



**BASE
RESOURCES**

ASX, AIM and Media Release

23 January 2019

Updated Ranobe Deposit Mineral Resources

HIGHLIGHTS

- Additional drilling and associated mineralogical re-definition completed to advance detailed mine planning and processing design criteria as part of the Toliara Project pre-feasibility study.
- Revised mineralogical and geological interpretations, together with a revision of cut-off grade from 3.0% to 1.5% HM, has increased the Ranobe Mineral Resources estimate of contained heavy mineral (HM) tonnes by 25% to 1.3 billion tonnes at 5.1% HM.
- Drilling will continue over the course of 2019, aimed at increasing Mineral Resources in the Measured and Indicated categories as well as completing the re-definition of the remaining mineralogy required for the Toliara Project definitive feasibility study.

Base Resources Limited (ASX & AIM: BSE) (**Base Resources** or the **Company**) is pleased to announce an update to the Ranobe deposit Mineral Resources estimate at its Toliara Project (the **2019 Ranobe Mineral Resources**).

The Company completed the acquisition of the Toliara Project on 22 January 2018 and is currently progressing the project through a full study phase. The Toliara Project is founded on the Ranobe deposit, located approximately 40 kilometres north of the regional town of Toliara in south west Madagascar and approximately 15 kilometres inland from the coast.

The 2019 Ranobe Mineral Resources estimate is the result of additional drilling completed to date and revised geological interpretations following a comprehensive mineralogical re-definition of drill samples. The 2019 Ranobe Mineral Resources estimate was completed as part of the Toliara Project pre-feasibility study (**PFS**) to advance detailed mine planning and to refine the processing design criteria. The PFS is expected to be completed in March 2019.

The combination of the new drilling, lowering of cut-off grade to 1.5% (on the basis of the likely economics for the Toliara Project) and inclusion for the first time of some material from one of the two lower mineralised units (the intermediate clay sand unit) have resulted in a 25% increase in the contained heavy mineral (**HM**) tonnes of the Ranobe deposit Mineral Resources estimate.

The drill program will continue over the course of 2019, with the objectives of completing the remaining mineralogy re-definition, improving the understanding of the lower mineralised units and increasing the volume of Mineral Resources within the measured and indicated categories. A further update to the Ranobe deposit Mineral Resources estimate is expected once this work is complete, which will form the basis for the Ore Reserves estimate required for the project's definitive feasibility study.

The 2019 Ranobe Mineral Resources is estimated to be 1,293 million tonnes (**Mt**) at an average HM grade of 5.1% and contains 66Mt of in-situ heavy mineral, based on a 1.5% HM cut-off grade.

Table 1: The 2019 Ranobe Mineral Resources estimate at a 1.5% HM cut-off

Category	2019 as at 23 January 2019								2018 as at 30 June 2018							
	Material	In Situ HM	HM	SL	OS	HM Assemblage			Material	In Situ HM	HM	SL	OS	HM Assemblage		
						ILM	RUT*	ZIR						ILM	RUT	ZIR
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)
2019 Ranobe Mineral Resources																
Measured	419	28	6.6	4	0	75	2.0	5.9	Data not previously available							
Indicated	375	18	4.9	8	17	72	2.1	5.7								
Inferred	499	20	3.9	7	15	70	2.1	5.4								
Total	1,293	66	5.1	6	04	72	2.0	5.7								

Table subject to rounding errors, resources estimated at a 1.5% HM cut-off grade.

*RUT reported in the table is rutile + leucosene mineral species.

For comparison to previously reported Mineral Resources estimates, the 2019 Ranobe Mineral Resources at a 3% HM cut-off grade is estimated to be 1,021 million tonnes (**Mt**) at an average heavy mineral (**HM**) grade of 5.8% and contains 59Mt of in-situ heavy mineral.

Table 2: The 2019 Ranobe Mineral Resources estimates at a 3% HM cut-off compared with the Ranobe deposit Mineral Resources estimate reported at 30 June 2018.


Category	2019 as at 23 January 2019								2018 as at 30 June 2018							
	Material	In Situ HM	HM	SL	OS	HM Assemblage			Material	In Situ HM	HM	SL	OS	HM Assemblage		
						ILM	RUT*	ZIR						ILM	RUT	ZIR
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(Mt)	(Mt)	(%)	(%)		(%)	(%)	(%)
2019 Ranobe Mineral Resources																
Measured	398	27	6.8	4	0	75	2.0	5.9	282	20	7.2	4	0	72	2	6
Indicated	306	17	5.5	6	0	72	2.2	5.7	330	21	6.2	4	0	72	2	6
Inferred	318	15	4.8	6	1	70	2.1	5.4	245	12	5.0	5	1	71	1	5
Total	1,021	59	5.8	5	0	73	2.0	5.7	857	53	6.2	4	0	72	2	6

Table subject to rounding errors, resources estimated at a 3% HM cut-off grade.

*RUT reported in the table is rutile + leucosene mineral species.

The Ranobe deposit comprises three mineralised units: the upper sand unit (**USU**), the intermediate clay sand unit (**ICSU**) and the lower sandy unit (**LSU**). Historically, the Ranobe deposit Mineral Resources estimate only included material from the USU due to the limited number of drill holes with sufficient depth to reach the lower mineralised units. Since acquiring the project, Base Resources has broadened the focus to include all mineralised horizons in the Mineral Resources estimate where supported by sufficient data and a reasonable prospect for economic extraction. The current drill program has produced samples from all three mineralised units and allowed material from the ICSU to be included in the Ranobe deposit Mineral Resources estimate for the first time. The LSU has been excluded from this resource estimate on the basis of limited currently available mineralogical data for this unit.

Based on the preliminary PFS economic modelling completed to date, Base Resources has revised the economic cut-off grade for the 2019 Ranobe Mineral Resources estimate from 3.0% to 1.5%. Lowering the cut-off grade has resulted in a 12% or 7Mt increase in contained in situ HM in the Mineral Resources estimate.



Mineral Resources are reported in accordance with the JORC Code (2012 edition). Accordingly, the information in these sections should be read in conjunction with the respective explanatory Mineral Resources information included in Appendix 1.

Supporting Information Required Under ASX Listing Rules, Chapter 5

The supporting information below is required, under Chapter 5 of the ASX Listing Rules, to be included in market announcements reporting estimates of Mineral Resources and Ore Reserves.

Section 1, Section 2 and Section 3 of JORC Table 1 can be found in Appendix 1.

Requirements applicable to the Mineral Resources estimate

A summary of the information used to prepare the 2019 Ranobe Mineral Resources estimate as presented in this report is as follows.

The Toliara Project is located on the 125.4 km² Mining Lease (Permis D'Exploitation) 37242 (PDE 37242), approximately 40 kilometres north of the regional town of Toliara in south west of Madagascar and approximately 15 kilometres inland from the coast (refer Figure 1). The Toliara Project comprises a single continuous body of mineralisation, the Ranobe deposit.

Drilling programs were conducted on the Ranobe deposit in 2001, 2003, 2005 and 2012 by the previous owners and in 2018 by Base Resources (refer Figure 2).

Mineral Resources estimation work previously carried out on the Ranobe deposit is as follows:

- 2004 by Ticor Pty Ltd;
- 2006 by Exxaro Resources Ltd;
- 2010 by Geocraft Consulting for Madagascar Resources NL;
- 2012 by McDonald Speijers and Associates for World Titanium Resources Limited;
- 2016 by World Titanium Resources (WTR) Limited Competent Person, Ian Ransome; and
- 2017 by Base Resources Limited Competent Person, Scott Carruthers.

The unconsolidated aeolian Quaternary sediments comprising the deposit overlie Eocene age limestone which in turn overlie Mesozoic limestone, marl and sandstone. The aeolian Holocene Ranobe Formation partially onlaps the deposit from the west. The Ranobe deposit comprises three mineralised units: the upper sand unit (USU), intermediate clay sand unit (ICSU) and the lower sandy unit (LSU), see figure 4 for a stylised cross section.

The USU is a well sorted fine-grained unconsolidated aeolian sediment. It contains approximately 5 per cent slime or clay (SL) and approximately 6 per cent HM, mainly Ilmenite, Zircon and Rutile, and low oversize (OS), which on average is less than 1 per cent. The ICSU is a thin unit primarily consisting of high slime content with a dark red to orange brown sandy clay and clayey sand material. It typically averages 4% HM and 25% SL. It is interpreted to have been deposited in a low energy lagoonal environment. The LSU is orange brown to yellow brown medium grained quartz sand with moderately low slimes content. It averages 4% HM and 6% SL. The LSU onlaps the limestone (LST) basement and, much like the USU unit, its thickness increases to the west with the recent 2018 drilling proving this notion. The base of the LSU unit has the facies indicators of a shallow marine strand facies depositional environment, although this has not been tested extensively.

The geological interpretation for the Ranobe deposit considered the data in the drill logs, HM assay results, and the results of pilot plant-scale test work conducted on trial mining pits. Five geological domains have been identified: the three mineralised units (USU, ICSU, LSU), the Ranobe Formation and the limestone basement (LST). Geostatistical contact analysis shows clear step changes in grade distributions across the interpreted geological contacts, giving confidence in the geological interpretation.



The right to mine the Ranobe deposit was granted to the prior owners under PDE 37242 on 21 March 2012. PDE 37242 has a term of 40 years from 21 March 2012 and provides the right to carry out mining operations for the production of ilmenite, rutile, leucoxene and zircon and is renewable in units of 20 years.

The environment and land use are described as semi-arid and intensive subsistence agriculture/mixed farming/forestry.

A total of 1,249 drill holes were used for the Ranobe deposit Mineral Resources estimate.

Drill hole collars were surveyed using DGPS for 2003, 2005 and 2012 to establish horizontal and vertical control to UTM zone 38S, WGS 84. The 2001 and 2018 drill collars were surveyed by GPS and collars that showed a significant difference in RL relative to local topography were normalised to the LIDAR digital terrain surface. All collar positions were deemed satisfactory and fit for purpose for the geological interpretation and interpolation processes.

Drilling was completed by the reverse circulation, air core (RCAC) method for all four drilling programs conducted to date, all by Wallis Drilling. RCAC drilling was used to obtain 1 to 3 m samples from which, approximately 10 – 30 kg was collected. Samples were dried, riffle split and submitted for assay. Three laboratories were used, and all followed the same assay procedure which conformed to AS4350.2-1999. All labs produced three assays: HM% (via sink float using tetrabromoethane), SL% (screened at 63 µm) and OS% (screened at 1 mm). This is described in the relevant section of the JORC 2012 Table 1 in Appendix 1.

Mineral assemblage analyses were conducted by two different methods to characterise the mineralogy of the deposit. Base Resources has developed its own method, Minmod, which is used where samples were available. Where not available, historical mineralogy was used. The ultimate aim will be to use only Minmod mineralogy in future resource updates.

In brief, Minmod is tailored to specific deposits and relies on a development stage where detailed assessment by QEMSCAN, XRF, XRD, wet chemistry and SEM of samples representative of the deposit spatially and of the range of HM grades present so that a database of the deposit's heavy minerals and their chemistry may be developed. Once developed, composite samples from the deposit are fractionated magnetically, the fractions assayed by XRF and mineralogy derived from an error minimisation algorithm that varies the amount of minerals in the database and compares theoretical oxide levels to those from the assays. Composites were generated on roughly a 400 x 400 m square grid, and from 6 m intervals downhole, but skipping every other possible downhole composite. The aim of this was to cover as much of the project as possible within the limited time frame and leave open the possibility to infill in between composites.

The historical mineralogy method is similar to the Minmod but has far more samples per composite. The historical mineralogy method uses samples subjected to magnetic separation to capture magnetic (mag), middling (mid) and non-magnetic (non-mag) fractions. The mid and mag fractions were combined and, with the non-mag fraction, subjected to XRF analysis. Data from the mag and non-mag XRF analyses were processed through an error minimisation algorithm that calculated mineralogy using assumed mineral chemistries. Figure 3 shows the location of the Minmod and historical mineral assemblage samples.

Sampling and assaying were subjected to quality control processes by WTR and further by Base Resources with the submission of blind field duplicates and standards. The Base Resources QA/QC data for drilling undertaken in 2018 was available and the THM, SLIMES and OS duplicates/replicates were all subjected to log scatter plot, cumulative probability plot and general statistical investigation. The rate of submission for field duplicates was 1 in 23, lab duplicates were 1 in 39 and standards at 1 in 20. Analysis of the duplicate assays shows very high reproducibility for HM, giving confidence that the sampling process is producing highly representative samples.

Standard samples were prepared and submitted for the generation of CRM with known mean and standard deviation for internal QA/QC. Unfortunately, the standard deviation generated from the CRM analyses was not considered tight enough to use as a QA/QC control; this will be rectified for subsequent drilling programs.



Analysis of the drill sample variography for HM indicates for the USU a strike direction of 160 degrees with strong grade relationships to 1,500 m along strike and 400 m across strike. The downhole relationship extends beyond 10 m. The dominant drill spacing is 200 m along strike and 100 m across, with a dominant sampling interval of 3 m. All are significantly less than the variography would require.

Drill hole, collar and assay data are captured digitally and managed in a Microsoft Access database. Sufficient quality control has been undertaken to satisfy the Competent Person that the assay data is sound and may be used for resource estimation.

The topographic digital elevation model was captured by South Mapping Corporation in 2007. The LIDAR data points were captured using an aircraft mounted 70 kHz laser which classified the data points into ground and non-ground points. The relative accuracy of this survey method is 15 cm RMS in the vertical and 30 cm RMS horizontal. The drill holes take their level from the LIDAR surface DEM. The coordinate system used is UTM zone 38 south (WGS 84).

Model cell dimensions of 50 m x 100 m x 1.5 m in the XYZ orientations were used, in accordance with standard practice of taking half the distance between holes of the dominant drill hole spacing of 200 m north-south and 100 m east-west.

Interpolation was undertaken using various sized search ellipses to populate the model with primary grade fields (HM, SL and OS). Inverse distance weighting (IDW) to a power of three was used for primary assay fields. Mineralogy was interpolated by nearest neighbour.

The bulk density (BD) applied to the 2019 Ranobe Mineral Resources model was a component-based algorithm: $BD = 1.61 + (0.01 \times HM)$. Given the generally low slime levels and based on the experience of the Competent Person this is considered appropriate.

The model was validated visually (by displaying wireframes, drill holes and model cells simultaneously and stepping through the model), statistically (by plotting distributions of model and drill hole grades together) and graphically (by preparing swathe plots or plots of drill hole and model grades by northing). Generally, the grade interpolation has performed well for each of the domains and each of the primary assay grades. Figure 5 shows an oblique view of the mineralisation, coloured by HM grade.

The JORC classification for the Ranobe deposit has taken into consideration the drill hole spacing in plan view, as well the sample support within domains, the size, weighting and distribution of the mineral assemblage composites and the variography.

The deposit has been assigned a JORC Classification of Measured, Indicated and Inferred and is supported by the criteria:

- regular drill hole spacing that defines the geology and HM mineralisation distribution and trends;
- domain controlled variography for HM that supports the drill spacing for each of the classifications; and
- the distribution of mineral assemblage composites having adequately identified the various mineralogical domains as well as the variability within those domains.

The drill pattern is not regular, but in general, Measured category material has a drill spacing of 100 x 200 m and has Minmod mineral assemblage. Only material from the USU met these criteria. Material in the Indicated category typically has hole spacing at 100 x 400 m and may have either Minmod or historical mineralogy. Where line spacing is greater than 400 m, but less than 1600 m, and mineralogical information is available, material is classified as Inferred.

The Ranobe deposit Mineral Resources estimate is reported above a cut-off grade of 1.5% (on the basis of likely economic cut-off grade) and 3% HM (to allow comparison to historical reporting). These tables conform to guidelines set out in the JORC Code (2012) and are formatted for internal or external public reporting.

Given the permeable nature of the sediments, the low water table and Base Resource's dry mining expertise, the most likely mining method would be dry mining by dozer. Processing could be achieved via standard mineral sands methods: spiral



concentration, and magnetic and electrostatic separation. The physical properties of the heavy minerals at the Ranobe deposit are, from metallurgical test work, similar to other deposits being mined today.

Competent Persons Statements

The information in this report that relates to Mineral Resources is based on, and fairly represents, information and supporting documentation prepared by Mr. Greg Jones, who acts as Consultant Geologist for Base Resources and is employed by IHC Robbins. Mr. Jones is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposits 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 (JORC Code). Mr. Jones consents to the inclusion in this report of the Mineral Resources estimates and supporting information in the form and context in which it appears.

Forward Looking Statements

Information in this report should be read in conjunction with other announcements made by Base Resources to the ASX. No representation or warranty, express or implied, is made as to the fairness, accuracy or completeness of the information contained in this report (or any associated presentation, information or matters). To the maximum extent permitted by law, Base Resources and its related bodies corporate and affiliates, and their respective directors, officers, employees, agents and advisers, disclaim any liability (including, without limitation, any liability arising from fault, negligence or negligent misstatement) for any direct or indirect loss or damage arising from any use or reliance on this report or its contents, including any error or omission from, or otherwise in connection with, it.

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Figure 1: Toliara Project Location

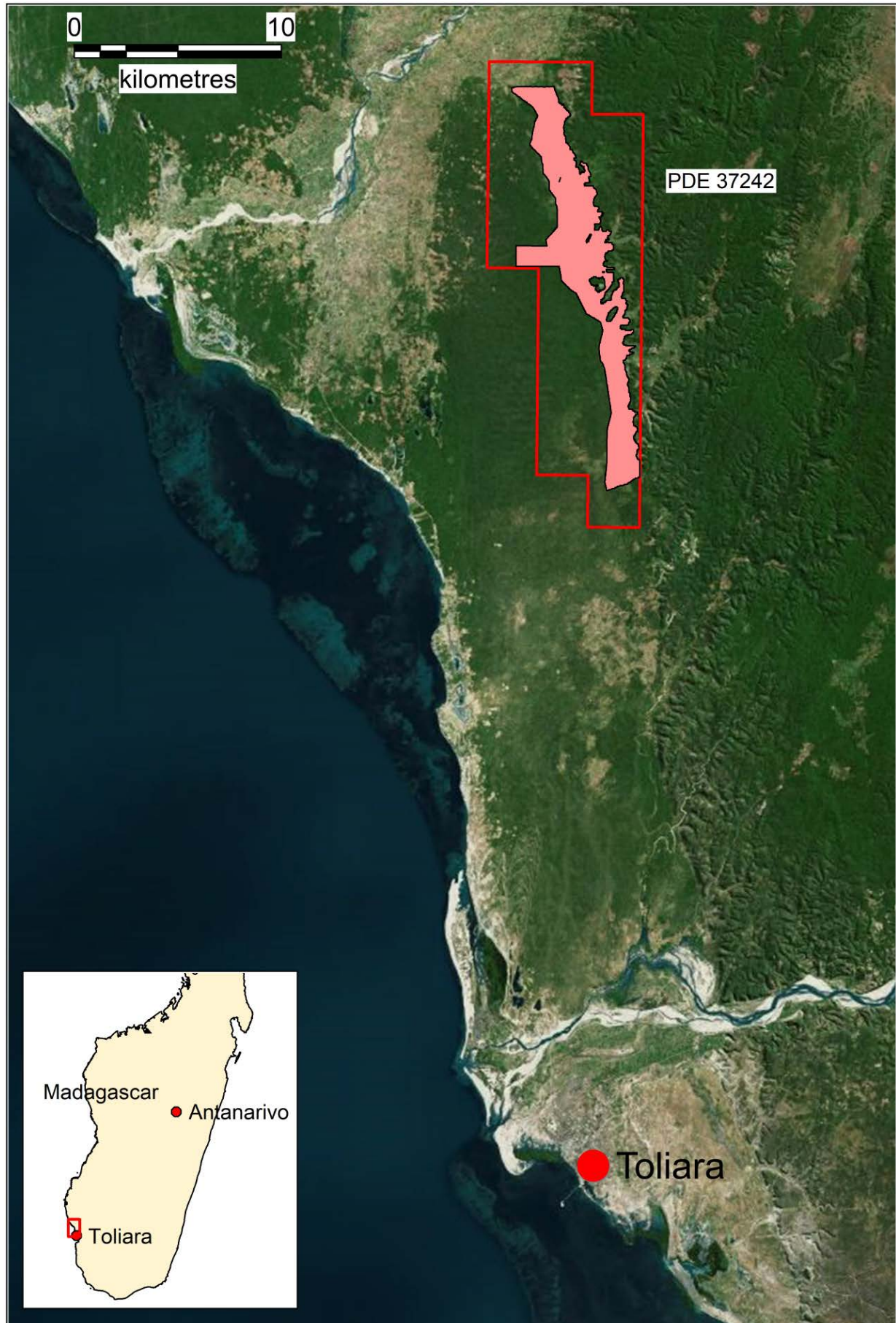


Figure 2. Drill hole Collars and Resource Category

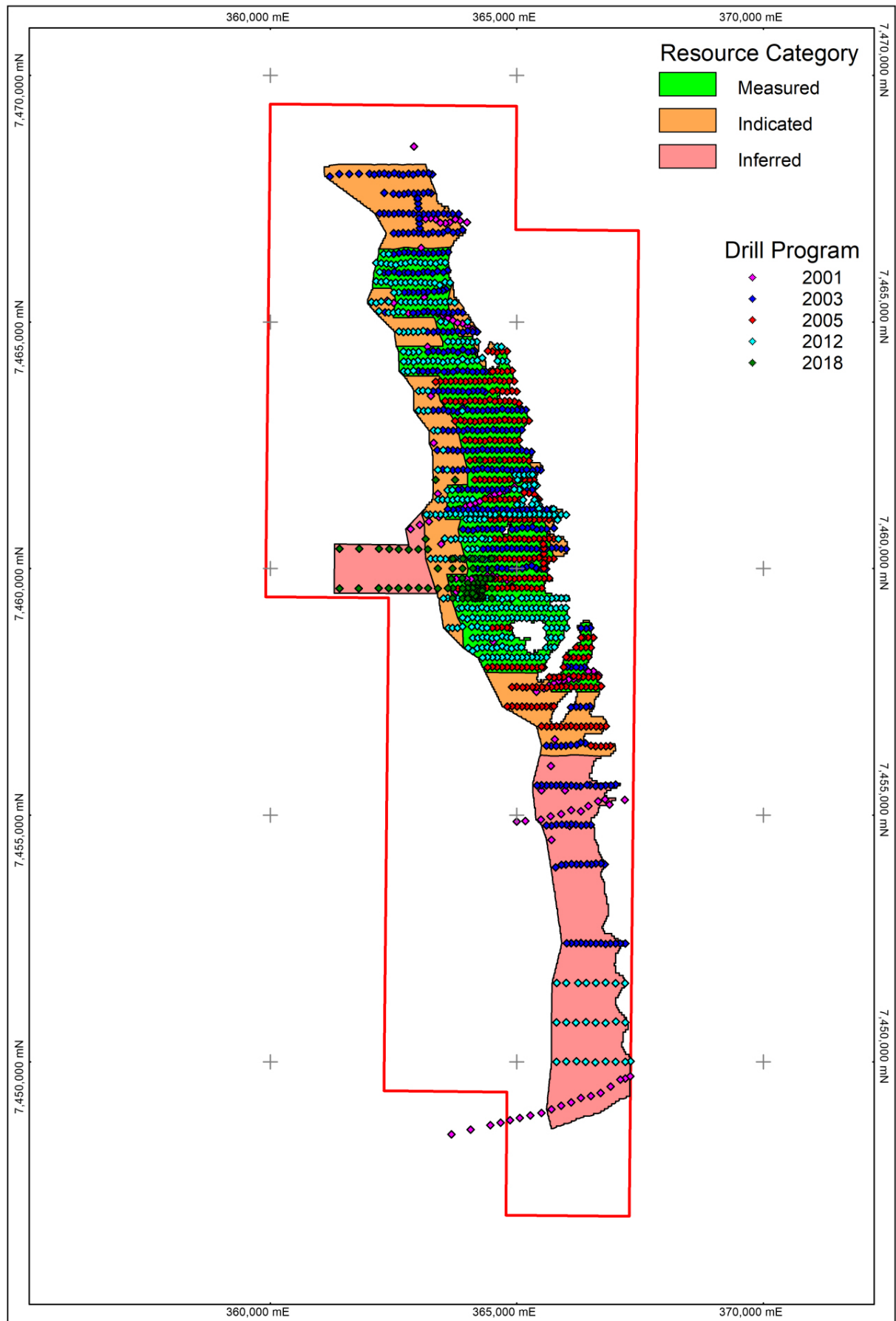


Figure 3: Location of Mineralogy Composite Samples

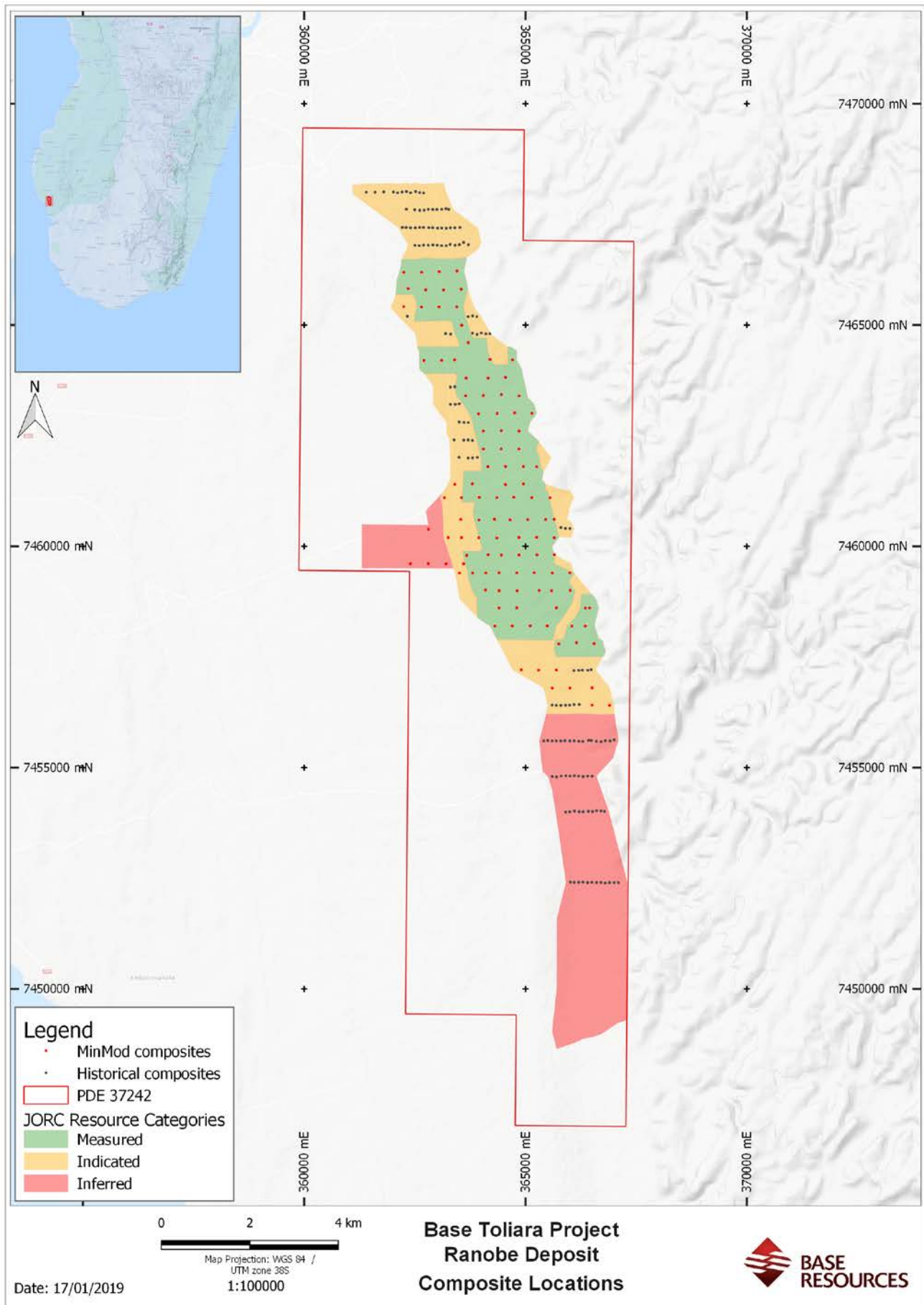




Figure 4: Stylised Cross section

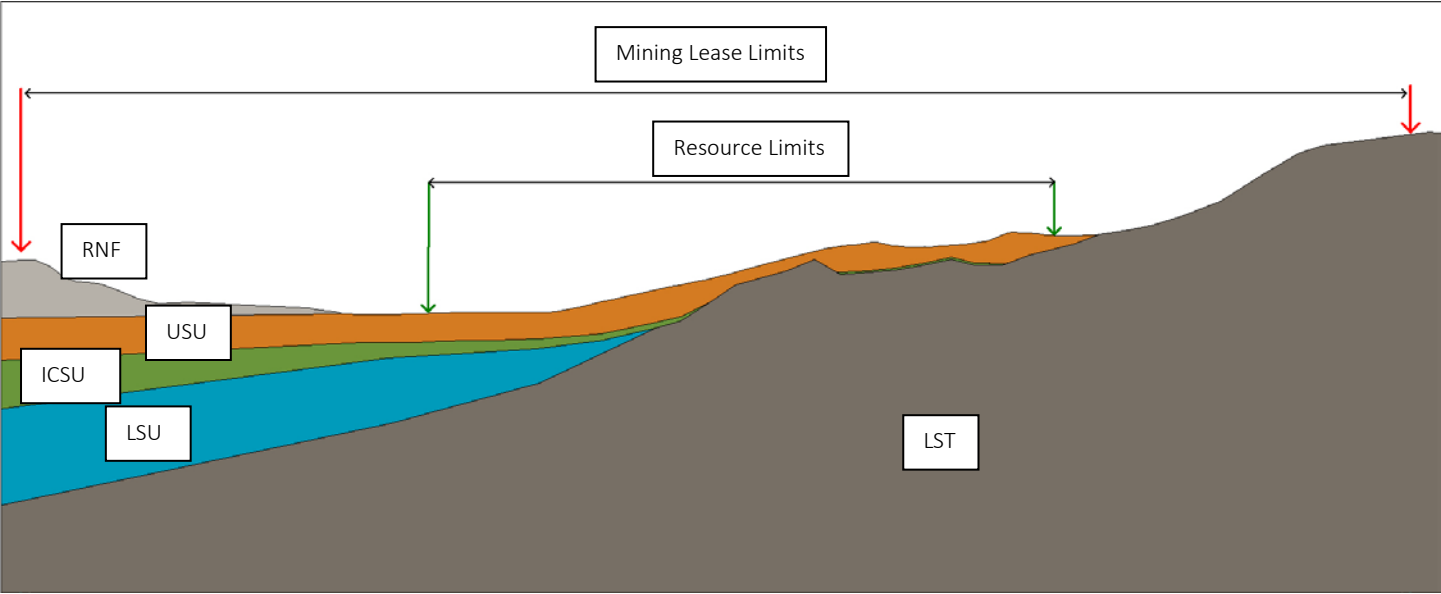


Figure 5: Oblique view with model cells coloured on HM grade (7x exaggeration)

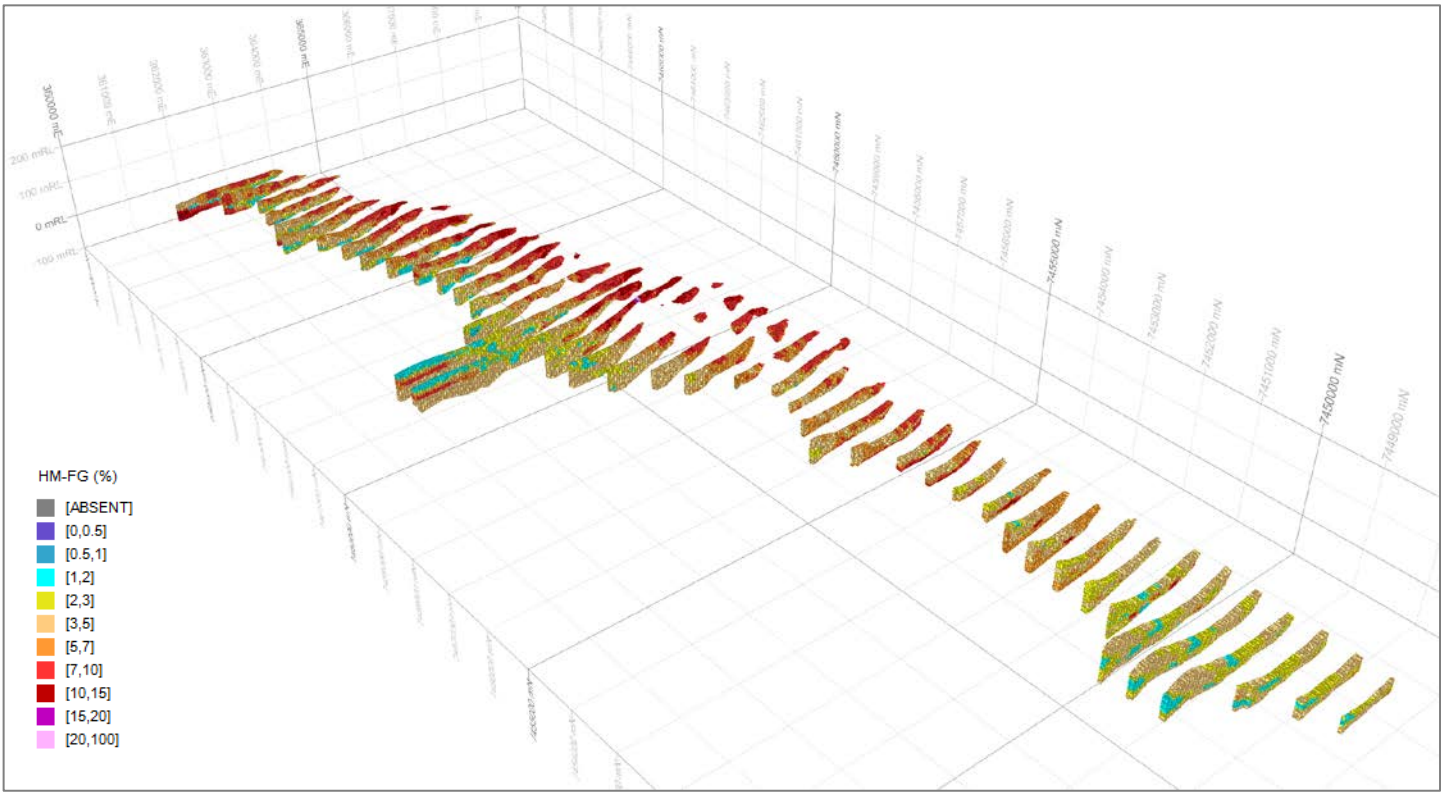
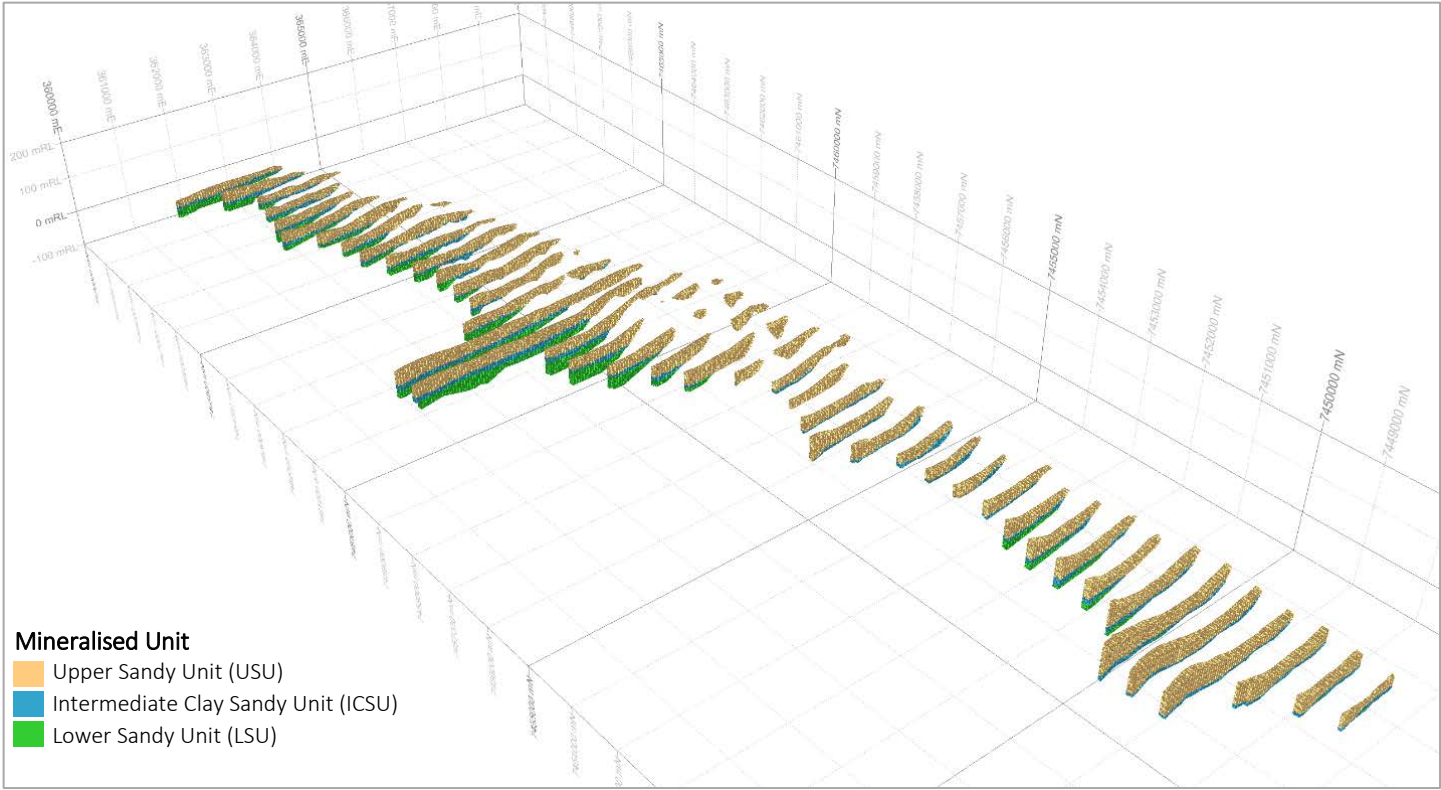




Figure 6: Oblique view with model cells coloured on mineralised unit (7x exaggeration)



APPENDIX 1

Section 1 Sampling Techniques and Data		
Criteria	Explanation	Comment
Sampling techniques	<p>Nature and quality of sampling (e.g. 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.</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</p>	<p>All holes were drilled vertically</p> <p>All holes were sampled over a consistent 1 – 3 m interval</p> <p>All holes were drilled using a reverse circulation Wallis Drill setup to collect the complete sample with a basic cyclone separation by means of a swivel outlet feeding two alternate sample bags</p> <p>No sample splitting was performed on the drill site for earlier drill programs, however sample splitting was carried out for the 2018 drilling program.</p>
Drilling techniques	<p>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).</p>	<p>All holes were drilled vertically</p> <p>All drilling was undertaken using an air pressured reverse circulation Wallis Mantis drill</p> <p>Core diameter is NQ (76 mm external diameter), with 3m rod lengths fitted with a face discharge drill bit</p>

Criteria	Explanation	Comment
<i>Drill sample recovery</i>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>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.</i></p>	<p><i>Wallis Mantis drill rig uses face discharge bits, at low air pressures (105 - 140kPa) and low rotation speeds (45-65RPM) to maximize recovery</i></p> <p><i>There is no correlation between recovery and grade resulting in no sample bias</i></p>
<i>Logging</i>	<p><i>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.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p><i>All samples were visually checked and logged on site by rig geologist and logged for lithotype, grain size, sorting, colour, competence, moisture content</i></p> <p><i>A small subsample was taken for each drill interval and manually panned for estimation of HM and clay content</i></p>

Criteria	Explanation	Comment
Sub-sampling techniques and sample preparation	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>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.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>The material was split using a 40 mm single tier riffle to produce a sample for submission of approximately 1 kg in a calico sample bag. The calico sample bags were sundried before being shipped</p> <p>For one sample in every 20, an additional two 1 kg calico bagged samples were taken for checking purposes. These are referred to as the B and C samples, the primary sample being designated as the A sample</p> <p>2001 drill samples were dispatched to Western Geochem Labs in Perth, Australia. WGL was retained for the analysis of check samples in 2003 and 2005</p> <p>The A samples were sent to IMP Laboratory in Boksburg, South Africa in 2003, ACT Laboratory in Pretoria, South Africa in 2005 and 2012, and to Bureau Veritas, South Africa in 2018</p> <p>All laboratories: separation of concentrates was by heavy liquid (tetrabromoethane (TBE) at density 2.95 g/cc)</p> <p>All samples were:</p> <ul style="list-style-type: none"> • Dried, weighed • Sample riffle split to produce 400 gram A sample • Sample screened +1 mm weighted • Sample screened -63 µm weighed • TBE for heavy media separation • TBE Floats weighed • TBE Sinks weighed

Criteria	Explanation	Comment
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</p>	<p>Analytical procedure conforms to AS4350.2-1999; Australian Standards Heavy mineral sand concentrates - Physical testing using TBE.</p> <p>Quality control procedures:</p> <ul style="list-style-type: none"> • Regular checks of analyses • Against estimates from field logging • Submission of B and C samples to a second laboratory • Submission of randomly inserted control samples at a rate on about 1 in 25 • Duplicate sample analyses • Extra samples taken irregularly in high grade areas
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>Assay data was compared with geology logs of panned HM grades for out of range assay produced by site geologist</p> <p>Replicate assaying undertaken 2003 and 2005 drilling and sample assaying undertaken independently by Ticor/Kumba Resources</p> <p>2012 drilling, logging and sampling undertaken by independent site geologist</p> <p>2018 drilling, logging and sampling undertaken by Base Resources company geologists</p> <p>Validation of the drill database was undertaken independently by IHC Robbins</p>

Criteria	Explanation	Comment
<i>Location of data points</i>	<p><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p><i>2003, 2005, 2012, and 2018 drill hole collars were surveyed using DGPS. 2001 drill collars were surveyed by GPS</i></p> <p><i>Topographic data was derived from ground controlled LIDAR survey undertaken by Southern Surveys</i></p> <p><i>All drill holes are vertical, down hole surveys were deemed inappropriate</i></p> <p><i>Grid system used throughout the program UTM Grid, Zone 38S, WG84</i></p> <p><i>IHC Robbins adjusted the RL of the 2001 collars using CAE software 'Datamine Studio RM' to the LIDAR topographic surface to increase accuracy and precision for mineral resource or ore reserve estimation for the deposit</i></p>
<i>Data spacing and distribution</i>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>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.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p><i>Three basic drill patterns used:</i></p> <ul style="list-style-type: none"> <i>• 100 mE spacing along line with 200 mN between lines with 50 m hole offset</i> <i>• 100 mE spacing along line with 400 mN between lines</i> <i>• 200 mE spacing along line with 800 mN between lines</i> <p><i>Variography demonstrates that drill spacing of 100 mE x 200 mN sufficient to classify as Measured Resource; 100 mE x 400 mN sufficient to classify as Indicated Resource</i></p> <p><i>No sample compositing has been applied</i></p>

Criteria	Explanation	Comment
<i>Orientation of data in relation to geological structure</i>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>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.</i></p>	<p><i>All drill holes were drilled vertically</i></p> <p><i>Drill line were drilled north - south, east - west within 12 degrees of the deposit anisotropy</i></p> <p><i>No bias to drill grid sampling has been introduced</i></p>
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	<p><i>All samples were placed in calico bags and grouped in rice bags by drill hole</i></p> <p><i>The samples bags were labelled by both marker and aluminium tags for drill hole number and sample depth.</i></p> <p><i>The samples were delivered to the laboratory sealed with cable ties and with a shipment form</i></p>
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p><i>Audits and reviews of the sampling data and techniques have been carried out by:</i></p> <ul style="list-style-type: none"> <i>• Ticor 2004</i> <i>• Kumba Resources 2006</i> <i>• Exxaro 2007</i> <i>• McDonald Speijers and Associates 2012</i> <i>• World Titanium Resources (WTR) 2016</i> <i>• IHC Robbins 2018</i> <p><i>All review and audits considered the sampling and analysis to be of good quality and suitable for resource estimation.</i></p>

Section 2 Reporting of Exploration Results

Criteria	Explanation	Comment
<i>Mineral tenement and land tenure status</i>	<p><i>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.</i></p> <p><i>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.</i></p>	<p><i>The Ranobe deposit is 100% owned by Base Resources subsidiary, Base Toliara SARL which is 85% owned by Base Resources and is located wholly within Mining Lease PDE (Permis D'Exploitation) 37242 (Figure 1).</i></p> <p><i>Base Resources will acquire the remaining 15% interest upon payment of deferred consideration on achievement of key milestones as the project advances to mine development. If the key milestones have not been achieved within two years of the acquisition date, the remaining 15% interest automatically transfers to Base Resources.</i></p> <p><i>October 2017 saw Mining Lease PDE 37242 merge with both Mining Lease 39130 and Exploration Lease 3315 which to form one complete footprint of the previous three leases.</i></p>
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p><i>1999 - 2002 Deposit first discovered and explored by Madagascar Resources NL:</i></p> <ul style="list-style-type: none"> <i>• 120 RC air core holes for 3,068 m</i> <p><i>2003 - 2009 Tigor/Kumba Resources (Exxaro) joint venture:</i></p> <ul style="list-style-type: none"> <i>• 689 RC air core holes for 15,559 m</i> <i>• Pre-Feasibility Study completed</i> <p><i>2012 WTR:</i></p> <ul style="list-style-type: none"> <i>• 361 RC air core holes</i> <i>• for 8,088 m</i> <p><i>2018 Base Resources:</i></p> <ul style="list-style-type: none"> <i>• 78 RC air core holes</i> <i>• for 3,617 m</i>

Criteria	Explanation	Comment
Geology	Deposit type, geological setting and style of mineralisation.	<p>Project comprises a Heavy Mineral Sand deposit and is located on the southwest coast of Madagascar within the Mesozoic Morondava Basin along a 30 km wide coastal plain juxtaposed to an Eocene limestone scarp. The coastal plain which is floored by faulted limestone is overlain by a succession of progressively shallowing sequence of beach and lagoon type unconsolidated clastic and subaerial dunes which successively overstep and on-lap onto the basement limestone scarp in the east.</p> <p>The deposit is hosted within a stabilized mega dune system which is arrested along the basement scarp slope and extend for approximately 20 km north northwest south southeast. The entire dune unit is mineralized by an assemblage of ilmenite, zircon, rutile and monazite concentrated with the unit by aeolian winnowing. The unit generally thickens westwards away from the scarp slope from 3 metres to 60 m. The deposit anisotropy parallels the scarp slope, with higher HM grades concentrated along the mega- dune crest line.</p>
Drill hole Information	<p>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</p> <ul style="list-style-type: none"> - easting and northing of the drill hole collar - elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar - dip and azimuth of the hole - down hole length and interception depth - hole length. 	<p>Madagascar Resource NL drilled:</p> <ul style="list-style-type: none"> • 120 RC air core holes for 3,068 m <p>Ticor/Kumba Resources (Exxaro) drilled:</p> <ul style="list-style-type: none"> • 689 RC air core holes for • 15,559 m <p>WTR has drilled:</p> <ul style="list-style-type: none"> • 361 RC air core holes for • 8,053.2 m <p>Base Resources has drilled:</p> <ul style="list-style-type: none"> • 78 RC air core holes for

Criteria	Explanation	Comment
	<i>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.</i>	<ul style="list-style-type: none"> • 3,617 m <p><i>All holes were drilled vertically</i></p> <p><i>RC holes averaged 24 m long for the project</i></p> <p><i>2018 drilling had an average depth of 46.4 m as the program looked to also targeted a lower mineralisation zone</i></p> <p><i>See drill hole location plan; Figure 2.</i></p> <p><i>Exploration Results are not being reported at this time</i></p>
<i>Data aggregation methods</i>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>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.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p><i>Exploration results are not being reported at this time</i></p> <p><i>No metal equivalent values were used</i></p> <p><i>No aggregation of short length samples was used as samples were consistently sampled at 1 - 3 m intervals</i></p>
<i>Relationship between mineralisation widths and intercept lengths</i>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></p>	<p><i>The deposit is flat lying and intersected by vertical holes</i></p> <p><i>The 1.5% HM cut-off zone averages 17.5 m thick and ranges in thickness from 6 to 21 m</i></p>

Criteria	Explanation	Comment
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	<i>Plan of Mineral Resources see Figure 2 to 3 Oblique sections see Figure 5 to 6</i>
<i>Balanced reporting</i>	<i>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.</i>	<i>Exploration results are not being reported at this time</i>
<i>Other substantive exploration data</i>	<i>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.</i>	<i>Exploration results are not being reported at this time</i>
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. 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.</i>	<i>Future work will consist of extending the drilling to the western extents of the deposit to further determine the extents of the lower mineralisation zone</i>

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Explanation	Comment
Database integrity	<p>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.</p> <p>Data validation procedures used.</p>	<p>The original drill data derived by Madagascar Resources, Ticor/Kumba Resources (Exxaro), WTR, and Base Resources drill data have been independently reviewed and validated by IHC Robbins. Data review included:</p> <ul style="list-style-type: none"> • Checks of data by visually inspecting on screen (to identify translation of samples) • Cross checking of laboratory analysis certificates with from/to assay data • Validation of reported assay data against field value estimates • Cross checking lithology log interpretation with oversize, slimes and HM content • Visual and statistical comparison was undertaken to check the validity of results <p>An Access data base is updated and maintained by Base Resources, which has been reviewed by IHC Robbins.</p> <p>Validation checks of the drill database include:</p> <ul style="list-style-type: none"> • Assay comparison for out of range values • Sample gaps • Overlapping sample intervals <p>Collar coordinate verification including collar elevations normalized to LIDAR digital terrain model</p>

Criteria	Explanation	Comment
Site visits	<p>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</p> <p>If no site visits have been undertaken indicate why this is the case.</p>	<p>A site visit was undertaken in 2018 by Greg Jones, the Competent Person for the IHC Robbins. The 2018 site visit also included training and mentoring for the Malagasy geologists (which was carried out in conjunction with Ian Reudavey - Geological Superintendent)</p> <p>Review of key geological units was possible by comparing drill hole residual samples from a selected type section with the logging and undertaking a side-by-side re-logging exercise</p>
Geological interpretation	<p>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</p> <p>Nature of the data used and of any assumptions made.</p> <p>The effect, if any, of alternative interpretations on Mineral Resource estimation.</p> <p>The use of geology in guiding and controlling Mineral Resource estimation.</p> <p>The factors affecting continuity both of grade and geology.</p>	<p>The previous geological interpretation for the Toliara deposit was undertaken by WTR in 2012 and the data was used by IHC Robbins which was validated using all logging data, sampling data, and observations and modified where appropriate. The geological interpretation undertaken by IHC Robbins was in collaboration with the companies Resource Manager</p> <p>Current data spacing and quality is sufficient to confirm or indicate geological and grade continuity</p> <p>Interpretation of modelling domains was restricted to the main mineralised zones using THM sinks, oversize material, slimes, and lithological logging (including colour changes)</p> <p>There is a high degree of confidence in the geological interpretation of the sand units (aeolian and shallow marine sands)</p> <p>The extent of the upper mineralized sand unit was determined by a combination of LIDAR and drill hole data, with no assumptions made</p> <p>A further interpretation of the lower mineralised sand unit was determined primarily along the western boundary of the Toliara deposit with more recent drilling adding to the confidence of its stratigraphic positioning within the Toliara deposit</p>

Criteria	Explanation	Comment
		<p><i>The lower mineralised sand unit has been excluded from this current resource estimate and report at this point in time on the basis that mineralogical data is available for this unit</i></p> <p><i>Only the aeolian Upper Sand Unit and the Intermediate Clay Sand Unit have been considered for this resource estimate and report</i></p> <p><i>The primary factor controlling grade and geology continuity is mega-dune morphology. The limestone morphology also impacts continuity of grade, primarily along the eastern extents of the Toliara deposit</i></p> <p><i>Dune morphology and grade trends have been used with cross-sectional data to define search ellipsoid orientation in populating the resource model</i></p>
<i>Dimensions</i>	<i>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.</i>	<p><i>The resource extends for 20 km north - south and averages 2.2 km wide east-west</i></p> <p><i>The average depth of mineralization from the surface to the 3% HM cut-off is 17.5 m with an average of 6 to 21 m</i></p>
<i>Estimation and modelling techniques</i>	<p><i>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.</i></p> <p><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></p> <p><i>The assumptions made regarding recovery of by-products.</i></p>	<p><i>CAE mining software Datamine Studio RM was used to estimate the mineral resources</i></p> <p><i>Inverse distance weighting techniques were used to interpolate assay grades from drill hole samples into the block model and nearest neighbour techniques were used to interpolate index values and non-numeric sample identification into the block model</i></p> <p><i>The mostly regular dimensions of the drill grid and the anisotropy of the drilling and sampling grid allowed for the use of inverse distance methodologies as no de-clustering of samples was required</i></p>

Criteria	Explanation	Comment
	<p><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></p> <p><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></p> <p><i>Any assumptions behind modelling of selective mining units.</i></p> <p><i>Any assumptions about correlation between variables.</i></p> <p><i>Description of how the geological interpretation was used to control the resource estimates.</i></p> <p><i>Discussion of basis for using or not using grade cutting or capping.</i></p> <p><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></p>	<p><i>Appropriate and industry standard search ellipses were used to search for data for the interpolation and suitable limitations on the number of samples and the impact of those samples was maintained. An inverse distance weighting of three was used so as not to over smooth the grade interpolations</i></p> <p><i>Hard domain boundaries were used and these were defined by the geological wireframes that were interpreted</i></p> <p><i>Topographic surface was created from LIDAR data</i></p> <p><i>Resource was modelled to key geological boundaries and then reported at cut-off grades of 1.5 and 3.0% THM (no minimum thickness)</i></p> <p><i>The average parent cell size used for the interpolation was approximately half the standard drill hole width and a half of the standard drill hole section line spacing</i></p> <p><i>The average drill hole spacing for the Ranobe deposit was 100 m east-west and 200 m north-south and with a 1.5 m samples and so the selected parent cell size was 50 x 100 x 1.5 m (where the Z or vertical direction of the cell was nominated to be the same distance as the sample length)</i></p> <p><i>Four Mineral Resources estimates have been undertaken previously; Ticor 2004, Exxaro 2006, Milne 2010, MacDonald Speijers and Associates 2012. The current resource model has been reviewed against these previous estimates</i></p> <p><i>No assumptions have been made regarding recovery of by-products</i></p> <p><i>No deleterious elements or non-grade variables are present</i></p>

Criteria	Explanation	Comment
		<p><i>All resource blocks are assumed to be mined from the surface with no overburden</i></p> <p><i>Mineral assemblages show little statistical variation over the deposit, and correlate well with HM content</i></p> <p><i>Drill hole declustering was not used during the interpolation because of the regular nature of sample spacing</i></p> <p><i>Sample distributions were reviewed, and no extreme outliers were identified either high or low that necessitated any grade cutting or capping</i></p> <p><i>Validation of grade interpolations were done visually In CAE Studio (Datamine) software by loading model and drill hole files and annotating and colouring and using filtering to check for the appropriateness of interpolations</i></p> <p><i>Statistical distributions were prepared for model zones from drill hole and model files to compare the effectiveness of the interpolation</i></p> <p><i>Along strike distributions of section line averages (swath plots) for drill holes and models were also prepared for comparison purposes</i></p>
<i>Moisture</i>	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	<p><i>Tonnages were estimated on an assumed dry basis.</i></p> <p><i>The bulk density used for the Ranobe deposit is one that has been utilised by previous workers and is based on a simple linear algorithm originally developed by John Baxter (1977). IHC Robbins from experience of working with these styles of ore bodies considers that this algorithm is a fair approximation of the in situ dry bulk density</i></p>
<i>Cut-off parameters</i>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	<i>Cut-off grades were used for reporting the Mineral Resources estimate. No top or bottom cuts were used for grade interpolation</i>

Criteria	Explanation	Comment
<i>Mining factors or assumptions</i>	<i>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.</i>	<i>No specific mining method is assumed other than potentially the use of dry mining methods for the deposit using dozer trap and/or front-end loader</i> <i>Deposit is planned to be mined from surface with no minimum dimensions</i>
<i>Metallurgical factors or assumptions</i>	<i>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.</i>	<i>Test work completed by Ticor/Kumba Resource 2004 Pre-Feasibility Study</i> <i>Test work completed Exxaro 2009 Feasibility Study</i> <i>Test work undertaken by AML 2007 and 2009</i> <i>Process design TZMI 2012, Definitive Engineering Study</i> <i>Ongoing test work at Mineral Technologies and IHC Robbins, Brisbane</i>
<i>Environmental factors or assumptions</i>	<i>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 greenfield 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</i>	<i>EMP (Environmental Management Plan) approved by Government of Madagascar June 2015</i>

Criteria	Explanation	Comment
	<i>this should be reported with an explanation of the environmental assumptions made.</i>	
<i>Bulk density</i>	<p><i>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.</i></p> <p><i>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.</i></p> <p><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	<p><i>The bulk density used for the Ranobe deposit is one that has been utilised by previous workers and is based on a simple linear algorithm originally developed by John Baxter (1977).</i></p> <p><i>IHC Robbins from experience of working with these styles of ore bodies considers that this algorithm is a fair approximation of the in situ dry bulk density, where $BD = 1.61 + (0.01 \times HM)$</i></p>
<i>Classification</i>	<p><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p> <p><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></p> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p>	<p><i>The resource classification for the Ranobe deposit was based on the following criteria: drill hole spacing and the distribution and influence of bulk samples</i></p> <p><i>The classification of the Measured, Indicated, and Inferred Resources was supported by the uncomplicated geology, continuity of mineralisation, confidence in the drill hole data and all the supporting criteria as noted above</i></p> <p><i>As a Competent Person, IHC Robbins Geological Services Manager Greg Jones considers that the result appropriately reflects a reasonable view of the deposit categorisation</i></p>

Criteria	Explanation	Comment
<i>Audits or reviews.</i>	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	<i>An audit and review was undertaken on the previous resource estimate carried out by WTR</i>
<i>Discussion of relative accuracy/ confidence</i>	<p><i>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.</i></p> <p><i>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.</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<p><i>No statistical or geo-statistical review of the accuracy of the resource estimate has been undertaken</i></p> <p><i>Variography was undertaken to determine the drill hole support of the selected JORC classification</i></p> <p><i>Validation of the model vs drill hole grades by direct observation and comparison of the results on screen, swathe plot and population distribution analysis were favourable</i></p> <p><i>The resource statement is a global estimate for the entire known extent of the Ranobe deposit within the Exploration Permit</i></p> <p><i>There has been no production to date</i></p>

GLOSSARY

CRM	Certified Reference Material are 'controls' or standards used to check the quality and metrological traceability of products, to validate analytical measurement methods, or for the calibration of instruments.
Competent Person	<p>The JORC Code requires that a Competent Person must be a Member or Fellow of The Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a 'Recognised Professional Organisation'.</p> <p>A Competent Person must have a minimum of five years' experience working with the style of mineralisation or type of deposit under consideration and relevant to the activity which that person is undertaking.</p>
DGPS	Differential Global Positioning System is a system to provide positional corrections to GPS signals. DGPS uses a fixed, known position to adjust real time GPS signals to eliminate pseudo range errors.
DTM	Digital Terrain Model.
Indicated Resource	An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.
Inferred Resource	An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
Inverse distance weighting	A statistical interpolation method whereby the influence of data points within a defined neighborhood around an interpolated point decreases as a function of distance.
JORC	The Joint Ore Reserves Committee: The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code'), as published by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.
LIDAR survey	LIDAR is a remote sensing technology that measures distance by illuminating a target with a laser and analysing the reflected light.
Measured Resource	A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.
Mineral Resources	Mineral Resources are a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
Ore Reserves	Ore Reserves are the economically mineable part of Measured and/or Indicated Mineral Resources.
QEMSCAN	Is an acronym for Quantitative Evaluation of Materials by Scanning Electron Microscopy, an integrated automated mineralogy and petrography solution providing quantitative analysis of minerals and rocks.



RL	The term Reduced Level is denoted shortly by 'RL'. National survey departments of each country determine RL's of significantly important locations or points. RL is used to describe the relative vertical position of drill collars.
RMS	Is the Root Mean Square error used in surveying.
SEM	A Scanning Electron Microscope is a type of electron microscope that produces images of a sample or minerals by scanning the surface with a focused beam of electrons.
UTM	The Universal Transverse Mercator (UTM) conformal projection uses a 2-dimensional Cartesian coordinate system to give locations on the surface of the Earth.
Variography	A geostatistical method that investigates the spatial variability and dependence of grade within a deposit. This may also include a directional analysis.
WGS 84	The World Geodetic System 1984 (WGS84) is the reference frame used by the Global Positioning System (GPS).
XRD	X-Ray Diffraction is an analytical technique used to determine mineral species.
XRF analysis	A spectroscopic method used to determine the chemical composition of a material through analysis of secondary X-ray emissions, generated by excitation of a sample with primary X-rays that are characteristic of a particular element.

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About Base Resources

Base Resources is an Australian based, African focused, mineral sands producer and developer with a track record of project delivery and operational performance. The Company operates the established Kwale Operations in Kenya and is developing the Toliara Project in Madagascar. Base Resources is an ASX and AIM listed company. Further details about Base Resources are available at www.baseresources.com.au.