



Niobium – The New Age Steel Alloy

Panda Hill Niobium Project – Tanzania

SEPTEMBER 2014



Investment

The investment opportunity in Panda Hill Niobium Project

- World class resource – 6.5 Moz at 2.5 g/t (gold equivalent)
- Low strip ratio – 0.4:1 LOM
- Great infrastructure (roads, power, water)
- Long term stable metal price regime
- A market with growth dynamics
- High margin business of approximately 55%
- Financed up to construction with Denham Capital backed Tremont
- Stable political and operating regime in Tanzania



Commercial Niobium is Very Rare

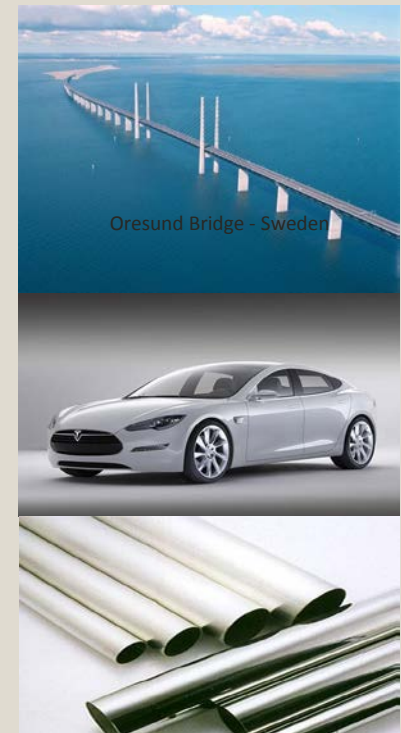
- “Strategic” metal, steel alloy, makes harder, lighter steel products
 - Niobium production generates in excess of \$1 billion in operating profits per annum at current prices
- Only 3 existing Niobium producers world wide
 - CBMM (84%), Brazil
 - Anglo American (7 - 8%), Brazil
 - IAMGOLD (7 - 8%), Canada
- China does not have any Niobium resources
- No new Niobium producers since 1976 (none in 38 years)
- 6 years of strong Niobium prices have failed to stimulate any new projects
- Panda Hill is the most viable undeveloped Niobium project world-wide
- CBMM (private company) valued at \$10 billion
 - 70% owned by Brazilian banking family
 - 15% Chinese steel mills (Baosteel, Shougang, Anshan, Taiyuan)
 - 15% Japanese and South Korean steel mills (Fe Steel, Nippon, Sojitz, Posco)



Niobium Market

Niobium is a boutique metal with one dominant producer

- Long history of stable prices
- No signs of significant new suppliers
- Strategic “new-age” metal with likely growth of 30% in next 6 years
- This Project will add about 5% to global supply
- Market size is \$2.2 billion pa (3 times graphite)
- China does not have any in country resources and needs long life alternative sources

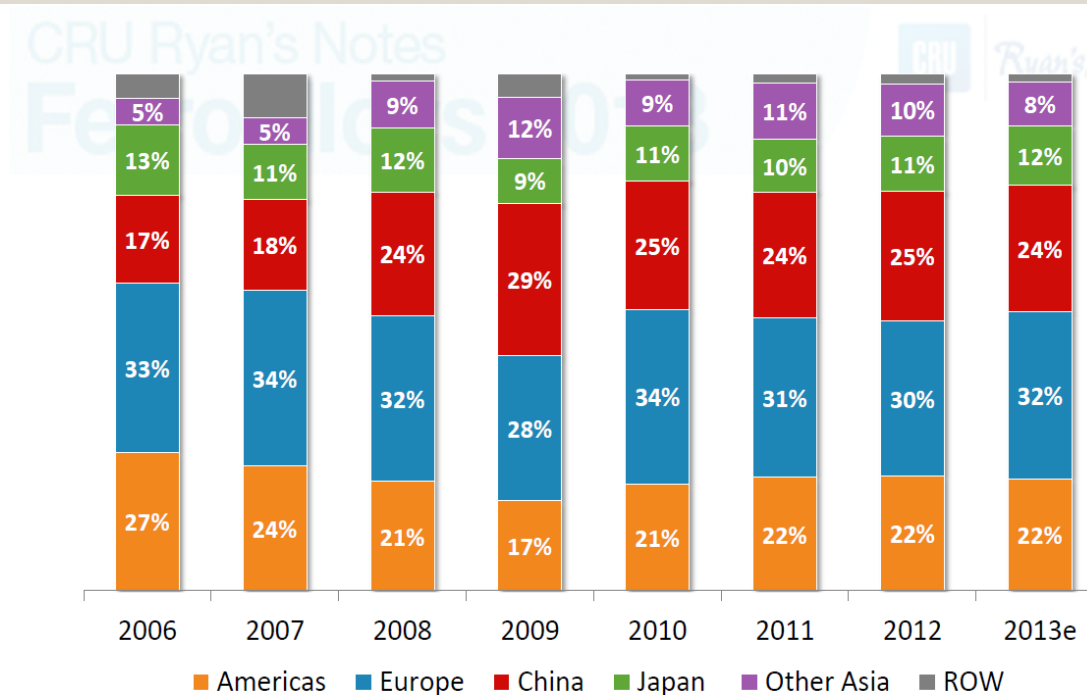


Niobium Usage

- Niobium enables significant cost benefits in construction and machinery manufacture
- \$9 of Nb added to a car will
 - Reduces the weight by 100kg
 - Increases fuel efficiency
 - Decreases greenhouse gases
- 0.025% Nb was used in the Oresund bridge
 - 60% weight saving in steel and concrete
- Nb used in piping to strengthen and lighten



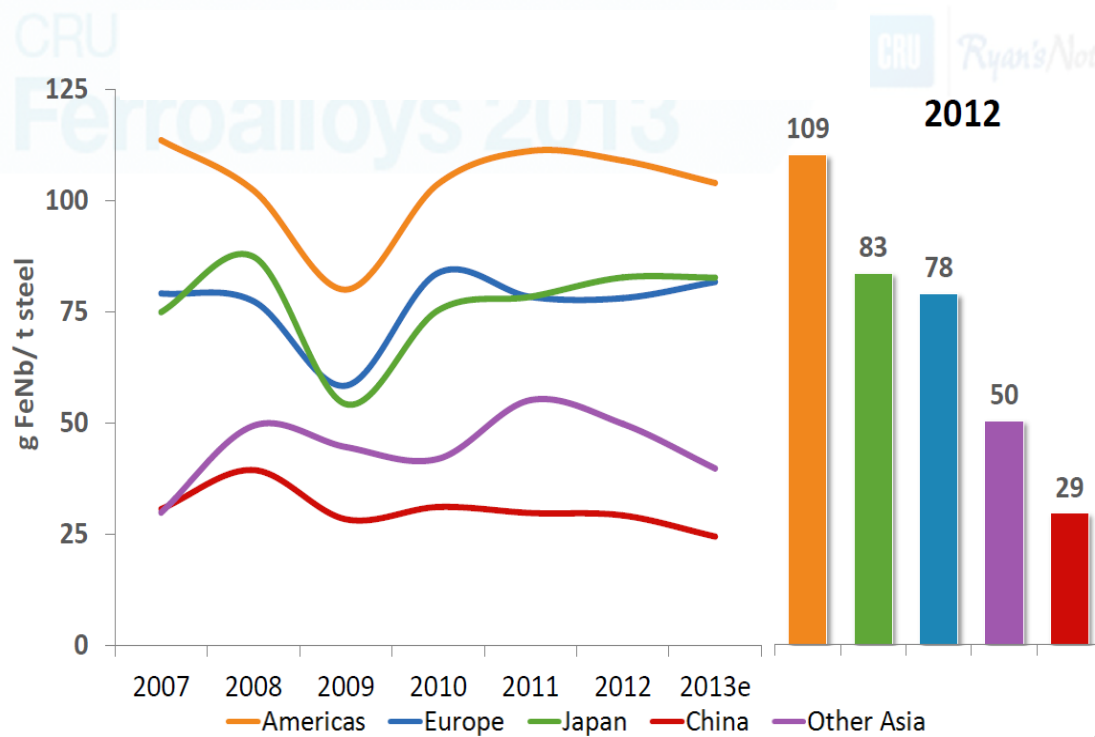
FeNb Consumption by Region



Source: Camet Metallurgy

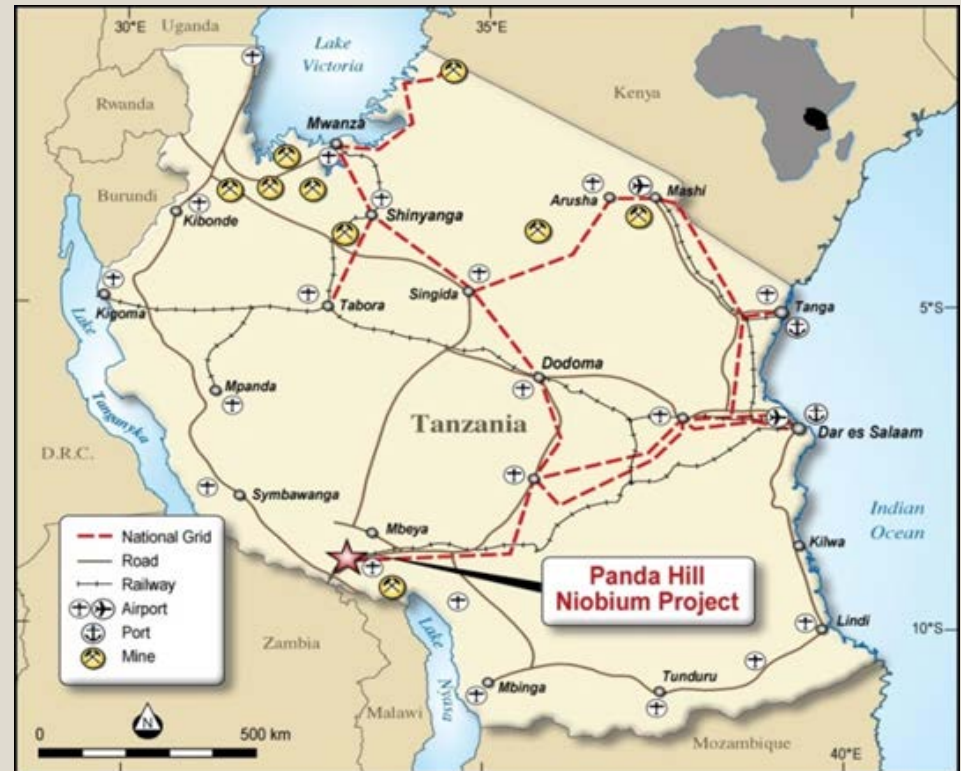


Intensity of Use by Region



Panda Hill Location

- 650km from Dar es Salaam
- In the Mbeya region
 - 280,000 people
 - Industry and farming focus
- Excellent project access
 - International airport
 - Good road infrastructure
 - Tanzan Rail
- World class infrastructure
 - Water
 - Power
- Good mining jurisdiction



Community and Social Responsibility



School Soccer Clinic



Hospital Equipment



School Cement Donation



Songwe Clinic Solar Lighting



Community Involvement 2013/2014

- Hospital donations
 - 51 x hospital beds
 - Emergency trolley
 - 38 x boxes of medical consumables
 - 24 x wheelchairs
- Installation of solar lighting to the Songwe Medical Clinic
- Cement for floors and buildings at Songwe Primary
- Roofing equipment to the Shisonta community
- School Soccer Clinic



The Panda Hill Project

- Located in Tanzania
- Inferred JORC resource (based on 91 diamond drillholes)
 - 82mt at 0.52% Nb_2O_5 (above a 0.3% Nb_2O_5 lower cutoff)
 - Gold equivalent of 6.5 Moz at 2.5 g/t¹
- Open cut, strip ratio (0.4:1)
 - First 20mt mineable at 0.7% Nb_2O_5
- Only drilled to 100m depth, open at depth and on strike
- Scope to drill resource to 300m; target 3 times increase in resource
- Good flotation recoveries, in line with current producers
 - 60% - 70% in fresh carbonatite
 - 50% - 60% in weathered carbonatite



¹The metal equivalent grades are shown to illustrate Nb_2O_5 grade data relative to more traditional commodities to aid in the interpretation of the results and are not intended to indicate the presence of Au or Ni credits. The formula used to derive the equivalent grades is shown on the last page of this presentation.



Excellent Infrastructure

- Located 30km southwest of the major city of Mbeya, in Southern Tanzania
- Less than 10km from the new Mbeya airport (80 minute flight from Dar es Salaam)
- Highway to Dar es Salaam – only 4km away
- Tazara Railway runs through the tenements
- Nearby power infrastructure
- Prison relocation – friendly negotiations with the government



Scoping Study – January 2014

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

See release dated 30 January 2014 - <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.



Niobec – Case Study

Niobec is an existing Nb producer (a subsidiary of IAMGOLD, TSX listed)

- A 2m tpa underground operation located in Canada
- Same flow sheet as Panda Hill, except underground mining, similar geology
- Characterised by solid earnings and a stable metal price

Year	Nb Price US\$	EBITDA US\$	Head grade Nb ₂ O ₅
2008	\$34/kg	\$79m	0.62%
2009	\$37/kg	\$86m	0.61%
2010	\$37/kg	\$79m	0.61%
2011	\$39/kg	\$68m	0.57%
2012	\$41/kg	\$72m	0.55%
2013	\$41/kg	\$88m	0.56%

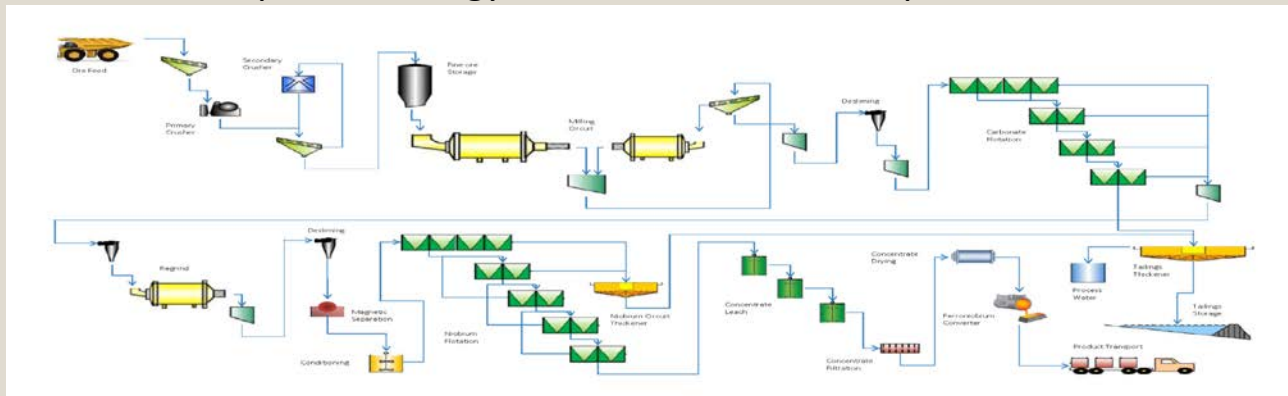
Note: Extracted from Annual Reports of IAMGOLD Limited (rounded)



Extraction Process

Well known, simple extraction process:

- Two stage flotation to produce a concentrate (~55% Nb₂O₅)
- Then a converter (mini-roaster) to produce FeNb (~66% Nb)
- Same process is used by all existing Niobium producers
- FeNb is marketed directly to steel mills as a direct feed in the steel alloy process
- Panda Hill ore has simple metallurgy and initial test work is positive



The Plan

- PFS complete 1st quarter 2015 (US\$8 million)
 - Additional drilling, move 20 mt to Indicated Resource category
 - Additional metallurgical work
 - Baseline environmental work
 - Process engineering and design
- DFS complete 4th quarter 2015 (US\$5 million)
 - Definitive Feasibility Study for a 1.0 mtpa expanding to 2.3 mtpa project producing FeNb for direct sale to steel mills
- 2015/2016 - development of Project (50/50 funding with Tremont)
 - Circa US\$185 million initial Capex
 - FeNb production build up to 4,500 tpa



Project Level Deal

- Tremont has the right to subscribe up to US\$20 million to acquire a 50% interest in the Panda Hill Project, by sole funding expenditure
- Post earn-in all further costs are shared 50/50 (e.g. development costs and option exercise cost)
- The Tremont subscription will be staged as follows:

US\$	Timing	Tremont Interest	Cradle Interest
1st \$5m	Paid in June 2014	12.5%	87.5%
2nd \$5m	Upon expenditure of 1 st \$5m, to be used towards completing a PFS	25.0%	75.0%
3rd \$5m	Upon completion of PFS, to be used towards completing a DFS	37.5%	62.5%
4th \$5m	Following completion of DFS, to be used towards development	50.0%	50.0%



Capital Structure

Cradle Resources Limited (ASX listed)	
Issued Shares*	147,477,617
Performance rights	1,837,500
Unlisted options (May 2016 at 26.7c)	7,687,500
Listed options (January 2015 at 26.7c)	17,947,506
Total Rights and Options	27,472,506

*Included in Issued Shares are 18,750,000 Class B performance shares which convert to ordinary shares subject to completion of a definitive feasibility study which demonstrates an NPV 10 of US\$400 million or greater.

Project Ownership

Cradle currently owns 50% of the Panda Hill Project, with an option to purchase the balance for US\$14 million* on or before March 2017. Tremont is farming in to earn 50% of Cradle's interest in the Project. Accordingly, post the farm-in and option exercise, Cradle will hold 50% of the Project

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



Experienced, High Calibre Management Team

Craig Burton	Chairman	Resource Entrepreneur	<ul style="list-style-type: none"> Panoramic, Exco, Capital Drilling, Mirabela
Grant Davey	Managing Director	Mining Engineer	<ul style="list-style-type: none"> Senior operational management AGA, Anglo American
Keith Bowes	Project Manager	Metallurgist	<ul style="list-style-type: none"> Project management, Anglo American, BHP, Vale
Neil Inwood	Geology Manager	Geologist	<ul style="list-style-type: none"> Principal consultant Coffey



Disclaimer and Competent Person

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The information in this document that relates to Exploration Results and Resources is based on information compiled or reviewed 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 Pty Ltd. Mr Inwood 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Inwood consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

The information relating to the Mineral resource is extracted from the report entitled 'Substantial Upgrade to Panda Hill Resource' created on 8th November 2013 and is available to view on www.cradleresources.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement 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.

Cautionary Statement concerning Scoping Study Results including Inferred Resources

The Scoping Study results and production targets reflected in this presentation are preliminary in nature as conclusions are drawn from partly from Indicated Mineral Resources and partly from Inferred Mineral Resources. The Scoping Study is based on lower level technical and economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised. 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 information in this presentation regarding Scoping Study results is extracted from the announcement entitled 'Panda Hill Project – Highly Positive Scoping Study Results' dated 30 January 2014 and is available to view on <http://www.cradleresources.com.au>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that all the material assumptions and technical parameters underpinning the production targets and the forecast financial information derived from the production targets in the Scoping Study continue to apply and have not materially changed.

Competent Person's Statement

The information in this presentation relating to the Panda Hill Resource Estimate is extracted from the announcement entitled 'Substantial Upgrade to Panda Hill Resources' dated 8 November 2013 and is available to view on <http://www.cradleresources.com.au>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that, in the case of Mineral Resources or Ore Reserves, all the material assumptions and technical parameters underpinning the estimates in the relevant market announcement 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.

¹Au and Ni equivalent grades have been based upon spot prices of US\$1,320/oz and US\$16,000/t respectively and a Nb metal price of \$40/kg for Nb in FeNb. A recovery factor of 65% for Niobium, 90% for gold and 78% for Ni has been used for this comparison. The Niobium recovery is based upon initial testwork reported by Cradle Resources in January 2014. The formula used to estimate the metal equivalents is $(A \times B \times C \times Ra) / (D \times Rd)$. Where A = Nb₂O₅ grade, B is the Nb₂O₅ to Nb oxide conversion (1/1.43), C is the Niobium price per Kg, Ra is the estimated niobium recovery, D is the comparison metal price unit, and Rd is the estimated comparison metal recovery.





Thank you

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