

ASX, AIM and Media Release
1 May 2019

Mineral Resource for Kwale North Dune deposit

Highlights

- The Kwale North Dune Mineral Resources estimate is 171 million tonnes at an average HM grade of 1.5% and contains 2.6Mt HM, based on a 1% HM cut-off grade.
- The Kwale North Dune Mineral Resource is considered to have the potential to add mine life to the Company's existing Kwale Operations.
- Base Resources will shortly commence a concept study to confirm a business case, followed by a pre-feasibility study to determine the economics, and therefore viability, of any mine life extensions.
- Drilling on the North Dune will continue in 2019, aimed at increasing Mineral Resources in the Measured and Indicated categories as well as furthering our understanding of the resource.

African mineral sands producer, **Base Resources Limited** (ASX & AIM: BSE) (**Base Resources** or the **Company**) is pleased to release the maiden JORC 2012 North Dune Mineral Resources estimate (the **2019 Kwale North Dune Mineral Resource**) at its 100% owned and operated Kwale Operations in Kenya.

The Kwale Operation is currently based on the Central Dune and South Dune deposits, with mining operations to date focused on the Central Dune. A transition to the South Dune deposit is scheduled for June 2019. On the basis of current Ore Reserves, Kwale Operations will continue until mid-2022, which will be extended to mid-2024 subject to approval of the South Dune mining lease variation currently before the Kenyan Government.

The North Dune deposit was acquired by the Company as part of the acquisition of the Kwale Project in mid-2010 but was excluded from the project's Mineral Resources on the basis of grade and then prevailing economic conditions. A decision was taken to re-evaluate the potential of the North Dune in 2018 in light of improved economic conditions, refined resource definition methodology and with insights gained from five years of operations on the Central Dune. The 2019 Kwale North Dune Mineral Resources estimate incorporates the results of an extensional and infill drill program completed in 2018 (refer to the Company's announcements on 25 July 2018¹ and 18 October 2018²) as well as earlier programs.

The 2019 Kwale North Dune Mineral Resource is estimated to be 171 million tonnes (**Mt**) at an average heavy mineral (**HM**) grade of 1.5% and 38% slimes (**SL**) and containing 2.6Mt HM, based on a 1% HM cut-off grade. The high slimes content is likely to make the resource amenable to hydraulic mining as is currently employed at the Kwale Operations. Mining activity on the North Dune deposit would only require minimal capital expenditure due to the close proximity of the existing Kwale Operations processing facilities.

With the expectation that the resource will support modest extensions to the Kwale Operations, a further drilling program will now be completed on the North Dune deposit to allow a better understanding of the resource and a study phase commenced to assess the economics of potential mine life extensions. This will proceed in parallel with the ongoing drilling programs in the Vanga and Kwale East zones in pursuit of further mine life extensions.

¹ Refer to Base Resources' ASX announcement "Quarterly Activities Report – June 2018" released on 25 July 2018, which is available at <http://www.baseresources.com.au/investor-centre/asx-releases/>.

² Refer to Base Resources' ASX announcement "Quarterly Activities Report – September 2018" released on 18 October 2018, which is available at <http://www.baseresources.com.au/investor-centre/asx-releases/>.

Table 1: 2019 Kwale North Dune Mineral Resources estimate at a 1% HM cut-off.

2019 Kwale North Dune Mineral Resources as at 1 May 2019								
Category	Material (Mt)	In Situ HM (Mt)	HM (%)	SL (%)	OS (%)	HM Assemblage		
						ILM (%)	RUT (%)	ZIR (%)
Measured	-	-	-	-	-	-	-	-
Indicated	136	2.1	1.5	38	2	45	12	5
Inferred	34	0.5	1.4	36	3	46	13	6
Total	171	2.6	1.5	38	2	45	12	5

Table subject to rounding errors, resources estimated at a 1% HM cut-off grade.

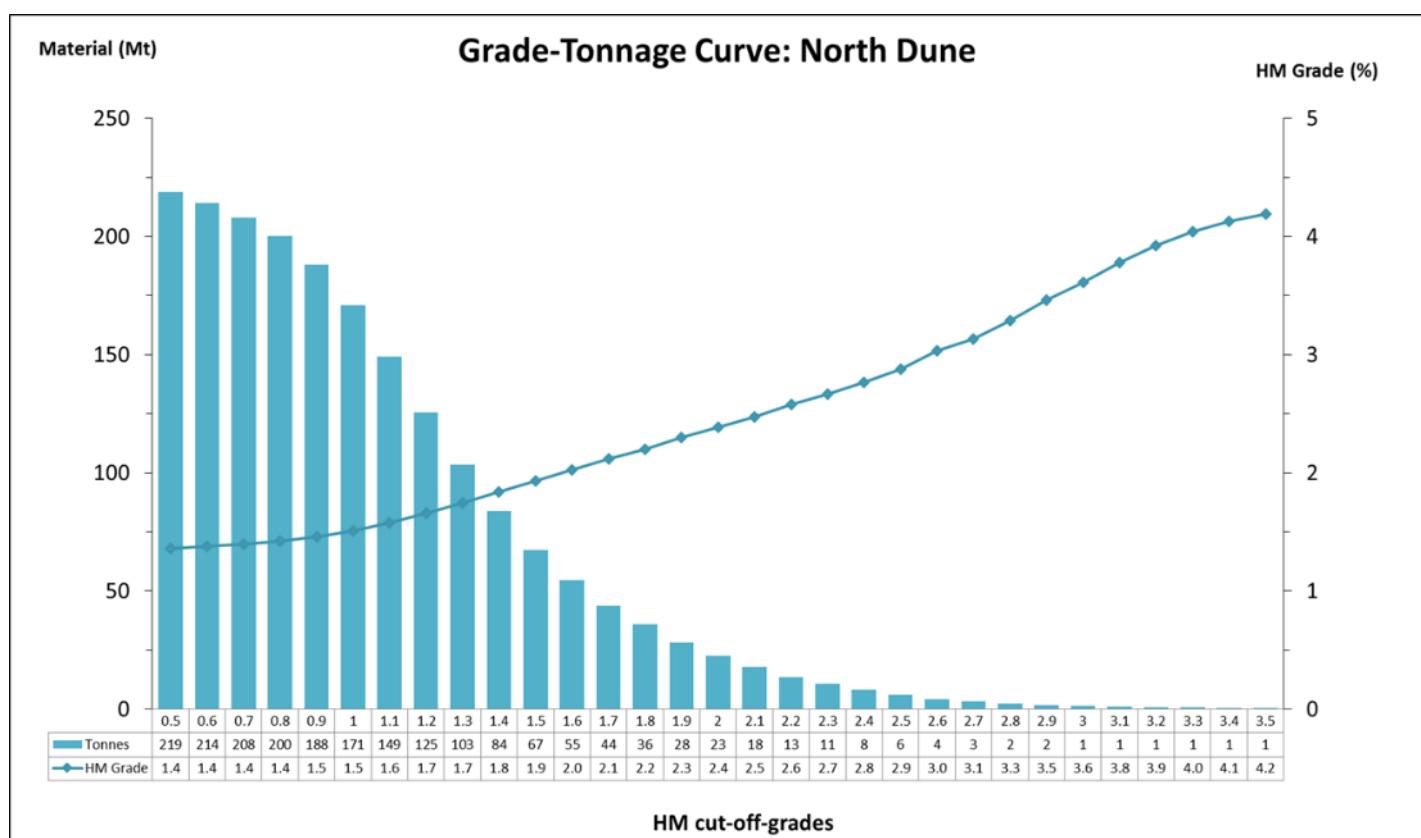


Figure 1: 2019 Kwale North Dune Mineral Resource grade tonnage curve (correlates with Table 1 data)

In addition, some potentially valuable mineralisation was identified in the lower sandstone unit (which normally forms the basement to the Kwale Central Dune and South Dune deposits), see Table 2. The mineralogy of this unit is quite different to the much younger overlying units reported in Table 1. If it were to be mined, its saleable products would likely only be rutile and zircon. A titano-haematite mineral is also present, but due to its low TiO₂ content it is not currently considered to be marketable.

Table 2: 2019 Kwale North Dune lower sandstone unit (zone 10) Mineral Resources estimate at a 1% HM cut-off.

2019 Kwale North Dune Mineral Resources as at 1 May 2019								
Category	Material (Mt)	In Situ HM (Mt)	HM (%)	SL (%)	OS (%)	HM Assemblage		
						Ti-Haem. (%)	RUT (%)	ZIR (%)
Measured	-	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-	-
Inferred	61	1.5	2.5	42	2	45	7	3
Total	61	1.5	2.5	42	2	45	7	3

Table subject to rounding errors, resources estimated at a 1% HM cut-off grade.

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

The supporting information below is provided in accordance with Chapter 5 of the ASX Listing Rules.

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 Kwale North Dune Mineral Resources estimate as presented in this report is as follows.

The Kwale Project was initially owned by Tiomin Resources Inc. (**Tiomin**) who conducted drilling in 1997 to establish Mineral Resources estimates for the Central Dune, South Dune and North Dune deposits. Base Resources purchased the Kwale Project in mid-2010. At the time, Base Resources excluded the North Dune deposit from the project on the basis of HM grade and then prevailing economic conditions.

The Kwale North deposit is located on prospecting licence 2018-0119 comprising an area of 88.7km² (formerly special prospecting licence 173) which is located approximately 50 kilometres south of Mombasa and approximately 10 kilometres inland from the Kenyan coast. The deposit is immediately north of the operating Kwale Central Dune mine and the plant and infrastructure comprising the Kwale Operations. The Kwale Operations currently comprise two areas that contain economically viable concentrations of heavy minerals on Special Mining Lease 23, being the Central Dune and the South Dune (Figure 2).

The rocks of the area are of sedimentary origin and range in age from Upper Carboniferous to Recent. Three divisions are recognised: the Cainozoic rocks, the Upper Mesozoic rocks (not exposed within the area) and the Duruma Sandstone Series giving rise to the dominant topographical feature of the area: the Shimba Hills. The Shimba grits and Mazeras sandstone are of Upper Triassic age and form the Upper Duruma Sandstone.

The Magarini sands form a belt of low hills running parallel to the coast. They rest with slight unconformity on the Shimba grits and Mazeras sandstone. This formation was deposited during Pliocene times and consists mainly of unconsolidated fluvial sediments derived from the Duruma Sandstone Series.

The Kwale deposits are an aeolian subset of the Magarini sands and are generally poorly stratified and contain a fraction of silt of around 25%. Heavy minerals, mainly ilmenite, rutile and zircon, are locally concentrated and are abundant in some places, giving rise to the deposits.

The geological interpretations for the Kwale North Dune deposit considered the data in the drill logs, HM assay results, microscopic logging of HM sinks, detailed mineralogy and knowledge gained from mining the Central Dune deposit. Five geological domains have been identified at the Kwale North Dune deposit. These were used and honoured during the geological modelling (Figure 3).

The uppermost zone at the Kwale North Dune deposit, referred to as Ore Zone 1, is a dark brown, predominantly fine grained, well sorted silty sand with very little induration and is similar to the Ore Zone 1 units in the other Kwale deposits. Mineralogically it is

characterised by clean, glossy and rounded HM grains with an average VHM content of ~75% VHM.

Ore Zone 4 lies below Ore Zone 1 with an indurated paleo-surface separating the two zones, as observed in the field through difficult drill bit penetration; and in HM sink logs, exhibiting elevated iron oxides. The Ore Zone 4 host is higher in slimes with difficult washability and the grain sorting is generally poor. It is slightly lower in valuable heavy mineral (**VHM**) content, often with elevated iron oxides and alumino-silicate minerals (kyanite, andalusite and sillimanite). Ore Zone 4 is considered a fluvial deposit based on the difficulty of wash and the poor grain sorting.

Ore Zone 5 lies below Ore Zone 4 and is separated from the former by a lateritic paleo-surface and is also hosted in a fluvial clay-rich, poorly sorted formation. It is distinguished mineralogically by an increased amount of almandine garnet that reports to the magnetic fraction, significantly increasing magnesium, manganese, aluminium and silicon in the oxide chemistry. As a result of this it has a notably lower average VHM content (44%).

Ore Zone 10 lies below Ore Zone 5 and is typically hosted in weathered variants of the Mesozoic (Permo-Triassic) Duruma Sandstones. Its mineralogy is predominantly titanite (<40% TiO₂) with zircon enrichment in the non-magnetic fraction.

For Ore Zones 1, 4 and 5, a strong correlation between the field logs, HM sink logs and XRF oxide chemistry and QEMSCAN mineralogy gives confidence to these interpretations.

Following acquisition of the Kwale Project, subsequent resource drilling by Base Resources was completed using the reverse circulation, air core (**RCAC**) method and conducted in three campaigns: November 2010, December 2012 to April 2013 and June to October 2018 (Figure 5).

The predominantly 3 m sample intervals in the 2010 and 2012/13 drilling was replaced by sampling at 1.5 m intervals for the 2018 drill program to provide greater control on geological boundaries. Sample size averages close to 3 kg at this sample interval when collecting 25% of the rotary splitter cycle. Samples are dried, weighed, and screened for material less than 45 µm (slimes) and +1 mm (oversize).

Approximately 100 grams of the screened sample is subjected to a HM float/sink technique using the heavy liquid, lithium polytungstate (LST with an SG of 2.85 gcm⁻³). The resulting HM concentrate is dried and weighed as are the other separated constituent size fractions (the minus 45 µm material being calculated by difference).

Mineral assemblage analyses were conducted by Base Resources to characterise the mineralogical and chemical characteristics of specific mineral species and magnetic fractions. These mineral assemblage samples were subjected to magnetic separation using a Mineral Technologies induced-roll magnetic separator which captures magnetic (**mag**), middling (**mid**) and non-magnetic (**non-mag**) fractions. The mid and mag fractions are combined and, with the non-mag fraction, are subjected to XRF analysis using a Bruker, S8 Tiger XRF.

Data from the mag and non-mag XRF analyses are processed through the Minmod algorithm that runs approximately 100,000 iterations in assigning key chemical species to a calculated mineralogy determination.

Drill hole collar and geology data is captured by industry-specific, field logging software with on-board validation. Field and assay data are managed in a MS Access database and subsequently migrated to a more secure SQL database.

Standard samples were generated and certified for use in the field and laboratory. Accuracy of HM and SL analysis was verified by using the standard samples and monitored using control charts. Standard errors greater than three standard deviations from the mean prompted batch re-assay. A standard precision analysis was conducted on the key assay fields: HM, SL and Oversize (**OS**) for both laboratory and field duplicate samples. Normal scatter and QQ plots were prepared for HM, SL and OS for laboratory and field duplicates.

A twin drilling program was introduced for the 2018 program to quantify short-range variability in geological character and grade intersections. A water injection versus dry drilling assessment was included in the twin drilling analysis. Field and laboratory duplicate, standard and twin drilling analysis show adequate level of accuracy and precision to support resource classifications as stated.

A topographic DTM was based on a LIDAR survey.

Construction of the geological grade model was based on coding model cells below open wireframe surfaces, comprising topography, geology (Ore Zones 1, 4, 5 and 10) and basement (Figure 3). Model cell dimensions of 50 m x 50 m x 1.5 m in the XYZ orientations were utilised.

Interpolation was undertaken using various sized search ellipses to populate the model with primary grade fields (HM, SL and OS), and index fields (hardness, induration percent, composite ID). Inverse distance weighting to a power of three was used for primary assay fields whilst nearest neighbour was used to interpolate index fields.

A fixed bulk density of 1.7 (t/m³) was applied to the 2019 Kwale North Dune Mineral Resources model. This bulk density was selected based on operational experience in the Kwale Central Dune deposit and because no bulk density sampling was undertaken. This is considered to be a conservative estimate of bulk density.

The Kwale North Dune deposit, being similar in nature to the Kwale Central Dune deposit currently being mined, is considered amenable to being mined and processed in the same way. That is, by using the existing plant and equipment at the Kwale Operations: hydraulic mining, spiral concentrator and mineral separation plant with magnetic, electrostatic and further gravity separation.

The criteria used for classification was primarily the drill spacing (predominantly 100 m x 100 m) and sample interval (predominantly 1.5 m), with consideration also given to the continuity of mineral assemblage information. The estimates presented herein used a 1% HM bottom cut because the economic cut-off grade at the nearby Kwale Central Dune deposit mine is near to this, and resource estimates for the Kwale Operation have historically been reported at this cut-off grade.

Competent Person's Statement

The information in this report that relates to 2019 Kwale North Dune 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) and as qualified person for the purposes of the AIM Rules for Companies. Mr. Jones has reviewed this report and 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.

Certain statements in or in connection with this report contain or comprise forward looking statements. By their nature, forward looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and may be outside Base Resources' control. Accordingly, results could differ materially from those set out in the forward-looking statements.

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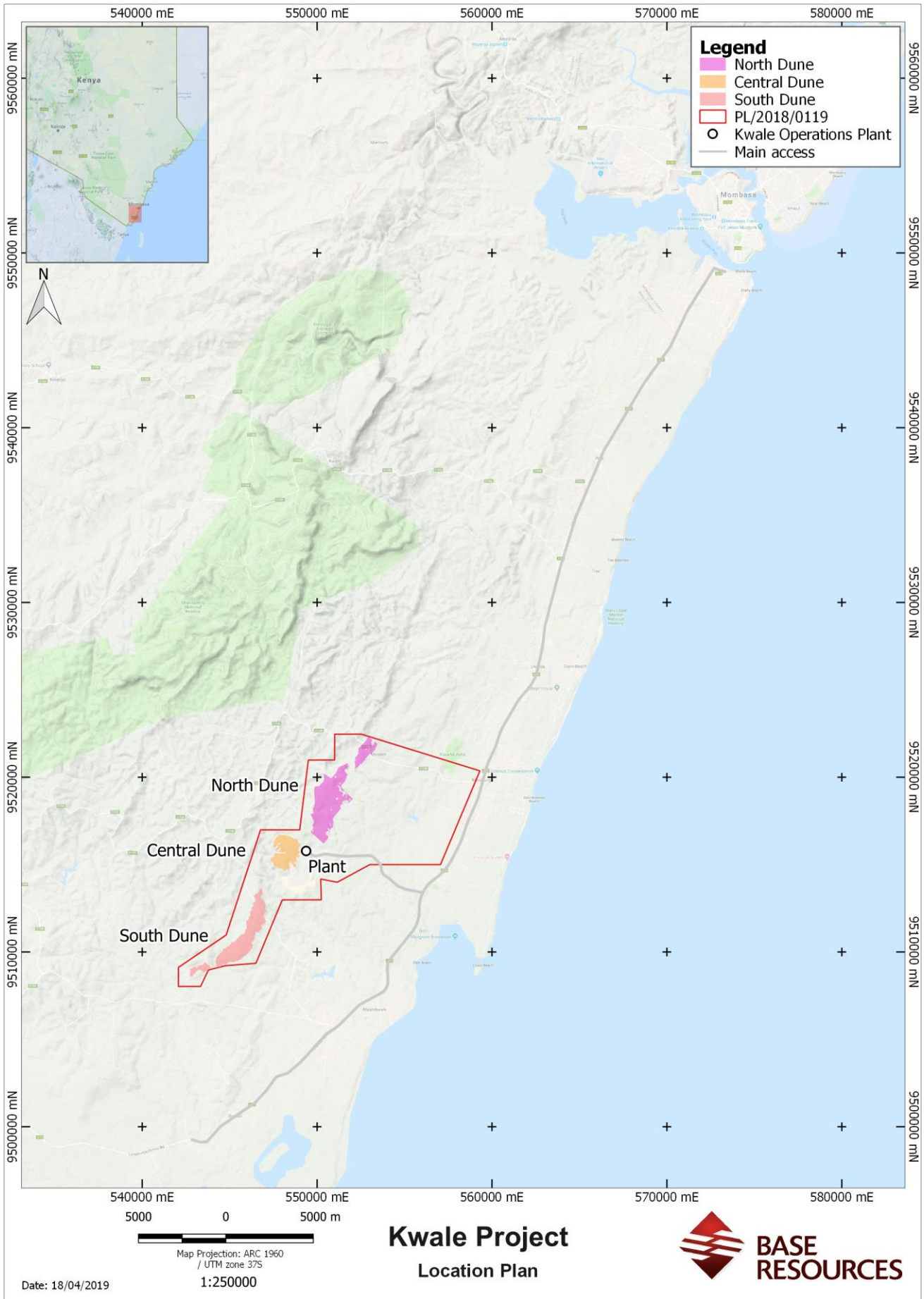


Figure 2 – Wider Kwale location with Central Dune, South Dune and North Dune deposits

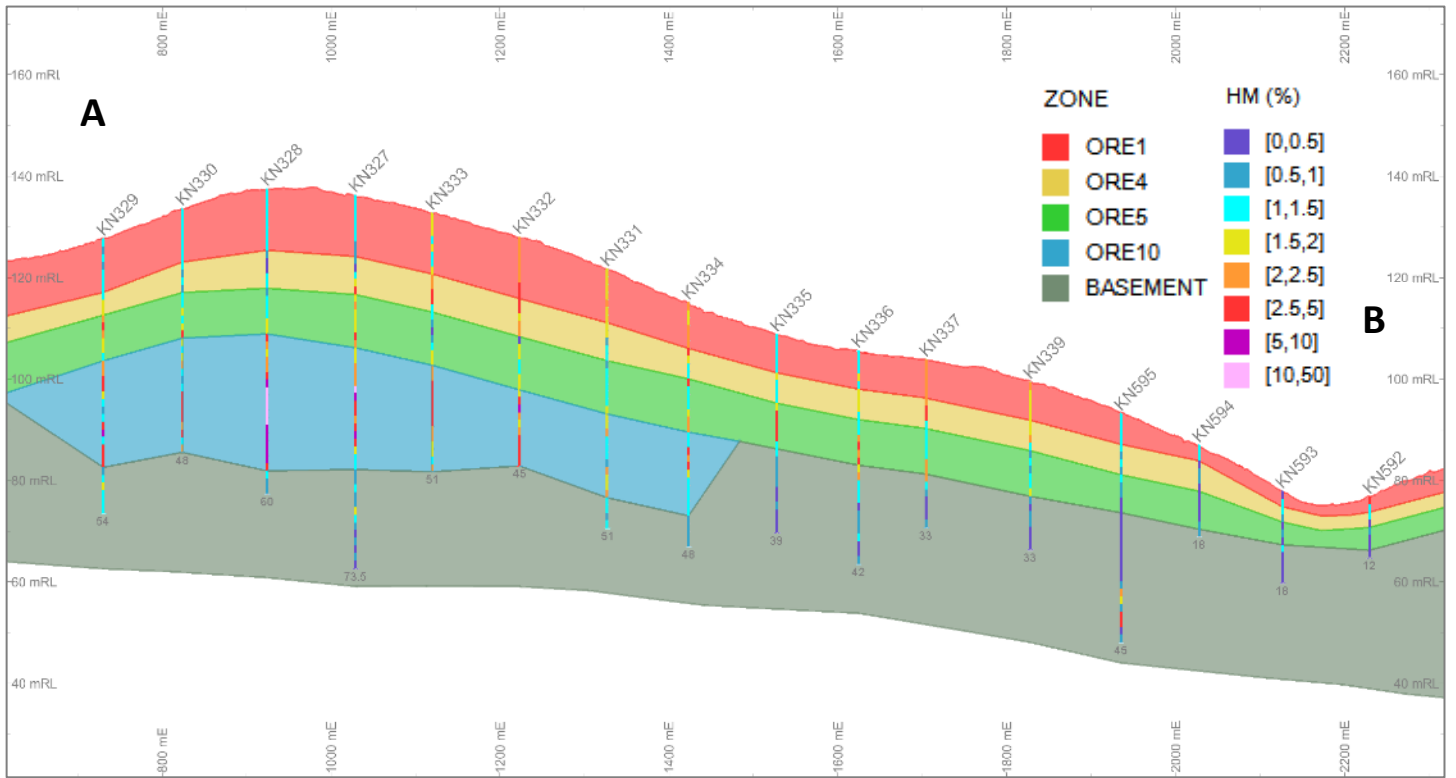


Figure 3 - Schematic cross-section of the Kwale North Dune deposit showing geology and HM grade relationships between geological domains

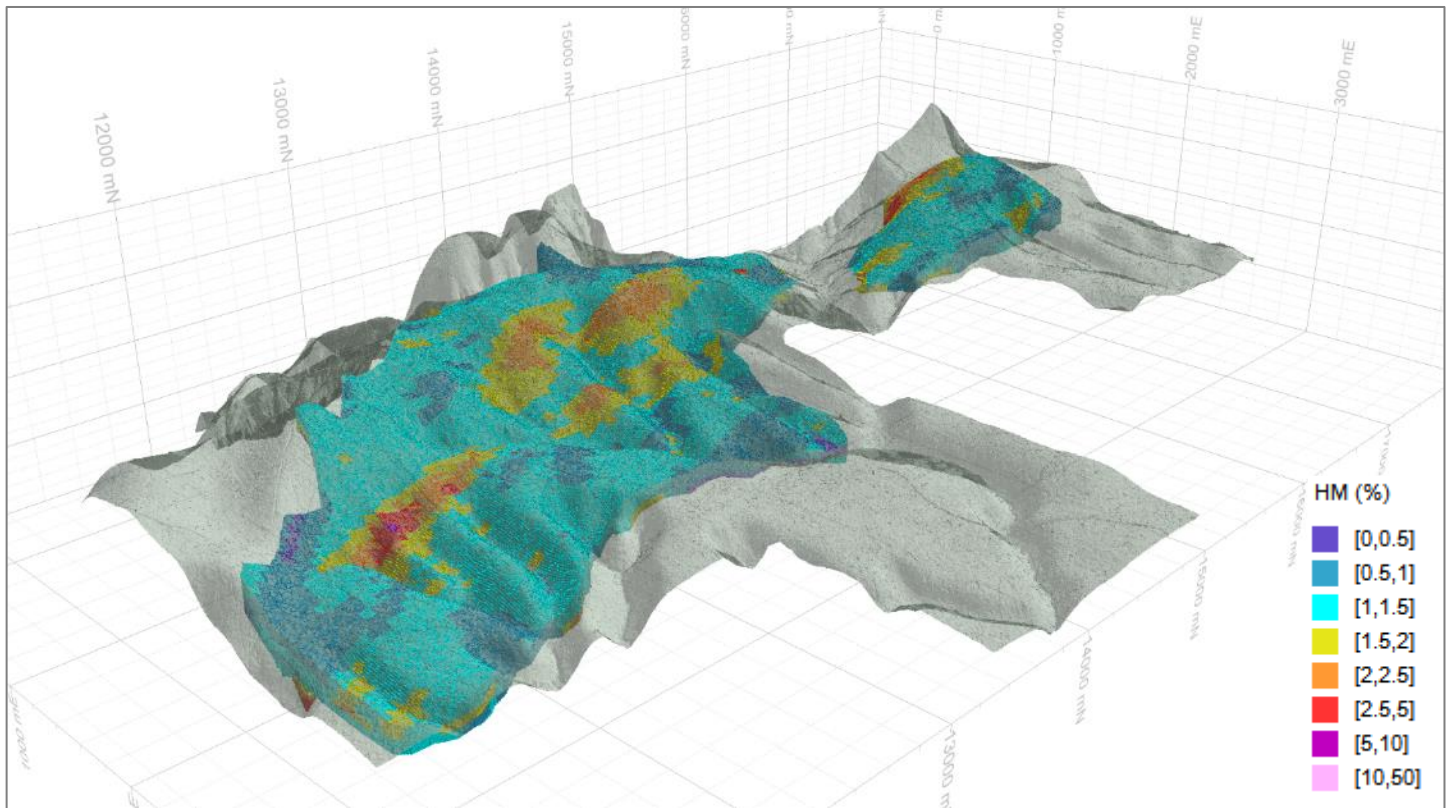


Figure 4 – Oblique view with model cells coloured on HM grade

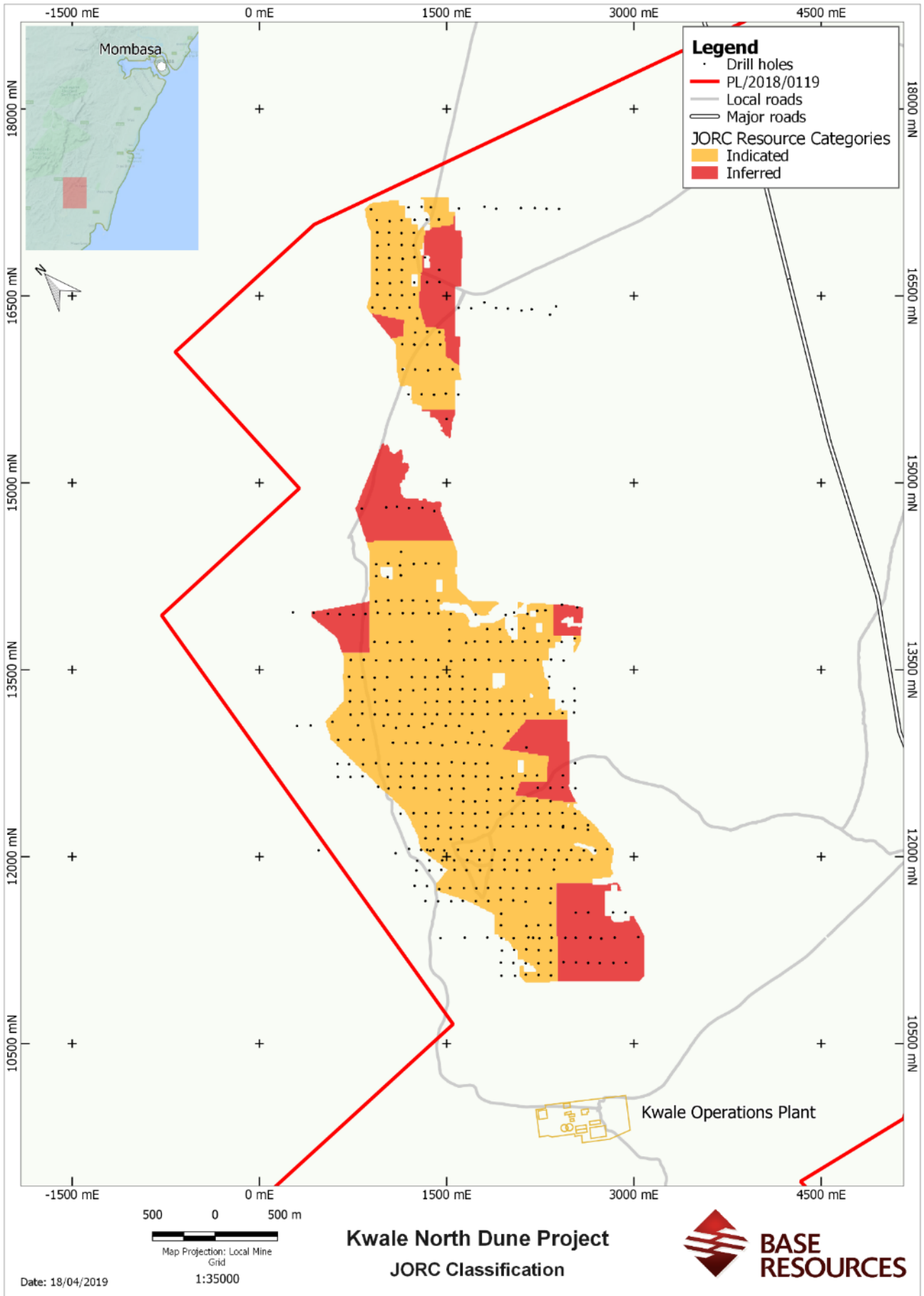


Figure 5 – Map showing Kwale North Dune deposit, location of drill holes, tenure boundaries and Resources category

Appendix 1

JORC Code, 2012 Edition

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none">• <i>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.</i>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>• <i>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g 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.</i>	<ul style="list-style-type: none">• Reverse circulation aircore drilling (RCAC) was used to collect downhole samples for the project.• Sample sub-splits are collected at 3m down-hole intervals for the 122 holes drilled in 2012/2013 and 1.5 m down-hole intervals for the 566 holes (drilled in 2018), using an on-board rotary splitter mounted beneath the rig cyclone.• Sample gates are set to collect 25% of the splitter cycle, which delivers about 2.5 - 3.5 kg of sample per interval on average.• Duplicate samples are collected at the splitter for every 20th sample by simultaneously with the original sample.• A representative grab sample from the sample bags is routinely washed and panned for a visual HM content estimate.
Drilling techniques	<ul style="list-style-type: none">• <i>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).</i>	<ul style="list-style-type: none">• 122 holes in the 2012/2013 campaign were drilled with a RCAC Wallis Mantis 75 drill rig using NQ drill tooling of about 76 mm in diameter.• 566 holes in the 2018 campaign were drilled with a more modernised Mantis 80 drill rig, also using NQ drill bits.• For the 2012/13 campaign, the mast was oriented vertically (90°) by sight. For the 2018 drilling the rig mast was orientated vertically by spirit level prior to drilling to adhere to best practice for geological boundary delineation.• Drilling is recorded in geological logs as either dry or water injected, depending on ground conditions. Water injection was employed to assist with penetration through clays/rock and

Criteria	JORC Code explanation	Commentary																				
		maintain sample quality and delivery.																				
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <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> 	<ul style="list-style-type: none"> • Sample Condition is logged at the rig as either good, moderate or poor, with good meaning not contaminated and appropriate sample size (recovery), moderate meaning not contaminated, but sample over or under sized and poor meaning contaminated or grossly over/undersized. • Ground conditions of slightly damp with ~36% silt/clay meant that best sample quality was found to be achieved via slow penetration with water injection to aid in the sample recovery. • No relationship is believed to exist between grade and sample recovery. No bias is also believed to occur due to loss of fine material. 																				
<i>Logging</i>	<ul style="list-style-type: none"> • <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> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> • Field logging is recorded for all 15,681 fixed, down-hole intervals and is conducted as drilling and sampling proceeds. Logging is based on a representative grab sample that is panned for heavy mineral estimation and host material observations. • Logging codes are designed to capture observations on lithology, colour, grainsize, induration and estimated mineralisation. Any relevant comments e.g. water table, gangue HM components and stratigraphic markers are included to aid in the subsequent geological modelling. <table border="1"> <thead> <tr> <th>PROJECT</th> <th>Kwale North</th> </tr> </thead> <tbody> <tr> <td>HOLE_ID</td> <td>Hole Identifier</td> </tr> <tr> <td>DEPTH_FROM</td> <td>Depth from</td> </tr> <tr> <td>DEPTH_TO</td> <td>Depth to</td> </tr> <tr> <td>SAMMETHOD</td> <td>Sampling method: Rotary splitter (ROT)</td> </tr> <tr> <td>SAMTYPE</td> <td>Sample Type (SOIL)</td> </tr> <tr> <td>SAMP_ID</td> <td>Sample identifier</td> </tr> <tr> <td>SAMPLE_CONDITION</td> <td>Sample Quality</td> </tr> <tr> <td>LITH1_COL1</td> <td>Major lithology colour observed in grab sample</td> </tr> <tr> <td>IND_CODE</td> <td>Induration type observed in grab sample</td> </tr> </tbody> </table>	PROJECT	Kwale North	HOLE_ID	Hole Identifier	DEPTH_FROM	Depth from	DEPTH_TO	Depth to	SAMMETHOD	Sampling method: Rotary splitter (ROT)	SAMTYPE	Sample Type (SOIL)	SAMP_ID	Sample identifier	SAMPLE_CONDITION	Sample Quality	LITH1_COL1	Major lithology colour observed in grab sample	IND_CODE	Induration type observed in grab sample
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Criteria	JORC Code explanation	Commentary
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IND_PCT	Induration percent estimate in grab sample
HARDNESS	Hardness estimate: qualitative from 1 = no induration to 5 = refusal
LITH1_CODE	Major Lithology observed in grab sample
LITH1_PCT	Major Lithology percent observed in grab sample
WASH	Washability of the grab sample
EST_HM_PCT	HM visual estimate
HM_GRAINSIZE	Heavy mineral grain size estimate
LITH2_CODE	Minor Lithology observed in grab sample
LITH2_COL2	Minor Colour observed in grab sample
LITH1_GRAINSIZE	Dominant grainsize of Major lithology
P90_GRAINSIZE	Coarsest grainsize of Major lithology
SORTING	Estimated sorting (grainsize) of the sediment in grab sample
AS	Assay "yes" or "no"
FACIES	Sequence stratigraphic unit
FORMATION	Domain code (Ore Zone 1, 4, 5, 10 and Base)
COMMENT	Commentary on non-coded observations

- A qualitative estimate of how representative a sample is of the drilled interval is recorded by Base Titanium Limited (**BTL**) field geologists whilst logging. This sample condition field records whether the hole is drilled with injected water or dry and sample size (and the influence of contamination or sample loss) directs the quality assessment of each sample.
- Heavy mineral sinks from assayed samples are logged routinely under a reflected-light,

Criteria	JORC Code explanation	Commentary														
		<p>stereoscopic microscope. This work is carried out to capture information relating to valuable heavy mineral (VHM) content, mineralogy, HM grainsize and quality.</p> <table border="1" data-bbox="1070 264 2123 762"> <thead> <tr> <th data-bbox="1070 264 1370 331">Field</th> <th data-bbox="1370 264 2123 331">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="1070 331 1370 399">SAMP_ID</td> <td data-bbox="1370 331 2123 399">Sample identifier</td> </tr> <tr> <td data-bbox="1070 399 1370 497">DOMINANT_HM</td> <td data-bbox="1370 399 2123 497">Classification of dominant VHM, VHM percent and minor non-VHM species</td> </tr> <tr> <td data-bbox="1070 497 1370 564">SINK_QUALIFIER</td> <td data-bbox="1370 497 2123 564">Additional qualifier field for non-coded observations</td> </tr> <tr> <td data-bbox="1070 564 1370 632">SINK_COMMENTS</td> <td data-bbox="1370 564 2123 632">General comments field</td> </tr> <tr> <td data-bbox="1070 632 1370 699">SINK_LOGGED_BY</td> <td data-bbox="1370 632 2123 699">Geologist Initials</td> </tr> <tr> <td data-bbox="1070 699 1370 762">SINK_LOGGED_DATE</td> <td data-bbox="1370 699 2123 762">Date of Logging</td> </tr> </tbody> </table>	Field	Description	SAMP_ID	Sample identifier	DOMINANT_HM	Classification of dominant VHM, VHM percent and minor non-VHM species	SINK_QUALIFIER	Additional qualifier field for non-coded observations	SINK_COMMENTS	General comments field	SINK_LOGGED_BY	Geologist Initials	SINK_LOGGED_DATE	Date of Logging
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<p><i>Sub-sampling techniques and sample preparation</i></p>	<ul style="list-style-type: none"> <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> <i>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.</i> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> Rotary split at the sampling cyclone on the rig. Approximately 25% of the original sample retained. Duplicate samples are collected at every 20th sample. The drill rods and cyclone were routinely cleaned between holes using pressurised water to avoid inter-hole contamination. The sample size is considered appropriate for the grain size of the material because the grade of HM is measured in per cent, and a 2.5-5 kg sample contains in excess of 50 million grains of sand. The sample preparation flow sheet departs from standard mineral sand practices in one respect; the samples were not oven dried prior to de-sliming, to prevent clay minerals being baked onto the HM grains (because the HM fractions were to be used in further mineralogical test work). Instead a separate sample was split and dried to determine moisture content, which was accounted for mathematically. Pre-soaking of the sample Sodium (Tetra) Pyrophosphate (TSPP) dispersant solution ensured a more efficient de-sliming process and to avoid potentially under-reporting slimes content. 														
<p><i>Quality of assay data</i></p>	<ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> 	<ul style="list-style-type: none"> The assay process employed by Base Resources includes a Sample Preparation stage, completed by BTL staff, followed by a heavy liquid separation (using lithium polytungstate: SG = 2.85g/cm³), completed by SGS staff at the Kwale site laboratory. 														

Criteria	JORC Code explanation	Commentary
<p><i>and laboratory tests</i></p>	<ul style="list-style-type: none"> • <i>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.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • Improvements to the sample preparation stage were made to ensure industry best practice and to deliver a high degree of confidence in the results. These included the following: <ul style="list-style-type: none"> ○ A formalised process flow was generated, posted in all sample preparation areas and used to train and monitor sample preparation staff, ○ Regular monitoring was completed by BTL senior staff, ○ Field samples were left in their bags for initial air-drying to avoid sample loss, ○ Tetrasodium Pyrophosphate (TSPP) was introduced to decrease attrition time and improve slimes recovery. A range of attrition times (with 5% TSPP) were trialled and plotted against slimes recovery figures to determine optimum attrition time (15 minutes), ○ Staff were trained to use paint brushes and water spray rather than manipulate sample through slimes screen by hand to remove the potential for screen damage, ○ A calibration schedule was introduced for scales used in the sample preparation stage, ○ The introduction of ruggedized computers allowed the capture of sample preparation data digitally at inception. This greatly reduced the instance of scribe and data entry errors, ○ Slimes screen number is recorded to isolate batches should re-assay be required due to poor adherence to procedure or to identify screen damage, ○ Various quality control samples were submitted routinely to assure assay quality. A total of 684 duplicate field samples, 675 duplicate sample preparation samples, 326 field certified standard samples, and an unspecified number of internal SGS laboratory standards repeats and blanks have been assayed at the host SGS Kwale laboratory.
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • The Kwale North Dune Deposit is a moderate to low HM grade, dunal-style accumulation that does not carry excessive mineralisation or suffer from ‘nugget’ effects, typical of other commodities. • No external audit validation was completed for the HM analyses included in the Kwale North Dune Resources Estimate. This is not considered material given the adequate performance of results from extensive QA/QC verification and on account of low HM grade variance and deposit homogeneity. • A twin drill hole procedure was introduced for the 2018 program at a recommended rate of 5% of the total number of holes. These twins are used to quantify short-range variability in geological character and grade intersections and ideally should be placed throughout the deposit. • A total of twenty-six twin drill holes were completed during the 2018 Kwale North Dune drilling program, which represents about 4.8% of the total program.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> The spatially well-represented twin hole paired data shows very good correlation considered material to the integrity/quality of the resource data.
<i>Location of data points</i>	<ul style="list-style-type: none"> <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> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> Proposed drill holes are sited on the ground using hand-held GPS. After drilling, surveyors record collar positions via DGPS RTK unit registered to local base stations. The accuracy of the DGPS unit is stated at 0.02m in the X, Y and Z axes. The survey Geodetic datum utilised is UTM Arc 1960, used in E. Africa. Arc 1960 references the Clark 1880 (RGS) ellipsoid and the Greenwich prime meridian. All survey data used in the Kwale North Resource dataset has undergone a transformation to the local mine grid from the standard UTM Zone 37S (Arc 1960). The local Grid is rotated 42.5°, which aligns the average strike of the deposits with local North and is useful for both grade interpolation and mining reference during production. All drill collars are projected to the local LiDAR survey, digital terrain model (DTM), captured over the resource area in 2018 at a 2x2 m grid spacing. This is performed prior to interpretation and model construction to eliminate any elevation disparities for the block model construction.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <i>Data spacing for reporting of Exploration Results.</i> <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> <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> The drill data spacing for the 2018 Kwale North Resource drilling is nominally 100 m X, 100 m Y and 1.5 m Z. Variations from this spacing result from terrain/traverse difficulties and ground access. A sample spacing of 3 m, with occasional 1.5 m intervals at geological contacts, was employed in the 2012/2013 drilling campaign by BTL. A 1.5 m, down-hole block size was applied to model construction and all previous 3 m drill data was de-surveyed to 1.5 m intervals for consistency in the interpolation processes. This spacing and distribution is considered sufficient to establish the degree of geological and mineralisation continuity appropriate for the resource estimation procedures and classifications applied. No sample compositing has been applied for HM, slimes and oversize in the interpolation processes.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <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> <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</i> 	<ul style="list-style-type: none"> With the geological setting being a layered dunal/fluviatile sequence, the orientation of the deposit mineralisation in general is sub-horizontal. All drill holes are orientated vertically to penetrate the sub-horizontal mineralisation orthogonally. Hole centres are spaced nominally at 100 m. This cross-profiles the dune so that variation can be determined. Down hole intervals are nominated as 1.5 metres. This provides adequate sampling resolution to capture the distribution and variability of geology units and mineralisation

Criteria	JORC Code explanation	Commentary
	<i>reported if material.</i>	<p>encountered vertically down hole.</p> <ul style="list-style-type: none"> The orientation of the drilling is considered appropriate for testing the horizontal and vertical extent of mineralisation without bias.
<i>Sample security</i>	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> Sample residues from the prep stage are transferred to pallets and stored in a locked shed beside the warehouse at the Kwale Operations. Residues from the Kwale Operations (SGS) HM Laboratory are placed in labelled bags and stored in numbered boxes. Boxes are placed into a locked container beside the laboratory. Sample tables are housed on a secure, network-hosted SQL database. Administration privileges are limited to two BTL staff: Edwin Owino (Exploration Superintendent), and Crispo Mwangi (Business Applications Administrator). Data is backed up every 12 hours and stored in perpetuity on a secure, site backup server.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> In-house reviews were undertaken by the Resources Manager, Mr. Scott Carruthers who is a Competent Person under the JORC Code.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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> <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> 	<ul style="list-style-type: none"> The drilling work was completed on a Prospecting License (PL) that is 100% owned by Base Titanium Limited – PL/2018/0119 located in Kwale County, Kenya. The 88 km² Prospecting License was granted on the 26th of May 2018 for a three-year term ending 25th May 2021. The PL is in good standing with the Kenya Ministry of Petroleum & Mining at the time of reporting, with all statutory reporting and payments up to date. Local landowners generally supportive of drilling activities with over 90% of planned holes drilled. The existing Special Mining Lease (SML23) lies within the Prospecting license area and covers the Kwale Central and South Orebodies. The Kenya Mining Act 2016 includes provision for the amendment of an existing SML and for the conversion of an existing PL to SML.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> In 1996, Tiomin carried out reconnaissance surface and hand-auger sampling. Following the encouraging results obtained, mud-rotary drilling was undertaken in 1997. 37 holes for a total of 1,824 m was achieved for the North dune, at 3 m sampling intervals. A pre-stripped resource at 1% cut-off established (47 Mt @ 2.1% HM). The current resource model omits the Tiomin data. This follows a twin drilling analysis of the Tiomin Mud Rotary holes with Base RCAC to determine relevance of historical data to the Kwale South Dune resource estimate in 2016. A total of 18 twin-hole pairs from a geographically dispersed area within the South Dune were included for analysis. A very poor correlation in HM values between the two methods ($R^2 = 0.1522$) resulted from the study. It is assumed that the poor correlation would extend to the North Dune. This is expected, given the open-hole method of drilling employed by Tiomin and supports the decision to exclude Tiomin data from the current interpolation.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The North Dune is part of the extensive Kwale Dune systems comprising of reddish, windblown Magarini sand formations that overlie a sequence of mineralised clay-rich fluvial units, which in turn overlie a Mesozoic sandstone Base, known as the Mazeras formation. These three units are separated by lateritic paleo-surfaces which signify a time-gap between the geological formations. The Mazeras Sandstone, derived from the disintegration of the Mozambique Belt metamorphic rocks, has likely provided the supply of heavy minerals to the Magarini sand dunes and the fluvial formations. Exploration of the Kenyan Coastline is yet to be successful in terms of mineralised paleo-strandlines related to fossil marine terraces, as these are likely buried beneath recent barren fluvial overburden or were just not developed owing to reduced energy levels from a fringing coral reef that has acted as a barrier to effective winnowing and reworking of HM deposits.
Drill hole Information	<ul style="list-style-type: none"> 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: <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 	<ul style="list-style-type: none"> Drilling by year (max, min and average depths) used for the resource model build are as follows; <ul style="list-style-type: none"> 2010 <ul style="list-style-type: none"> 11 drill holes (depth: max 72 m, min 24 m, avg 56 m). Total 581 m drilled. 2012

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> ● <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"> ○ 31 drill holes (depth: max 75 m, min 18 m, avg 60 m). ○ Total 1,681 m drilled. ● 2013 <ul style="list-style-type: none"> ○ 65 drill holes (depth: max 75 m, min 21 m, avg 54 m). ○ Total 3,234 m drilled. ● 2018 <ul style="list-style-type: none"> ○ 524 drill holes (depth: max 117 m, min 6 m, avg 46 m). ○ Total 19,176m drilled. ● See drill hole location plan, Figure 5. ● All drill holes drilled vertically. ● Exploration results are not being reported at this time.
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> ● <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> ● <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> ● <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> ● Exploration results are not being reported at this time. ● No equivalent values were used. ● No aggregation of short length samples used as samples were consistently 1.5 m intervals.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> ● <i>These relationships are particularly important in the reporting of Exploration Results.</i> ● <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> ● <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> 	<ul style="list-style-type: none"> ● The deposit sequences are sub-horizontal, and the vertically inclined holes are a fair representation of true thickness.

Criteria	JORC Code explanation	Commentary
<i>Diagrams</i>	<ul style="list-style-type: none"> • <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> 	<ul style="list-style-type: none"> • See body of report.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> • <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> 	<ul style="list-style-type: none"> • Exploration results are not being reported at this time.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> • <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> 	<ul style="list-style-type: none"> • The Minmod mineralogy technique, developed and employed by Base Resources, comprises an XRF analysis of the magnetic and non-magnetic fractions of each composite or sample, the results from which are then back-calculated to determine in-ground mineralogy. Minmod represents an improvement on the previous method (Geomod) that was not as effective at determining accessory minerals in the Kwale assemblage. Minmod has been validated by external quantitative analysis (QEMSCAN and SEM EDX) and is considered sufficiently certified to support quoted resource confidence in this report.
<i>Further work</i>	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>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> 	<ul style="list-style-type: none"> • Geological interpretation of nearby drilling to the East. • Additional 100 x 100 m aircore drilling to extend mineralisation in the open NW part of the deposit. • Generation of six Ore Zone 5 QEMSCAN composites for a more confident mineralogical modelling. • Detailed tests to establish accurate bulk densities. • Updated Mineral Resource estimate. • Scoping study and a go or no-go decision made to progress to a pre-feasibility study.

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
<p><i>Database integrity</i></p>	<ul style="list-style-type: none"> • <i>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.</i> • <i>Data validation procedures used.</i> 	<ul style="list-style-type: none"> • Field data is captured in LogChief logging application and automatically validated through reference to pre-set library table configurations. • Typing or logging code errors, duplication of key identifiers (e.g. HOLE_ID, SAMP_ID) and conflicts in related tables (e.g. down-hole depth) are quarantined by the software and require resolving immediately before logging can proceed. • The SQL Database also has identical automated validation features. Data import is unsuccessful until these data issues are resolved. • Field logging and survey data from the SQL database are imported into Datamine Discover (MapInfo) for sectional interpretation. Validation steps include a visual interrogation of collar versus geology depths, a review of hole locations against the drilling plan and a check for missing or duplicated logged fields and outliers. Any spurious or questionable entries were resolved by the supervising Geologist. • At the completion of each hole, an entry was made to the hand-written drilling diary. The diary recorded the hole name, date, depth, number of samples, time of start and finish, a description of the location of the hole in relation to the last hole and other things. Such a diary provides valuable evidence if there is an error in-hole naming or surveying. • A Geologist was employed to manage digital data capture at the sample preparation laboratory to reduce the potential for data entry error by unskilled labourers. A number of validation checks were made of sample preparation data to ensure accurate data entry and application of correct procedure by BTL staff. This included: <ul style="list-style-type: none"> ○ comparison of pre- versus post-oven weights, ○ comparison of split weight versus de-slimed weight, ○ comparison of split weight versus field sample weight, ○ all sample preparation data were sorted by each individual field and outliers investigated. • Assay results are delivered via email in 45 sample batches from SGS. These are in the form of CSV text files and imported by batch number directly into the SQL database tables where pre-set algorithms convert weights to percentages and remove the moisture content. The calculated assay results are then checked manually for missing records and out of range or unrealistic values.
<p><i>Site visits</i></p>	<ul style="list-style-type: none"> • <i>Comment on any site visits undertaken by the Competent</i> 	<ul style="list-style-type: none"> • Base Resources' Resources Manager Scott Carruthers made one site visit to review the SQL

Criteria	JORC Code explanation	Commentary
	<p><i>Person and the outcome of those visits.</i></p> <ul style="list-style-type: none"> <i>If no site visits have been undertaken indicate why this is the case.</i> 	<p>database and the geological interpretations. The Competent Person is satisfied with the integrity of the database as well as the delineation of the geological boundaries.</p>
<i>Geological interpretation</i>	<ul style="list-style-type: none"> <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i> <i>Nature of the data used and of any assumptions made.</i> <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> <i>The factors affecting continuity both of grade and geology.</i> 	<ul style="list-style-type: none"> The geological interpretation was undertaken by the BTL Exploration Superintendent using field logs and observations, assays, HM sachet logs, XRF oxide chemistry and mineralogy data. The oversize grades were particularly useful in determining the lateritic paleo-surfaces between the geological zones. The data spacing for the project is considered sufficient for grade and mineralogical continuity. Four mineralised geological zones and a basement zone were identified and are used as constraints in the Mineral Resource Estimation. The uppermost zone at Kwale North, referred to as Ore Zone 1, is a dark brown, predominantly fine grained, well sorted silty sand with very little induration. It is also characterised by a clean, high value heavy mineral assemblage. Ore Zone 4 lies below Ore Zone 1 with a clear lateritic boundary observed in the field with slightly difficult bit penetration, and in HM sink logs, exhibiting elevated iron oxides. Ore Zone 4 is lower in valuable heavy mineral (VHM) content, often dominated by iron oxides and Al₂SiO₄ polymorphs (kyanite, andalusite and sillimanite). It is considered a fluvial deposit based on the difficulty of wash and the poor grain sorting. Ore Zone 5 lies below Ore Zone 4 and is separated from the former by a lateritic paleo-surface. It is unique mineralogically by an increased amount of almandine garnet that reports to the mag fraction, significantly increasing the magnesium, manganese, aluminium and silicon in the oxide chemistry, and this is also reflected in QEMSCAN mineralogy. Ore Zone 10 lies below Ore Zone 5 and is typically hosted in weathered variants of the Mesozoic (Permo-Triassic) Duruma Sandstones. It ranges in composition from a predominantly primary titano-haematite (<40% TiO₂) to a garnet dominant suite. Some portions show a high zircon enrichment in the non-mag fraction. For Ore Zones 1, 4 and 5, a strong correlation between the field logs, HM sink logs and XRF oxide chemistry and QEMSCAN mineralogy gives confidence to these interpretations. The grade and mineralogy continuity is abruptly truncated at the western edge by an interpreted normal fault that pushed basement material to the surface with resultant low grades and trash HM.
<i>Dimensions</i>	<ul style="list-style-type: none"> <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth</i> 	<ul style="list-style-type: none"> The Kwale North Mineral Resource is approximately 6,300 m along strike and about 1,200 m across strike on average, the deposit thickness ranges from 9 m to 109 m.

Criteria	JORC Code explanation	Commentary
	<p><i>below surface to the upper and lower limits of the Mineral Resource.</i></p>	
<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> • <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> • <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> • <i>The assumptions made regarding recovery of by-products.</i> • <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i> • <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> • <i>Any assumptions behind modelling of selective mining units.</i> • <i>Any assumptions about correlation between variables.</i> • <i>Description of how the geological interpretation was used to control the resource estimates.</i> • <i>Discussion of basis for using or not using grade cutting or capping.</i> • <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> 	<ul style="list-style-type: none"> • The Kwale North Dune computerised Mineral Resource estimation was undertaken using Datamine Studio RM software. • Inverse Distance Weighting (IDW) to the power of three was used to interpolate assay grades (HM, Slimes, Oversize) from the drill hole file. • Nearest Neighbour (NN) was used to interpolate the composite ID and mineralogy data. • This is the maiden JORC 2012 Mineral Resource estimate for the Kwale North Dune and no previous estimates, or mining production records have been prepared by Base Resources. Prior to acquisition of the Kwale Project by Base Resources, Tiomin prepared and published a Mineral Resource Estimate of 116 Mt @ 2.1% HM using a 0.5% HM cut-off grade. • No assumptions have been made as to the recovery of by-products. • The parent cell size used in the grade interpolation was half the average drill hole spacing on the X and Y axes, which was 100 m x 100 m. The vertical thickness of the cell was the nominal average drill sample interval i.e. 1.5 m. • No assumptions were made behind modelling of selected mining units. • No assumptions made about correlation behind variables. • Validation was undertaken by swathe plots, population distribution analysis and visual inspection. • The geological zones were used to control the resource estimates.
<p><i>Moisture</i></p>	<ul style="list-style-type: none"> • <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i> 	<ul style="list-style-type: none"> • The resource estimate is on a dry tonnes basis.

Criteria	JORC Code explanation	Commentary
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> The economic cut-off of the operating Kwale Mine is between 1 and 1.5% HM, and historically the Kwale Operation's Mineral Resources Estimate reporting focuses on a 1% HM cut-off grade.
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Prior to commencing any feasibility studies that may find to the contrary, it is assumed that the hydraulic mining method used at the neighbouring Kwale mine would be used. High slime content and low levels, generally, of induration provide support for this mining method.
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The existing concentrator and separation plant at the Kwale Operation are assumed capable of processing the material with recoveries expected to be aligned with present production.
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Tailing disposal, in the absence of any feasibility studies, would probably initially use the existing TSF for slime tails storage (it has spare tails storage capacity due to efficient processing practices) and the existing pit void for sand tails. Once space is available, tailings would probably be co-disposed into the Kwale North pit void.
<i>Bulk density</i>	<ul style="list-style-type: none"> Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or 	<ul style="list-style-type: none"> A fixed dry bulk density of 1.7 (t/m³) was assumed for the resource estimation, based on operational experience of mining the Kwale Central Dune Deposit.

Criteria	JORC Code explanation	Commentary
	<p><i>dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></p> <ul style="list-style-type: none"> <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> <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i> 	
Classification	<ul style="list-style-type: none"> <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> <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> <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i> 	<ul style="list-style-type: none"> The Mineral Resource classification for the Kwale North deposit was based on the following criteria: drill hole spacing and the distribution and influence of bulk samples. The classification of the Indicated, and Inferred Mineral Resources was supported by the uniform grid spacing of drilling, uncomplicated and consistent geology, relatively good continuity of mineralisation particularly along strike (and supported by the domain controlled variography), and confidence in the down hole drilling data and supporting criteria as noted above. As Competent Person, IHC Robbins Geological Services Manager Greg Jones considers that the result appropriately reflects a reasonable view of the deposit categorisation.
Audits or reviews	<ul style="list-style-type: none"> <i>The results of any audits or reviews of Mineral Resource estimates.</i> 	<ul style="list-style-type: none"> Peer review was undertaken by Scott Carruthers of Base Resources with focus on the process and output of the geology interpretation, database integrity, whether wireframes reflect the geological interpretation, and model vs. drillhole grades. Mr. Carruthers was satisfied with these facets.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <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> <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</i> 	<ul style="list-style-type: none"> Variography was undertaken to determine the drill hole support of the selected JORC classification. Validation of the model vs drill hole grades by direct observation and comparison of the results on screen. The resource statement is a global estimate for the entire known extent of the Kwale North deposit within the tenement area.

Criteria	JORC Code explanation	Commentary
	<p><i>and the procedures used.</i></p> <ul style="list-style-type: none">• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	

Glossary

Arc 1960	The commonly used Geodetic System in East Africa, and is the reference frame used by the Global Positioning System (GPS).
Competent Person	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'. 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.
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 Resources	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.
Minmod	A company developed mineralogy modelling technique, it comprises an XRF analysis of the magnetic and non-magnetic fractions of each composite or sample, the results from which are then back-calculated to determine in-ground mineralogy.
NQ	Refers to the diameter of drill rods. It is 69.9mm. Drill bits extend beyond this resulting in a larger diameter hole. NQ is the most common size rod used in mineral sand drilling.
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.
QQ plot	Quantile quantile plot. Used to graphically compare data distributions.
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.

RTK	Real time kinematic DGPS uses a base station GPS at a known point that communicates via radio with a roving unit so that the random position error introduced by the satellite owners may be corrected in real time.
SEM, SEM EDX	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. EDX is short for energy dispersive X-ray and is commonly used in conjunction with SEM.
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.
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.