price + premium
- Mine gate sales
- Revenue base of up to ~A\$8 Million per annum





## MINE WATER TREATMENT

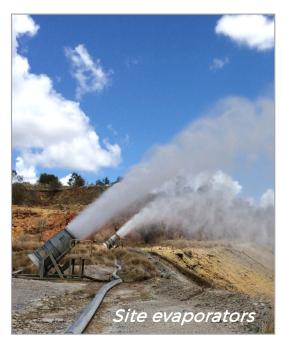
Immediate site cashflow generation

#### Long term service agreement to operate existing site water treatment plant

- 10 year contract treating up to 500ML per annum (revenue of \$2,500/ML before costs)
- Targeting further improvement in volume and quality of discharge water
- Opportunity to apply IX demonstration plant to existing water treatment plant:
  - Further cashflow via extraction of up to 300tpa of copper
  - Showcase for the use of IX technology on site







## STRATEGIC PARTNERSHIP

GR Engineering now Carbine's largest shareholder

#### **Alliance with GR Engineering for future mine development**

- Dec 2015: Binding MOU with GR Engineering Services Limited (ASX: GNG)
- \$750,000 placement: strong vote of confidence in Carbine's development plans
- Long term relationship for ongoing engineering, design, construction and operations

#### **GR Engineering Overview**

- ASX Listed, leader in specialist process engineering, design and construction
- Strong reputation and experience in tailings reprocessing
- Track record of project delivery in 13 countries



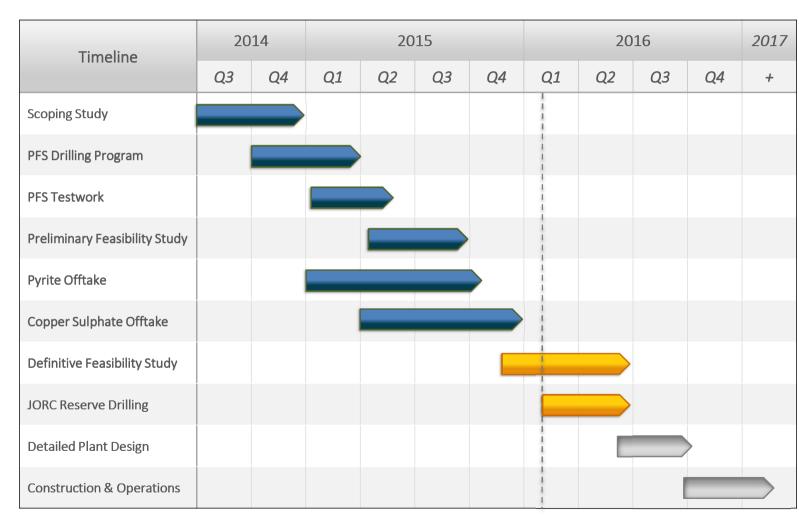
Andy Well Gold Process Plant (GR Engineering EPC)
Source: Doray Minerals Ltd

## MINE DEVELOPMENT PLANNING

Final feasibility & financing process underway

#### **Highlights**

- ✓ Confirmed US\$234 AISC via independent PFS
- ✓ Binding pyrite offtake A\$25M p.a. revenue
- ✓ Binding copper sulphate offtake A\$8M p.a. revenue
- ✓ DFS & drilling underway
- ✓ Employed key technical and financial staff
- ✓ 2015 Austmine Innovation Award for Miners
- ✓ Three phases of independent testwork
- ✓ Maintained strong cash balance



## **MOUNT MORGAN SUMMARY**

Value Proposition

# Significant Resource Base

- ✓ 8.4Mt JORC Resource base (<30% of known mineralisation on site)
- ✓ Up to +1Moz Au & 80,000t Cu tailings resource

## Robust Project **Economics**

- ✓ Projected All-In Sustaining Costs of US\$234/oz for life of mine
- ✓ Operating margin US\$866/oz (A\$1,230/oz) at current gold price

# **Committed By- Product Offtake**

- ✓ Binding pyrite concentrate offtake up to A\$25M per annum
- ✓ Binding copper sulphate offtake up to A\$8M per annum

# **GR Engineering Partnership**

- ✓ Now Carbine's largest shareholder strong vote of confidence
- ✓ Responsible for the Mount Morgan PFS & DFS

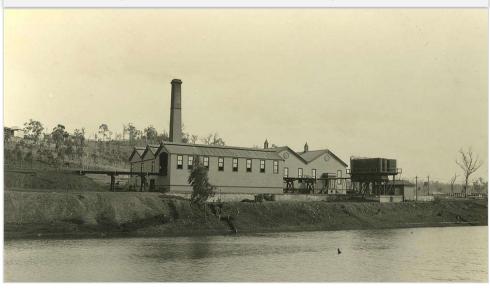
## HISTORY REPEATS...

Using the success of the past in restarting operations

### 1927

#### $Underground \rightarrow Open Pit Operations$

- Gold production main focus
- Initial revenue via copper cement production from flooded underground workings
- Pyrite by-product sales
- Mine operated for a further 50 years



### **2016** (planned)

### Primary Ore $\rightarrow$ Tailings Operations

- Gold production main focus
- Initial revenue via copper sulphate production from flooded open pit
- Pyrite by-product sales
- Potential for another 25+ years of operations





### **CARBINE RESOURCES**

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#### **Contact**

Patrick Walta Executive Director Ph: +61 8 6142 0986

#### **Carbine Resources Limited**

Suite 23 513 Hay Street Subiaco WA 6008

Unlocking significant metal value left behind after 100+ years of operations