



# Indaba Presentation

February 2014

# ASX Capital Structure

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<b>Issued Shares*</b>	<b>128,675,017</b>
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Unlisted options (May 2016 at 26.7c)	7,687,500
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Listed options (January 2015 at 26.7c)	17,962,506
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<b>Total Options</b>	<b>25,650,006</b>
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\* Included in Issued Shares is 37,500,000 performance shares:

- Half subject to the completion of a scoping study
- Half subject to completion of a definitive feasibility study which demonstrates an NPV 10 of US\$400 million or greater.

# Project Ownership

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- Cradle owns 50% of the Panda Hill Project with management control
- Cradle has an option to purchase the remaining 50% before March 2017
- The option exercise price is ~US\$14 million\*, of which US\$9 million is payable in cash and US\$5 million in shares or capped royalty.

\* The precise option exercise price is US\$17.1m less 25% of project expenditure by Cradle during the option period. The estimated likely deduction is ~US\$3.1m. An instalment of US\$500,000 is payable within 2 years.

# Board and Management Team

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- Craig Burton Chairman
- Grant Davey Managing Director
- Didier Murcia Non-Executive Director
- Evan Cranston Non-Executive Director
- Keith Bowes Project Director - Metallurgist
- Neil Inwood Resource/Exploration Geologist

*A strong, capable team with the right experience to drive the feasibility and development work*

# What is Niobium?

Niobium (Nb) is used as an alloy to make steel harder  
Nb steel is known as high strength, low alloy steel (HSLA)

## Niobium Properties:

- Strengthens steel and lightens
- Corrosive resistant properties
- High temperature tolerance

## Main growth industries:

- Automotive
- Construction
- Pipelines

A “critical and strategic metal” US Geological Survey



Millau Viaduct, France



Oresund Bridge, Sweden

# Niobium Demand

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- HSLA is a well known, commonly used steel product:
  - About 20% of steel produced in developed countries is HSLA
  - Compared to about 10% of steel in developing countries
- Solid demand growth is expected over the next six years (~30%)
- Growth in Nb demand is a combination of:
  - General growth in steel volumes
  - Potential for increased proportion of HSLA steel in developing countries (trend to higher quality products)
- Total annual demand of ~ 90,000 tpa FeNb (~\$2.2 billion pa)

# Niobium Supply

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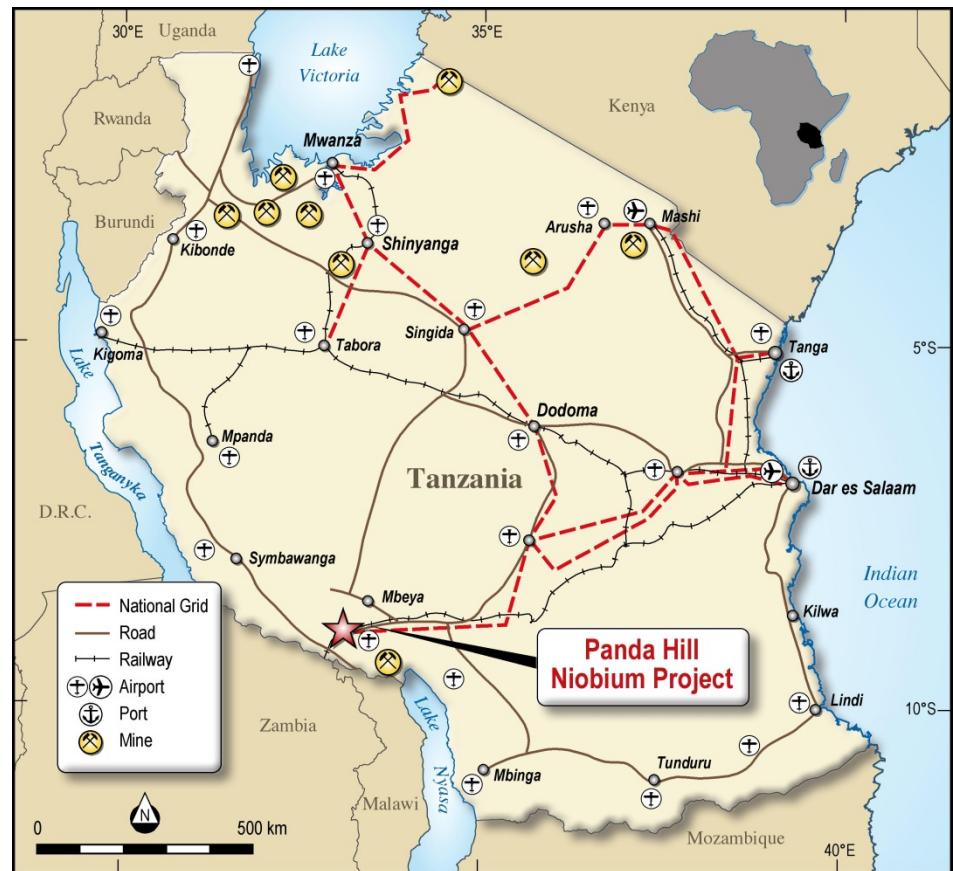
- Only three existing producers (CBMM, IAMGOLD, Anglo American)
- No new producers since 1976, even though market has grown several fold
- Limited suppliers result in highly stable Nb prices
- Panda Hill will initially add only 4% to annual supply
- No greenfields supply under construction, no other projects appear likely to be developed
- Undeveloped Niobium deposits are characterised by low grade or difficult metallurgy

# Panda Hill Niobium Project

- Located in Mbeya region, Tanzania
- Excellent local infrastructure (grid power, roads, rail)
- 98 holes drilled 1950 – 1990s
- 13 confirmatory holes drilled 2013



Panda Hill, Mbeya



# 2013 Updated JORC Resource by Coffey Mining

## 2013 Panda Hill 2013 Resource – Reported Above a 0.3% Nb<sub>2</sub>O<sub>5</sub> Lower Cut-off^

Combined			
Lower Cut-off (Nb <sub>2</sub> O <sub>5</sub> %)	Million Tonnes	Nb <sub>2</sub> O <sub>5</sub> %	Nb <sub>2</sub> O <sub>5</sub> Content (KT)
Indicated	5.4	0.62	33
Inferred	76.4	0.51	390
<b>Total</b>	<b>81.8</b>	<b>0.52</b>	<b>423</b>
Weathered Carbonatite			
Lower Cut-off (Nb <sub>2</sub> O <sub>5</sub> %)	Million Tonnes	Nb <sub>2</sub> O <sub>5</sub> %	Nb <sub>2</sub> O <sub>5</sub> Content (KT)
Indicated	2.1	0.77	16
Inferred	8.6	0.81	69
<b>Total</b>	<b>10.7</b>	<b>0.80</b>	<b>86</b>
Primary Carbonatite			
Lower Cut-off (Nb <sub>2</sub> O <sub>5</sub> %)	Million Tonnes	Nb <sub>2</sub> O <sub>5</sub> %	Nb <sub>2</sub> O <sub>5</sub> Content (KT)
Indicated	3.2	0.52	17
Inferred	67.8	0.47	319
<b>Total</b>	<b>71.1</b>	<b>0.47</b>	<b>336</b>

^Ordinary Kriged estimate using a 25mN x 25mE x 5mRL parent block.

See release dated 11 September 2013 - <http://www.cradleresources.com.au/investors.asp?ref=announcements>

Cradle Resources confirms that since the release of this Resource there have been no material changes in the underlying material assumptions

# Scoping Study Results

Option	Mill Throughput	Average Niobium Production	Average Cash Cost (\$/kg Nb) Cash cost at mine gate	Mine Life	Payback	Initial Capital
Base Case	2Mtpa	4.80M kg pa	US\$16.67	28yrs	2.8yrs	US\$185M
Staged Case	1Mtpa building in yr 3 to 2.3Mtpa	2.65M building to 5.46M kg pa	US\$19.86 / \$16.17	27yrs	4.5yrs	US\$125M








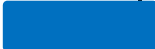

See release dated 30 January 2013- <http://www.cradleresources.com.au/investors.asp?ref=announcements>  
Cradle Resources confirms that since the release of Scoping Study Results there have been no material changes in the underlying material assumptions

# Scoping Study Results

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- Great Infrastructure
- Resource
  - 50% increase in metal content
  - Total resource – 82mt @ 0.52% Nb<sub>2</sub>O<sub>5</sub>
    - Indicated 5.4mt @ 0.62% Nb<sub>2</sub>O<sub>5</sub>
    - Inferred 76.4mt @ 0.51% Nb<sub>2</sub>O<sub>5</sub>
- Metallurgy Testwork
  - 65% recovery for + 55% grade Nb<sub>2</sub>O<sub>5</sub> in fresh carbonatite
  - 50% recovery for 50% grade Nb<sub>2</sub>O<sub>5</sub> in weathered carbonatite
  - Good quality concentrate (in line with producers)

# Feasibility Planning Schedule

Project Activities	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q3 2015
Prefeasibility Study					
Project Planning / Contracting					
Resource/ Infill Drilling					
Mineral Resource / Mining					
Metallurgical Testwork					
Preliminary Engineering					
Environmental and Social Impact Assessment					
Reporting					
DFS					

# Project Summary

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- **Financing negotiations currently taking place for DFS and project construction**
- **Feasibility to focus on a modular processing plant:**
  - Optimise and reduce upfront capital (~\$125 million)
  - Enter the niobium market responsibly – lower initial production in first 3 - 4 years
- **Main focus of next study phase:**
  - Increase the confidence of the Mineral Resource Estimate
    - 15 – 20 million tons in Indicated
  - Complete metallurgy development work on the primary and secondary rock types
  - Continue with ESIA baseline study
  - Update the engineering design
- **Final study phase to focus on metallurgy pilot plant, licencing and detailed engineering**

# Estimated Cost to DFS

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Drilling Program	US\$4.0M
Metallurgical Test work	US\$2.2M
ESIA	US\$0.7M
Engineering	US\$1.5M
Corporate	US\$1.6M
<b>Total</b>	<b>US\$10.0M</b>

**PFS completed in 3<sup>rd</sup> Quarter 2014 ~US\$6M**

# Disclaimer and Competent Person

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All statements, trend analysis and other information contained in this document related to markets for Cradle, trends in revenue, gross margin and anticipated expense levels, as well as other statements about anticipated future events or results, constitute forward-looking statements. Forward-looking statements often, but not always, are identified by the use of words such as ‘seek’, ‘anticipate’, ‘believe’, ‘plan’, ‘estimate’, ‘expect’, ‘intend’, ‘forecast’, ‘project’, ‘likely’, ‘potential’, ‘target’ and ‘possible’ and statements that an event or result ‘may’, ‘will’, ‘would’, ‘should’, ‘could’ or ‘might’ occur or be achieved and other similar expressions. Forward-looking statements are subject to known and unknown business and economic risks and uncertainties and other factors that could cause actual results of operations to differ materially from those expressed or implied by the forward-looking statements. Forward-looking statements are based on estimates and opinions of management at the date the statements are made.

Cradle does not undertake any obligation to update forward-looking statements even if circumstances or management’s estimates or opinions should change. For the reasons set forth above, investors should not place undue reliance on forward-looking statements.

The reported Resources that relate to the Panda Hill Niobium Deposit are based on information compiled by Ms Ellen Maidens, who is the Competent Person for the Mineral Resource and 2013 Exploration Data. Ms Maidens is a Member of the Australian Institute of Geologists and is a full-time employee of Coffey Mining. Ms Maidens has sufficient experience, relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken, to qualify as Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Mineral Resources and Reserves”.

The full resource statement is available on the Cradle website: [www.cradleresources.com.au](http://www.cradleresources.com.au)

The information in this document that relates to the Panda Hill Geology and Exploration Data is based on information compiled by Mr Neil Inwood, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Inwood is a full time employee of Verona Capital and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Mineral Resources and Reserves”. Mr Inwood has consented to the inclusion of this information in this document in the form and context in which it appears.



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