20 January 2015

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SIGNIFICANT RESOURCE UPGRADE FOR PANDA HILL NIOBIUM PROJECT

Highlights

- The Primary Carbonatite Resource is increased to 88Mt at 0.52% Nb_2O_5 (Indicated and Inferred)
- Representing a 10% increase in grade and a 37% increase in metal in the Primary Carbonatite Resource
- And includes a JORC Indicated Resource Primary Carbonatite component of 36Mt at 0.54% Nb_2O_5
- Representing a substantial improvement in Resource confidence through additional data and modelling
- The new Resource is based on the Multiple Indicated Kriging (MIK) method which incorporates increased mining selectivity and internal dilution for a planned Selective Mining Unit (SMU)
- Initial mine scheduling will focus on the Angel Zone comprising a higher grade sub-zone of the Indicated Resource
- Infill Drilling for a Measured Resource in the Angel Zone is complete, with results due in February 2015

Cradle Resources Limited (**"Cradle"**) is pleased to announce that the updated 2014 Resource for the Panda Hill Niobium Project has been completed. The Resource was undertaken by the independent mining consultants Coffey Mining based in Perth, Western Australia. The 2014 Resource has been reported in accordance to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, The JORC Code 2012 Edition.

The updated total Resource (Weathered and Primary Carbonatite , Indicated and Inferred) contains **96.3Mt at 0.52% Nb_2O_5** for 503Kt of contained Nb_2O_5 reported at a 0.3% Nb_2O_5 cut off, and is based predominantly on new drilling undertaken in 2013 and 2014. The MIK method used incorporates both increased mining selectivity and internal dilution in its SMU model, which is expected to have a positive effect on the head grades of the future feasibility studies.

This program has significantly increased the endowment of expected high-recovery Primary Carbonatite mineralisation to **88.4Mt at 0.52% Nb_2O_5** for 459Kt of Nb_2O_5 which represent a 37% increase in metal and 10% increase in grade to the 2013 estimate. The increase in Primary Carbonatite mineralisation incorporates depth extensions due to drilling in the Angel Zone, as well as extensions on strike to the North of the deposit.

The 2014 infill drill program was planned to increase the overall confidence of the Resource so as to enable advanced mining studies to be undertaken. Significantly, this new drilling has enabled a substantial increase in Primary Resource **Indicated** material to **35.9Mt at 0.54% Nb_2O_5** for 194Kt of Nb_2O_5.

The additional drilling has also enabled better definition and classification of Weathered Material, which has effectively decreased the amount and grade of this material. The Weathered Material generally has poorer metal recoveries and is not expected to play a significant role in the initial mining schedule. There are plans to upgrade this material by gravity separation enabling treatment of the upgraded material in the same circuit as the Primary Material, however, this will remain an option for later study and development.

The updated 2014 Mineral Resource is summarised below in Table 1 by weathering type. The JORC Code reporting criteria and input parameters used for the resource estimate are summarised in Appendix 1.

Table 1
2014 Panda Hill 2013 Resource
Reported Above a 0.3% Nb_2O_5 Lower Cut-off

Classification	Million Tonnes	Nb_2O_5 %	Nb_2O_5 Content (KT)
Combined			
Indicated	41.0	0.54	223
Inferred	55.3	0.51	280
Total	96.3	0.52	504
Primary Carbonatite[1]			
Classification	Million Tonnes	Nb_2O_5 %	Nb_2O_5 Content (KT)
Indicated	35.9	0.54	194
Inferred	52.5	0.51	265
Total	88.4	0.52	459
Weathered Carbonatite[2]			
Classification	Million Tonnes	Nb_2O_5 %	Nb_2O_5 Content (KT)
Indicated	5.1	0.59	30
Inferred	2.8	0.53	15
Total	7.9	0.57	45

Note: Figures have been rounded. [1] Primary Carbonatite is defined as a region of fresh to Moderately Oxidised material dominated by carbonatite lithologies. This material is expected to have a higher metallurgical recovery. [2] Weathered Carbonatite is a region dominated by strongly oxidised material dominated by weathered carbonatite with other mixed lithologies. This material is expected to have a lower recovery than the Primary Carbonatite material.

Cradle has drill tested only a third of the carbonatite outcrop to date, and the deposit is still sparsely drilled towards the south, the north, and the west, and is open at depth (Figures 1 and 2). Geological mapping undertaken by Cradle in 2014 of the broader carbonatite has shown than many of regions previously mapped as Fenite (pink in Figure 1) contain outcrops of carbonatite and magnetite-carbonatite which are mineralised at surface. These regions have the potential to allow for lateral expansion of the current resource.

The 2014 Resource incorporated the results of 21 diamond and 51 RC holes drilled from June to October 2014 with 5,171 samples taken for the 9,365 metres drilled. The 2014 Resource was estimated using Multiple Indicator Kriging on 2m composites with a 25m x 25m by 5m (X x Y x Z) panel to generate a recoverable estimate emulating an SMU of 6.25m x 12.5m x 5m.

Niobium analysis has been undertaken by SGS Johannesburg using the XRF Borate fusion process. Cradle adheres to industry best-practice in conducting QAQC procedures by inserting blanks and certified niobium standards at a rate of 1:20 samples. The QAQC data for the Project has been reviewed by Cradle's Competent Person, Mr Neil Inwood.

Representative metallurgical samples have been previously been sent to SGS Lakefield in Canada with positive test work results already announced.

Grant Davey, the Managing Director of Cradle, commented: *"The 2014 Resource upgrade is another great result for the Company. The 2014 drilling program has been successful in upgrading the Resource confidence, and the grade and tonnes of the Primary Resource, resulting in a substantial increase in contained Niobium. The drilling for a JORC compliant Measured Resource which will be used for our definitive feasibility study has recently been completed, with a further Resource update planned for second quarter 2015. The pre-feasibility study is progressing well and is on schedule for completion during the first quarter of 2015. This upgraded Resource will be used to optimise the technical and commercial parameters of this world class niobium project."*

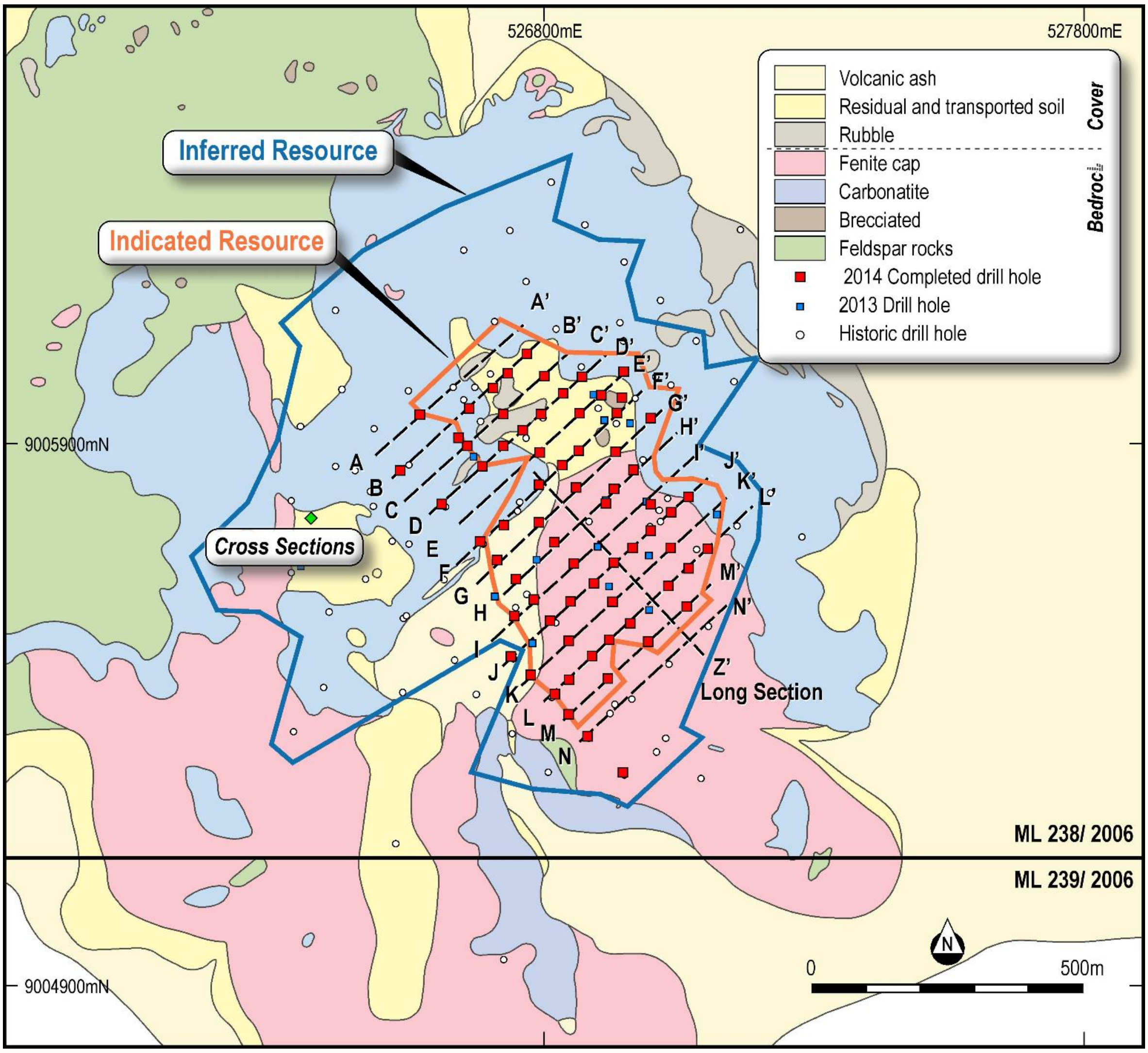

Figure 1: Geology plan showing the 2014 Resource regions. The regions in blue (carbonatite) and pink (Fenite Cap) are both highly prospective with field mapping showing carbonatite and magnetite-carbonatite outcrop contained with many of these areas.

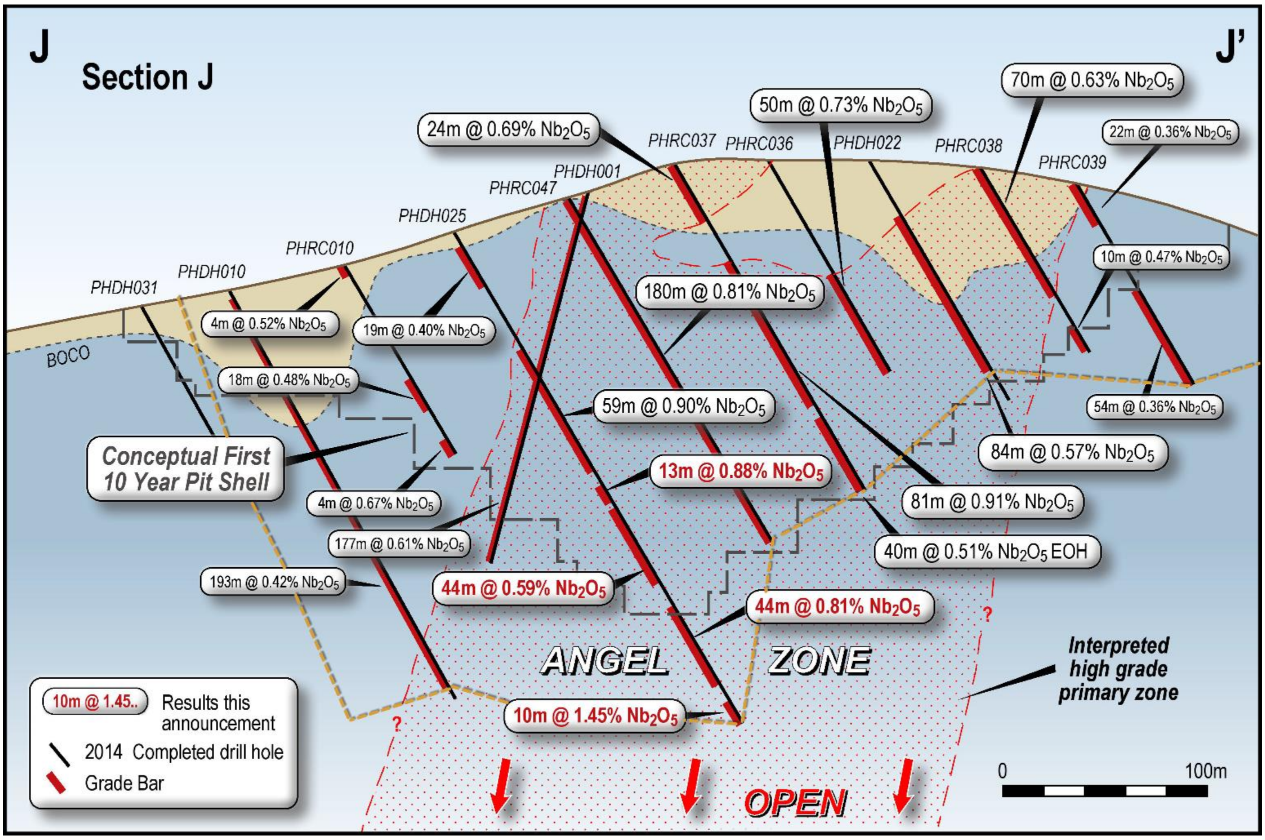

Figure 2: Cross-section (J) showing grade composites from Cradle drilling and Resource Outline (orange)

For further information, please visit www.cradleresources.com.au or contact:

Grant Davey Managing Director Tel: +61 8 9389 2000

Competent Persons' Statements

The information in this document that relates to the Panda Hill Mineral Resource is based on information provided by Mr Ingvar Kirchner, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists, and by Ms Ellen Maidens, who is a Member of the Australian Institute of Geoscientists. Both are full time employees of Coffey Mining Ltd and have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Reserves". Mr Kirchner and Ms Maidens have consented to the inclusion of this information in this document in the form and context in which it appears.

The information in this document that relates to the Panda Hill Geology and Historic Data, Exploration Data, and Geology is based on information provided 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.

Assumptions on the metallurgical factors, as relating to the resource documentation, are provided by Mr Dave Dodd. Mr Dodd is a consultant for MDM Engineering, South Africa, and is a Fellow of the SAIMM. Mr Dodd has sufficient relevant experience to qualify as a competent person as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Reserves". Mr Dodd has consented to the inclusion of this information in the document in the form and context in which it appears.

Under the JORC Code (2012), Clause 9, consent has been sought and obtained from all Competent Persons listed above for any initial public release of information related to this resource estimate and associated report. The Panda Hill Resource Report is available on the Cradle website: www.cradleresources.com.au

Appendix 1 – Resource Statement and JORC Code Reporting Criteria Follows

Executive Summary

Coffey Mining Pty Ltd (Coffey) was retained by Cradle Resources Limited (Cradle) to undertake a resource estimate for the Panda Hill niobium (Nb_2O_5) deposit in Tanzania (Figure 1).

Principle activities undertaken in the study are as follows:

- A review of historical drilling data.
- A review and input to the proposed 2014 resource definition drilling.
- A site visit to review RC drilling and sampling procedures during drilling.
- Generate a Stage 1 interim grade estimate incorporating data available at that date from new drillholes, modelling Nb_2O_5 as per previous models using the OK method. This interim model was used for internal purposes and was not to be reported publically and as such, did not require JORC Code 2012 resource classification. It is not reported on in this document.
- On completion of drilling and compilation of assay and geology data from the new resource definition drillholes, a final Multiple Indicator Kriging Selective Mining Unit (MIK SMU) resource model was required for Nb and other ancillary variables. This involved:
  - Import the existing drillhole data.
  - Refine existing mineralisation envelope for MIK estimation purposes.
  - Drillhole data flagging and compositing of the data relevant to the mineralised envelope
  - Using the selected groupings of data for the mineralised envelope, evaluate the statistics for the following elements/variables:
    - Nb_2O_5.
    - Fe_2O_3.
    - SiO_2.
    - CaO.
    - TiO_2.
    - Oxidation flags.
    - Multiple indicator variables.
    - Bulk density (BD).
  - Block model preparation.
  - Resource estimation using MIK incorporating change of support (COS) to produce an SMU model for Nb_2O_5. Ordinary Kriging (OK) was used to estimate the ancillary elements Fe_2O_3, SiO_2, CaO, and TiO_2.
  - Probability modelling of lithology (Fenites/Carbonatite), oxidation/weathering flags, and recovery from diamond drilling.
  - Review and classification of the resource estimate.
  - Report the resource estimate for a range of cutoffs.
  - Technical review of available QAQC data for all resource definition drilling data.
  - Resource model documentation.

Drillhole sample data was sourced from Cradle, and represents work carried out by Cradle since 2013 as well as the compiled historic drilling data. The data files were supplied as MS Access database extracts from Datashed, with tables for collar, survey, assay, lithology, core recovery, density, structure (geotechnical), structure (orientations), hand held XRF results, metadata, assays (QC), assays (standards). Neil Inwood from Cradle is acting as competent person for the data and geology. Database information was validated by Coffey in MS Access. The checks made to the database prior to resource estimation included checks for overlapping intervals, for consistency of depths between different data tables, for gaps in the data, for irregular collar coordinates and that there were downhole surveys at 0m.

For the Panda Hill deposit, the database used for resource modelling contained:

- 34 surface diamond drillholes for 4,784.22m (includes a 267.7m diamond tail to PHRC025) drilled by Cradle.
- 51 surface RC drillholes for 6,150.7m drilled by Cradle.
- 38 surface historic diamond drillholes for 2,656.85m drilled by previous owners of the project.

Note that 64 historic drillholes were deliberately removed from the database, having been essentially superseded by new drilling.

The drillhole data was limited to the immediate resource area. Drillholes used in the resource estimate are shown in Figure 2 and listed with collar coordinates in Table 1.

Drillholes are spaced at 50m to 100m centres on 50m spaced drilling sections oriented approximately NE-SW. The majority of drillholes are angled with dips of -60° towards 046°, targeting the SW dipping carbonatites and the pyrochlore rich flow banding entrained within the carbonatites. Typical cross-sections showing the drilling are presented in Figure 3 to Figure 6.

Assaying for Nb_2O_5 was by Borate fusion XRF carried out by SGS in Johannesburg. This method also provides assays for a multi-element suite including Fe_2O_3, SiO_2, CaO, TiO_2 as well as other major elements. Drillholes were sampled in their entirety except where there was no sample due to intersection of cavities. Diamond core was sampled on geological intervals, generally of 1m length. RC holes were sampled as 2m composites.

QAQC data was supplied with the data and consisted of results for certified standards, blanks, field duplicates, coarse reject duplicates and umpire duplicates from the 2013 and 2014 drilling programmes. Analysis of these results has been included in this report.

The Panda Hill database contains approximately 2,700 calliper method bulk density determinations collected from the surface diamond holes drilled in 2013 and 2014.

Geological data was reviewed by Coffey. Niobium mineralisation at Panda Hill is found within pyrochlore and lesser columbite. The bulk of the known mineralisation is located within carbonatite lithologies, with Nb_2O_5 grades typically ranging from 0.1% to 1%. Higher-grade niobium mineralisation is noted within flow-banding (schlieren) within the carbonatite, particularly in magnetite rich zones, and within the surficial weathered cap.

A relatively broad mineralisation envelope wireframe was defined for the Nb_2O_5 mineralisation for use in the MIK modelling (Zonecode 100). A nominal 0.2% Nb_2O_5 lower cut-off was used to define mineralisation. Wireframe surfaces were created to mark the divisions between mostly completely oxidised material, transitional material, and mostly fresh material. All wireframes were snapped to drillholes.

The drillhole database, coded with the mineralisation, lithology and oxidation domains, was composited to a regular 2 metre downhole composite length as a means of achieving a uniform sample support. The compositing used a residual retention process that prevents loss of data near the division margins. The decision to produce 2 metre composites considered the common raw sampling intervals in the drillholes data, open pit mining scenario and related parent cell sizes used for modelling.

A 3 dimensional block model was generated for the Panda Hill deposit to enable grade estimation via MIK. The block model block size was selected largely as a compromise for adequate volume definition of the mineralisation envelope, the current drillholes spacing, and an open pit mining scenario. The block model constructed for mineral resource estimation was based on a 25mE x 25mN x 5mRL parent block size with an appropriate level of subcelling to define the mineralisation wireframe volume.

Statistical analysis was carried out on the 2 metre composites of the drillhole sample data for the elements, bulk density, and indicator variables. While no top cut is used in the MIK estimation, a top cut of 3% Nb_2O_5 was applied to the Nb_2O_5 composites used for variography and for the Nb_2O_5 OK estimation used for validation purposes. No topcuts were applied to Fe_2O_3, SiO_2, CaO, or $TiO_{2.}$

Twelve indicator cutoffs for the Nb_2O_5 data were selected for the MIK modelling.

Declustered statistics and MIK bin grade statistics were generated for the MIK estimation process.

Variography was generated for the Zonecode 100 Nb_2O_5 cut data and selected indicator variables, and also for Fe_2O_3, SiO_2, CaO, and TiO_2. The Nb_2O_5 data demonstrated a typical 45% relative nugget variance and moderately well structured variograms. Similarly, the variogram models for 7 of the 12 indicators were reasonably well structured and demonstrated the expected increasing nugget variance and decreasing ranges with increasing indicator cutoff value. The modelled variography is consistent with both the geological modelling and the style of mineralisation. The major axis of the variograms was oriented along strike (0°→315°) and the semi-major axis oriented along down dip (-50°→225°). The three oxidation probability fields were oriented horizontally with major axis oriented along strike (0°→315°) and the semi-major axis oriented horizontally (0°→225°).

Multiple Indicator Kriging (MIK) was applied for grade estimation at Panda Hill. Considering the mixed material types, variable grades, and potentially complex local geometries, MIK is considered a robust estimation methodology for this type of deposit. MIK grade estimation with change of support has been applied to produce “recoverable niobium” estimates for a range of cutoff grades targeting a selective mining unit (SMU) of 6.25m x 12.5m x 5m. The additional elements Fe_2O_3, SiO_2, CaO, and TiO_2 were estimated using OK.

A variance adjustment factor was applied to emulate a 6.25m x 12.5m x 5m SMU via the indirect lognormal change of support. Average in situ dry bulk densities were assigned on the basis of measurements collect for the 2013 and 2014 drill core using the calliper method. After statistical review of the 2793 density measurements, bulk density values have been applied to the block model as follows: for waste material values of 2.33t/m^3, 2.53 t/m^3 and 2.74t/m^3 have been applied to oxide, moderately oxide and fresh domains respectively. For mineralised material bulk density values of 2.15t/m^3, 2.53t/m^3 and 2.68t/m^3 have been applies to oxide, moderately oxide and fresh domains respectively. The bulk density values for mineralisation incorporate a 6% void factor for oxide material, and a 3% void factor for transitional and fresh material resulting from statistical estimates of recorded voids/cavities.

Based on the MIK SMU model, an Indicated and Inferred Mineral Resource has been defined in accordance with the criteria set out in the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves, published by the Joint Ore Reserves Committee (JORC) of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists, and Minerals Council of Australia, 2012. The criteria used to categorise the Mineral Resource include the robustness of the input data, the confidence in the geological interpretation including the predictability of both structures and grades within the mineralised zones, the distance from data, and amount of data available for block estimates within the mineralised zone as well as other considerations outlined in the JORC Code 2012 Table 1 below.

The Mineral Resource for the Panda Hill Niobium Project categorised in accordance with the JORC Code 2012 is reported in Table 1 below.

Table 1 – Summary Table – Panda Hill In situ Mineral Resource

December 2014 Panda Hill In situ Mineral Resource
Estimated by Multiple Indicator Kriging
Reported using (variable) cutoffs; preferred cutoff for reporting purposes (0.3% Nb2O5)
(Nb2O5) Grade tonnage distributions subdivided by JORC Code 2012 Resource Categories
Oxidised, Fresh and Combined Oxidised and Fresh
using ROUNDED figures

Oxidation/ Weathering	Lower Cutoff Grade	Indicated			Inferred			Total (Measured + Indicated + Inferred)		
		Tonnes (kT)	Nb_2O_5 (%)	Nb_2O_5 Metal (kT)	Tonnes (kT)	Nb_2O_5 (%)	Nb_2O_5 Metal (kt)	Tonnes (kT)	Nb_2O_5 (%)	Nb_2O_5 Metal (kt)
Oxidised	0.28	5,288	0.57	30.4	3,021	0.51	15.5	8,309	0.55	45.8
	0.30	**5,083**	**0.59**	**29.8**	**2,822**	**0.53**	**14.9**	**7,905**	**0.57**	**44.7**
	0.32	4,855	0.60	29.1	2,629	0.54	14.3	7,484	0.58	43.4
	0.34	4,615	0.61	28.3	2,438	0.56	13.7	7,053	0.60	42.0
	0.35	4,492	0.62	27.9	2,343	0.57	13.3	6,836	0.60	41.2
	0.36	4,370	0.63	27.5	2,252	0.58	13.0	6,622	0.61	40.5
	0.38	4,129	0.64	26.6	2,073	0.60	12.4	6,202	0.63	39.0
	0.40	3,893	0.66	25.7	1,891	0.62	11.7	5,784	0.65	37.3
Moderately Oxidised + Fresh	0.28	38,188	0.52	200.1	56,561	0.49	277.1	94,749	0.50	477.2
	0.30	**35,933**	**0.54**	**193.6**	**52,447**	**0.51**	**265.4**	**88,380**	**0.52**	**459.0**
	0.32	33,600	0.55	186.4	48,246	0.52	252.5	81,846	0.54	438.9
	0.34	31,294	0.57	178.9	44,244	0.54	239.4	75,538	0.55	418.3
	0.35	30,160	0.58	175.0	42,327	0.55	232.9	72,487	0.56	408.0
	0.36	29,024	0.59	171.1	40,453	0.56	226.3	69,478	0.57	397.4
	0.38	26,779	0.61	162.8	36,787	0.58	212.9	63,566	0.59	375.7
	0.40	24,637	0.63	154.6	33,280	0.60	199.3	57,917	0.61	353.9
Total	0.28	43,475	0.53	230.4	59,582	0.49	292.6	103,058	0.51	523.0
	0.30	**41,016**	**0.54**	**223.4**	**55,269**	**0.51**	**280.2**	**96,285**	**0.52**	**503.6**
	0.32	38,455	0.56	215.5	50,875	0.52	266.8	89,331	0.54	482.3
	0.34	35,908	0.58	207.2	46,682	0.54	253.1	82,590	0.56	460.3
	0.35	34,653	0.59	202.9	44,671	0.55	246.2	79,323	0.57	449.2
	0.36	33,395	0.59	198.5	42,705	0.56	239.3	76,100	0.58	437.9
	0.38	30,908	0.61	189.4	38,860	0.58	225.3	69,768	0.59	414.7
	0.40	28,530	0.63	180.2	35,171	0.60	211.0	63,700	0.61	391.2

NOTES:

- The Panda Hill project is located in south-western Tanzania, approximated 20km south-west of the town of Mbeya.
- Niobium mineralisation occurs in pyrochlore (and minor columbite) and is hosted by the Panda Hill carbonatite complex.
- The deposit is defined by diamond and RC drillholes on a nominal 50-100m spaced drilling on NE-SW oriented grid lines. The majority of drillholes are angled at -60° to 046.
- Validated data from 123 drillholes has been used in the resource estimate. 51 of these are RC drillholes drilled by Cradle in 2014, 34 are diamond drillholes drilled by Cradle in 2013 and 2014, and the remaining 38 are historic diamond drillholes. Note that 64 historic drillholes were deliberately removed from the database as they have been replaced by new drilling or are outside of the resource area.
- Drillhole data was used to create a 3D wireframe of mineralisation utilising a nominal 0.2% Nb_2O_5 lower cut-off that was appropriate for MIK estimation.
- Geological logging information was used to create 3D surfaces defining three zones of oxidation: mostly weathered (oxide), moderately weathered (transitional), and mostly fresh (fresh).
- Sample preparation was carried out by SGS in Mwanza, Tanzania. Samples were then sent to SGS in Johannesburg for assay by XRF Borate fusion.
- QAQC consists of the insertion of certified standards and blanks into the sampling stream. Field duplicates were collected from the RC drillholes and coarse reject duplicates were collected from the diamond drillholes. Selected samples were also sent for analysis at Genalysis laboratory in Perth as an umpire check. No potential problems were highlighted by the QAQC results, and the data is considered to be of sufficient standard for use in the Resource estimation.
- Following flagging for the zones and domains, drillhole data was composited to 2m downhole intervals.
- Statistical analyses were completed on the raw sample data and the 2m composite data. While no top cut is used in the MIK estimation, a top cut of 3% Nb_2O_5 was applied to the Nb_2O_5 composites used for variography and for geostatistical purposes.
- Grade estimates were generated for parent blocks of size 25m(X) by 25m(Y) by 5m(Z) with sub-blocks of 5m(X) by 5m(Y) by 1m (Z). The estimation method was Multiple Indicator Kriging (MIK). MIK grade estimation with change of support has been applied to produce 'recoverable' Nb2O5 estimates for a range of cutoff grades targeting a selective mining unit (SMU) of 6.25m x 12.5m x 5m.
- In situ dry bulk densities were assigned on the basis of measurements collect for the 2013 and 2014 drill core using the calliper method. After statistical review of the 2793 density measurements, bulk density values have been applied to the block model as follows: for waste material values of 2.33t/m^3, 2.53 t/m^3 and 2.74t/m^3 have been applied to oxide, moderately oxide and fresh domains respectively. For mineralised material bulk density values of 2.15t/m^3, 2.53t/m^3 and 2.68t/m^3 have been applies to oxide, moderately oxide and fresh domains respectively. The bulk density values for mineralisation incorporate a 6% void factor for oxide material, and a 3% void factor for transitional and fresh material resulting from statistical estimates of recorded voids/cavities.
- Resource classification was developed from the confidence levels of key criteria including drilling methods, geological understanding and interpretation, sampling quality, data density and location, grade estimation and quality of the estimates.

Competent persons

The information in this document that relates to the Panda Hill data and geology is based on information provided 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".

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Figure 1 – Project Location and Tenure

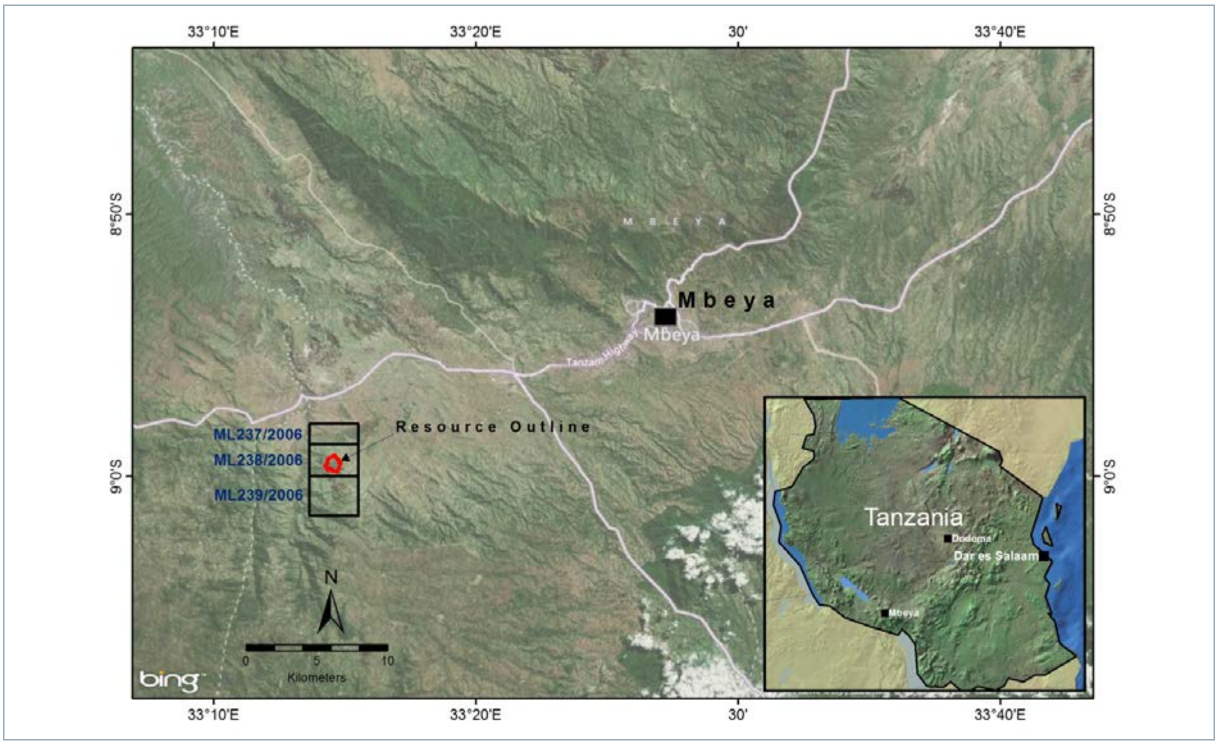

Figure 2 – Drillhole Location

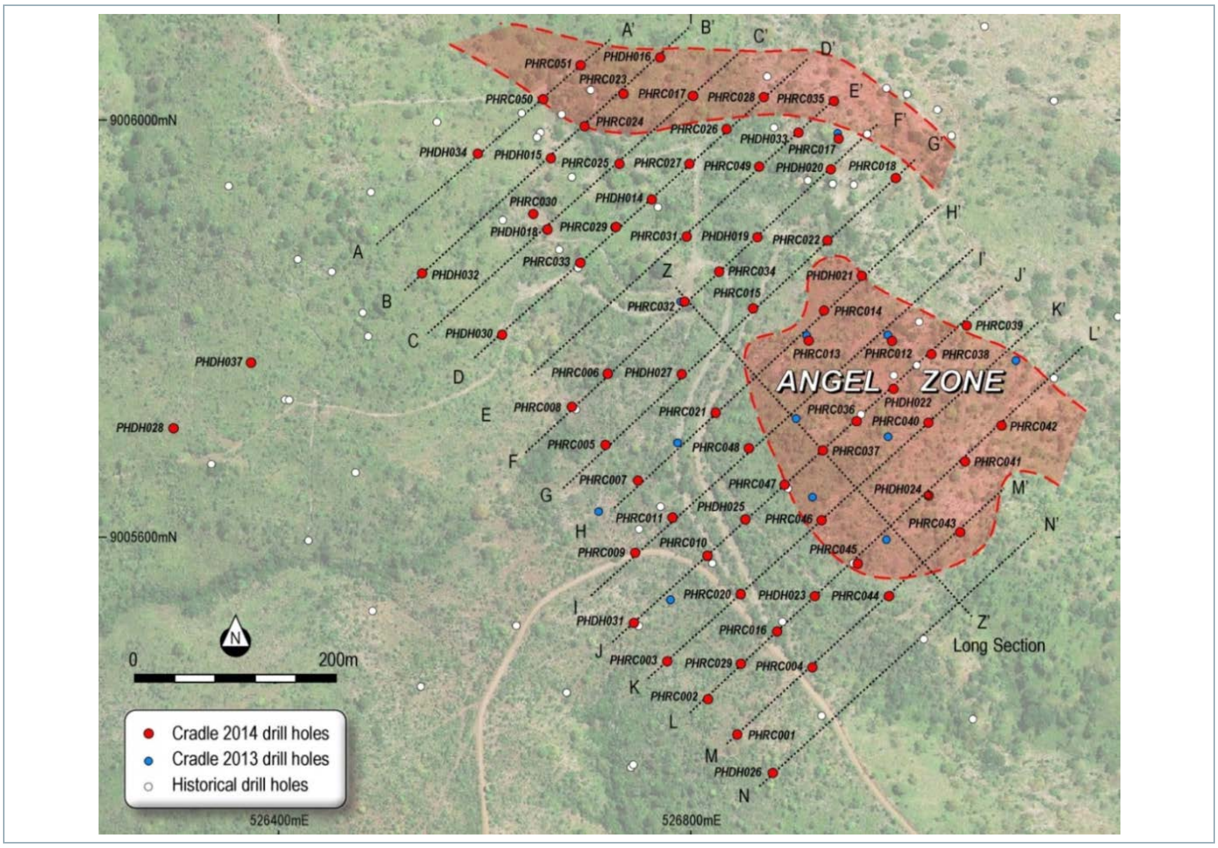

Figure 3 – Drillhole and Geology Cross Sections B-B'

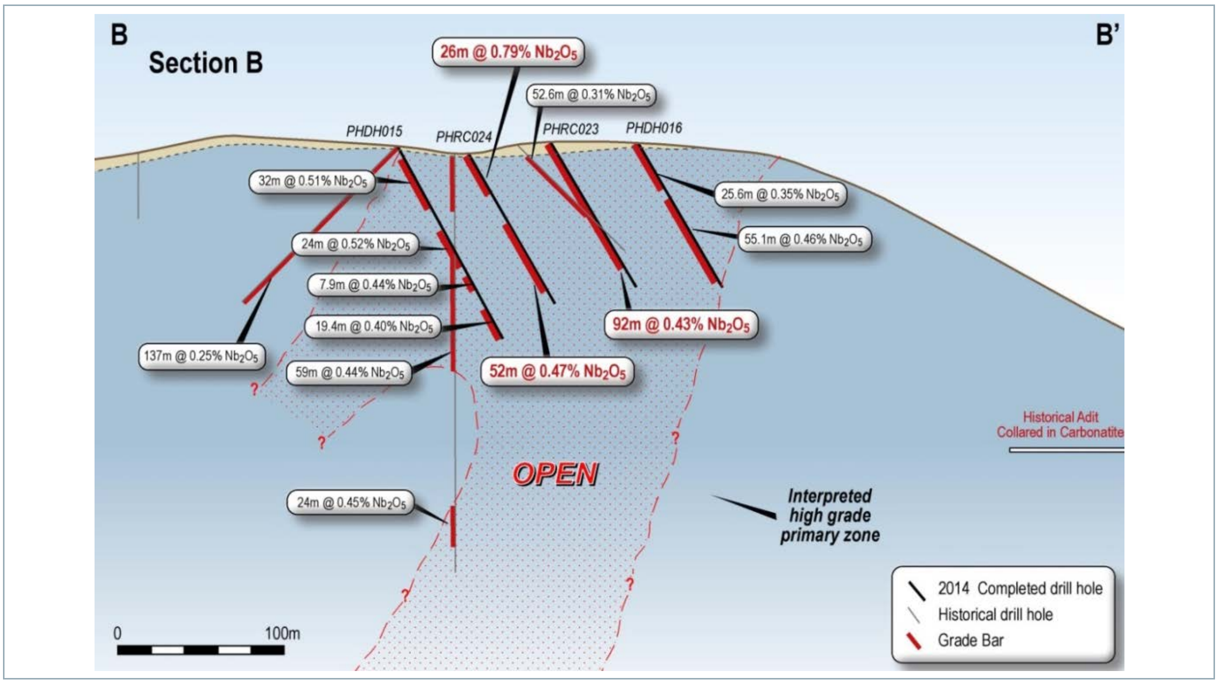

Figure 4 – Drillhole and Geology Cross Section H-H'

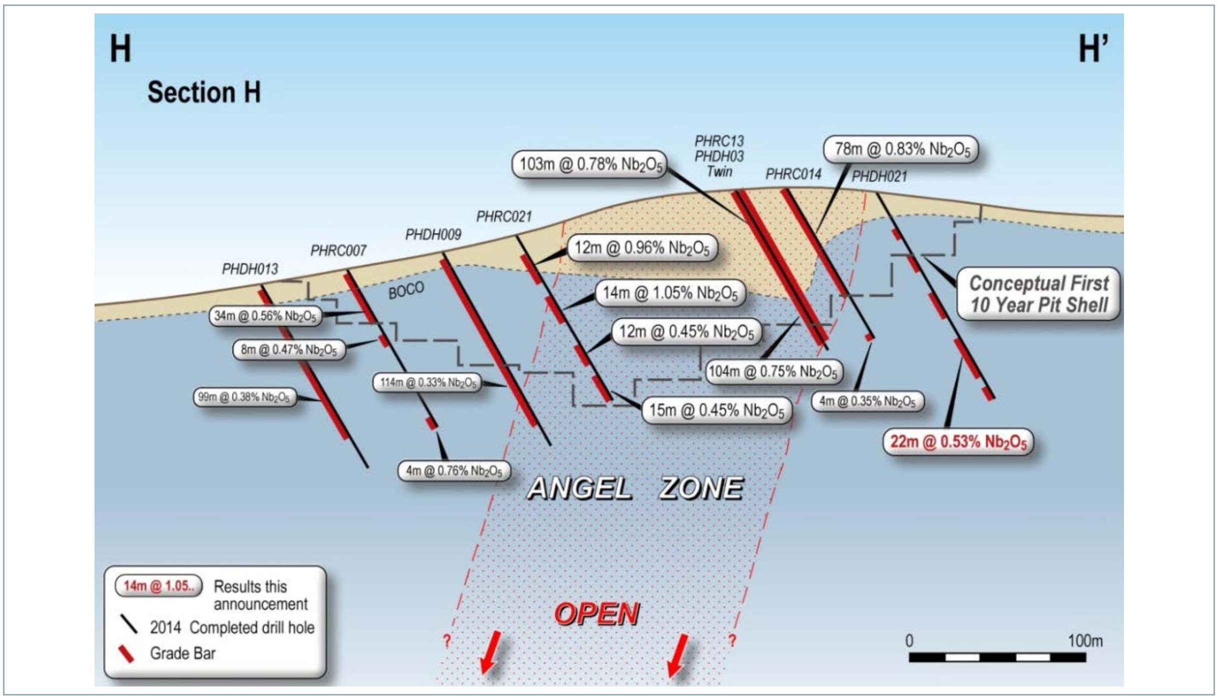

Figure 5 – Drillhole and Geology Cross Section J-J'

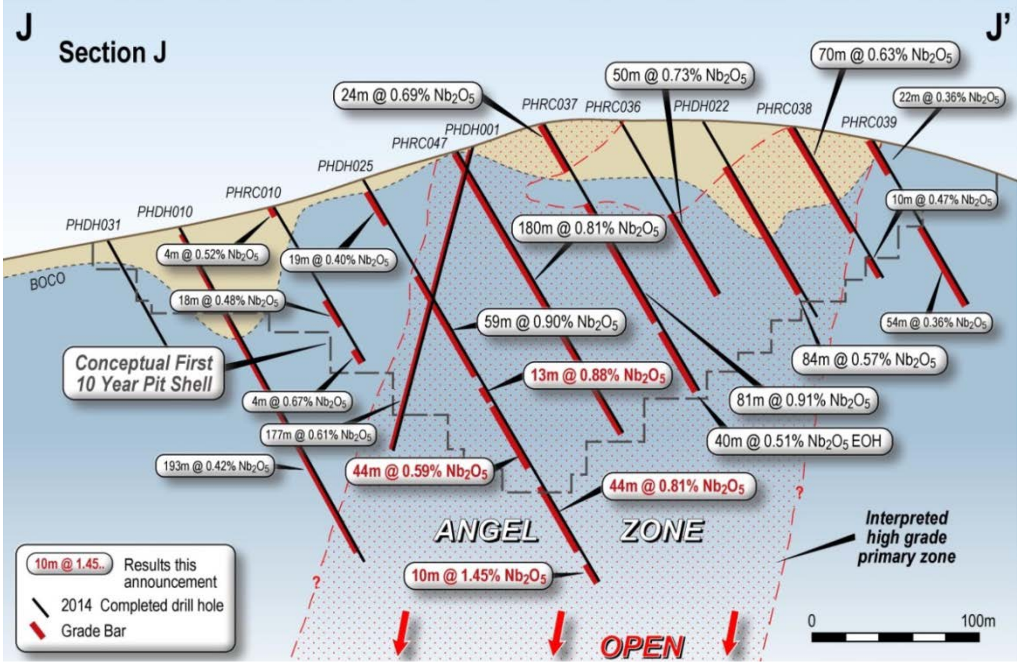

Figure 6 – Drillhole and Geology Long Section Z-Z'

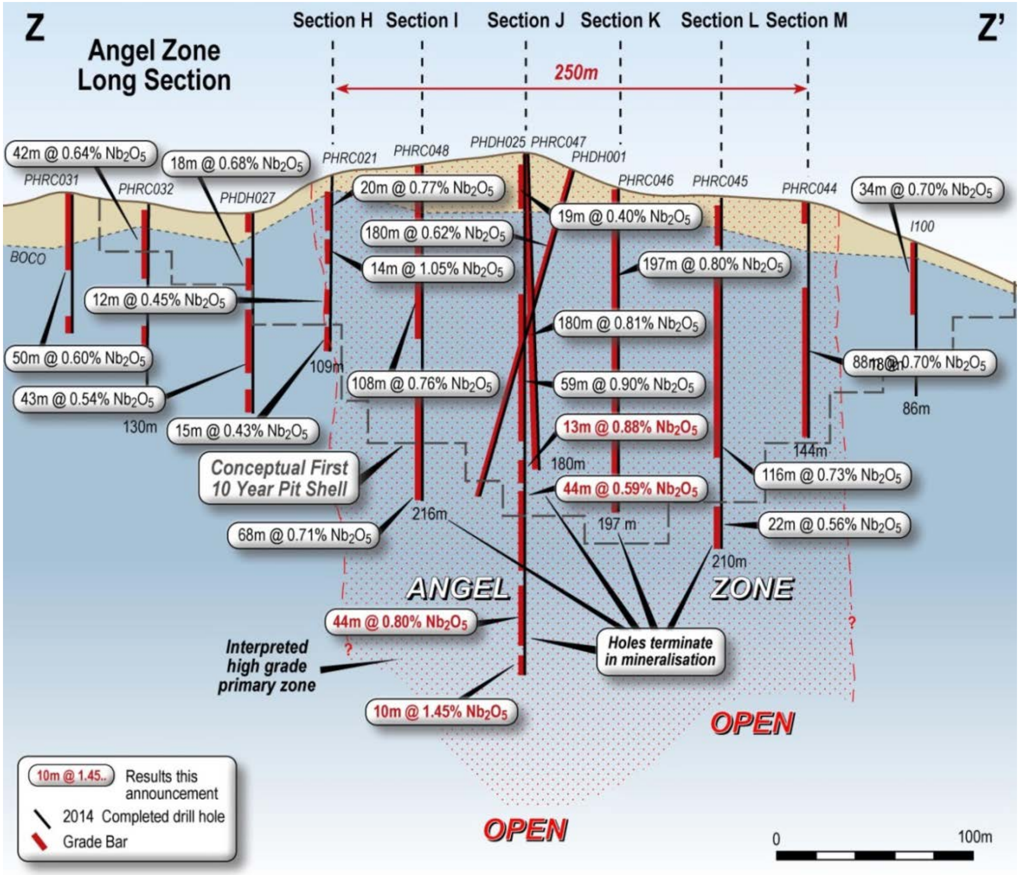

Table 2 – Collar Coordinates for Drillholes used in the Resource

Hole ID	Easting	Northing	RL	Total Depth (m)	Dip	Azi
A2A	526,555	9,005,722	1,508	35	-90	0
A3	526,489	9,005,799	1,526	35.72	-90	0
A5	526,351	9,005,948	1,534	35.58	-90	0
B4	526,492	9,005,942	1,550	35.22	-90	0
B5	526,424	9,006,016	1,544	35.02	-90	0
BK1	526,483	9,005,822	1,531	60.04	-40	044
E4	526,717	9,006,142	1,531	35.08	-90	0
GS4	526,659	9,006,000	1,545	149.66	-45	315
GS6	526,680	9,006,019	1,544	253.29	-90	0
GSX10	526,659	9,006,273	1,476	60.96	-70	135
GSX12	527,018	9,005,338	1,478	12.192	-75	225
GSX3	526,963	9,006,109	1,513	60.96	-2	225
GSX4	527,021	9,006,039	1,513	60.96	-2	225
GSX6	527,065	9,005,997	1,513	60.96	-2	225
I100	527,038	9,005,499	1,512	86.63	-90	0
I29	527,229	9,005,818	1,476	52	-90	0
I32	527,166	9,006,032	1,479	50	-90	0
I35	526,960	9,006,252	1,456	31.37	-90	0
I37	526,827	9,006,398	1,475	48.59	-90	0
I47	526,619	9,005,661	1,483	56.17	-90	0
I48c	526,407	9,005,736	1,501	98.25	-90	0
I49	526,477	9,005,664	1,493	63.53	-90	0
I53	526,815	9,005,299	1,487	47.75	-90	0
I58	526,541	9,005,452	1,487	62.2	-90	0
I59	526,404	9,005,597	1,454	34.21	-90	0
I61	526,397	9,005,459	1,483	59.9	-90	0
I8	526,467	9,005,527	1,467	35.54	-90	0
I92	527,033	9,005,363	1,468	45	-90	0
II6	526,635	9,005,512	1,490	83.16	-90	0
J17/79	526,419	9,006,160	1,543	142	-90	0
KU2	526,238	9,005,721	1,464	74.92	-66	224
L14/79	526,336	9,005,808	1,499	100.59	-90	0
L17/79	526,557	9,006,011	1,544	146.19	-90	0
L20/79	526,779	9,006,216	1,516	76.81	-90	0
MS1	526,450	9,005,954	1,538	100.52	-50	234
O11/79	526,337	9,005,381	1,490	91.78	-90	0
O14/79	526,541	9,005,590	1,467	67.15	-90	0
PHDH001	526,926	9,005,642	1,539	182.77	-70	272
PHDH002	526,909	9,005,720	1,556	122.5	-60	062
PHDH003	526,923	9,005,802	1,548	107.4	-60	062
PHDH004	527,129	9,005,776	1,536	101.1	-60	060
PHDH005	527,002	9,005,700	1,553	84.3	-60	092
PHDH006	527,000	9,005,600	1,539	116.2	-60	062
PHDH007	527,001	9,005,802	1,554	170.9	-60	047

Hole ID	Easting	Northing	RL	Total Depth (m)	Dip	Azi
PHDH008	526,952	9,006,003	1,541	110.25	-60	062
PHDH009	526,793	9,005,696	1,517	125.3	-60	062
PHDH010	526,786	9,005,540	1,498	239.2	-60	062
PHDH011	526,797	9,005,837	1,522	121.75	-50	222
PHDH012	526,351	9,005,682	1,491	100	-60	227
PHDH013	526,714	9,005,629	1,501	121.15	-60	052
PHDH014	526,769	9,005,937	1,535	80	-60	047
PHDH015	526,671	9,005,980	1,539	132	-60	047
PHDH016	526,773	9,006,079	1,548	102	-60	047
PHDH017	526,810	9,006,040	1,545	110	-60	047
PHDH018	526,663	9,005,907	1,526	130	-60	047
PHDH019	526,873	9,005,901	1,534	108	-60	047
PHDH020	526,944	9,005,967	1,540	130	-60	046
PHDH021	526,975	9,005,861	1,547	130	-60	046
PHDH022	527,013	9,005,749	1,552	130.8	-60	046
PHDH023	526,928	9,005,544	1,520	132	-60	046
PHDH024	527,043	9,005,645	1,546	130	-60	046
PHDH025	526,862	9,005,619	1,522	280.2	-60	046
PHDH026	526,887	9,005,367	1,508	80	-60	046
PHDH027	526,798	9,005,763	1,516	130	-60	046
PHDH028	526,300	9,005,713	1,488	130	-60	225
PHDH029	526,855	9,005,471	1,503	130	-60	047
PHDH030	526,626	9,005,797	1,512	80	-60	046
PHDH032	526,542	9,005,863	1,544	201	-60	046
PHDH033	526,911	9,006,000	1,541	200	-60	046
PHDH034	526,579	9,005,964	1,557	137.7	-60	046
PHDH037	526,373	9,005,773	1,503	130	-60	225
PHRC001	526,857	9,005,403	1,506	60	-60	046
PHRC002	526,830	9,005,445	1,500	67	-60	046
PHRC003	526,787	9,005,480	1,492	104	-60	046
PHRC004	526,928	9,005,471	1,505	60	-60	046
PHRC005	526,724	9,005,694	1,500	100	-60	046
PHRC006	526,735	9,005,758	1,500	100	-60	046
PHRC007	526,758	9,005,661	1,507	100	-60	046
PHRC008	526,696	9,005,734	1,494	80	-60	046
PHRC009	526,754	9,005,596	1,503	106	-60	047
PHRC010	526,825	9,005,585	1,508	100	-60	046
PHRC011	526,788	9,005,624	1,510	100	-60	047
PHRC012	527,000	9,005,804	1,554	97	-60	047
PHRC013	526,926	9,005,802	1,548	103	-60	062
PHRC014	526,943	9,005,826	1,549	100	-60	047
PHRC015	526,869	9,005,832	1,532	109	-60	047
PHRC016	526,901	9,005,517	1,510	108	-60	047
PHRC017	526,953	9,006,005	1,541	150	-60	062
PHRC018	527,008	9,005,963	1,533	106	-60	047
PHRC019	526,956	9,005,303	1,491	76	-60	046
PHRC020	526,858	9,005,546	1,507	102	-60	046

Hole ID	Easting	Northing	RL	Total Depth (m)	Dip	Azi
PHRC021	526,823	9,005,728	1,526	109	-60	046
PHRC022	526,942	9,005,894	1,542	109	-60	046
PHRC023	526,742	9,006,043	1,544	109	-60	047
PHRC024	526,718	9,006,015	1,540	109	-60	047
PHRC025	526,736	9,005,970	1,534	376.7	-60	047
PHRC026	526,842	9,006,009	1,541	84	-60	047
PHRC027	526,806	9,005,973	1,537	100	-60	047
PHRC028	526,881	9,006,038	1,544	133	-60	047
PHRC029	526,737	9,005,910	1,531	80	-60	047
PHRC030	526,650	9,005,797	1,526	100	-60	047
PHRC031	526,800	9,005,922	1,530	104	-60	047
PHRC032	526,797	9,005,840	1,522	130	-60	047
PHRC033	526,694	9,005,867	1,517	80	-60	047
PHRC034	526,844	9,005,872	1,525	100	-60	047
PHRC035	526,958	9,006,045	1,538	104	-60	047
PHRC036	526,971	9,005,718	1,555	110	-60	047
PHRC037	526,939	9,005,692	1,553	180	-60	047
PHRC038	527,048	9,005,783	1,551	104	-60	046
PHRC039	527,079	9,005,810	1,546	108	-60	047
PHRC040	527,042	9,005,714	1,549	100	-60	047
PHRC041	527,078	9,005,675	1,545	130	-60	047
PHRC042	527,114	9,005,711	1,540	130	-60	047
PHRC043	527,073	9,005,605	1,539	106	-60	047
PHRC044	527,003	9,005,542	1,526	144	-60	047
PHRC045	526,971	9,005,574	1,529	210	-60	047
PHRC046	526,936	9,005,617	1,533	197	-60	047
PHRC047	526,901	9,005,651	1,540	180	-60	047
PHRC048	526,864	9,005,689	1,540	216	-60	047
PHRC049	526,875	9,005,967	1,542	200	-60	047
PHRC050	526,668	9,006,044	1,545	140	-60	047
PHRC051	526,704	9,006,079	1,544	140	-60	047
S14/79	526,748	9,005,372	1,475	71.95	-90	0

The following extract from the JORC Code 2012 Table 1 is provided for compliance with the Code requirements for the reporting of Mineral Resources:

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections).

Table 3 – Extract of JORC Code 2012 Table 1

Criteria	JORC Code Explanation	Commentary	Competent Person
Sampling techniques	▪ Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. ▪ Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. ▪ Aspects of the determination of mineralisation that are Material to the Public Report. ▪ In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	▪ Sample intervals for the 2013 and 2014 drill core were based on lithological units. Care was taken not to mix different lithologies or weathering types. Sample intervals were nominally 1m length but range from 0.3m to a maximum of 1.5m in barren uniform material. Sample lengths are kept to 1m in mineralised material if possible. ▪ Quarter core samples were taken from the HQ and ½ core from NQ core for assaying. Competent core was cut using a core saw. Friable material was carefully sampled by hand. ▪ RC Samples are split using a cone splitter into 1m samples, then a combined 2m composite is taken using a riffles splitter. RC sample weights are approximately 2kg. ▪ Samples were dispatched to the SGS preparation laboratory in Mwanza, Tanzania, for crushing and pulverising to 85% passing 75µm. Pulps were then sent to SGS Johannesburg, South Africa, for niobium assay by XRF Borate Fusion. ▪ A calibrated hand-held Niton XRF analyser is used to aid in mineralisation identification. ▪ Historic core samples were sampled according to rock type. Sample intervals reportedly varied between 2m and 20m, however the assay data contains some sample intervals much larger than this. Unrealisatic intervals were not included in the estimate.	NAI
Drilling techniques	▪ Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	▪ 2013 diamond drilling was conducted by Bamboo Rock drilling. 2014 diamond drilling was conducted by Capital Drilling. Drilling typically started in HQ3 core to allow for safe collaring and to capture sufficient material for metallurgical test work. When difficult drilling conditions were encountered, the HQ rods were left as casing to allow for continuation of drilling using NQ rods. HQ and NQ core is typically taken.	NAI

Criteria	JORC Code Explanation	Commentary	Competent Person
		▪ Core orientations were done with the Reflex orientation tool. ▪ RC Drilling is by a Schram 450 rig drilling with a 5.5" diameter bit typically and a 900cfm compressor. No booster compressor was required for RC drilling. ▪ Type of rig and core size were not recorded for the majority historic holes. One generation of historic holes (drilled by RUDIS) were drilled using a Longyear 38DC rig with NQ core sampled as quarter core and BQ core sampled as half core.	
Drill sample recovery	▪ Method of recording and assessing core and chip sample recoveries and results assessed. ▪ Measures taken to maximise sample recovery and ensure representative nature of the samples. ▪ Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	▪ Core recovery is measured as a % and any cavities or missing intervals are recorded. ▪ Recovery was generally high for all core. Up to 6% voids are reported in some regions. ▪ RC recovery is recorded by visual estimation of recovered sample bags and by weighing all sample rejects from the splitter. Recovery is generally good. ▪ Recovery is not recorded for the historic data.	NAI
Logging	▪ Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. ▪ Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. ▪ The total length and percentage of the relevant intersections logged.	▪ Logging of the 2013 and 2014 drillholes included recording of lithological contacts, weathering contacts, vein/dyke orientations, and the orientation of any observed flow banding. Structural measurements (alpha and beta) were taken. Wet and dry core photos were taken. All Cradle core was logged. ▪ Geotechnical logging of the Cradle holes were completed by a geotechnical engineer. RQDs, defects, weathering, strength, infill, and jointing were recorded. ▪ Logging is of sufficient quality for current studies. ▪ Geological logging of historic holes was qualitative, focusing on rock type and mineralogy, particularly the presence of pyrochlore and apatite, and the carbonate mineralogy. Some holes only had summary log information. Overall the historical logging is repeated by the 2013 logging. The 2013 logging contains the most detail, the RUDIS logging is generally good, and the logging of the MBEXCO drillholes is generally in less detail than the other drill campaigns.	NAI
Sub-sampling techniques and sample preparation	▪ If core, whether cut or sawn and whether quarter, half or all core taken. ▪ If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. ▪ For all sample types, the nature, quality and appropriateness of the	▪ For the 2013 and 2014drilling, half core samples were sent to SGS Vancouver for metallurgical testing and quarter core samples were sent to SGS Johannesburg for assay after being sent to SGS Mwanza (Tanzania) for preparation. ▪ All sampling of the 2013 and 2014 core was carefully supervised. Ticket	NAI

Criteria	JORC Code Explanation	Commentary	Competent Person
	sample preparation technique. ▪ Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. ▪ Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. ▪ Whether sample sizes are appropriate to the grain size of the material being sampled.	books were used with pre-numbered tickets placed in then sample bag and core tray double checked against the ticket stubs to guard against sample mix ups. ▪ One metre lengths of quarter HQ/NH core, as sampled by Cradle, are considered sufficient to provide an adequately representative sample for assaying. ▪ RC samples were taken as 2m composites. ▪ RUDIS sampled NQ core as quarter core and BQ core as half core to ensure similar weights were collected. Samples were crushed on site, composited and sent to Yugoslavia for analysis in their own laboratory using a Philips XRF machine. ▪ Details of historic sampling from GST and MBEXCO are not known. ▪ Portions of the 2013 drillholes that twin sections of the historic holes show comparable Nb_2O_5 grades.	
Quality of assay data and laboratory tests	▪ The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. ▪ For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. ▪ Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	▪ Coffey conducted an inspection of the Johannesburg laboratory during a site visit in August 2013 and found the laboratory to be of industry standard with no problems noted. ▪ Matrix matched standards are inserted every 20 samples on sample numbers ending in 0 (eg *00, *20, *40 etc). Eight different standards were used. Approximately 10g of standard was used for the XRF Borate fusion analysis samples (note: borate fusion only used ~4g of pulp). Standards were either supplied pre=packaged or were measured into a small paper bag so the standards were not blind. ▪ Blanks were inserted at a 1:50 ratio (i.e. samples *10, *70) and at the start of each batch. ▪ A programme of coarse reject duplicates was undertaken for the core samples. Duplicates were taken at a rate of approximately 1 in 30. ▪ Field duplicates of RC samples were taken at a rate of 1 in 30. ▪ A selection of pulps were sent to Genalysis in Perth for umpire assaying.	NAI/EM
Verification of sampling and assaying	▪ The verification of significant intersections by either independent or alternative company personnel. ▪ The use of twinned holes. ▪ Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. ▪ Discuss any adjustment to assay data.	▪ Coffey conducted site visits in August 2013 and September 2014,, during the drilling programmes, observing all drilling procedures. All procedures were considered industry standard, well supervised and well carried out. ▪ Geological data is entered directly into a "Tough Book" (logging laptop computer). The data is then downloaded to a computer where it is compiled into an access database. ▪ Assay data is provided as /csv files from the laboratory and extracted	NAI/EM

Criteria	JORC Code Explanation	Commentary	Competent Person
		through a query into the assay table, eliminating the chance of data-entry errors. Spot checks are made against the laboratory certificates. Datashed is used for final assay importation. ▪ 3 RC holes have been drilled to twin the 2013 diamond drilling.	
Location of data points	▪ Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. ▪ Specification of the grid system used. ▪ Quality and adequacy of topographic control.	▪ Collar positions were set out using a Handheld Garmin GPS with reported accuracy of 3m. Two pegs lined up using a Suunto compass were used to align the rig. Historic holes were drilled on the Tanzanian ARC60 grid. Cradle Resources are using WGS84, UTM36S. ▪ Drillhole positions have been surveyed by DGPS using a local base station and survey stations and have an average relative accuracy of ±2cm. ▪ Downhole surveys were taken using a Reflex electronic multi shot instrument. Collar surveys were taken using a compass and inclinometer. Whilst there is the possibility of deviations in the recorded azimuth due to the presence of magnetite in the carbonatite, overall the surveys showed only minor deviations in azimuth and dip. There is no apparent trend to the deviations based on drilling direction.	NAI
Data spacing and distribution	▪ Data spacing for reporting of Exploration Results. ▪ Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. ▪ Whether sample compositing has been applied.	▪ The drillholes are spaced on a nominal 50m to 100m spacing; with 50m section lines. ▪ The 2014 drilling had a nominal sample length of 1m for diamond and 2m for RC. ▪ The data spacing is considered suitable for resource estimates.	NAI/EM
Orientation of data in relation to geological structure	▪ Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. ▪ If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	▪ The distribution of pyrochlore and hence of niobium within the carbonatite is fairly uniform for the lower grade material. Higher grade areas occur in the steeply dipping schlieren (flow banding), particularly in the magnetite rich zones. The recent drilling has been oriented with a dip of 60° with an azimuth of 045 degrees, which is considered acceptable to test the mineralisation.	NAI/EM
Sample security	▪ The measures taken to ensure sample security.	▪ Details for sample security for the historic drillholes is not known. ▪ Samples from the 2013 and 2014 drilling were placed into small plastic bags with the pre-printed sample number. These bags were stapled shut in the core yard. The samples were then put into large polyweave or plastic bags with approximately 10 samples per bag. These were sealed shut using tape prior to being transported to the SGS preparation laboratory in Mwanza (northern Tanzania).	NAI

Criteria	JORC Code Explanation	Commentary	Competent Person
Audits or reviews	▪ The results of any audits or reviews of sampling techniques and data.	▪ Coffey conducted a site visit during the drilling program in August 2013 and during the infill drilling programme in September 2014. The sampling techniques were reviewed and found to be of industry standard and entirely appropriate for this type of deposit.	EM

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section).

Criteria	JORC Code Explanation	Commentary	Competent Person
Mineral tenement and land tenure status	▪ Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. ▪ The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	▪ The project area is located on three granted MLs (ML237/2006, 238/206 and 239/2006) located approximately 25km WSW of regional capital of Mbeya, in southern Tanzania. The three MLs cover an approximate area of 22km^2. Cradle Resources holds a 50% interest in all three MLs through its ownership of Panda Hill Mining Pty Ltd (PHM). RECB Ltd (a BVI Company) owns the three Panda Hill MLs, PHM owns 50% of RECB Ltd and has an option to purchase the remaining 50%. It is understood that a 3% royalty may be payable to the Tanzanian Government once mining has started. The licences are not subject to any 3rd party agreements. ▪ The resource and the bulk on ML237/2006 and ML238/2006 are located within a region of designated Prison grounds. The Resource itself is removed from any buildings or infrastructure. As the location of the resource is located within the prison boundaries, only the prison-related community would be directly affected by any potential mining activities. ▪ The three granted MLs are current until 16 November 2016. Department of Prisons approval is required for any work to be conducted on ML237/2006 and ML238/2006. Cradle Resources has obtained permission to operate on these areas and is not aware of any impediment for future operations.	NAI
Exploration done by other parties	▪ Acknowledgment and appraisal of exploration by other parties.	▪ The Panda Hill Niobium project has been explored since the 1950s. The Geological Survey of Tanzania (GST) and Mbeya Exploration Company (MBEXCO) drilled 83 diamond drillholes for a total depth of 5,187m in the Panda Hill project area in the 1950's and early 1960's. Yugoslavian company RUDIS, in joint venture with the State Mining Company of Tanzania (STAMINCO), drilled 13 diamond drillholes for a total of 1,305m in the period of 1978 to 1980. These holes were drilled on a 100m x 100m spaced centres on the Tanzanian ARC60 grid. Drillhole logs and assays are available for the historic drilling. Laboratory certificates have been sighted for the GST drilling and original data printouts have been obtained for the RUDIS drilling.	NAI
Geology	▪ Deposit type, geological setting and style of mineralisation.	▪ The project is characterised as a carbonatite hosted niobium deposit. The bulk of the Panda Hill niobium mineralisation is found within pyrochlore and lesser columbite. The bulk of the known mineralisation is located within carbonatite lithologies, with Nb_2O_5 grades typically ranging from 0.1% to 1%. Higher-grade niobium mineralisation is noted within flow-banding (schlieren) within the carbonatite and within the surficial	NAI

Criteria	JORC Code Explanation	Commentary	Competent Person
		weathered cap.	
Drillhole Information	▪ A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: ▫ easting and northing of the drillhole collar ▫ elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar ▫ dip and azimuth of the hole ▫ down hole length and interception depth ▫ hole length ▪ If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	▪ Drillhole coordinates and orientations are provided in Table 2 of this report. ▪ This statement relates to a Mineral Resource. Exploration results have been announced by Cradle Resources previously. ▪ 64 of the historic drillholes have been removed from the drilling database. 37 of these are replaced by new drilling, 8 are adjacent to other better informed historic holes, and the remainder are either outside of the resource area or too far from other holes to allow interpretation and estimation in that area, and/or have insufficient assay data or data quality to use.	NAI/EM
Data aggregation methods	▪ In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. ▪ Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. ▪ The assumptions used for any reporting of metal equivalent values should be clearly stated.	▪ This statement relates to a Mineral Resource. Exploration results have been announced by Cradle Resources previously.	
Relationship between mineralisation widths and intercept lengths	▪ These relationships are particularly important in the reporting of Exploration Results. ▪ If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. ▪ If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	▪ This statement relates to a Mineral Resource. Exploration results have been announced by Cradle Resources previously.	
Diagrams	▪ Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery	▪ A drillhole plan and accompanying cross-sections are provided in Figures 2 to 5 of this report.	NAI/EM

Criteria	JORC Code Explanation	Commentary	Competent Person
	being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.		
Balanced reporting	▪ Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	▪ This statement relates to a Mineral Resource. Exploration results have been announced by Cradle Resources previously.	
Other substantive exploration data	▪ Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	▪ Detailed geological mapping has been conduction by the Tanganyika Geological Survey in the 1950s and RUDIS in the 1980s. Two papers detailing the geology of the Panda Hill carbonatite were subsequently published in Economic Geology. ▪ Cradle conducted geological mapping at the same time as the drilling program. Both the recent and historic mapping provide information relating to the orientation of the flow banding within the carbonatite. ▪ Metallurgical test work has been conducted by MBEXCO and RUDIS in the past. MBEXCO also conducted trial mining. Cradle has undertaken metallurgical test work on the mineralized carbonatite material. At the time of writing the results are not available, however there is no reason to suspect they will be materially different from the historic test work results.	NAI
Further work	▪ The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). ▪ Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	▪ An infill drilling programme is underway at the time of writing, aimed at producing an improved Resource estimate to higher levels of confidence and to enable more detailed metallurgical and lithological/weathering modelling. ▪ A magnetic survey has been commissioned over the project which will aid in the understanding of the broader structures within the deposit.	NAI

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section).

Criteria	JORC Code Explanation	Commentary	Competent Person
Database integrity	▪ Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. ▪ Data validation procedures used.	▪ The 2013 and 2014data collection was directly into logging tablets. Entry of 2013 assay data into the database was through direction extraction via an Access query from the laboratory files. In 2014 the database was migrated through to a Datashed relational database. Final assay importation of the /.csv files provided by the assay laboratory has been into Datashed, eliminating the potential for data entry errors. Spot checks have been conducted on all aspects of the data by Cradle. ▪ Coffey has conducted its own validation process on the data, with checks looking for missing/overlapping intervals, missing data, extreme values. Coffey has also carried out spot checks on the assay data against the laboratory certificates. ▪ Historic data was compiled by the Canadian National Geo. Expl. Ltd. (CINGEX) in 1972-1973. Neil Inwood of Verona Capital has validated this data compilation against original laboratory assay sheets for the GST and MBEXCO drilling, and found only 1 data transposition. The compilation was also validated against and original computer printout of the RUDIS database, and found to be in accordance 100%. No original geological logs were found for validation.	NAI/EM
Site visits	▪ Comment on any site visits undertaken by the Competent Person and the outcome of those visits. ▪ If no site visits have been undertaken indicate why this is the case.	▪ Neil Inwood supervised the Cradle Resources 2013 and 2014 drilling programmes on site. ▪ Ellen Maidens conducted site visits during the August 2013 drilling programme and the September 2014 drilling programme. All drilling, logging and sampling procedures were observed and found to be of industry standard with no problems highlighted. Ellen also conducted a site visit of the SGS Johannesburg assay laboratory with Keith Bowes of Cradle Resources during the 2013 visit. The laboratory was found to be of industry standard with no material problems noted.	NAI/EM
Geological interpretation	▪ Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. ▪ Nature of the data used and of any assumptions made. ▪ The effect, if any, of alternative interpretations on Mineral Resource estimation. ▪ The use of geology in guiding and controlling Mineral Resource estimation. ▪ The factors affecting continuity both of grade and geology.	▪ The understanding of the orientation of the flow-banding from mapping and recent drilling has been used to support the orientations seen in the Variography and used in the Resource estimate. ▪ It is apparent that over the extent of the Resource area, there are areas of different orientations. It is hoped further mapping and drilling will help delineate these area into discrete domains.	NAI

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th><th>Competent Person</th></tr>
<tr><td>Dimensions</td><td>▪ The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</td><td>▪ The block model dimensions are given below:
<table>
<tr><th></th><th>Easting (X)</th><th>Northing (Y)</th><th>RL (Z)</th></tr>
<tr><td>Model Origin</td><td>526,000</td><td>9,004,800</td><td>1,200</td></tr>
<tr><td>Model Extent (m)</td><td>1,400</td><td>1,800</td><td>500</td></tr>
<tr><td>Parent Cell dimension (m)</td><td>25</td><td>25</td><td>5</td></tr>
<tr><td>Minimum Subcell dimension (m)</td><td>5</td><td>5</td><td>1</td></tr>
<tr><td>Number of Parent Cells</td><td>56</td><td>72</td><td>100</td></tr>
</table>
▪ Note that due to drillhole depths, mineralisation is only modelled for a maximum vertical extent of ~ 350m below surface. Mineralisation occurs from surface.</td><td>IK</td></tr>
<tr><td>Estimation and modelling techniques</td><td>▪ The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.
▪ The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.
▪ The assumptions made regarding recovery of by-products.
▪ Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).
▪ In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.
▪ Any assumptions behind modelling of selective mining units.
▪ Any assumptions about correlation between variables.
▪ Description of how the geological interpretation was used to control the resource estimates.
▪ Discussion of basis for using or not using grade cutting or capping.
▪ The process of validation, the checking process used, the</td><td>▪ Multiple Indicator Kriging (MIK) with change of support for a final SMU model is considered a robust method for the style of mineralisation and intended purpose of the model (for PFS use). The mineralisation envelope has been modelled using a nominal 0.2% Nb_2O_5 lower cut off to define the mineralisation. The estimation was carried out using Datamine mining software.
▪ While no top cut is used in the MIK estimation process, a top cut of 3% Nb_2O_5 was applied to the Nb_2O_5 composites used for variography and geostatistical validation. This was based on analysis of the Nb_2O_5 population distribution.
▪ MIK grade estimation with change of support has been applied to produce ‘recoverable’ Nb_2O_5 estimates targeting a selective mining unit (SMU) of 6.25m x 12.5m x 5m.
▪ Search ellipses were oriented dipping to the SW based on variography and geology. Estimation was generally conducted in a 2 pass strategy with the second estimate completed with expanded sample searches and relaxed composite collection criteria.
▪ Validation was by visual and statistical comparison of the estimation with the input data. The previous 2013 resource estimate is available for comparison.
▪ The new drilling has increased the confidence in the geology and grade continuity, resulting in the conversion of a large part of the Resource to Indicated category. Deeper drilling has also resulted in an overall increase in tonnage and metal content for the project. A combination of</td><td>IK</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary	Competent Person
	comparison of model data to drillhole data, and use of reconciliation data if available.	infill drilling, replacement of historic drilling, and redefinition of oxide boundaries has resulted in a reduction in both tonnage and grade of oxide material. ▪ There is no mining at Panda Hill to date. ▪ No assumptions are made regarding recovery of by-products. ▪ Additional elements (Fe_2O_3, SiO_2, CaO and TiO_2) were estimated by Ordinary Kriging (OK). ▪ Probability Kriging was conducted for lithology (fenites), and oxidation/weathering variables. ▪ The block size of 25m x 25m x 5m is appropriate to the sample spacing and style of mineralisation.	
Moisture	▪ Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	▪ Tonnages are based on insitu dry bulk density measurements.	IK
Cut-off parameters	▪ The basis of the adopted cut-off grade(s) or quality parameters applied.	▪ A nominal reporting grade of 0.3% Nb_2O_5 has been chosen to reflect a potentially economic mining cut off. Further work is required to define this cut-off.	IK/NAI
Mining factors or assumptions	▪ Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	▪ Based on the studies completed, there is sufficient data to support the design of a typical moderate scale open cut mine to economically extract the contained resource and reasonable prospects for eventual economic extraction. ▪ The SMU dimension of 6.25m x 12.5m x 5m assumes a moderate level of mining selectivity if required. ▪ The assumption is that there is existing, steady demand and price for the niobium product.	IK/NAI
Metallurgical factors or assumptions	▪ The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	▪ Ferroniobium has been economically produced from carbonatite ores for many years now. In 2002, preliminary test work undertaken on the Panda Hill fresh carbonatite by SGS Lakefield reported an Nb2O5 recovery of 69% at 56% grade. Further testwork undertaken by Cradle Resource during 2013 and 2014 (also at SG Lakefield) showed that recoveries ranging from 50% to 70% recovery were possible over a range of material types, with the more oxidised materials demonstrating the recoveries at the lower end of this range. Published recovery[1] for a similar fresh carbonatite ore body currently in production is 58% Nb2O5. Both the producing plant and	NAI

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th><th>Competent Person</th></tr>
<tr><td></td><td></td><td>the test work share a similar flow sheet concept consisting of milling, niobium mineral flotation, concentrate leaching and ferroniobium production through an aluminothermic process. The 2014 testwork program also showed that the strongly weathered material predominantly found near the surface of the deposit may be recovered economically, but would require a modification to current proposed circuit through the inclusion of a gravity circuit prior to milling.
[1] "The Production of Ferroniobium at the Niobec Mine" by Claude Dufrense and Ghislain Goyette.</td><td></td></tr>
<tr><td>Environmental factors or assumptions</td><td>▪ Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</td><td>▪ No detailed assumption regarding possible waste and process residue disposal options or environmental surveys have been made at this early stage of the project.</td><td>NAI</td></tr>
<tr><td>Bulk density</td><td>▪ Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.
▪ The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.
▪ Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</td><td>▪ 2793 density measurements have been taken from Cradle core. The majority of these have been determined using the calliper method. In 2013, density measurements were also determined using the Archimedes method. A statistical comparison revealed negligible difference between the methods.
▪ After statistical review of the density data, bulk density values have been assigned to the block model as follows:
<table>
<tr><th>Oxidation State</th><th>Mineralised Zone</th><th>Waste</th></tr>
<tr><td>▪ Oxidised</td><td>▪ 2.15t/m^3</td><td>▪ 2.33t/m^3</td></tr>
<tr><td>▪ Moderately oxidised</td><td>▪ 2.53t/m^3</td><td>▪ 2.53t/m^3</td></tr>
<tr><td>▪ Fresh</td><td>▪ 2.68t/m^3</td><td>▪ 2.74t/m^3</td></tr>
</table>
▪ The bulk density values for material within the mineralisation envelope incorporate a 6% void factor for oxide material, and a 3% void factor for transitional and fresh material resulting from statistical estimates of voids/cavities recorded during drilling.</td><td>IK</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary	Competent Person
Classification	▪ The basis for the classification of the Mineral Resources into varying confidence categories. ▪ Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). ▪ Whether the result appropriately reflects the Competent Person's view of the deposit.	▪ Resource classification was developed from the confidence levels of key criteria including drilling methods, geological understanding and interpretation, sampling quality, data density and location, grade estimation and quality of the estimates, as well as the various and more subjective considerations discussed in the JORC Code 2012 Table 1.	IK
Audits or reviews	▪ The results of any audits or reviews of Mineral Resource estimates.	▪ The 2012 Resource estimate for Panda Hill, completed by Coffey, was reviewed in an Independent Geologist's Report by Ravensgate Mining Industry Consultants and found to be appropriate though conservative.	EM
Discussion of relative accuracy/ confidence	▪ Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. ▪ The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. ▪ These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	▪ The grade estimate is based on the assumption that small to medium scale open cut mining methods will be applied. ▪ The Resource is recoverable model assuming a 6.25m x 12.5m x 5m SMU. ▪ The MIK SMU estimation process is deemed appropriate for use in this style of deposit. ▪ Factors affecting the confidence and relative accuracy of the Resource are primarily: o Incorporation of the historic drillhole data. This data is gradually being phased out and superseded by current drilling. o Increased drilling density might vary model results in localised areas. o Accuracy of averaged bulk density data and associated void factors. There has been a substantial amount of data collected by Cradle Resources. Mineralisation and lithology may prove to be more variable than the current scale of drilling suggest. o The variance adjustment factor applied for the SMU model may vary in future estimates according to the amount of data available within the domains being modelled. o Geology and domains are possibly more complex than assumed by the current resource model, particularly with respect to strike and dip of mineralisation and possible multiple potential orientations related to the complex geometry of the intrusives. o Fenite lithology definition may vary with available data, and is significant for metallurgical processing. o Cutoff grades may vary in future according to mining studies.	IK