

# MOUNT MORGAN GOLD COPPER PROJECT



CARBINE RESOURCES  
LIMITED



RRS  
Resources Rising Stars

30 – 31 May 2017

LONG LIFE PROJECT | SHORT TERM PAYBACK | COMMUNITY AND ENVIRONMENT ENHANCEMENT

## SUMMARY INFORMATION AND NOT AN OFFER

The purpose of this presentation is to provide information about Carbine Resources Limited (“Carbine or the “Company”). It is not recommended that any person makes any investment decision in relation to the Company based on this presentation. This presentation is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of Carbine shares in any jurisdiction. To the fullest extent permitted by law, Carbine, its officers, employees, agents and advisers do not (a) make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of any information, statements, opinions, estimates, forecasts or other representations contained in this presentation or (b) accept any liability, including liability arising from fault or negligence on their part, for any loss arising from the use of this announcement or its contents or otherwise in connection with it. All securities transactions involve risks, which include (among other things) the risk of adverse or unanticipated market, financial or political developments.

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This presentation includes forward looking statements. Forward looking statements are only predictions and the assumptions on which they are based are subject to risk factors related to the conduct of mineral exploration, mining and production activities. Whilst Carbine believes that the expectations as to future matters reflected in these forward looking statements are based on reasonable grounds, they may be affected by changes to underlying assumptions which could cause a material change to actual values, results or events, such as price and currency fluctuation, drilling results, environmental and physical risk, financial market conditions, approvals, legislative and regulatory changes, and cost estimates. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Subject to any continuing obligations under applicable law and ASX Listing Rules, Carbine does not undertake to update or revise any information or any of the forward looking statements in this presentation.

## METAL EQUIVALENTS

Both AuEq (g/t) and PyriteEq (wt%) have been used in this announcement. AuEq was calculated for each ore source based on the different metallurgical recoveries associated with those ore sources. A combined Total AuEq was also determined for representation of the combined effect of the four different ore sources. Please refer to Appendix F to see the detail formulas used for the determination of the metal equivalents.

## EXPLORATION TARGETS

It is common practice for a company to comment on and discuss its exploration in terms of target size and type. 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 significant 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.

## CAPITAL STRUCTURE

ASX Code	CRB
Shares on issue	193 Million
Share Price	7.9 cents <sup>1</sup>
Unlisted Options (\$0.05 - \$0.10)	26.7 Million
Market Cap	\$15.37M
Cash & Deposits	\$5.4M <sup>2</sup>

## MAJOR SHAREHOLDERS

Board, management and related parties	8.0%
GR Engineering Services	7.9%

## MOUNT MORGAN PROJECT EARN IN AGREEMENTS

Carbine & Raging Bull Metals <sup>3</sup>	CRB 6 month option to acquire 100% of project for 25M CRB shares, A\$2.3M and 1% Royalty. Previous milestone payments for initial 75% and remaining 25% after DFS replaced in new agreed option.
Raging Bull Metals & Norton Goldfields	100% interest transferred on decision to mine and payment \$2M Deferred payment \$13M (via 20% annual EBITDA)

## NOTES

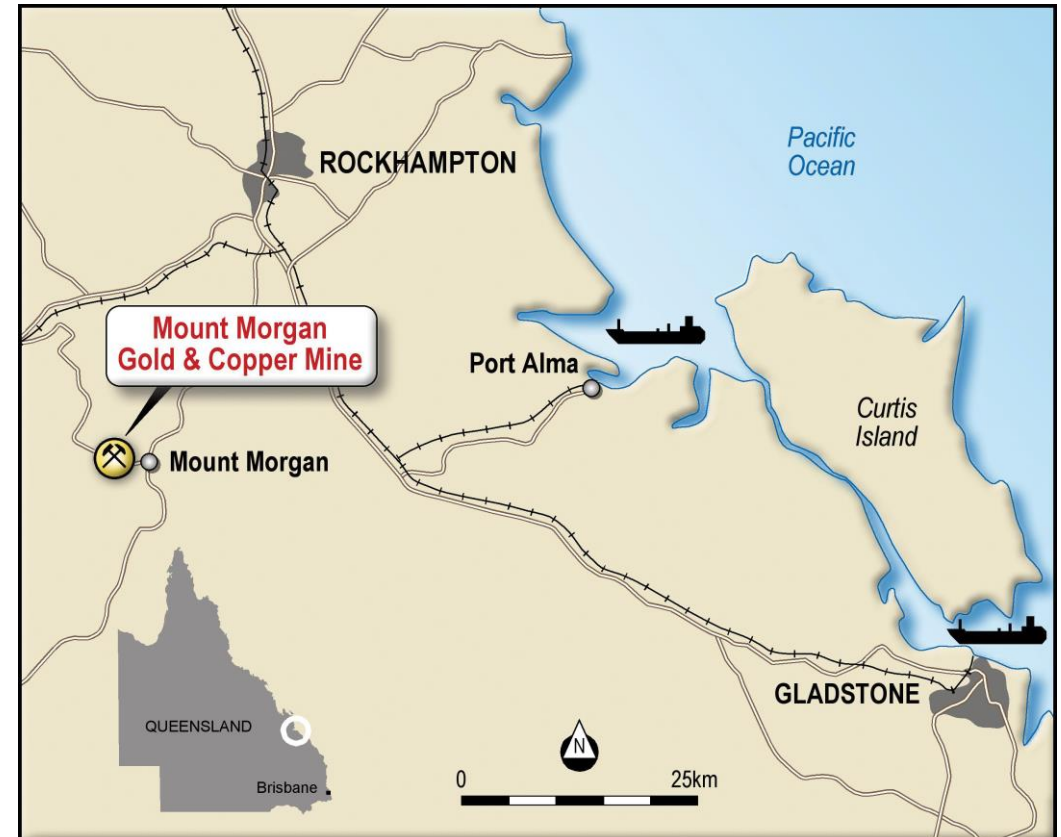
1 - ASX 26 May 2017, 2 - As at 30 March 2016, 3 - ASX: 24 March 2017

## BOARD & MANAGEMENT

Chairman	John Fitzgerald
Managing Director	Anthony (Tony) James
Director	Graham Brock
Director	Evan Cranston
Chief Operating Officer	Terry Moylan
Geology Manager	Chris Newman
Mount Morgan Project Specialist	Russell Dann



1. MOUNT MORGAN GOLD AND COPPER PROJECT IN CENTRAL QUEENSLAND. THE PROJECT SITS ADJACENT TO THE MOUNT MORGAN TOWNSHIP WITH FIRST CLASS INFRASTRUCTURE ALREADY IN PLACE
2. CARBINE FEASIBILITY STUDY COMPLETED IN DECEMBER 2016 ON THE TAILINGS RETREATMENT AND ENVIRONMENTAL CLEAN-UP OF FOUR HISTORIC TAILINGS DUMPS<sup>1</sup>
3. THE HISTORICAL MOUNT MORGAN MINE IS ONE OF AUSTRALIA'S PREMIER GOLD AND COPPER MINES WITH PRODUCTION OF OVER 8.5MOZ GOLD, 400KT COPPER AND 1.2MOZ SILVER FROM 1882 TO 1980
4. TAILINGS PREVIOUSLY REPROCESSED VIA A 3MTPA CIL PLANT FROM 1981 TO 1990. LOW RECOVERY AND HIGH COST DUE TO CYANIDE CONSUMPTION AND SOLUBLE COPPER DROVE PREMATURE CLOSURE
5. QUEENSLAND GOVERNMENT ACCEPTED FULL ENVIRONMENTAL AND HERITAGE LIABILITY IN 1993
6. CARBINE NEW BOARD AND MANAGEMENT TEAM ANNOUNCED APRIL 2016<sup>2</sup>
7. TECHNICAL AND COMMERCIAL SUCCESSFUL TEAM ESTABLISH NEW 3 STREAM PROCESS FLOW SHEET TO UNDERPIN FEASIBILITY STUDY (GR ENGINEERING SERVICES<sup>3</sup>)



#### NOTES

1. Please refer announcement ASX:8 December 2016.
2. Please refer announcement ASX: 13 April 2016.
3. Please refer announcement ASX: 23 December 2015.

## 1. LONG LIFE PROJECT / SHORT TERM PAYBACK<sup>1</sup>

- 9.5 YEAR ORE RESERVE BASE CASE & 20 YEAR EXPANDED CASE
- 2 YEAR PROJECT PAYBACK PERIOD
- \$549/AU OUNCE AISC
- 60-30KOZS AUEQ ANNUAL PRODUCTION

## 2. ENVIRONMENTAL ENHANCEMENT

- QLD GOVERNMENT ACID MINE DRAINAGE LEGACY +\$500M
- COPPER (2KTPA) & PYRITE (200KTPA) BY-PRODUCTS REMOVED FROM SITE
- TAILINGS CLEANED OUT OF OLD WATER WAYS & ORIGINAL GULLIES ESTABLISHED

## 3. COMMUNITY ENHANCEMENT

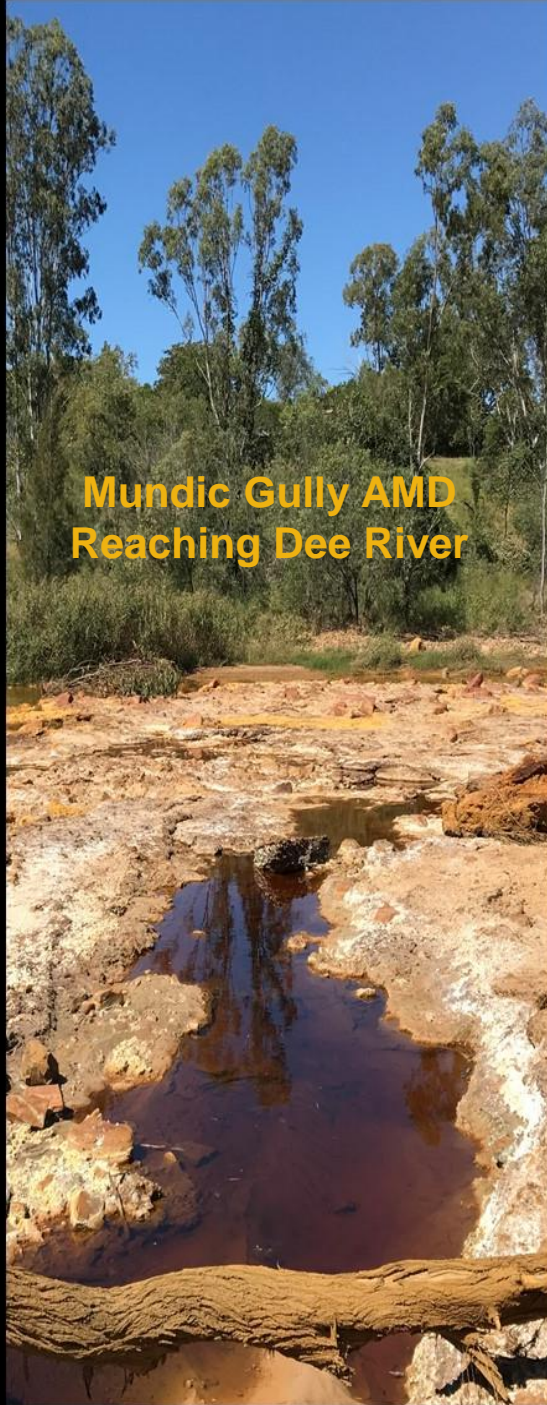
- 12 MONTH CONSTRUCTION PERIOD WITH \$85M SPEND
- 20 YEAR OPERATING COSTS +\$45M/YEAR
- 60 DIRECT JOBS, NO FIFO, MOUNT MORGAN HAS 13% UNEMPLOYMENT
- ENVIRONMENTAL CLEANUP
- HERITAGE VISION LINKED TO GREEN TOURISM OPPORTUNITY
- OPERATING MINE “MULTIPLYER EFFECT” INTO REGIONAL COMMUNITY



**Dee River Above Mundic  
Gully, Sunday 30 April 2017**

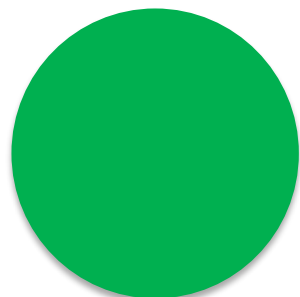


**Mundic Gully AMD  
Reaching Dee River**

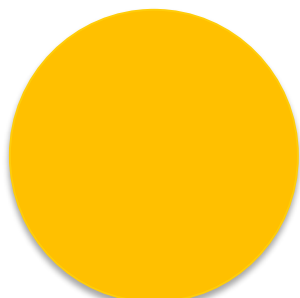


**Dee River Below Mundic  
Gully, Sunday 30 April 2017**

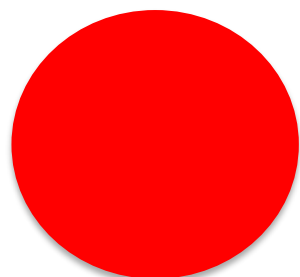




CLEANSSED RESOURCE & PROJECT DATA (2016)  
MAIDEN ORE RESERVE (JORC 2012 – Dec 2016)<sup>1</sup>  
LONG LIFE, SHORT PAYBACK FEASIBILITY STUDY (Dec 2016)<sup>1</sup>  
RAGING BULL OPTION AGREED<sup>2</sup>  
HERITAGE DEVELOPMENT APPLICATION ENDORSED BY QHC & APPROVED BY MINISTER DNRM<sup>3</sup>  
COMMENCE FEED & RIP DEMONSTRATION PLANT<sup>4</sup> **AUGUST**



NORTON GOLDFIELDS DISCUSSIONS RE TIMING OF TITLE TRANSFER **JUNE/JULY**  
ENVIRONMENT AUTHORITY APPLICATION (PREVIOUSLY APPROVED IN 2010) **JULY**  
REGIONAL PLANNING AUTHORITY (ROCKHAMPTON COUNCIL) **JUNE**  
PYRITE OFFTAKE (CHINESE OFFTAKE INVESTIGATION) **JUNE/JULY**  
QLD REGIONAL JOBS & GROWTH FUND (APPLICATION) **JUNE**  
PROJECT FINANCE (PARALLEL DUE DILIGENCE)



**NIL**

#### NOTES

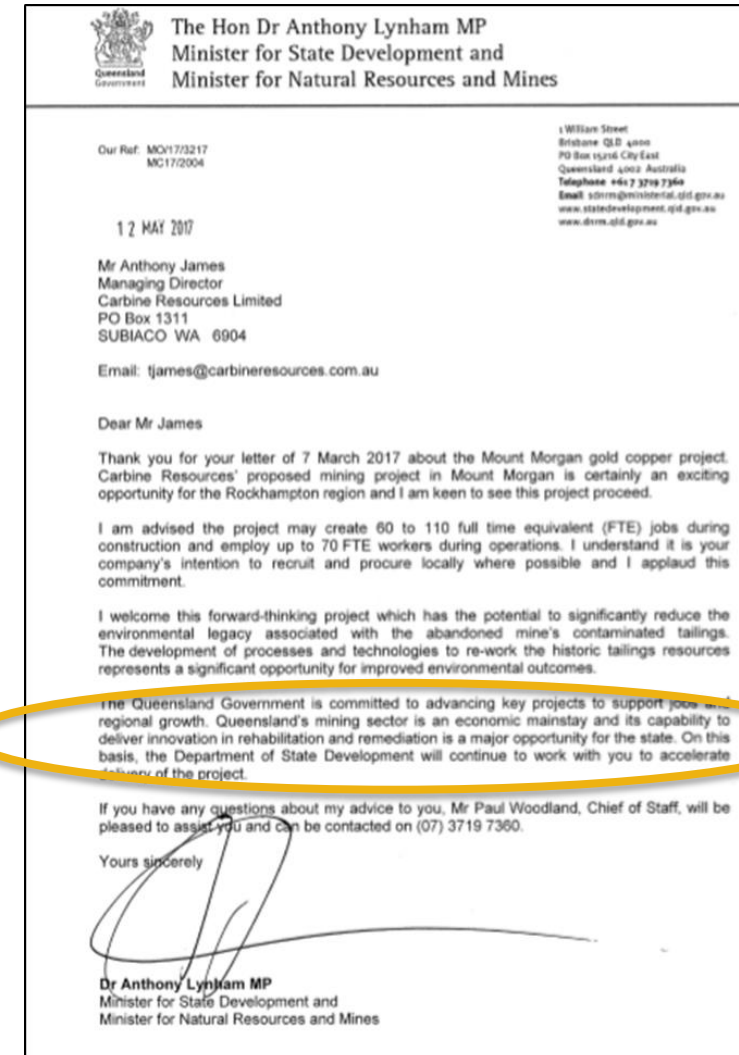
1. Please refer announcement ASX: 8 December 2016.
2. Please refer announcement ASX: 24 March 2017.
3. Please refer announcement ASX: 27 April & 29 May 2017.
4. Please refer announcement ASX: 9 May 2017.


“The Queensland Government is **committed** to advancing key projects to support **jobs** and **regional growth**. Queensland’s mining sector is an **economic** mainstay and its capability to deliver **innovation in rehabilitation and remediation** is a major opportunity for the state. **On that basis the Department of State Development will continue to work with you to accelerate delivery of the project” ...**



**Jobs and Regional Growth Fund**

**\$130 million fund**  
Backing business and jobs in regional Queensland



 The Hon Dr Anthony Lynham MP  
Minister for State Development and  
Minister for Natural Resources and Mines

Our Ref: MCY17/3217  
MC17/2004

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12 MAY 2017

Mr Anthony James  
Managing Director  
Carbine Resources Limited  
PO Box 1311  
SUBIACO WA 6904

Email: [tjames@carbineresources.com.au](mailto:tjames@carbineresources.com.au)

Dear Mr James

Thank you for your letter of 7 March 2017 about the Mount Morgan gold copper project. Carbine Resources' proposed mining project in Mount Morgan is certainly an exciting opportunity for the Rockhampton region and I am keen to see this project proceed.


I am advised the project may create 60 to 110 full time equivalent (FTE) jobs during construction and employ up to 70 FTE workers during operations. I understand it is your company's intention to recruit and procure locally where possible and I applaud this commitment.

I welcome this forward-thinking project which has the potential to significantly reduce the environmental legacy associated with the abandoned mine's contaminated tailings. The development of processes and technologies to re-work the historic tailings resources represents a significant opportunity for improved environmental outcomes.

The Queensland Government is committed to advancing key projects to support jobs and regional growth. Queensland's mining sector is an economic mainstay and its capability to deliver innovation in rehabilitation and remediation is a major opportunity for the state. On this basis, the Department of State Development will continue to work with you to accelerate delivery of the project.

If you have any questions about my advice to you, Mr Paul Woodland, Chief of Staff, will be pleased to assist you and can be contacted on (07) 3719 7360.

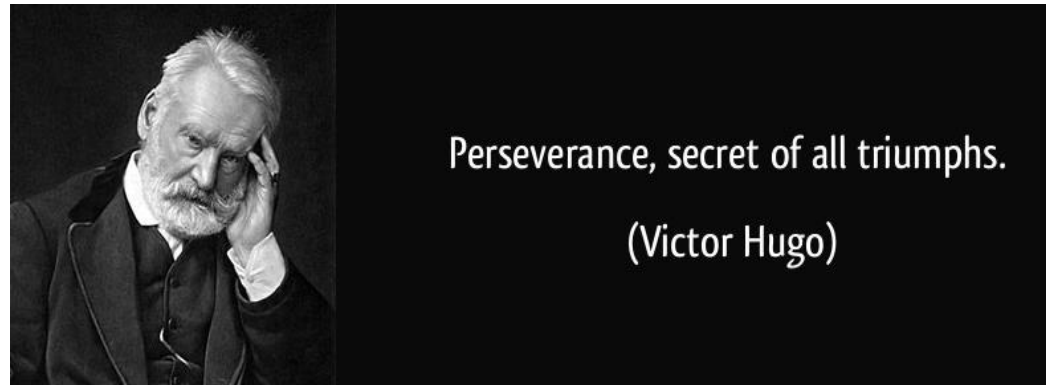
Yours sincerely



Dr Anthony Lynham MP  
Minister for State Development and  
Minister for Natural Resources and Mines



1. MOUNT MORGAN PROJECT IS A LOW COST, LONG LIFE PROJECT WITH SHORT TERM PAYBACK
2. PROJECT WILL HELP MAKE SIGNIFICANT INROADS INTO THE HISTORICAL ENVIRONMENT LEGACY
3. EXPERIENCED TECHNICAL AND COMMERCIAL TEAM WITH A TRACK RECORD OF MINE BUILDING AND DELIVERING SIGNIFICANT VALUE TO SHAREHOLDERS
4. VERY STRONG COMMUNITY AND GOVERNMENT SUPPORT
5. ESTABLISH STRONG GROWTH PLATFORM FOR MANY YEARS THAT UNDERPINS THE COMPANY'S CORPORATE STRATEGY



## 1. LONG LIFE PROJECT (1.1MTPA THROUGHPUT)

- 9.5 YEAR BASE CASE<sup>1</sup>
- 20 YEAR EXPANDED CASE<sup>1</sup>

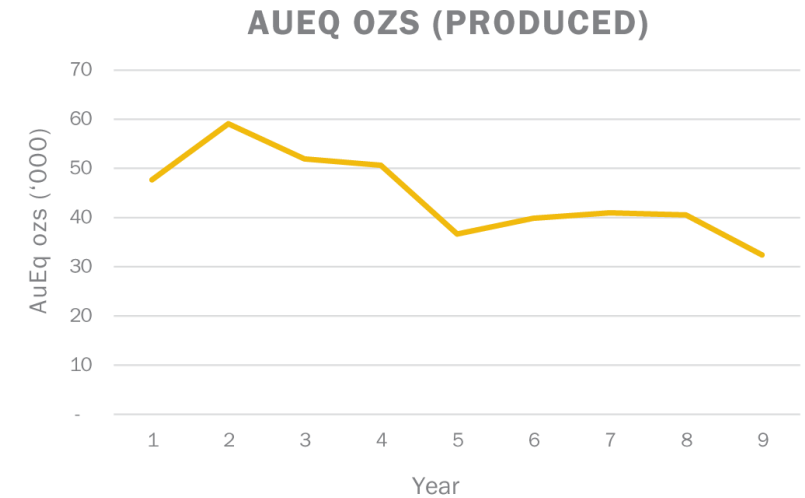
## 2. LOW COST - AISC<sup>2</sup> OF A\$549/AU OZ

## 3. SHORT TERM PAYBACK - 2 YEAR PAYBACK

## 4. PRE-PRODUCTION CAPITAL<sup>3</sup> OF A\$85M, WHICH INCLUDES

- PROCESSING PLANT \$75.6M

## 5. MAIDEN ORE RESERVE OF 9.9MT @ 1.8 G/T AUEQ<sup>4</sup> (1.2G/T AU, 0.16% CU, 21% PYRITE)



### NOTES

1. Please refer announcement ASX:8 December 2016.
2. AISC = C1 + royalties + sustaining capital costs (C1 = Direct cash operating costs produced net of by-product credits),
3. Preproduction capital is capital spent prior to first gold production.
4. AuEq reference formula Appendix F:

# MINING - ORE RESERVE

**MOUNT MORGAN OPEN PIT**

**SANDSTONE GULLY**

**MUNDIC GULLY**  
1.5MT @ 2.6G/T AUEQ,  
2.0G/T AU, 0.17% CU, 19% PY

**NO 2 MILL**  
2.8MT @ 1.7G/T AUEQ,  
1.1G/T AU, 0.11% CU, 24% PY

**RED OXIDE**  
0.7MT @ 2.5G/T AUEQ,  
2.1G/T AU, 0.3% CU

Shepherd's Gully

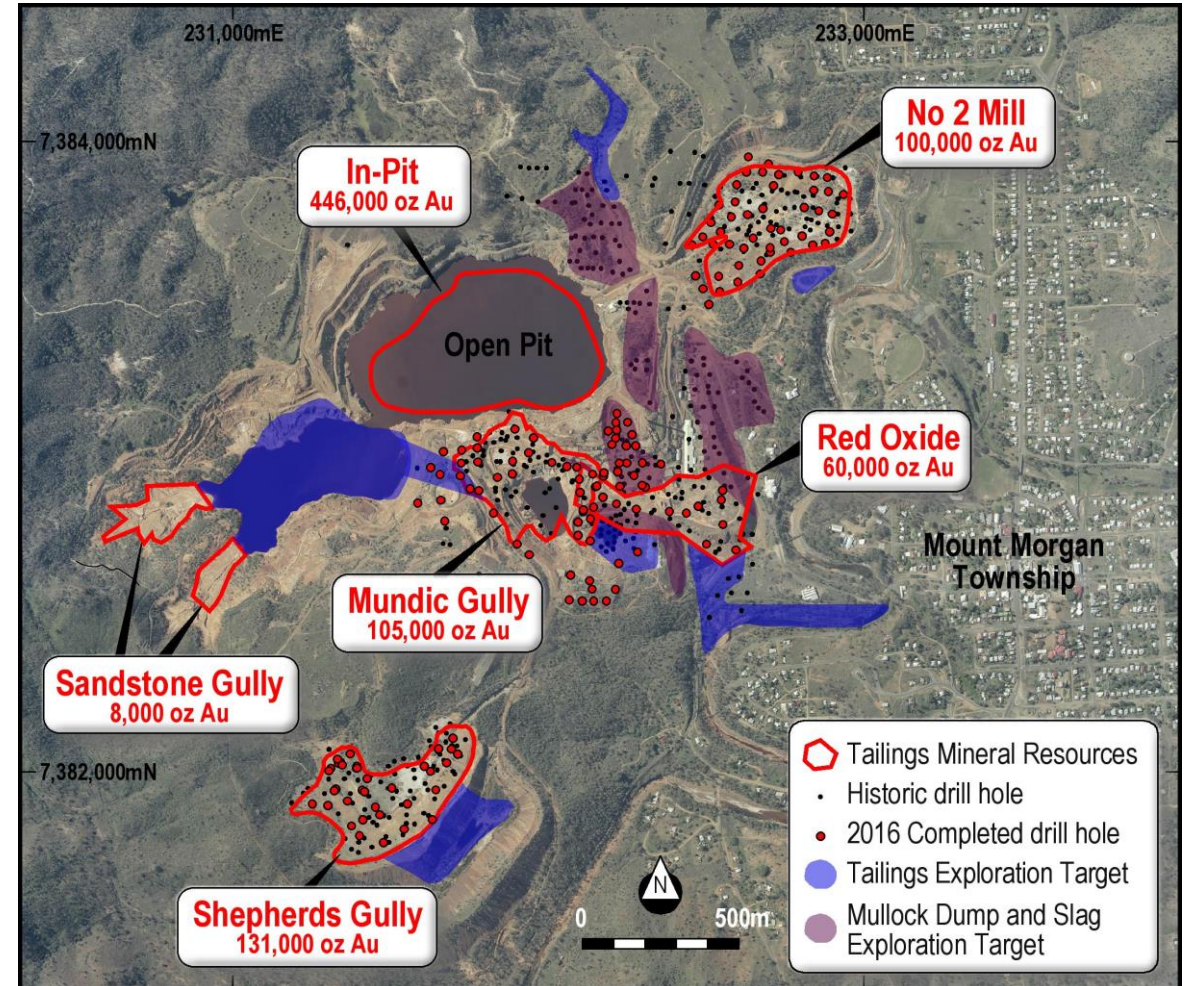
**SHEPHERDS GULLY**  
4.8MT @ 1.5G/T AUEQ,  
0.84G/T AU, 0.17% CU, 23% PY

**NOTES**  
AuEq reference formula Appendix F

## 1. 20 YEAR PROJECT IS AN EXTENSION TO ORE RESERVE (“BASE CASE”)

## 2. EXPANDED CASE - 22MT @ 1.6G/T AUEQ<sup>1</sup>, (0.9G/T AU, 0.12% CU, 21% PYRITE)

- First 9.5 years – “Base Case”, Ore Reserve
- +9.5 years to achieve 20 years expansion (same throughput rate) includes;
  - 10.8Mt @ 0.63g/t Au (47% of total Inferred Mineral Resources)<sup>2</sup>
  - 1.9Mt @ 1.2g/t Au (Low range Exploration Target)<sup>2</sup>
- Exploration Target is combination of oxide and sulphide waste and tailings dumps. Exploration Target is conceptual in nature, there has been insufficient exploration to estimate Mineral Resources and it is uncertain further exploration will result in estimation of the Mineral Resources or that the production target will be realised.
- Historical Production data and detailed technical review support reasonable grounds for inclusion of a portion of Inferred Mineral Resources in the Expanded Case. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.
- The project is not dependent on the Expanded Case to be economic



### NOTES

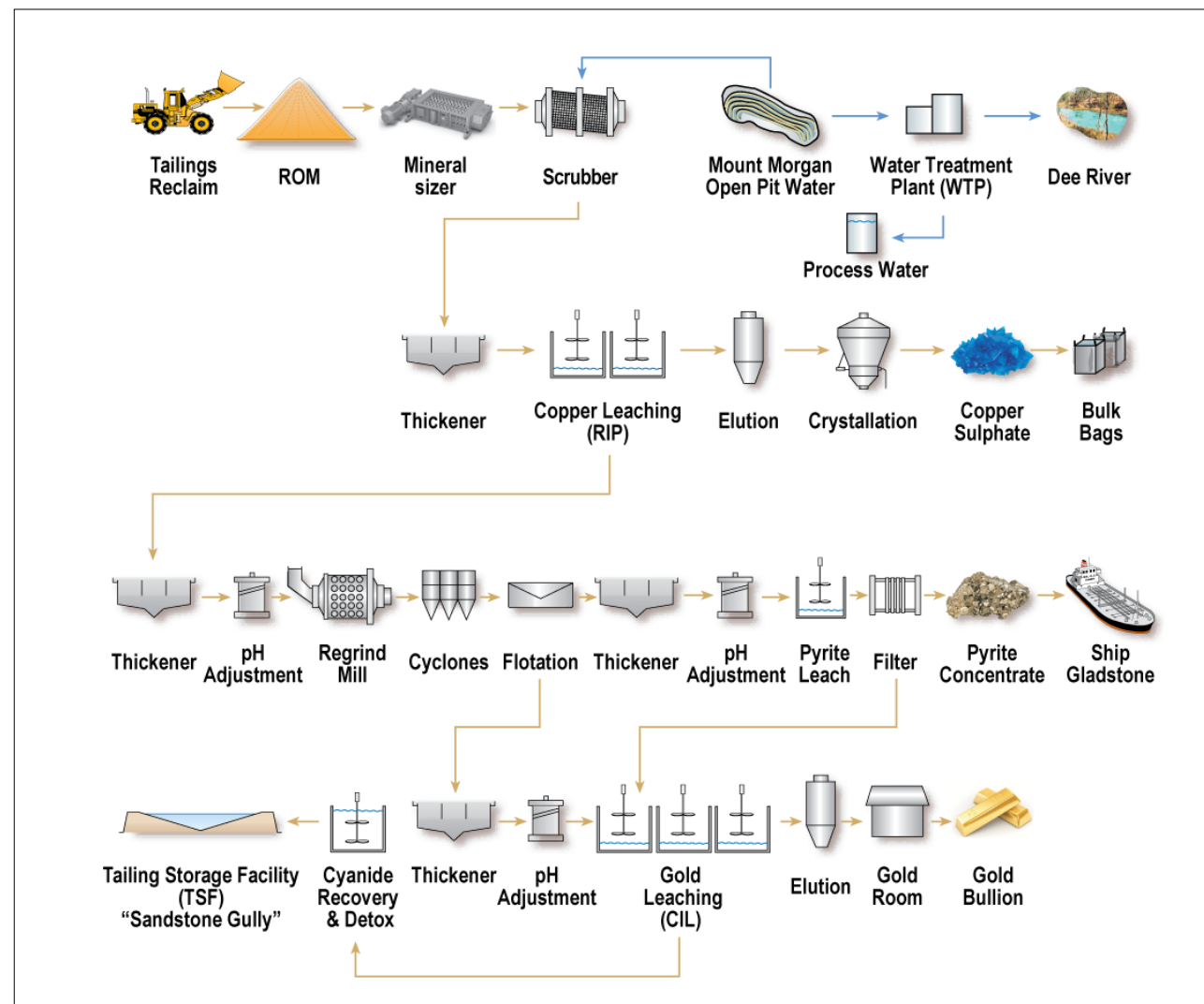
1. AuEq reference formula Appendix F:
2. Mount Morgan Resource increases by 215% to 850,000oz (ASX: 30 August 2016)

## THREE STREAM PROCESSING FACILITY PRODUCING COPPER SULPHATE, UNROASTED PREMIUM IRON PYRITE AND GOLD

- COPPER RESIN LEACHING (RIP)
- PYRITE CONCENTRATE FLOTATION
- GOLD CARBON LEACHING (CIL)

## WATER TREATMENT PLANT UTILISATION AND CONTINUED TREATED WATER DISCHARGE INTO DEE RIVER

METAL RECOVERY	MUNDIC GULLY	NO 2 MILL	RED OXIDE	SHEPHERDS	TOTAL
GOLD	72%	71%	74%	70%	71%
PYRITE	96%	93%	0%	87%	90%
COPPER	66%	65%	48%	51%	56%





# **NEW PROCESSING FACILITY**

PHOTO COURTESY OF DNRM

## 1. SPECIFIC MARKETS FOR PYRITE CONCENTRATE

- Sulphuric Acid – Bulk supply of premium concentrate to China and Europe,
- Industrial Components – Specific small volume distribution to customers primarily in Asia

## 2. MOUNT MORGAN PREMIUM PYRITE CONCENTRATE IS SIMILAR TO THE PYHASALMI MINE (FINLAND)

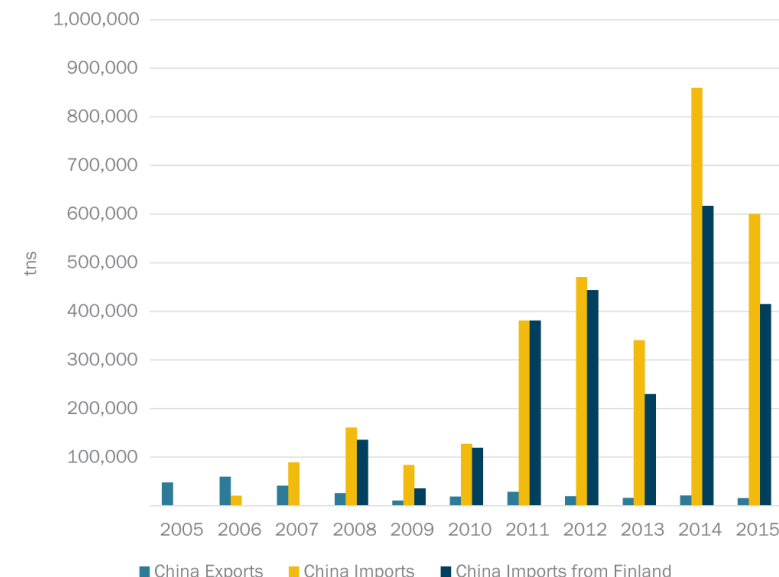
- Premium Pyrite Product – High Sulphur (50%) with low deleterious elements (e.g. arsenic, mercury)
- Pyhasalmi running since 1962 producing Zinc, Copper and Pyrite Concentrate (~800ktpa pyrite concentrate),
- Mine is 1,450m deep and expecting closure in 2019 (based on current Ore Reserves)

## 3. PYHASALMI PYRITE CONCENTRATE HAS DOMINATED WORLD EXPORT MARKET AND CHINA IMPORTS 2010-2016

- Opportunity exists for Mount Morgan concentrate to compete in China and enter Europe post Pyhasalmi
- Chinese market consuming circa 16Mtpa of average 35% S

## 4. AS WELL AS IMPROVING THE ENVIRONMENTAL LEGACY, UNROASTED IRON PYRITE REPRESENTS APPROXIMATELY 20% OF THE FORECAST MOUNT MORGAN PROJECT REVENUE.

PYRITE MARKETS CHINA



FORECAST CHINA PYRITE IMPORT VOLUMES TO 2020



## MINING LEASE AND ENVIRONMENTAL AUTHORITY IN PLACE.

### TWO REMAINING APPROVALS:

#### 1. ENVIRONMENT

Environmental Authority MIN100708908 was previously approved for the project in 2010. An Environmental Authority Amendment application is required due to variations in the plan including the relocation of the processing facility and the utilisation of the “State owned” Water Treatment Plant (WTP). The DEHP are currently reviewing the draft application with background work and discussions continuing between the DEHP, DNRM and Carbine.

#### 2. REGIONAL PLANNING

A development application seeking a Regional Interests Development Approval regarding resource activities in a Priority Living Area (PLA) has been lodged with the Department of Infrastructure, Local Government and Planning under the Regional Planning Interests Act 2014 (RPI Act). At the time the RPI Act was passed, the Mount Morgan mine site was designated as a PLA in the Central Queensland regional plan. The Company believes that the development application will be approved because future mining at Mount Morgan has been recognized in the Rockhampton Regional Council (RRC) Planning scheme as a desirable outcome where community benefits are provided and the impacts can be mitigated. Final endorsement by the RRC is expected to occur in June.

### APPROVED:

#### 1. HERITAGE

Development by the State Application under section 71 of the Queensland Heritage Act 1992 has been submitted by the Department of Natural Resources and Mines (DNRM). This requires initial endorsement by the Queensland Heritage Council (QHC) prior to final approval by the Minister of the Natural Resources and Mines (DNRM). QHC endorsement was achieved in April<sup>1</sup>. Final approval by the Minister was achieved in May<sup>2</sup>.



#### NOTES

1. Please refer announcement ASX: 27 April 2017.
2. Please refer announcement ASX: 29 May 2017.



## FOR FURTHER INFORMATION:

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**CARBINE RESOURCES**  
LIMITED

# AUSTMINE 2015 MINING INNOVATOR OF THE YEAR

## EXPANDED CASE – CAUTIONARY STATEMENT

**The expanded case referred to in this announcement has been undertaken to show the likely extension of the 9 year Mineral Reserve base case out to 20 years.**

It is a preliminary technical and economic study of the potential viability of the Mount Morgan project. It is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves. Further exploration and evaluation work and appropriate studies are required before Carbine will be in a position to estimate any ore reserves.

The expanded case is based on the material assumptions outlined in Section 15 and Appendix 1 of the announcement (ASX: 8 December 2016). These include assumptions about the availability of funding. While Carbine considers all of the material assumptions are based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated in the expanded case will be achieved.

To achieve the range of outcomes indicated in the expanded case, funding of in the order of \$90 -\$100M will likely be required. Investors should note that there is no certainty that Carbine will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may dilute to or otherwise affect the values of Carbine's existing shares.

It is also possible that Carbine could pursue other 'value realization' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce Carbine's proportionate ownership of the project

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the expanded case.

	DESCRIPTION	FS BASE CASE	EXPANDED CASE
<b>MINING</b>	Ore Reserve (Mt)	9.9	9.9
	Additional Material – Expanded Case (Mt)	0	12.5
	Ore Reserve + Additional Material (Mt)	9.9	22.4
	Gold Grade (g/t)	1.19	0.9
	Contained Gold (ozs)	380,000	660,000
	Copper Grade (%)	0.16	0.12
	Contained Copper (t)	16,000	27,000
	Pyrite Grade (Wt %) <sup>4</sup>	21	21
	Contained Pyrite (t)	2,300,000	5,100,000
<b>PROCESSING</b>	Ore Processed (Mt)	9.5	22
	Polymetallic AuEq (g/t) <sup>1</sup>	1.8	1.6
	Gold Grade (g/t)	1.23	0.9
	Copper Grade (%)	0.17	0.12
	Pyrite Grade (Wt %)	22	21
	Average Annual Gold Production (ozpa)	30,000	23,000
	Average Annual Copper Sulphate Production (tpa)	3,800	2,700
	Average Annual Pyrite Concentrate Production (tpa)	214,000	200,000
<b>PROJECT ECONOMICS<sup>2</sup></b>	Mine life (years)	9.5	20
	Payback (years) <sup>3</sup>	2	2
	C1 (A\$/Au oz) <sup>4</sup>	395	384
	AISC (A\$/Au oz) <sup>5</sup>	549	576
	Pre-production Capital (A\$M)	85.1	85.1

### Table Notes (Ref announcement ASX: 8 December 2016):

- AuEq ozs have been determined using the AuEq grade for each case as outlined in Table 2 above. The AuEq calculation has been done with respect to the commodity prices shown in point 3 below and suitable metal recovery factors. Please refer to Section 1.6 of announcement and Appendix F this presentation for detailed description of calculation of Metal Equivalents used in this presentation.
- Project economics shown above includes the capital payment of A\$2 million to Norton Gold Fields Limited at the commencement of the project to obtain ownership rights and includes deferred payment of A\$13 million from future profits.
- Payback was determined using a AUD/USD FX 0.75, and with commodity prices of US\$1,200/oz gold, US\$60/t unroasted iron pyrite for years 1 & 2 then US\$80/t for the remaining years, US\$5,800/t copper. Copper sulphate revenue is based on copper LME price for approximately 25% copper grade plus A\$500/t premium for copper sulphate.
- C1 is defined as the direct cash operating costs produced, net of by-product credits, divided by the amount of payable gold produced. Direct cash costs include all mining and processing costs, general and administration costs, and transport and port costs net of revenue credits from the sale of by-products (pyrite and copper sulphate).
- AISC is the "All in sustaining cost" includes C1 costs, plus royalties and sustaining capital and are presented net of by-product credits, divided by the amount of payable gold produced.

The information in this report that relates to Exploration Targets, Exploration Results and the Inferred Mineral Resources for Mount Morgan In-Pit and Sandstone Gully is based on, and fairly represents, information and supporting documentation prepared by Mr. C Newman, who is a Competent Person according to the JORC 2012 Code. Mr. C Newman is a fulltime employee of Carbine Resources and a Fellow of the Australasian Institute of Mining and Metallurgy. He has sufficient experience that is relevant to the style of mineralization and the 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 Exploration Results, Mineral Resources and Ore Reserves'. The information in this report is extracted from previous company releases 'ASX: 16 August 2016 and 30 August 2016', and is available to view on the Carbine Resources website. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this report that relates to the Mineral Resources for Mundic Gully, Shepherds Gully, No 2 Mill and Red Oxide is based on information compiled by Dr M. Abzalov, who is a Competent Person according to the JORC 2012 Code. Dr M. Abzalov is a Fellow of the Australasian Institute of Mining and Metallurgy. He has sufficient experience in estimation of resources of gold mineralisation, and has a strong expertise in the all aspects of the data collection, interpretation and geostatistical analysis to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves'. Dr M. Abzalov is independent consultant, contracted to Carbine Resources for providing the technical guidelines for resource definition drilling at the Mount Morgan tailings project and in estimating the Mineral Resources. The information in this report is extracted from previous company releases 'ASX: 18 July 2016, 27 July 2016, 1 August 2016 and 9 August 2016, and is available to view on the Carbine Resources website. The Company confirms that it is not aware of any new information or data that materially affects the information

included in the original market announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this report that relates to Ore Reserves for Mount Morgan is based on, and fairly represents, information and supporting documentation prepared by Mr. A James, who is a Competent Person according to the JORC 2012 Code. Mr. A James is a fulltime employee of Carbine Resources as the Managing Director of the company and he holds shares in the company. He is a Fellow of the Australasian Institute of Mining and Metallurgy. He has sufficient experience that is relevant to the style of mineralization and the 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 Exploration Results, Mineral Resources and Ore Reserves'. Mr. A James consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. The information in this report is extracted from previous company releases 'ASX: 8 December 2016', and is available to view on the Carbine Resources website. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

# APPENDIX C – MINERAL RESOURCES

## JORC 2012 MINERAL RESOURCE TABLE REPORTED AT A 0.00G/T CUT-OFF (REFER ASX ANNOUNCEMENT DATED 30 AUGUST 2016). ROUNDING ERRORS CAN OCCUR.

AREA	TYPE	CATEGORY	TONNAGE (MT)	GOLD (G/T)	GOLD (KOZ)	COPPER (%)	COPPER METAL (T)	SILVER (G/T)	SILVER METAL (KG)	SULPHUR (%)	PYRITE EQUIV. (WT %)
NO 2 MILL	Sulphide	Indicated	2.71	1.11	97	0.12	3,184	1.14	3,078	13.7	25.6
	Oxide	Indicated	0.12	0.8	3	0.05	55	1.8	207	4	
MUNDIC GULLY	Sulphide	Indicated	1.7	1.91	104	0.17	2,822	0.9	1,533	10.5	19.6
	Sulphide	Inferred	0.02	1.86	1	0.24	40	1.24	21	10.6	19.9
SHEPHERDS	Sulphide	Indicated	4.83	0.84	131	0.17	8,195	1.42	6,889	12.4	23.2
RED OXIDE	Oxide	Indicated	0.83	2.17	58	0.3	2,495	0.6	499	0.6	
	Oxide	Inferred	0.03	2.05	2	0.29	85	0.58	17	0.5	
SANDSTONE GULLY	Sulphide	Inferred	0.25	0.85	7	0.07	175	1.2	301	12	22.4
	Oxide	Inferred	0.02	0.85	1	0.07	14	1.2	24	2	
IN-PIT TAILS	Sulphide	Inferred	26.67	0.52	446	0.07	18,672	1.38	36,884	11.3	21.1
<b>TOTAL INDICATED</b>	<b>Total Indicated</b>	<b>Indicated</b>	<b>10.19</b>	<b>1.2</b>	<b>394</b>	<b>0.16</b>	<b>16,750</b>	<b>1.2</b>	<b>12,207</b>	<b>11.4</b>	
	Sulphide	Indicated	9.24	1.12	333	0.15	14,200	1.24	11,500	12.4	23.2
	Oxide	Indicated	0.95	2	61	0.27	2,550	0.74	706	1	
<b>TOTAL INFERRED</b>	<b>Total Inferred</b>	<b>Inferred</b>	<b>26.99</b>	<b>0.53</b>	<b>456</b>	<b>0.07</b>	<b>18,986</b>	<b>1.38</b>	<b>37,246</b>	<b>11.3</b>	
	Sulphide	Inferred	26.94	0.52	454	0.07	18,887	1.38	37,205	11.3	21.1
	Oxide	Inferred	0.05	1.56	2	0.2	99	0.84	41	1.1	

## EXPLORATION TARGET TABLE (ASX:30 AUGUST 2016).

The potential quality 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 the Mineral Resource. Rounding Errors will occur.

DESCRIPTION	DRILLHOLE NUMBER	TONNES (KT)	AU GRADE (G/T)	AU (KOZ)	COPPER %	SULPHUR %	TONNES (KT)	AU GRADE (G/T)	AU (KOZ)	COPPER %	SULPHUR %
OXIDE WASTE DUMPS	54	285	1.8	16	0.1	2	555	2.3	40	0.1	2
OXIDE SLAG DUMPS	5	280	1	9	0.4	1	1,000	0.8	26	0.6	1
OXIDE TAILINGS DUMPS	34	215	1	7	0.1	3	715	0.9	22	0.1	3
<b>TOTAL OXIDE</b>	<b>93</b>	<b>780</b>	<b>1.3</b>	<b>32</b>	<b>0.2</b>	<b>2</b>	<b>2,270</b>	<b>1.2</b>	<b>88</b>	<b>0.3</b>	<b>2</b>
SULPHIDE WASTE DUMPS	34	430	1.2	17	0.1	12	635	1.4	30	0.1	13
SULPHIDE TAILINGS DUMPS	12	660	1	22	0.1	9	2,000	1.2	77	0.1	12
<b>TOTAL SULPHIDE</b>	<b>46</b>	<b>1,090</b>	<b>1.1</b>	<b>39</b>	<b>0.1</b>	<b>10</b>	<b>2,635</b>	<b>1.3</b>	<b>106</b>	<b>0.1</b>	<b>12</b>
<b>TOTAL SULPHIDE AND OXIDE</b>	<b>139</b>	<b>1,870</b>	<b>1.2</b>	<b>71</b>	<b>0.2</b>	<b>6.7</b>	<b>4,905</b>	<b>1.2</b>	<b>194</b>	<b>0.2</b>	<b>7.5</b>

## MINERAL RESERVE TABLE (ASX: 8 DECEMBER 2016).

This estimate has been prepared in accordance with JORC Code (2012) guidelines. Further details for the estimate can be found in FS announcement and the JORC code table 1 located at the back of that announcement. Some discrepancies in total may occur due to the rounding of numbers:

2 – Au Eq(g/t) refers to the calculated Au equivalent grade formula for which is stated in Appendix F:

3 – PyriteEq(wt %) refers to the calculated Pyrite equivalent grade formula for which is stated in Appendix F

LOCATION	RESERVE CATEGORY	QUANTITY (MT)	AUEQ (G/T) <sup>2</sup>	AUEQ (KOZ) <sup>2</sup>	AU (G/T)	CU (%)	S (%)	PYRITE (WT%) <sup>3</sup>
MUNDIC	Proven							
	Probable	1.52	2.57	126	2.04	0.17	10.1	18.9
RED OXIDE	Proven							
	Probable	0.73	2.48	58	2.11	0.3	0.4	-
No 2 Mill	Proven							
	Probable	2.82	1.73	156	1.1	0.11	13.1	24.4
SHEPHERDS	Proven							
	Probable	4.83	1.49	232	0.84	0.17	12.4	23.1
TOTAL	Proven							
	Probable	9.9	1.8	573	1.19	0.16	11.3	21.1

## **BOTH AUEQ (G/T) AND PYRITEEQ (WT%) HAVE BEEN USED IN THIS ANNOUNCEMENT.**

AuEq was calculated for each ore source based on the different metallurgical recoveries associated with those ore sources. A combined Total AuEq was also determined for representation of the combined effect of the four different ore sources. The following formulas show the various calculations for the AuEq values seen in this announcement. The AuEq value is determined by multiplying the recovered metal by the metal prices and dividing by the gold price to determine the equivalent gold grade. Consideration is also given to the fact that the end product for Copper is Copper Sulphate and for Pyrite is Pyrite Concentrate. The total AuEq is determined by taking a weighted average of the four separate AuEq grades.

Mundic Gully AuEq = Au (g/t) + Cu(%)\*172.11 + PyriteEq (wt%)\*1.30

No2 Mill AuEq = Au (g/t) + Cu(%)\*172.76 + PyriteEq (wt%)\*1.73

Red Oxide AuEq = Au (g/t) + Cu(%)\*122.83

Shepherds AuEq = Au (g/t) + Cu(%)\*138.83 + PyriteEq (wt%)\*1.79

Metal prices used in this calculation are US\$ 1,200/oz gold, US\$ 60/t unroasted iron pyrite for years 1&2 and US\$ 80/t thereafter, \$5,800/t copper. Copper Sulphate revenue is based on copper LME price for approximately 25% Copper grade plus \$500/t premium for copper sulphate. Metal recoveries are provided in section 6, Processing Physicals. It is Carbine's view that all the metals included within this formula are expected to be recovered and sold.

Pyrite (wt%) – Sulphur (S,wt %) grade has been converted into "pyrite equivalent" (wt,%) using stoichiometry of the pyrite

Formula – FeS<sub>2</sub>

Chemical composition Fe – 46.6%, S – 53.4% (this corresponds to 100wt% of pyrite in a sample)