

29 January 2016

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#### December 2015 Quarterly Activity Report

#### **Highlights**

- Final stage Pilot Plant progressing well
- Definitive Feasibility Study on track for Q1 2016 completion
- Tremont completes final (4th tranche) investment of USD5m
- Cradle/Tremont JV (Panda Hill Tanzania) acquires 100% of mining licences, with Tanzanian Government approval

#### **Definitive Feasibility Study**

The Definitive Feasibility Study (DFS) is ongoing, with the last major activity being completion of the final stage of pilot plant work and consequent fine tuning of the flow sheet. A 45t shipment of mixed mineralisation types arrived in Canada in November 2015 and preliminary bench scale and plant setup work was undertaken in December 2015. The full scale test pilot plant commenced in January 2016 with results due shortly. This second stage pilot plant will focus on water management, fines and desliming management. Initial bench scale testwork undertaken in December indicates likely favourable results.

All activities for the completion of the DFS are progressing well and the DFS is on track to be completed in Q1, 2016.

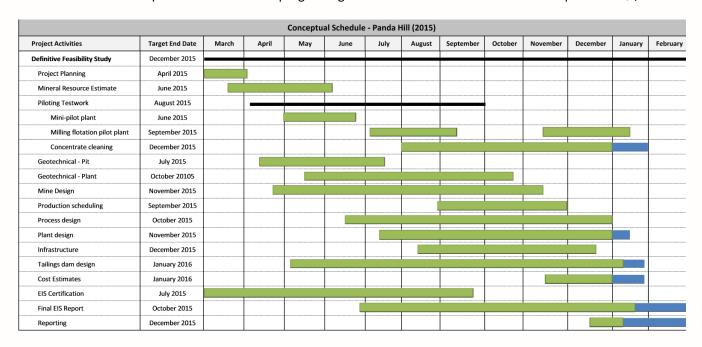


Figure 1: Panda Hill Feasibility Study Schedule



#### **Other Technical Activity**

#### **Bulk Sample Collection**

In October 2015 approximately 45t of mineralised rock samples were collected from the Panda Hill Niobium project and sent to SGS in Lakefield, Canada for the use in a pilot plant in Canada. This program is a follow-up to the January 2015 bulk sample program. Fresh and moderately-oxidised lithologies were targeted with an aim to obtain carbonatite mineralisation with a range of Si, Ca and Fe concentrations representing the main weathering categories within the deposit.

Sand and gravel samples were taken from within the local area to assess the suitability of various materials for use in road and construction design. Sand samples were taken from the Nsungwe River, Songwe; Ikungi; and Mbalizi. Gravel samples were taken from within the Pana Hill region. Samples were sent to Mbeya University for particle size and physical properties testing.

#### Mining and Engineering Activity

The work carried out in this quarter focused the continuation of the key activities associated with the DFS. Specifically the following was completed or initiated during the period:

#### Metallurgical Testwork

• The 45t of new bulk sample arrived at SGS Lakefield in November and sample preparation commenced. The final stage of piloting will focus on opportunities for improved recovery identified in the stage 1 plan through improved fines management and water quality control. Initial bench-scale testwork is positive and the pilot-scale testwork is expected to be finalised in January.

#### Mining & Geotechnical

- The second round of mining schedules have been received and are being evaluation against the latest schedules and layouts.
- Strategic schedules have been developed and the ultimate pit shell is being evaluated.
- The pit shells have been selected for the various pushbacks and the mine design of the ultimate pit shell is ongoing
- Waste rock dump and stockpile designs have been finalised.

#### Hydrology & Hydrogeology

- All field activities have been completed and all water samples have been analysed.
- Generation of site water balance (and associated salt balance ) has been finalised
- Geochem testwork on waste rock and tailings samples is progressing.

#### Tailings Storage Facility (TSF)

- Tailings facility layouts and sizing completed
- Modelling of TSF by phase is close to completion
- Characterisation of waste rock material for TSF wall construction completed
- Material take-offs, bill of quantities have been developed

#### Engineering (Plant & Infrastructure)

- Smelter design well progressed with sizing, layouts and equipment list completed
- Preliminary Process Flow Diagrams (PFDs) developed
- Mass and water balance finalised
- Road design consultant selected and site investigations completed

The activities for the next period will focus on finalisation of the feasibility study. The field office has been closed and monthly water and dust monitoring will be the main field activities.



#### Social and Environmental Activities

Dry Season dust and water monitoring activities have continued during the quarter. Meetings were held with local stakeholders over road designs and routing in the local area.

#### **Corporate Activity**

In October 2015, Tremont Investments Limited ("Tremont") exercised its right to acquire a further 12.5% of the Panda Hill Niobium Project ("Project") for a further US\$5 million (AU\$7.15M) investment (taking Tremont to 50% in total). Tremont has now completed its investment of US\$20 million in four separate tranches of US\$5 million each. This investment has been used to de-risk the Project through an in-fill and extensional drilling program, extensive metallurgical work, a Preliminary Feasibility Study ("PFS") and the DFS, as detailed above.

During the quarter, Panda Hill Tanzania Ltd ("PHT"), the joint venture entity owned 50% by the Company and 50% by Tremont, exercised its option to acquire 100% of the Mining Licences. As a result, PHT entered into an amended purchase agreement with the vendor, RECB Limited ("RECB"). Following approval by the Tanzanian Government of the transfer of the Mining Licences, completion under this amended agreement was achieved in November 2015. Under the amended purchase agreement, PHT has paid or is to pay RECB the following purchase consideration:

- US\$1.5 million, paid at completion;
- 6,200,000 million fully paid ordinary shares in Cradle (valued at US\$1.09 million), issued at completion, with half tradeable and half escrowed until the commencement of commercial production;
- US\$3 million, payable five days after project financing drawdown or 30 September 2016, whichever is earlier; and
- US\$5 million, payable out of production as a capped 5% net smelter return, with a time limit of four years from the commencement of commercial production.

The issue by Cradle of the 6,200,000 fully paid ordinary shares has created a credit in favour of Cradle with PHT of US\$1.09 million (being A\$0.25 per share). Accordingly, Tremont will be liable to contribute a further US\$1.09 million to PHT prior to Cradle having to make any further contributions.

During the quarter, the Company's Managing Director, Mr Grant Davey, resigned, consequent upon his desire to engage in a wider range of business activities, with ownership and management of the Panda Hill project transitioning to the joint venture company, PHT, and with the DFS nearly complete. Mr Davey will remain a consultant to PHT, and will assist in completion of the DFS.

Following Mr Davey's resignation, Mr Craig Burton became Executive Chairman of Cradle, pending the appointment of a new Managing Director.

During the December quarter, the Company held its Annual General Meeting, at which all resolutions were passed by shareholders, including the approval of a 10% additional placement capacity.

#### **Marketing and Financing**

Discussions with potential off takers for the sale of ferroniobium and project financing continue, both of which are being coordinated by the Denham-backed Pangea team out of South Africa.

#### **Tenement Summary**

As at 31 December 2015, the Company and its joint venture partner, Tremont Investments Limited, together hold the following interests in tenements:

Project	Tenement Number	Percentage Interest
Panda Hill Niobium, Tanzania	ML237/2006	100%



Panda Hill Niobium, Tanzania	ML238/2006	100%
Panda Hill Niobium, Tanzania	ML239/2006	100%

#### **Panda Hill Niobium Project Overview**

The Panda Hill Niobium Project (Figure 2) is located in the Mbeya region in south western Tanzania, near the borders with Zambia and Malawi, and approximately 650km west of the capital Dar es Salaam. The industrial city of Mbeya is situated only 35km from the Project area and will be a significant service and logistics centre for the Project. Mbeya has a population of approximately 280,000 people and has recently completed the construction of a new international airport.

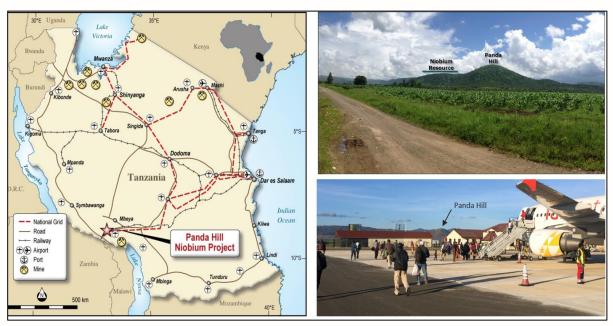


Figure 2: Location of the Panda Hill Niobium Project

The Project is covered by three granted Mining Licences (Figure 3) totalling 22.1km², which will enable a quick transition from the study and development phases, through construction and into operation. The area has excellent access to infrastructure, with existing roads, rail, airports and power available in close proximity. The three granted Mining Licenses were all renewed in the December 2015 quarter for a further 10 year period (valid until November 2026).



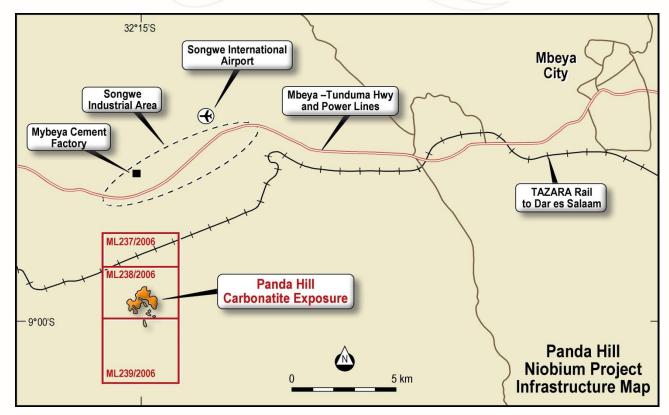


Figure 3: Mining Licences and Local Infrastructure

#### Competent Person's Statement

#### **Competent Person's Statement**

The information in this document that relates to the Exploration Target, 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 2012 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 'Significant Resource Upgrade for Panda Hill Niobium Project" created on 20th January 2015 and is available to view on <a href="www.cradleresources.com.au">www.cradleresources.com.au</a>. The information relating to the Pre-Feasibility Study is extracted from the report entitled 'Positive Pre-Feasibility Study results For Panda Hill' " created on 31st March 2015 and the update announcement on 14th July 2015 entitled "Updated Panda Hill Site and Study Progress" and is available to view on <a href="www.cradleresources.com.au">www.cradleresources.com.au</a>. The information referring to the Exploration Target is extracted from the report "Panda Hill Progress Update and Exploration Target" created on 23rd April 2015 and is available to view on <a href="www.cradleresources.com.au">www.cradleresources.com.au</a>. Other than as specified in this announcement and the mentioned announcements, 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, Exploration Target 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 announcements.

By order of the Board



# **Appendix 5B**

## Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/10.

Name of entity				
CRADLE RESOURCES LIMITED				
ABN	Quarter Ended ("Current Quarter")			
ADIV	Quarter Ended ( Current Quarter )			
60 149 637 016	31 DECEMBER 2015			

#### Consolidated statement of cash flows

Cash flows related to operating activities		Current Quarter \$A'000	Year to Date (6 months) \$A'000
1.1	Receipts from product sales and related debtors		
1.2	Payments for (a) exploration & evaluation	(658)	(1,493)
	(b) development	-	-
-	(c) production	-	-
	(d) administration	(184)	(564)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	2	7
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Other:		
	(a) reclaim of exploration and evaluation costs	1,123	2,196
	(b) refund of research and development rebate	-	621
	Net Operating Cash Flows	283	767
	Cook flours valeted to investing activities		
1.8	Cash flows related to investing activities		
1.8	Payment for purchases of: (a) prospects	_	-
	(b) equity investments	_	-
1.0	(c) other fixed assets	-	-
1.9	Proceeds from sale of: (a) prospects	_	-
	(b) equity investments	_	-
1.10	(c) other fixed assets Loans to other entities	_	-
		_	-
1.11	Loans repaid by other entities	_	-
1.12	Other: Monies held for onsite cash spend	4	4
	Net investing cash flows	4	4
1.13	Total operating and investing cash flows (carried		
	forward)	287	771



1.13	Total operating and investing cash flows (brought	207	
	forward)	287	771
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	-	-
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (capital raising cost)	(7)	(7)
	Net financing cash flows	(7)	(7)
	Net increase (decrease) in cash held	280	764
1.20	Cash at beginning of quarter/year	3,077	2,351
1.21	Exchange rate adjustments to item 1.20	(136)	106
1.22	Cash at end of quarter	3,221	3,221

#### Payments to directors of the entity and associates of the directors

Payments to related entities of the entity and associates of the related entities

		Current Quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	53
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions.

Amounts include Directors fees and reimbursements relating to travel, corporate and administrative costs incurred during the period.

#### Non-cash financing and investing activities

2.1	Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest



#### Financing facilities available

Add notes as necessary for an understanding of the position.

		Amount Available \$A'000	Amount Used \$A'000
3.1	Loan facilities	-	-
3.2	Credit standby arrangements	-	-
3.3	Convertible note	-	-

#### Estimated cash outflows for next quarter

		\$A'000
4.1	Exploration and Evaluation	-
4.2	Development	-
4.3	Production	-
4.4	Administration	220
	Total	220

#### **Reconciliation of cash**

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.		Current Quarter \$A'000	Previous Quarter \$A'000
5.1 Cash on hand and at bank		3,221	3,077
5.2	Deposits at call	-	-
5.3	Bank overdraft	-	-
5.4	Other (provide details)	-	-
Cash at end of quarter (item 1.22)		3,221	3,077



### Changes in interests in mining tenements

		Tenement Reference and Location	Nature of Interest (note (2))	Interest at beginning of quarter	Interest at end of Quarter
6.1	Interests in mining tenements held at the end of the quarter and their location	ML237/2006, Tanzania ML238/2006, Tanzania ML239/2006, Tanzania	Reflects (i) the acquisition as at Quarter end by Tremont Investments Limited of a further 12.5% of Panda Hill Tanzania Ltd (PHT), bringing Tremont's interest in PHT up to 50%, and (ii) the acquisition by PHT of 100% of the mining licences from RECB Limited, with the remaining 50% of Panda Hill Tanzania Ltd held by Cradle Resources Limited as at Quarter end	31.25% 31.25% 31.25%	50% 50% 50%
6.2	Interests in mining tenements relinquished, reduced or lapsed and their location				
6.3	Interests in mining tenements acquired or increased and their location	ML237/2006, Tanzania ML238/2006, Tanzania ML239/2006, Tanzania	As per section 6.1 above	31.25% 31.25% 31.25%	50% 50% 50%
6.4	Beneficial percentage interests held in farm-in or farm- out agreements	N/A	N/A	N/A	N/A



6.5	Beneficial	N/A	N/A	N/A	N/A
	percentage				
	interests in farm-				
	in or farm-out				
	agreements				
	acquired or				
	disposed of				

**Issued and quoted securities at end of current quarter**Description includes rate of interest and any redemption or conversion rights together with prices and dates.

		Total Number	Number Quoted	Issue Price per Security (see note 3) (cents)	Amount Paid Up per Security (see note 3) (cents)
7.1	Preference *securities (description)				
7.2	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy- backs, redemptions				
7.3	*Ordinary securities	134,927,617	134,927,617		
7.4	Changes during quarter (a) Increases through issues	6,200,000	6,200,000	Issued as part consideration for the acquisition of 100% of the mining licences from RECB Limited (of which 3,100,000 shares	Fully paid up
	(b) Decreases through returns of capital, buybacks			are tradeable immediately and 3,100,000 shares are escrowed until the commencement of commercial production)	
7.5	+Convertible debt			<u> </u>	
7.5	*Convertible debt securities (description)				
7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				



7.7	Options (description			Exercise Price	Expiry Date
	and conversion factor)	7,687,500 Unlisted Options	Nil	\$0.2667	31 May 2016
		2,500,000 Unlisted Options	Nil	\$0.25	31 October 2018
		1,000,000 Unlisted Options	Nil	\$0.25	30 April 2018
7.8	Issued during quarter				
7.9	Exercised during quarter				
7.10	Expired during quarter				
7.11	Debentures (totals only)				
7.12	Unsecured notes (totals only)				
7.13	Performance Shares				
		18,750,000 Class B Performance Shares	Nil	Issued as part consideration for the acquisition of the issued share capital of Panda Hill Mining Pty Ltd. Escrowed until 31/7/15	Nil
7.14	Performance Rights	1,837,500 Performance Rights	Nil	Nil exercise price	1,050,000 expire 30/9/16 787,500 expire 30/9/17
	(a) Converted to ordinary shares during the quarter				



#### **Compliance statement**

- This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.

Sophie Kaven

Sign here: Date: 29 January 2016

SOPHIE RAVEN, COMPANY SECRETARY

#### Notes

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities**. The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- The definitions in, and provisions of, AASB 1022: Accounting for Extractive Industries and AASB 1026: Statement of Cash Flows applies to this report.
- Accounting Standards. ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.