

ASX and Media Release 31 July 2024

#### **2024 Mineral Resources and Ore Reserves Statement**

#### **Key Points**

- Kwale North Dune Mineral Resources and Ore Reserves estimates reduced due to mining depletion and related sterilisation during the year to 30 June 2024, and removal of Mineral Resources no longer considered to have prospects of eventual economic extraction, resulting in:
  - o Mineral Resources reducing by 157Mt and 2.33Mt of heavy mineral.
  - o Ore Reserves reducing by 6.6Mt and 0.15Mt of heavy mineral.
- Bumamani Mineral Resources and Ore Reserves estimates reduced on an overall basis due to mining depletion and related sterilisation during the year to 30 June 2024, only being partially offset by increases from extensional drilling following additional land access, with:
  - o Mineral Resources reducing by 3.7Mt and 0.08Mt of heavy mineral.
  - o Ore Reserves reducing by 1.9Mt and 0.05Mt of heavy mineral.
- Kwale South Dune Mineral Resources and Ore Reserves estimates were fully depleted and/or sterilised following completion of mining in January 2024.
- The Toliara Project's Ranobe Mineral Resources and Ore Reserves estimates are both unchanged.

#### Summary

The 2024 Mineral Resources and Ore Reserves estimates for **Base Resources Limited** (ASX / AIM: BSE) are summarised in the table below, together with the 2023 Mineral Resources and Ore Reserves estimates for comparison. The Mineral Resources and Ore Reserves estimates in this statement are reported in accordance with the JORC Code.

Table 1: 2024 Mineral Resources and Ore Reserves estimates compared with the 2023 estimates.

		<b>2024</b> <sup>1</sup> as at 30 June 2024								<b>2023</b> ¹ as at 30 June 2023								
							HM Ass	emblage	9						ı	HM Ass	emblage	
	Tonnes	НМ	НМ	SL	OS	ILM	RUT	LEUC	ZIR	Tonnes	НМ	НМ	SL	OS	ILM	RUT	LEUC	ZIR
	(Mt)	(Mt)	(%)	(%	(%	(%)	(%)	(%)	(%)	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	Mineral Resou (Measured + Indicated + Inferred, inc									Reserves)								
Kwale <sup>2</sup>	13.5	0.22	1.6	36	1.1	51	15³	-	5.8	184	2.8	1.5	36	1.9	45	13³	-	5.8
Ranobe <sup>4</sup>	2,580	111	4.3	7.7	0.4	71	1.0	1.0	5.9	2,580	111	4.3	7.7	0.4	71	1.0	1.0	5.9
									Reserve + Probab									
Kwale	7.6	0.14	1.8	33	1.3	52	16	-	6.2	21	0.5	2.2	32	2.1	52	14	-	6.1
Ranobe	904	55	6.1	3.8	0.1	73	1.0	1.0	5.9	904	55	6.1	3.8	0.1	73	1.0	1.0	5.9

#### Notes:

- 1. Table may be subject to slight arithmetic differences due to rounding.
- $2. \quad \textit{Kwale incorporates the Kwale South Dune, Kwale North Dune and Bumamani deposits}.$
- 3. Kwale rutile reported is rutile + leucoxene minerals.
- 4. The Ranobe Mineral Resources estimate also specifies the monazite and garnet within the mineral assemblage as a percentage of HM, refer to the standalone table for the Ranobe Mineral Resources estimate below for these percentages.



A glossary of key terms used in this announcement is contained on pages 53 to 55.

#### **Kwale Deposits**

The Company's 100% owned Kwale Mineral Sands Operations (**Kwale Operations**) in Kenya is located in Kwale County and approximately 50 kilometres south of Mombasa and 10 kilometres inland from the Kenyan coast. The Company's wholly-owned subsidiary, Base Titanium, holds Special Mining Lease No. 23 (**SML 23**), which contains the Kwale South Dune, the Kwale North Dune and the Bumamani deposits.

#### Mineral Resources

The 2024 Kwale Mineral Resources, as at 30 June 2024, are estimated to be 13.5Mt at an average HM grade of 1.6% for 0.22Mt of contained HM, at a 1% HM cut-off grade.

Table 2: 2024 Kwale Mineral Resources estimate compared with the 2023 estimate at a 1% HM cut-off grade.

			as	<b>202</b> at 30 Ju	2 <b>4</b> ne 2024						as a	<b>202</b> 3 at 30 Jur	<b>3</b> ne 2023			
						НМ	Assemb	lage						НМ	Assemb	lage
Category	Tonnes	НМ	НМ	SL	OS	ILM	RUT	ZIR	Tonnes	НМ	НМ	SL	OS	ILM	RUT	ZIR
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)
					K	wale Sou	ıth Dune	Mineral	Resource	s						
Measured	-	-	-	-	-	1	-	-	4.9	0.11	2.2	26	2.3	59	14	6.1
Indicated	-	-	-	-	-	-	-	-	4.0	0.09	2.2	27	6.1	57	14	6.0
Total	-	-	•	-	-	-	ı	-	8.9	0.19	2.2	26	4.0	58	14	6.1
					K	wale No	rth Dune	Mineral	Resource	s						
Measured	8.1	0.13	1.7	38	0.6	52	15	5.5	104	1.60	1.5	37	1.5	40	13	5.4
Indicated	3.3	0.05	1.6	39	1.0	50	14	5.2	62	0.89	1.4	37	2.1	49	14	6.1
Inferred	-	-	-	-	-	-	-	-	2	0.03	1.2	37	2.9	49	15	6.5
Total	11.4	0.19	1.6	38	0.7	51	15	5.4	169	2.51	1.5	37	1.8	43	13	5.7
						Buma	mani Mi	neral Res	ources							
Measured	1.7	0.03	1.8	20	2.2	51	17	8.2	3.0	0.066	2.2	19	2.2	48	15	7.5
Indicated	0.5	0.01	1.6	22	7.2	52	16	7.4	2.6	0.045	1.7	23	5.2	47	16	7.7
Inferred	-	-	-	-	-	-	-	-	0.3	0.004	1.4	27	6.1	41	14	7.8
Total	2.2	0.04	1.7	20	3.4	51	17	8.0	5.9	0.115	1.9	21	3.8	47	15	7.6
						Total k	(wale Mi	neral Re	sources							
Measured	9.8	0.16	1.7	35	0.9	52	15	5.9	112	1.77	1.6	36	1.6	41	13	5.5
Indicated	3.8	0.06	1.6	37	1.7	50	14	5.5	69	1.02	1.5	36	2.5	50	14	6.2
Inferred	-	-	-	-	-	-	-	-	3	0.03	1.2	36	3.3	48	15	6.7
Total	13.5	0.22	1.6	36	1.1	51	15	5.8	184	2.82	1.5	36	1.9	45	13	5.8

Table may be subject to slight arithmetic differences due to rounding. Mineral Resources are reported inclusive of Ore Reserves.

The 2024 Kwale Mineral Resources estimate represents a decrease of approximately 170Mt (or 93%) in material tonnes containing 2.6Mt of HM compared to the 2023 Kwale Mineral Resources estimate. This was primarily due to an update of the Kwale North Dune Mineral Resource to remove material no longer considered to have prospects of eventual economic extraction, together with mining depletion and associated sterilisation of the Kwale South Dune, Kwale North Dune and Bumamani Mineral Resources.

The Kwale South Dune Mineral Resources were wholly depleted and/or sterilised following the completion of mining in January 2024, a decrease of 8.9Mt containing 0.19Mt of HM compared to the 2023 Kwale South Dune Mineral Resources estimate.



The 2024 Kwale North Dune Mineral Resources are estimated to be 11.4Mt at an average HM grade of 1.6% for 0.19Mt of contained HM as at 30 June 2024, a decrease of 157Mt containing 2.33Mt of HM compared to the 2023 Kwale North Dune Mineral Resources estimate.

The 2024 Bumamani Mineral Resources are estimated to be 2.2Mt at an average HM grade of 1.7% for 0.04Mt of contained HM as at 30 June 2024, a decrease of 3.7Mt containing 0.08Mt of HM compared to the 2023 Bumamani Mineral Resources estimate.

An infill drill program on the Kwale North Dune and Bumamani deposits was completed during 2023 for improved resource definition and classification to support detailed mine planning. As part of this drill program, access was obtained to land on the southern boundary of the Bumamani deposit, allowing drilling to further extend the deposit 250 metres along strike. Both the Kwale North Dune and Bumamani Mineral Resources estimates have been updated for the additional drilling and revised mineral assemblage values following refinement of the Kwale MinMod algorithm. The corresponding Kwale North Dune and Bumamani Ore Reserves estimates have also been reported using the updated resource models and revised pit designs.

#### **Ore Reserves**

Included within the Kwale Mineral Resources are the Kwale Ore Reserves, estimated to be 7.6Mt at an average HM grade of 1.8% for 0.14Mt of contained HM as at 30 June 2024.

**Table 3:** 2024 Kwale Ore Reserves estimate compared with the 2023 estimate.

		2024							2023							
	as at 30 June 2024							as at 30 June 2023								
						НМ	Assembl	age						HM .	Assembl	age
Category	Tonnes	НМ	НМ	SL	OS	ILM	RUT	ZIR	Tonnes	НМ	НМ	SL	OS	ILM	RUT	ZIR
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)
						(wale So	uth Dun	e Ore Re	serves							
Proved	-	-	-	-	-	-	-	-	3.6	0.09	2.4	27	2.2	59	14	6.1
Probable	-	-	-	-	-	-	-	-	1.6	0.05	3.0	26	7.4	57	13	6.1
Total	-	-	-	-	-	-	-	-	5.2	0.13	2.6	27	3.8	58	14	6.1
	Kwale North Dune Ore F							e Ore Re	serves							
Proved	4.6	0.08	1.9	38	0.5	53	15	5.6	7.3	0.15	2.1	39	0.7	48	13	5.5
Probable	1.0	0.02	1.8	39	1.1	49	14	5.1	4.9	0.10	2.1	38	1.6	52	13	5.9
Total	5.6	0.10	1.8	38	0.6	53	15	5.5	12.1	0.25	2.1	39	1.1	50	13	5.6
						Buma	amani Or	e Reser	/es							
Proved	1.6	0.03	1.7	20	2.1	51	17	8.2	2.6	0.06	2.3	19	2.2	48	16	7.5
Probable	0.4	0.01	1.7	22	7.5	52	16	7.3	1.3	0.03	2.2	19	5.3	48	16	7.6
Total	2.1	0.04	1.7	20	3.3	51	17	8.0	3.9	0.09	2.3	19	3.2	48	16	7.5
						Total	Kwale O	re Reser	ves							
Proved	6.2	0.11	1.8	33	0.9	53	16	6.3	13.5	0.30	2.2	32	1.4	51	14	6.1
Probable	1.4	0.03	1.8	34	3.0	50	15	5.7	7.8	0.18	2.3	33	3.4	53	14	6.2
Total	7.6	0.14	1.8	33	1.3	52	16	6.2	21.3	0.48	2.2	32	2.1	52	14	6.1

Table may be subject to slight arithmetic differences due to rounding.

The 2024 Kwale Ore Reserves estimate represents a decrease of approximately 13.7Mt (or 64%) in ore tonnes containing 0.34Mt (or 71%) of HM compared to the 2023 Kwale Ore Reserves estimate.

The Kwale South Dune Ore Reserves were wholly depleted and/or sterilised following the completion of mining in January 2024, a decrease of 5.2Mt containing 0.13Mt of HM.



The Kwale North Dune Ore Reserves are estimated to be 5.6Mt at an average HM grade of 1.8% for 0.10Mt of contained HM as at 30 June 2024, a decrease of 6.6Mt containing 0.15Mt of HM due to mining depletion, sterilisation, and revised pit designs following the 2023 infill drill program referred to above.

The Bumamani Ore Reserves are estimated to be 2.1Mt at an average HM grade of 1.7% for 0.04Mt of contained HM as at 30 June 2024, a decrease of 1.9Mt containing 0.05Mt of HM due to mining depletion and sterilisation, partially offset by revised pit designs following the 2023 infill and extensional drill program referred to above.

#### Ranobe Deposit

The Company's 100% owned Toliara Project is based on the Ranobe deposit, located approximately 45 kilometres north of the town of Toliara and 15km inland from the coast in south-west Madagascar. The Ranobe deposit sits within *Permis d'Exploitation* 37242, which is a mining lease under Malagasy law.

On-ground activities at the Toliara Project have been suspended since the Government of Madagascar-imposed suspension, which was put in place in November 2019, pending agreement on the fiscal terms applying to the project.

Following engagement with the Government in early 2024, and as confirmed during recent discussions, Base Resources considers inprinciple agreement has been reached on the key fiscal terms that will apply to the whole Toliara Project (i.e. both mineral sands and monazite), although these remain subject to entry of binding documentation and therefore the terms remain subject to change and timing is ultimately uncertain. These key terms include applicable royalties and Base Resources' required contributions to national and regional development projects, on achieving set milestones (such as achieving the requisite legal and fiscal stability for the project) pre and post a final investment decision.

Engagement with the Government is now focused on agreeing the terms of a binding memorandum of understanding (MoU) that records the terms agreed in-principle, a draft of which is well advanced. Lifting of the Toliara Project's on-ground suspension is expected to occur upon entry into the MoU, which Base Resources believes to be achievable in the near term. Discussions are also underway on the terms of the definitive investment agreement to be entered with the Government that will replace the MoU and will establish the necessary legal foundation for development of the Toliara Project. The intent is for the investment agreement to be approved and ratified by the Malagasy Parliament and have the force of law, following which the Company would seek eligibility certification under the Large Mining Investment Law (LGIM) in order for (among other things) the agreed fiscal regime and then current Malagasy law, as supplemented and clarified by the investment agreement, to be stabilised for the duration of the certification.

Once fiscal terms have been recorded in binding arrangements and the suspension has been lifted, Base Resources believes it would take approximately 14 months to complete the necessary work to reach a final investment decision, including:

- completion of the necessary land acquisitions;
- finalisation of funding arrangements;
- ratification of the investment agreement and LGIM eligibility certification; and
- entry into offtake agreements and major construction contracts.

In view of the progress made with the Government of Madagascar on agreeing fiscal terms and the terms of the MoU and investment agreement to replace the MoU (both as described above), the Company considers there are reasonable grounds for the project progressing in the near term, allowing the continued public reporting of the Ranobe Ore Reserves estimates. Furthermore (and by extension), the Company also considers that the continued public reporting of the Ranobe Mineral Resources estimates is permissible as resources continue to have reasonable prospects for eventual economic extraction. The basis for this includes the progress made with the Government of Madagascar discussions referred to above, as well as the large scale and high grade nature of the deposit, the completed feasibility studies with test work indicating that typical mineral sands processing recoveries are achievable and the forecast strong economic outcomes.



#### **Mineral Resources**

The 2024 Ranobe Mineral Resources are unchanged from the 2023 estimate of 2,580Mt at an average HM grade of 4.3% for 111Mt of contained HM, based on a 1.5% HM cut-off grade.

**Table 4**: The 2024 Ranobe Mineral Resources estimate at a 1.5% HM cut-off grade.

							Min	eral Assemb	lage as % of	НМ	
Category	Tonnes	НМ	МН	SL	OS	ILM	RUT	LEUC	ZIR	MON	GARN
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
					<b>nobe Miner</b> as at 30 June		S				
Measured	597	36	6.1	4.3	0.2	74	1.0	1.0	5.9	1.9	2.2
Indicated	793	35	4.4	7.1	0.5	71	1.0	1.0	5.9	2.0	3.6
Inferred	1,190	39	3.3	9.7	0.6	69	1.0	1.0	5.8	2.0	4.3
Total	2,580	111	4.3	7.7	0.4	71	1.0	1.0	5.9	2.0	3.4

Table may be subject to slight arithmetic differences due to rounding. Mineral Resources are reported inclusive of Ore Reserves.

#### Ore Reserves

Included within the Ranobe Mineral Resources are the Ranobe Ore Reserves, estimated to be 904Mt at an average HM grade of 6.1% for 55Mt of contained HM as at 30 June 2024, which is unchanged from the 2023 estimate. No monazite or garnet is incorporated in the Ranobe Ore Reserves estimate because the existing mining tenure, *Permis D'Exploitation* 37242, does not currently provide the right to exploit these minerals.

Table 5: The 2024 Ranobe Ore Reserves estimate.

						N	1ineral Assemb	lage as % of HN	M
Category	Tonnes	НМ	НМ	SL	OS	ILM	RUT	LEUC <b>^</b>	ZIR
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
			2	<b>.024 Ranobe O</b> (as at 30 Jun					
Proved	433	30	6.9	3.8	0.1	75	1.0	1.0	6.0
Probable	472	25	5.3	3.9	0.2	72	1.0	1.0	5.8
Total	904	55	6.1	3.8	0.1	73	1.0	1.0	5.9

Table may be subject to slight arithmetic differences due to rounding.

#### Further information

The Kwale North Dune and Bumamani Mineral Resources estimates reported in this statement have materially changed since they were last reported in accordance with ASX Listing Rule 5.8 (and the information material to understanding the estimates in relation to the applicable criteria in Table 1 of the JORC Code was publicly disclosed). Consequently, further information about both estimates is set out below and includes the summary information prescribed by ASX Listing Rule 5.8 and the explanatory information provided for the purposes of Sections 1 to 3 of Table 1 of the JORC Code, included as Appendix 1 (Kwale North Dune) and Appendix 2 (Bumamani) to this announcement. To avoid doubt, the Company does not consider the reduced Kwale North Dune and Bumamani Ore Reserve estimates constitute material changes for the purposes of ASX Listing Rule 5.9.

For further information about the other estimates in this statement, including information that is material to understanding the estimates in relation to the applicable criteria in Table 1 of the JORC Code, refer to the announcements in the table below<sup>1</sup>.

<sup>&</sup>lt;sup>1</sup> ASX announcements are available at https://baseresources.com.au/investors/announcements/.



<sup>^</sup>Recovered Leucoxene will be split between Rutile and Chloride Ilmenite products depending on product specification requirements.

Deposit(s)		Announcement Title	Estimate Date	Release Date
Kwale North Dune	Ore Reserves	Maiden Kwale North Dune and	20 June 2022	20 June 2022
and Bumamani		Bumamani Ore Reserves estimates		
Ranobe	Mineral Resources &	Updated Ranobe Mineral Resources and	27 September 2021	27 September 2021
(Toliara Project)	Ore Reserves	Ore Reserves estimates		
2023 Comparatives	Mineral Resources &	2023 Mineral Resources and Ore	30 June 2023	12 August 2022
	Ore Reserves	Reserves Statement		

#### Mineral Resources and Ore Reserves Governance

A summary of the governance, internal controls and estimation process applicable to Base Resources' Mineral Resources and Ore Reserves estimates is as follows:

#### **Mineral Resources**

- Review and validation of drilling and sampling methodology and data spacing, geological logging, data collection and storage, sampling and analytical quality control.
- Geological interpretation review of known and interpreted structure, lithology and weathering controls.
- Estimation methodology relevant to mineralisation style and proposed mining methodology.
- Comparison of estimation results with previous mineral resources models, and with results using alternate modelling methodologies.
- Visual validation of block model against raw composite data.
- Assessment of reasonable prospects for eventual economic extraction.
- Use of external Competent Persons to assist in preparation of initial Mineral Resources estimates or complete an independent review of initial Mineral Resources estimates.

#### **Ore Reserves**

- Review of potential mining methodology to suit deposit and mineralisation characteristics.
- Review of potential Modifying Factors, including cost assumptions and commodity prices to be utilised in mining evaluation.
- Ore Reserves estimate updates initiated following material changes in the relevant Modifying Factor assumptions.
- Optimisation using appropriate software packages for open pit evaluation.
- Design based on optimisation results.
- Use of external Competent Persons to assist in preparation of initial Ore Reserves estimates.

## Further information relevant to both the 2024 Kwale North Dune and Bumamani Mineral Resources estimates

Kwale Operations is located on SML 23, which includes the core of the Kwale North and Bumamani deposits.

The Kwale Project initially comprised three broad areas that contained concentrations of heavy minerals. They were the Kwale Central Dune, Kwale South Dune (both now fully depleted by mining and currently undergoing rehabilitation) and the Kwale North Dune deposits (Figure 1), with the Bumamani deposit only being discovered in 2017 after mining operations had commenced.

The project was initially owned by Tiomin Resources Inc. (**Tiomin**) which conducted drilling in 1997 and then by Base Titanium (a wholly-owned subsidiary of Base Resources) which purchased the project late in 2010 and commenced confirmatory and extensional drilling of the Central, South and North Dune deposits. The Kwale North Dune deposit was initially excluded from the project on the basis of heavy mineral grade and the then prevailing economic conditions. However, in 2018, with improved economic conditions, the potential of the Kwale North Dune was re-evaluated using refined resource definition methodology and insights gained from five years of mining the Kwale Central Dune. Following this, the 2019 Kwale North Dune Mineral Resources estimate was completed.



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 Margarini 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 fluviatile sediments derived from the Duruma Sandstone Series.

The Kwale deposits are an aeolian subset of the Margarini sands and are generally poorly stratified and contain a fraction of clay, which for the Kwale North Dune and Bumamani deposits is approximately 35% and 20%, respectively. Valuable heavy mineral (VHM), mainly ilmenite, rutile, and zircon are locally concentrated and are abundant in some places, giving rise to the deposits.

#### Further information specific to the 2024 Kwale North Dune Mineral Resources estimate

The geological interpretations for the Kwale North Dune deposit considered the data in the drill logs, assay results, microscope logging of HM sinks, detailed mineralogy and knowledge gained from mining the Kwale Central Dune and Kwale South Dune deposits. Four geological domains have been identified at the Kwale North Dune deposit. These were used and honoured during the geological modelling (Figure 2).

The uppermost zone, referred to as Ore Zone 1, is a dark red 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 approximately 75%.

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 pit exposures, and in HM sink logs, exhibiting elevated iron oxides. The Ore Zone 4 material is higher in slimes with difficult washability and the grain sorting is generally poor. It is slightly lower in VHM content (~70%), 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 by a lateritic paleo-surface and is also hosted in a fluviatile clay-rich, poorly sorted formation. It is distinguished mineralogically by an increased amount of almandine garnet that reports to the magnetic fraction, and other trash HM significantly increasing magnesium, manganese, aluminium, and silicon in the oxide chemistry. As a result of this, Ore Zone 5 has a notably lower average VHM content (~45%). Ore Zone 5 was previously reported as part of the Kwale North Dune Mineral Resources estimate, but the material has proven to be problematic for efficient hydraulic mining (due to a combination of high clay content and compaction) and mineral processing (poor quality mineral chemistry and variable mineralogy) and is now excluded.

The Basement Zone lies below Ore Zone 5 and is typically hosted in weathered variants of the Mesozoic (Permo-Triassic) Duruma Sandstones. It does contain mineralisation, however its VHM content is approximately 10% and is predominantly titano-haematite (<40% TiO<sub>2</sub>), with zircon enrichment in the non-magnetic fraction. The Basement Zone is not considered to hold potential for eventual economic extraction due to its low VHM content, depth of burial, high slime content (>40%), variability of mineralisation, and presence of induration.

For all ore zones, 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 of the Kwale North Dune deposit was completed using the reverse circulation, air core (**RCAC**) method and conducted in four campaigns: November 2010, December 2012 to April 2013, June 2018 to May 2019, and August 2023 to September 2023 (Figure 3). A total of 590 holes were drilled for 22,860 metres and generated 7,788 sample assays for resource estimation (excludes basement samples) over the current area of tenure. Tiomin had drilled 37 holes in 1997 but due to poor twinned hole assay repeatability, no Tiomin drilling information was used by Base Resources for the resource estimates.



The predominantly three metre sample intervals in the 2010 and 2012/13 drilling were replaced by sampling at 1.5 metre intervals for the 2018/19 and 2023 drill programs to provide greater control on geological boundaries. Sample sizes averaged close to 3kg at this sample interval when collecting 25% of the rotary splitter cycle.

Sub-samples of the drill samples were dried, weighed, and screened for material less than  $45\mu m$  (slimes) and +1 mm (oversize). Approximately 100 grams of the screened sample was subjected to a HM float/sink technique using the heavy liquids, lithium polytungstate and sodium polytungstate with a specific gravity of  $2.85 gcm^{-3}$ . The resulting HM concentrate was dried and weighed as were the other separated constituent size fractions (the minus  $45\mu m$  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 were combined and, with the non-mag fraction, were subjected to XRF analysis using a Bruker, S8 Tiger XRF.

Data from the mag and non-mag XRF analyses were then processed through an algorithm (MinMod) that runs multiple iterations in assigning key chemical species to derive a calculated mineralogy determination.

Drill hole collar and geology data was captured by industry-specific, field logging software with on-board validation. Field and assay data were 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 slimes (**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 2018/19 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 prepared by Base Resources based on a LIDAR survey.

Construction of the geological grade model was based on coding model cells inside solid wireframe surfaces, comprising topography, and geology (Ore Zones 1, 4, and 5) (Figure 2). Model cell dimensions of 50m x 50m x 1.5m in the XYZ orientations were utilised.

Interpolation was undertaken using various sized search ellipses to populate the model with primary grade fields (HM, SL, OS, ILM, RUT and ZIR), and index fields (hardness, induration percent, mineralogy). Inverse distance weighting to a power of three was used for primary assay fields whilst nearest neighbour was used to interpolate index fields. Figure 4 shows an oblique view of the model coloured by HM grades.

A fixed bulk density of 1.7 (t/m³) was applied to the 2024 Kwale North Dune Mineral Resources model. This bulk density was selected based on operational experience in the Kwale Central Dune, Kwale South Dune and Kwale North Dune deposits and because no specific deposit bulk density sampling was undertaken.

The Kwale North Dune deposit is amenable to being mined and processed in a similar way as the Kwale South Dune and 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. Unlike Ore Zone 1, Ore Zone 4 requires mechanical mining assistance to break up compacted clays for subsequent hydraulic mining. Fine and coarse tailings are partially co-disposed together.

The mining, metallurgical and operating cost modifying factors for the Kwale North Dune deposit have proven to be similar to those derived from mining the Kwale South Dune deposit, albeit marginally higher cost due to the mechanical mining assistance required to break up compacted clays in Ore Zone 4. It is considered that the Kwale North Dune deposit has reasonable prospects for eventual economic extraction when evaluated in the context of being part of an active mining operation and taking into consideration the form, characteristics and grade of the deposit.



The criteria used for classification was primarily the drill spacing (predominantly 100m x 100m) and sample interval (predominantly 1.5m), with consideration also given to the continuity of mineral assemblage information. The ore zones exhibit spatially different classifications mainly because of differing density of mineralogical information and variography. An infill drill program in 2023 has increased confidence levels in the 2024 Kwale North Dune Mineral Resources estimate. The 2024 Kwale North Dune Mineral Resources estimate used a 1% HM bottom cut because the economic cut-off grade established by financial modelling is near to this, and resource estimates for Kwale Operations have historically been reported at this cut-off grade. Figure 3 shows the distribution of the resource classifications for Ore Zones 1 and 4, respectively.

The significant decrease in material tonnes between the 2021 and 2024 Kwale North Dune Mineral Resources estimates is that the area available for short term mining is constrained to an operational envelope within SML 23 as the prospects for eventual economic extraction outside of the current operational envelope are considered poor given the low HM grade, high slimes content, lack of capacity for slimes tailings storage and high cost and extended timeframes for land acquisition.

#### Further information specific to the 2024 Bumamani Mineral Resources estimate

The geological interpretations for the Bumamani deposit considered the data in the drill logs, assay results, microscopic logging of HM sinks, detailed mineralogy and knowledge gained from mining the Kwale Central Dune and Kwale South Dune deposits. Four geological domains have been identified at the Bumamani deposit. These were used and honoured during the geological modelling (Figure 5).

The uppermost zone at the Bumamani deposit, referred to as Ore Zone 1, is a dark red 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. It averages 2.3% HM, 21% SL and 2% OS. The zone gets sandier to the east with reduced silt content. Mineralogically it is characterised by clean, glossy and rounded HM grains with an average VHM content of approximately 80% VHM.

Ore Zone 20 is a newly recognised unit in the 2024 Bumamani Mineral Resources estimate that occurs along the eastern edge of the Bumamani deposit where there is a distinct but shallow topographic dip that is interpreted as a paleoshoreline hosting pale coloured, well sorted, upwards fining, medium grained sands. The contact with Ore Zone 1 appears transitional and likely reflects some reworking, with no Ore Zone 1 present east of the shallow scarp feature. Ore Zone 20 averages 1.8% HM, 13% SL and 2% OS and has similar mineralogy to Ore Zone 1 with slight enrichment of rutile and zircon.

Ore Zone 4 lies below Ore Zone 1 and Ore Zone 20, with the contact represented by a lateritic paleo-surface which may imply a timegap in depositional history. Ore Zone 4 is a fluviatile unit represented locally with poorly sorted sandy clays and gritty sands. The Ore Zone 4 domain averages 1.7% HM, 21% SL and 8% OS. Ore Zone 4 is mineralogically similar to Ore Zone 1 with minor depletion of rutile and zircon.

The Basement Zone at the Bumamani deposit lies beneath Ore Zone 4 and comprises compacted clays, sandy-clays, limestone and fluvial sands. The grain sizes range from silt to pebbles and boulders, with generally poor sorting and is characterised by trace concentrations of HM typically with low VHM content.

For all ore zones, a strong correlation between the field logs, HM sink logs and XRF oxide chemistry and QEMSCAN mineralogy gives confidence to these interpretations.

Drilling of the Bumamani deposit was primarily completed using the RCAC method and conducted in three campaigns in 2017, 2018 and 2023 all employing 76mm diameter, 3m long NQ drill rods. A small mechanical auger drilling program was completed in early 2024 for resource edge definition purposes. A total of 243 holes were drilled for 3,912m at 1.5m sampling intervals and generated 3,265 assayed samples for resource estimation (excludes basement samples) (Figure 6). Holes were drilled 50m apart on lines 100m apart. Samples from 2017 and 2018 were split using a rig mounted rotary splitter which delivered an average of 2.7kg of dry sample per interval. Samples from 2023 were typically drilled wet with the total interval sample collected and subsequently air dried and riffle split off site.

Samples were dried, weighed, and screened for material less than  $45\mu m$  (slimes) and +1 mm (oversize). Approximately 100 grams of the screened sample was subjected to a HM float/sink technique using the heavy liquid sodium polytungstate with a specific gravity of  $2.85 \text{gcm}^{-3}$ . The resulting HM concentrate was dried and weighed as were the other separated constituent size fractions (the minus  $45\mu m$  material being calculated by difference).



Mineral assemblage analyses were conducted 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 mag, mid and non-mag fractions. The mid and mag fractions were combined and, with the non-mag fraction, were 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 multiple iterations in assigning key chemical species to derive a calculated mineralogy determination.

Drill hole collar and geology data was captured by industry-specific, field logging software with on-board validation. Field and assay data were 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 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 prepared by Base Resources based on a LIDAR survey.

Construction of the geological grade model was based on coding model cells inside solid wireframe surfaces, comprising topography, and geology (Figure 5). Model cell dimensions of 50m x 50m x 1.5m in the XYZ orientations were utilised.

Interpolation was undertaken using various sized search ellipses to populate the model with primary grade fields (HM, SL, OS and mineralogy), and index fields (hardness, induration percent). Inverse distance weighting to a power of three was used for primary assay fields whilst nearest neighbour was used to interpolate index fields. Figure 7 shows an oblique view of the model coloured by HM grade.

A fixed bulk density of 1.7 (t/m³) was applied to the 2024 Bumamani Mineral Resources model. This bulk density was selected based on operational experience in the Kwale Central Dune and Kwale South Dune deposits and because no deposit bulk density sampling was undertaken.

The Bumamani deposit, being similar in nature to the Kwale South Dune deposit recently mined, is amenable to being mined and processed in the same way 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. Modifications from previous methodology is that the fine and coarse tailings are partially co-disposed together.

The mining, metallurgical and operating cost modifying factors for the Bumamani deposit have proven to be similar to those derived from mining the Kwale South Dune deposit, and it is considered that the Bumamani deposit has reasonable prospects for eventual economic extraction when evaluated in the context of being part of an active mining operation and taking into consideration the form, characteristics and grade of the deposit.

The criteria used for classification was primarily the drill spacing (predominantly 100m x 50m at Bumamani) and sample interval (predominantly 1.5m), with consideration also given to the continuity of mineral assemblage information. The ore zones exhibit spatially different classifications mainly because of differing density of mineralogical information and variography. An infill drill program in 2023 for detailed mine planning has increased confidence levels in the 2024 Bumamani Mineral Resources estimate. The 2024 Bumamani Mineral Resources estimate used a 1% HM bottom cut because the economic cut-off grade established by financial modelling is near to this, and resource estimates for Kwale Operations have historically been reported at this cut-off grade. Figure 6 show the distribution of the resource classifications for Ore Zones 1, 20 and 4 at Bumamani.

The 2024 Bumamani Mineral Resources estimate is constrained to the area available for short term mining (an operational envelope around the current mining pit within SML 23 that considers buffer zones and infrastructure location).



#### Competent Persons' Statements

The information in this statement that relates to Mineral Resources and Ore Reserves is based on, and fairly represents, information and supporting documentation prepared by the Competent Persons named in the table below. Each Competent Person:

- is a Member or Fellow of The Australasian Institute of Mining and Metallurgy or the Australian Institute of Geoscientists;
- has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the JORC Code and as a qualified person for the purposes of the AIM Rules for Companies; and
- consents to the inclusion in this statement of the relevant estimate(s) listed alongside their name in table below in the form and context in which the estimate and the relevant information are presented.

Mr Ian Reudavey has also approved this statement as a whole.

Mr Ian Reudavey is employed by Base Resources and presently holds equity securities in Base Resources. Mr Reudavey is also entitled to participate in Base Resources' long-term incentive plan and receive equity securities under that plan. Mr Scott Carruthers and Mr Edwin Owino are both employed by Base Titanium, Base Resources' wholly owned subsidiary. Mr Carruthers and Mr Owino hold equity securities in Base Resources and are also entitled to participate in Base Resources' long-term incentive plan and receive equity securities under that plan. Details about that plan are included in Base Resources' 2023 Annual Report.

Name	Estimate(s)	Employer
Ian Reudavey	Kwale Mineral Resources and Ore Reserves (overall), Kwale North Dune Mineral Resources, Ranobe Mineral Resources, Kwale North Dune Ore Reserves and Bumamani Ore Reserves	Base Resources, full-time employee
Scott Carruthers	Ranobe Ore Reserves	Base Titanium, full-time employee
Edwin Owino	Bumamani Mineral Resources	Base Titanium, full-time employee

#### Forward looking statements

Certain statements in or in connection with this statement contain or comprise forward looking statements. Such statements may include, but are not limited to, statements with regard to future production and grades, capital cost, capacity, sales projections and financial performance and may be (but are not necessarily) identified by the use of phrases such as "will", "expect", "anticipate", "believe" and "envisage". 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 as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in product prices and exchange rates and business and operational risk management. Subject to any continuing obligations under applicable law or relevant stock exchange listing rules, Base Resources undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events.



Figure 1: Plan showing site layout of Kwale Operations Ore Reserves.

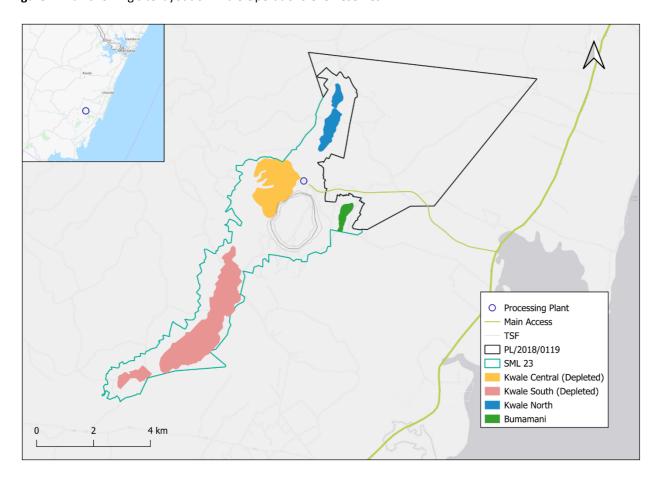
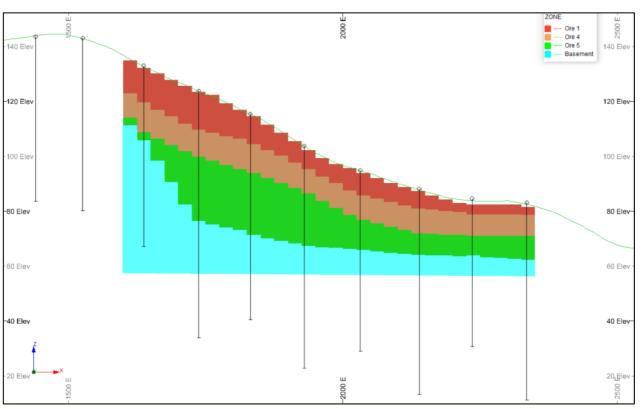


Figure 2: Schematic cross-section of the Kwale North Dune deposit showing relationships between geological domains.





**Figure 3:** Map showing Kwale North Dune deposit, location of drill holes, SML 23 tenure boundary, active mining and Mineral Resources category for Ore Zone 1 (top) and Ore Zone 4 (bottom)

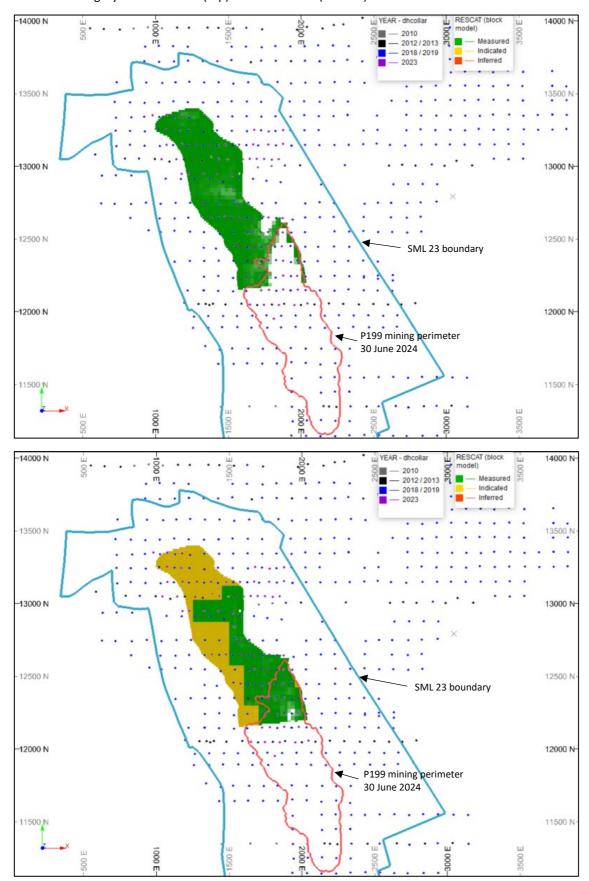




Figure 4: Oblique view of Kwale North Dune with model cells coloured by HM grade.

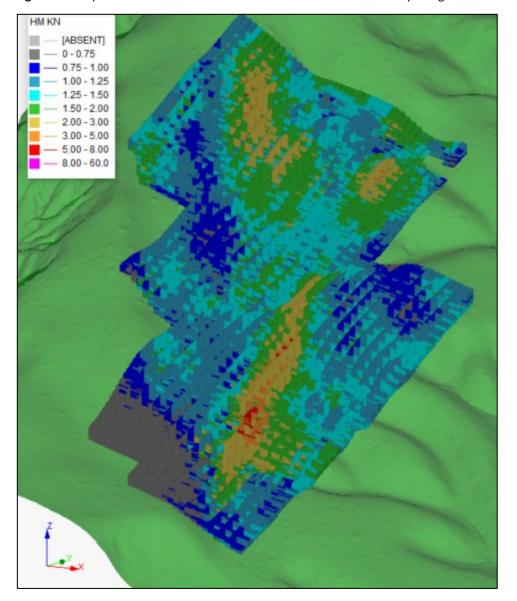
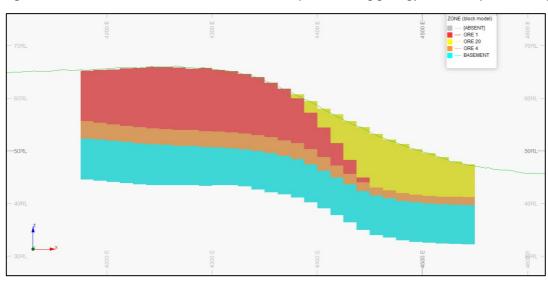


Figure 5: Schematic cross-section of the Bumamani deposit showing geology relationships between geological domains.





**Figure 6:** Map showing Bumamani deposit, location of drill holes, tenure boundaries and Mineral Resources category for Ore Zone 1 (LH), Ore Zone 20 (RH) and Ore Zone 4 (bottom).

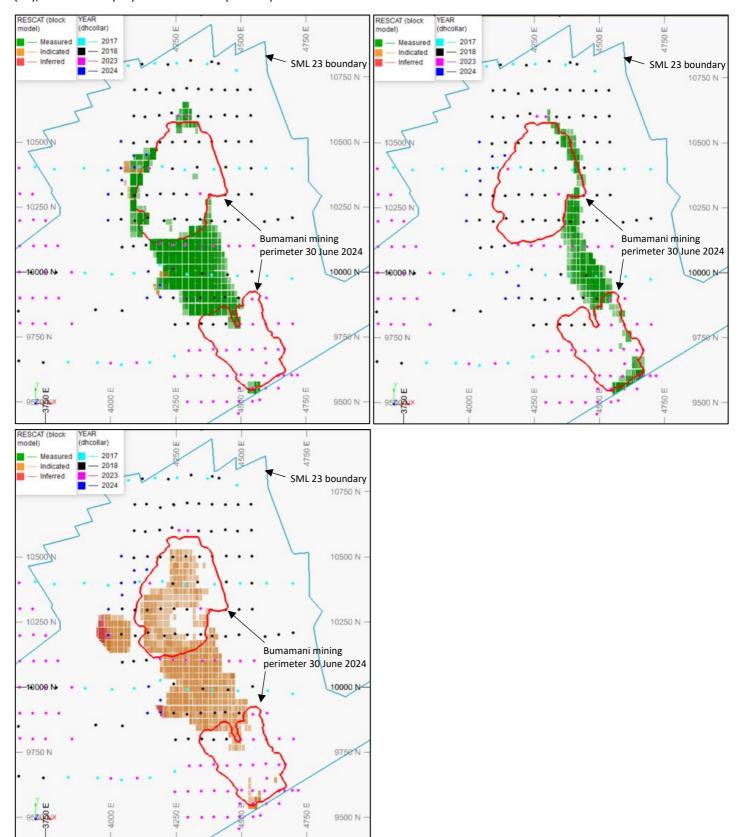
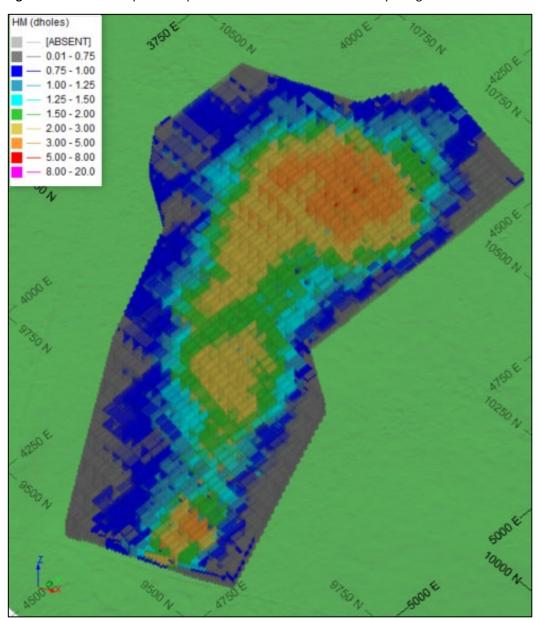




Figure 7: Bumamani deposit oblique view with model cells coloured by HM grade.





# Appendix 1 – Sections 1 to 3 of Table 1 of the JORC Code for 2024 Kwale North Dune Mineral Resources estimate Section 1 Sampling Techniques and Data

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

Criteria	Explanation	Comment
Sampling techniques	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.  Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.  Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (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.	RCAC drilling was used to collect downhole samples for the project.  For pre-2023 drilling a rig mounted rotary splitter was used to collect 25% of the downhole sample interval, equating to ~6kg for a 3m interval and 3kg for a 1.5m interval.  For 2023 drilling the entire 1.5m downhole sample interval (averaging ~10kg) was collected from which approximately 4kg was obtained via two-stage riffle splitting.  Of the 590 drill holes used, 73 of them (drilled between 2010 – mid 2012) utilised 3m sample intervals. The remaining 517 drill holes used 1.5m sample intervals from mid-2012 to 2023.  Duplicate samples were collected at the splitter for every 20th sample simultaneously with the original sample.  A representative grab sample from the sample bags was routinely washed and panned for lithological logging as well as a visual HM content estimate.  Samples were analysed by mineral sands industry standard techniques of screening, desliming and heavy liquid separation using LST (lithium heteropolytungstate) or SPT (sodium polytungstate) at SG of 2.85g/cm³. XRF analysis of HM magnetic fractions was used to define the mineral assemblage.
Drilling techniques	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).	73 holes in the 2010 and 2012/2013 campaigns were drilled with a RCAC Wallis Mantis 75 drill rig using NQ drill tooling of about 76mm in diameter and a 3-blade aircore vacuum face sampling bit.  480 holes in the 2018/19 campaign were drilled with a RCAC Wallis Mantis 80 drill rig, also using NQ drill tooling.  37 holes in the 2023 campaign were drilled with a RCAC EVH2100 drill rig, also using NQ drill tooling and a 3-blade aircore vacuum face sampling bit.



Criteria	Explanation	Comment
		For the 2010 and 2012/13 campaigns, the mast was oriented vertically (90°) by sight. For the 2018/19 and 2023 drilling campaign, the rig mast was orientated vertically by spirit level prior to drilling to adhere to best practice for geological boundary delineation.
		Drilling was recorded in geological logs as either dry or water injected, depending on ground conditions. Water injection was typically employed to assist with penetration through clays/rock and maintain sample quality and delivery.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.  Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Sample condition was 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.  Moist ground conditions with approximately 35% silt/clay meant that best sample quality was 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.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.  Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.  The total length and percentage of the relevant intersections logged.	Field logging was recorded for all down-hole intervals and was conducted by the site Geologist as drilling and sampling proceeded. Logging was based on a representative grab sample that was panned for heavy mineral estimation and host material observations.  Standardised logging codes are developed in the logging software (LogChief) to capture observations on lithology, colour, grainsize, induration and estimated mineralisation. Any relevant comments e.g., water table, gangue HM components and stratigraphic markers were included to aid in the subsequent geological modelling.
		A qualitative estimate of how representative a sample was of the drilled interval was recorded by Base Titanium field geologists whilst logging.  Heavy mineral sinks from assayed samples were logged routinely under a reflected-light, stereoscopic microscope. This work was carried out to capture information relating to VHM content, mineralogy, HM grainsize and quality.  The logging is of sufficient detail to support Mineral Resource estimation, mining studies and metallurgical studies.



Criteria	Explanation	Comment
Sub-sampling	If core, whether cut or sawn and whether quarter, half or all core taken.	For pre-2023 drilling, approximately 25% of the sample interval was rotary split at the
techniques and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether	sampling cyclone on the rig.
sumple preparation	sampled wet or dry.	For 2023 drilling the entire sample interval was collected mostly wet and bagged on site in
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	polyweave bags with internal plastic lining to avoid loss of slimes. Following air drying of excess moisture an approximate 25% split of the drilled sample interval was collected via riffle splitting.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	The split sample was processed in a dedicated sample preparation facility that follows conventional mineral sands processes. Samples were air-dried when weather permitted,
	Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.	otherwise oven dried during wet weather. After drying, the sample was rotary split to produce a ~200-400g sample for analytical work. The remaining drill sample material was combined and split down to ~2-3kgs for storage as a reference sample.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The analytical split sample was wet screened using 45 $\mu$ m and 1 mm sieves, to generate oversize and sand fractions, with slimes lost during screening and calculated by difference.
		Improvements to the sample preparation stage were made in 2017 to ensure industry best practice and to deliver a high degree of confidence in the results. These included the following:
		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 Base Titanium 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.



Criteria	Explanation	Comment
		The introduction of LIMS software allowed the capture of sample preparation data digitally at inception and synchronisation in real-time to the master Kwale Operations Laboratory SQL database.
		Slimes screen numbers are recorded to isolate batches should re-assay be required due to poor adherence to procedure or to identify screen damage.
		Duplicate samples were collected at every 20th sample and assessed regularly to ensure representivity was achieved.
		The drill rods and cyclone were routinely cleaned between holes using pressurised water to avoid inter-hole contamination.
		The sample preparation flow sheet follows conventional mineral sands processes but departed from standard mineral sand practices in one respect; the samples were generally not ovendried before de-sliming to prevent clay minerals baking onto the HM grains (because the HM fractions were to be used in further analysis). Instead, a separate sample was split and dried to determine moisture content, which was accounted for mathematically.
		QA/QC procedures involved the following:
		Prepared duplicate split samples were processed at every 20th sample.
		Prepared repeat samples were processed at every 7th sample.
		The manual hard-copy sample preparation records were maintained in files in the event of cross-references due to identified scribing errors in LIMS software.
		The sample size is considered appropriate for the grain size of the material because the grade of HM is measured in per cent.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	The assay process employed included a Sample Preparation stage, completed by Base Titanium staff, followed by a heavy liquid separation (using lithium polytungstate or sodium polytungstate) at SG = 2.85g/cm <sup>3</sup> ), completed at Kwale Operations' site laboratory.  The assaying and laboratory procedures used are considered to follow industry best practice and the technique is considered as a total analysis.



Criteria	Explanation	Comment					
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of	The dried, deslimed processed samples were submitted to the Kwale Operations laboratory with the following approach adopted.					
	accuracy (i.e. lack of bias) and precision have been established.	All samples were dried and weighed.					
		Sand fraction was processed by heavy liquid separation to generate a HM fraction.					
		HM fraction subject to magnetic separation on a roll magnet to generate a magnetic (Mag) fraction, mids (Mid) and non-magnetic (NonMag) fraction.					
		For 2023 drilling the HM fraction from individual samples was submitted for magnetic separation, whereas for pre-2023 drilling composite samples of HM from geological domains were submitted for magnetic separation.					
		XRF analysis of magnetic fractions was completed with the data used to model the mineralo using the Company's internally developed algorithms (MinModel).					
		The proprietary MinModel 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. MinModel has been validated by external quantitative analysis (QEMSCAN and EDX) and is considered sufficiently certified to support quoted resource confidence in this report.					
		Various quality control samples were submitted routinely to assure assay quality. A total of 835 duplicate field samples, 835 lab duplicate sample preparation samples, 294 field certified standard samples, and an unspecified number of internal laboratory standards, repeats and blanks have been assayed at Kwale Operations' site laboratory.  Acceptable levels of accuracy and precision have been established.					
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.	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.					
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	No external audit validation was completed for the HM analyses included in the Kwale North  Dune Mineral Resources estimate. This is not considered material given the adequate					



Criteria	Explanation	Comment
	Discuss any adjustment to assay data.	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 2018/19 program at a recommended rate of 5% of the total number of holes. These twins were used to quantify short-range variability in geological character and grade intersections, and were completed at appropriate spacing across the deposit. A total of 41 twin drill holes were completed during the 2018/19 Kwale North Dune drilling program, which represents about 5.7% of the total program. The twin hole paired data showed very good correlation, providing support to the integrity/quality of the resource data.
		Drill hole logging and site sample data were collected electronically in Maxwell LogChief software, installed on field Panasonic Tough pads that synchronise directly to the Datashed database. Assay data is captured electronically via LIMS software and merged with logging and sample data in the Datashed database.
		No adjustment to assay data was made.
Location of data points	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.  Specification of the grid system used.  Quality and adequacy of topographic control.	Proposed drill holes were sited on the ground using hand-held Garmin GPS units with an accuracy of ~ 3m. After drilling, the mine surveyors picked collar positions via a differential global positioning system DGPS RTK unit registered to local base stations. The accuracy of the RTK unit is stated at 0.02m in the X, Y and Z axes.  The survey Geodetic datum utilised was UTM Arc 1960, used in East Africa. Arc 1960 references the Clark 1880 (RGS) ellipsoid and the Greenwich prime meridian. All survey data used in the Kwale North Dune Mineral Resources estimate dataset has undergone a transformation to the local mine grid from the standard UTM Zone 37S (Arc 1960). The local Grid was rotated 42.5°, which aligns the average strike of the deposit with local North and is useful for both grade interpolation and mining reference during production.  All drill collars were projected to the local LIDAR survey, DTM, captured over the resource area in 2018/19 at a 222m grid spacing. This was performed prior to interpretation and model.
		in 2018/19 at a 2x2m grid spacing. This was performed prior to interpretation and model construction to eliminate any elevation disparities for the block model construction.



Criteria	Explanation	Comment
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The drill data spacing for the 2018/19 Kwale North Dune drilling established a nominal 100m X, 100m Y and 1.5m Z over the broader deposit. Variations from this spacing resulted from
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral	terrain/traverse difficulties and ground access.
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	The 2023 Kwale North Dune drilling targeted 50m X, 100m Y and 1.5m Z drill data spacing over areas identified for potential mining and is considered as grade control drilling.
	Whether sample compositing has been applied.	A downhole sample interval of 3m, with occasional 1.5m intervals at geological contacts, was employed in the 2012/2013 drilling campaign by Base Titanium.
		A 1.5m, down-hole block size was applied to model construction and 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. Pre-2023 drilling used compositing for mineralogical samples, with composites constrained to geological domains and typically limited to 6m downhole.
Orientation of data	Whether the orientation of sampling achieves unbiased sampling of	With the geological setting being a layered dunal/fluviatile sequence, the orientation of the
in relation to geological	possible structures and the extent to which this is known, considering the deposit type.	deposit mineralisation in general is sub-horizontal. All drill holes were orientated vertically to penetrate the sub-horizontal mineralisation orthogonally.
structure	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.	Hole centres were spaced nominally at 100m. This cross-profiles the dune so that variation can be determined. Down hole intervals were nominated as 1.5m. This provides adequate sampling resolution to capture the distribution and variability of geology units and
		mineralisation encountered vertically down hole.  The orientation of the drilling is considered appropriate for testing the horizontal and vertical extent of mineralisation without bias.
Sample security	The measures taken to ensure sample security.	Drill samples were transported daily from site to the secure sample preparation facility by company personnel.



Criteria	Explanation	Comment
		Sample residues from the preparation stage were transferred to pallets and stored in a locked shed beside the warehouse at Kwale Operations.  Residues from the Kwale Operations site laboratory were placed in labelled bags and stored in numbered boxes. Boxes were 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 Base Titanium staff: Exploration Superintendent and the Business Applications Administrator.  Data is backed up every 12 hours and stored in perpetuity on a secure, site backup server.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Historical audits and reviews of sampling techniques have been completed at Kwale Operations by industry consultants, and internal reviews by Base Resources' Exploration and Resource Manager were completed during the drilling campaigns.



## Section 2 Reporting of Exploration Results

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

Criteria	Explanation	Comment
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Kwale North Dune deposit extends across SML 23 and prospecting licence PL 2018/0119 which are both 100% held by Base Titanium, a wholly owned subsidiary of Base Resources. The resource being reported lies wholly within SML 23.  SML 23 was extended in June 2022 to cover the Kwale North Dune and Bumamani Ore Reserves and expires in June 2025. SML 23 is in good standing with the State Department for Mining and expires on 30 June 2025.  Local landowners are generally supportive of exploration and mining activities with established community relations and development programs in place.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	In 1996, Tiomin carried out reconnaissance surface and hand-auger sampling. Following the encouraging results obtained, mud-rotary drilling was undertaken in 1997 and 37 holes for a total of 1,824m was achieved for the Kwale North Dune, at 3m sampling intervals.  Prior to the acquisition of the Kwale Project by Base Resources, Tiomin prepared and published a North Dune Mineral Resources estimate of 116 Mt @ 2.1% HM using a 0.5% HM cut-off grade.
		The current resource model omits the Tiomin data. This followed a twin drilling analysis of the Tiomin Mud Rotary holes with Base Titanium RCAC to determine relevance of historical data to the Kwale South Dune Mineral Resources estimate in 2016. A total of 18 twin-hole pairs from a geographically dispersed area within the Kwale South Dune were included for analysis. A very poor correlation in HM values between the two methods (R2 = 0.1522) resulted from the study, and it is assumed that the poor correlation would also extend to the Kwale North Dune.
Geology	Deposit type, geological setting, and style of mineralisation.	The Kwale North Dune is part of the extensive Kwale Dune systems comprising of reddish, windblown Margarini sand formations that overlie a sequence of variably mineralised clayrich fluviatile units, which in turn overlie a Mesozoic sandstone base, known as the Mazeras



	formation. All formations are locally enriched in HM, with the VHM suite dominated by
	ilmenite with lesser rutile and zircon.
	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 Margarini sand dunes and the fluviatile formations.
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:  easting and northing of the drill hole collar	Drilling by year used for the resource model build was as follows:  2010  11 drill holes (depth: max 72m, min 24m, average 53m).  Total 582m drilled.
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.  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.	2012  24 drill holes (depth: max 75m, min 27m, average 60m).  Total 1,449m drilled.  2013  38 drill holes (depth: max 75m, min 27m, average 50m).  Total 1,911m drilled.  2018  473 drill holes (depth: max 117m, min 9m, average 38 m).  Total 18,045m drilled.  2019  7 drill holes (depth: max 21m, min 9m, average 16m).  Total 114m drilled.  2023  37 drill holes (depth: max 30m, min 9m, average 21m).  Total 759m drilled.
	exploration results including a tabulation of the following information for all Material drill holes:  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.  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



Criteria	Explanation	Comment
		All drill holes were drilled vertically.
		All collars were projected to the LIDAR topographical surface.
		A tabulation of material drill holes is not included as exploration results are not being reported.
Data aggregation	In reporting Exploration Results, weighting averaging techniques,	Exploration results are not being reported.
methods	maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No metal equivalent values were used.
	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.	No aggregation of short length samples used as samples were consistently 3m and 1.5m intervals.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	The deposit sequences are sub-horizontal, and the vertically inclined holes are a fair representation of true thickness.
mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	
intercept lengths	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').	
Diagrams	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.	See Figures 2 and 3 in the body of the announcement.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or	Exploration results are not being reported.



Criteria	Explanation	Comment
	widths should be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	The Kwale North Dune deposit contains higher levels of slimes than the deposits previously mined at Kwale Operations, and also a thicker sequence of Ore Zone 4. These characteristics can be mitigated by mining North Dune concurrently with other deposits to provide a blended feed to the processing plants.
Further work	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.	No further work is recommended or planned as the deposit is currently being mined and, with the planned cessation of mining activities at Kwale Operations in December 2024 following the depletion of existing Ore Reserves, there are no potential mine extensions that have not already been identified and assessed.



## 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	Explanation	Comment
Criteria  Database integrity	Explanation  Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.  Data validation procedures used.	Field data was 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 resolution 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 were imported into Datamine Studio RM for sectional interpretation.  Validation steps included 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.  A field diary was utilised by the site Geologist to record 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 previous hole and other relative observations. 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 Base Titanium staff. This included:
		<ul> <li>comparison of pre-versus post-oven weights;</li> <li>comparison of split weight versus de-slimed weight;</li> <li>comparison of split weight versus field sample weight; and</li> <li>all sample preparation data were sorted by each individual field and outliers investigated</li> </ul>



Criteria	Explanation	Comment
		Assay results were delivered via email in 45 sample batches from Kwale Operations' site laboratory. These were in the form of CSV text files and imported by batch number directly into the SQL database tables where pre-set algorithms converted weights to percentages and removed the moisture content. The calculated assay results were then checked manually for missing records and out of range or unrealistic values.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.  If no site visits have been undertaken indicate why this is the case.	The Competent Person, Base Resources' Exploration and Resources Manager, Mr. Ian Reudavey, was based at Kwale Operations during 2023 and 2024. The Competent Person is satisfied with the integrity of the database as well as the delineation of the geological boundaries having observed mining at Kwale North Dune.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.  Nature of the data used and of any assumptions made.  The effect, if any, of alternative interpretations on Mineral Resource estimation.  The use of geology in guiding and controlling Mineral Resource estimation.  The factors affecting continuity both of grade and geology.	The original geological interpretation was undertaken by the Base Titanium Exploration Superintendent using field logs and observations, assays, HM sink logs, XRF oxide chemistry and mineralogy data. The oversize grades were particularly useful in determining the lateritic paleo-surfaces between the geological zones. Interpretations were revised and updated by the Competent Person.  The data spacing for the project is considered sufficient for grade and mineralogical continuity.  Three mineralised geological zones and a basement zone were identified and are used as constraints in the Mineral Resources estimation.  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. 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 content, often dominated by iron oxides and Al <sub>2</sub> SiO <sub>5</sub> 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 that zone by a lateritic paleo-surface. It is unique mineralogically due to an increased amount of almandine garnet that reports to



Criteria	Explanation	Comment
		the mag fraction, significantly increasing the magnesium, manganese, aluminium and silicon in the oxide chemistry, and this is also reflected in QEMSCAN mineralogy.
		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. Grade and geological continuity for Ore Zone 1 and 4 can be impacted by erosion and the formation of a dendritic drainage pattern shedding to the east.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the	The Kwale North Dune Mineral Resources estimate is approximately 1,800m along strike and about 700m across strike on average.
	upper and lower limits of the Mineral Resource.	The typical thickness of Ore Zone 1, Ore Zone 4 and Ore Zone 5 is approximately 8m, 10m and 8m, respectively.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.  The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.  The assumptions made regarding recovery of by-products.  Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).  In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The Kwale North Dune Mineral Resources estimation was undertaken using Datamine Studio RM software. The estimation techniques used were based upon revision and modification (as required) of parameters developed during previous modelling of the Kwale North Dune deposit.  Interpolation was constrained within the geological domains and utilised search ellipse dimensions developed from variography, with a dynamic ellipse orientation controlled by strike and dip trend points of the geological domain.  Inverse Distance Weighting to the power of three was used to interpolate assay grades (HM, Slimes, Oversize, Ilmenite, Rutile and Zircon) from the drill hole file. Nearest Neighbour was used to interpolate the logged hardness, mineralogy composite ID and mineralogy chemistry data.  This resource estimate has been constrained to a designated mining area within SML 23, as the area outside of the current operational envelope is no longer considered to have prospects for eventual economic extraction, given the absence of mining tenure, the planned closure of Kwale Operations, the low HM grade, high slimes content, lack of capacity for slimes tailings storage and high cost and timeframes of land acquisition.



Criteria	Explanation	Comment
	Any assumptions behind modelling of selective mining units.  Any assumptions about correlation between variables.  Description of how the geological interpretation was used to control the resource estimates.  Discussion of basis for using or not using grade cutting or capping.  The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Mining commenced at Kwale North Dune in February 2023, and while successfully producing HM, there have been challenges with hydraulic mining of high clay material in Ore Zone 4 and Ore Zone 5. Given that Ore Zone 5 also has a low VHM content and poor HM quality, it has now been excluded from the mineral resource as it has proven uneconomical to extract.  No assumptions have been made as to the recovery of by-products.  The parent cell size used in the grade interpolation (50m x 50m) was half the average drill hole spacing on the X and Y axes, which was 100m x 100m. The vertical thickness of the cell was the nominal average drill sample interval i.e., 1.5m.  No assumptions were made behind modelling of selected mining units.  No assumptions were made about correlation between variables.  No grade cutting or capping has been applied as the HM grade is typically quite low at Kwale North Dune and the higher-grade assays present have been shown to have continuity along a geological feature from infill drilling data.  Validation was undertaken by swathe plots, population distribution analysis and visual inspection.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content	The Mineral Resources estimate is on a dry tonnes basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The economic cut-off of Kwale Operations is between 1% and 1.5% HM dependent upon mineral assemblage and product prices, and historically Kwale Operations Mineral Resources estimate reporting has used a 1% HM cut-off grade.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be	The hydraulic mining method currently used at Kwale Operations is also being used at Kwale North Dune. The high slime content and generally low levels of induration in the Kwale North Dune deposit provide support for this mining method, but the presence of compacted clay has necessitated the use of higher-pressure water guns and some mechanical mining assistance.  Based on the operational experience to date the Competent Person considers there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.



Criteria	Explanation	Comment
	rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The existing concentrator, modified to accommodate the increased slimes, and mineral separation plant at Kwale Operations have proven capable of processing the Kwale North Dune material with recoveries achieving ranges aligned with historical production.  Based on the operational experience to date the Competent Person considers there are no metallurgical factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.
Environmental factors or assumptions	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.	Environmental factors for Kwale North Dune are well established and managed as they form a continuation of the current operational plan. The Competent Person considers there are no environmental factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.  Course tailings are deposited in the mined out pit voids of both the Kwale Central Dune and Kwale North Dune before being capped with a layer of co-disposed of fine and coarse tails as the first step in rehabilitation of these areas. The excess fine tails not used for co-disposal are deposited in the site tailings storage facility.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.  The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	A fixed dry bulk density of 1.7 (t/m³) was assumed for the Kwale North Dune Mineral Resources estimate, based on operational experience of mining the Kwale Central Dune, Kwale South Dune and Kwale North Dune deposits and the difficulty in developing a bulk density formula to account for all material types.  Ongoing production reconciliation has shown this to be a reasonable assumption and more reliable than bulk density algorithms.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	



Criteria	Explanation	Comment
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.  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).  Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resources classification for the Kwale North Dune deposit was based on drill hole spacing, sample interval and the distribution and influence of composite mineralogical samples.  The classification of the Measured, 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), confidence in the down hole drilling data and supporting criteria as noted above.  As Competent Person, Base Resources Exploration and Resources Manager, Mr. Ian Reudavey, considers that the result appropriately reflects a reasonable view of the deposit categorisation.
Audits or reviews.	The results of any audits or reviews of Mineral Resource estimates.	No audits or reviews of this Mineral Resource estimate have been undertaken. However, it represents an update of an existing Mineral Resource that was initially completed by independent consultants and was subject to internal review, and implements recommendations from that review. Kwale North Dune is also currently being mined which represents the ultimate test of a Mineral Resource estimate.
Discussion of relative accuracy/confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.  The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.  These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Variography was undertaken to determine the drill hole support of the selected JORC Code 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 Dune deposit within the designated mining area of SML 23.  Production data shows reasonable correlation with the resource estimate.



#### Appendix 2 – Sections 1 to 3 of Table 1 of the JORC Code for the 2024 Bumamani Mineral Resources estimate

#### Section 1 Sampling Techniques and Data

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

Criteria	Explanation	Comment
Sampling techniques	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.  Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.  Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (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.	RCAC drilling was used to collect downhole samples for the project.  For 2017 and 2018 drilling a rig mounted rotary splitter was used to collect 25% of the 1.5m downhole sample interval, equating to ~2.5kg.  For 2023 drilling the entire 1.5m downhole sample interval (averaging ~10kg) was collected from which approximately 4kg was obtained via two-stage riffle splitting.  Duplicate samples were collected at the splitter for every 20th sample simultaneously with the original sample.  A representative grab sample from the sample bags was routinely washed and panned for lithological logging as well as visual HM content estimate.  Samples were analysed by mineral sands industry-standard techniques of screening, desliming and heavy liquid separation using SPT (sodium polytungstate) at SG of 2.85g/cm³. XRF analysis of HM magnetic fractions was used to define the mineral assemblage.
Drilling techniques	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).	173 holes in the 2017 and 2018 campaigns were drilled with a Wallis Mantis 80 RCAC drill rig using NQ drill tooling of about 76mm diameter and a 3-blade aircore vacuum face sampling bit.  58 holes in the 2023 campaign were drilled with an EVH2100 RCAC rig using Remet rods with an outside diameter of about 75mm and a 3-blade aircore vacuum face sampling bit.  12 mechanised auger holes in the 2024 campaign were completed immediately west of the Bumamani deposit with a GY-150 engineering rig using 152mm auger bits. Although drilled for



Criteria	Explanation	Comment
		reconnaissance purposes, these holes were incorporated into the estimation database where significant gaps in aircore drilling occurred.
		For all drilling campaigns, the rig mast was orientated vertically by spirit level before drilling, to adhere to best practices for geological boundary delineation.
		Drilling was recorded in geological logs as either dry or water-injected depending on ground conditions. Water injection was employed to assist with penetration through silty/clayey formations to maintain sample quality and delivery.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.  Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Sample condition was 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 undersized and poor meaning contaminated or grossly over/undersized.  Ground conditions of slightly damp silty sands meant the best sample quality was achieved through 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 the loss of fine material.



Criteria	Explanation	Comment
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Field logging was recorded for all 3,987 fixed, down-hole intervals and was conducted by the site Geologist as drilling and sampling proceeded. Logging was based on a representative grab sample that was panned for host material observations and heavy mineral estimation.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.  The total length and percentage of the relevant intersections logged.	Standardised logging codes were developed in the logging software (LogChief) to capture observations on lithology, colour, grain size, induration, and estimated HM. Any relevant comments e.g., water table, gangue HM components and stratigraphic markers were included to aid in the subsequent geological modelling.  A qualitative estimate of how representative a sample was of the drilled interval was recorded by Base Titanium field geologists whilst logging.  Heavy mineral sinks from assayed samples were logged routinely under a reflected-light, stereoscopic microscope. This work was carried out to capture information relating to VHM content, mineralogy, HM grainsize and quality.  The logging is of sufficient detail to support Mineral Resource estimation, mining studies and metallurgical studies.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.  For all sample types, the nature, quality and appropriateness of the sample preparation technique.  Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.  Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.  Whether sample sizes are appropriate to the grain size of the material being sampled.	For the 2017/2018 drilling, approximately 25% of the sample interval was rotary split at the sampling cyclone on the rig.  For the 2023 aircore and 2024 auger drilling, the entire sample interval was collected mostly wet and bagged on-site in polyweave bags with internal plastic lining to avoid loss of slimes. Following air drying of excess moisture, an approximate 25% split (~5kg) of the drilled material was collected via riffle splitting.  The split sample was processed in a dedicated sample preparation facility that follows conventional mineral sands processes. Samples were air-dried when weather permitted, otherwise they were oven-dried during wet weather. After drying, the sample was rotary split to produce a ~200-400g sample for analytical work. The remaining drill sample material was combined and split down to ~2-3kgs for storage as a reference sample.  The analytical split sample was wet screened using 45 µm and 1 mm sieves, to generate oversize and sand fractions, with slimes lost during screening and calculated by difference.



Criteria	Explanation	Comment
		The sample preparation stage aligns with industry best practice to deliver a high degree of confidence in the results. Steps include the following:
		A formalised process flow is posted in all sample preparation areas and used to train and monitor sample preparation staff.
		Regular monitoring is completed by Base Titanium senior staff.
		Field samples are left in their bags for initial air-drying to avoid sample loss.
		TSPP dispersant is utilised to decrease attrition time (to 15 minutes) and improve slimes recovery.
		Staff are trained to use paint brushes and water spray rather than manipulate samples through the screen by hand to remove the potential for screen damage.
		A calibration schedule is utilised for scales used in the sample preparation stage.
		The introduction of LIMS software allows the capture of sample preparation data digitally at inception and synchronisation in real-time to the master Kwale Laboratory SQL database.
		Slimes screen numbers are recorded to isolate batches should re-assay be required due to poor adherence to procedure or to identify screen damage.
		Duplicate samples were collected at every 20th sample and assessed regularly to ensure representivity was achieved.
		The drill rods and cyclone were routinely cleaned between holes using pressurised water to avoid inter-hole contamination. The sample preparation flow sheet follows conventional mineral sands processes but departed from standard mineral sand practices in one respect; the samples were generally not oven-dried before de-sliming to prevent clay minerals baking onto the HM grains (because the HM fractions were to be used in further analysis). Instead, a separate sample was split and dried to determine moisture content, which was accounted for mathematically.
		QA/QC procedures involved the following:



Criteria	Explanation	Comment
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.  Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>Prepared duplicate split samples were processed at every 20th sample.</li> <li>Prepared repeat samples were processed at every 7th sample.</li> <li>The manual hard-copy sample preparation records were maintained in files in the event of cross-references due to identified scribing errors in LIMS software.</li> <li>The sample size is considered appropriate for the grain size of the material because the grade of HM is measured in per cent.</li> <li>The assay process employed included a Sample Preparation stage, completed by Base Titanium staff, followed by a heavy liquid separation (using sodium polytungstate) at SG = 2.85g/cm³), completed at Kwale Operations' site laboratory.</li> <li>The assaying and laboratory procedures used are considered to follow industry best practice and the technique is considered as a total analysis.</li> <li>The dried, deslimed processed samples were submitted to the Kwale Operations laboratory with the following approach adopted.</li> <li>All samples were dried and weighed.</li> <li>Sand fraction was processed by SPT heavy liquid separation to generate a HM fraction.</li> <li>The HM fraction was subject to magnetic separation on a roll magnet to generate a magnetic (Mag) fraction and a non-magnetic (non-Mag) fraction.</li> <li>XRF analysis of magnetic fractions was completed with the data used to model the mineralogy using the Company's internally developed algorithms (MinModel).</li> </ul>
		The proprietary 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 has been validated by external quantitative analysis (QEMSCAN and EDX) and is considered sufficiently certified to support quoted resource confidence in this report.
		Various quality control samples were submitted routinely to assure assay quality. A total of 112 duplicate field samples, 108 lab duplicate sample preparation samples, 68 field standard



Explanation	Comment
	samples, 84 lab standard samples and 71 instrument stability standards have been assayed at Kwale Operations' site laboratory.
	Acceptable levels of accuracy and precision have been established.
The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.  Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  Discuss any adjustment to assay data.	The Bumamani Deposit is a moderate to low HM grade, dunal and paleo-beach style accumulation that does not carry excessive mineralisation or suffer from 'nugget' effects, typical of other commodities.  An external audit validation was completed for the HM analyses included in the Bumamani Mineral Resources estimate by IHC Robbins in 2020.  An internal audit validation was completed by the Base Resources Exploration & Resources Manager who is a Competent Person.  A total of 12 twin drill holes were completed between the two drilling programmes, representing about 5.2% of the total programme. These twin holes are used to quantify short-range variability in geological character and grade intersections and were drilled throughout the deposit.  The spatially well-represented twin-hole paired data shows a good correlation, considered material to the integrity/quality of the resource data.  Drill hole logging and site sample data were collected electronically in Maxwell LogChief software, installed on field Panasonic Tough pads that synchronise directly to the Datashed database. Assay data is captured electronically via LIMS software and merged with logging and sample data in the Datashed database.
	No adjustment to assay data was made.
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.  Specification of the grid system used.  Quality and adequacy of topographic control.	Proposed drill holes were sited on the ground using hand-held Garmin GPS units with an accuracy of ~ 3m. After drilling, the mine surveyors picked collar positions via a DGPS RTK unit registered to local base stations. The accuracy of the RTK unit is stated at 0.02m in the X, Y and Z axes.  The survey geodetic datum utilised is UTM Arc 1960, used in east Africa. Arc 1960 references the Clark 1880 (RGS) ellipsoid and the Greenwich prime meridian. All survey data used in the
	The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.  Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  Discuss any adjustment to assay data.  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.  Specification of the grid system used.



Criteria	Explanation	Comment
		from the standard UTM Zone 37S (Arc 1960). The local grid was rotated at (-42.5°) which aligned the average regional strike with the local North and was useful for both grade interpolation and mining reference during production.
		All drill collars are projected to the local LIDAR DTM captured over the resource area in 2018 at a 2x2m grid spacing. This was performed before interpretation and model construction, to eliminate any elevation disparities for the block model construction.
Data spacing and distribution	Data spacing for reporting of Exploration Results.  Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.  Whether sample compositing has been applied.	The drill data spacing from the 2017/2018 and 2023 Bumamani Mineral Resource drilling programmes was on average 50m East, 100m North and 1.5m downhole. Variations from this spacing resulted from terrain challenges or low grades.  This spacing and distribution was 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, oversize and XRF assays.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.  If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	With the geological setting being a layered dunal/marine/fluviatile sequence, the orientation of the deposit mineralisation in general is sub-horizontal. All drill holes were orientated vertically (-90°) to penetrate the sub-horizontal mineralisation orthogonally.  Hole centres were spaced at 50m. This cross-profiled the ore zones so that variation could be determined. Downhole intervals at 1.5 metres provided adequate sampling resolution to capture the distribution and variability of geology units and mineralisation encountered vertically.  The orientation of the drilling was considered appropriate for testing the horizontal and vertical extent of mineralisation without bias.
Sample security	The measures taken to ensure sample security.	Drill samples were transported daily from site to the secure sample preparation facility by company personnel.  Sample residues from the preparation stage were transferred to pallets and stored in a locked sample storage shed beside the warehouse at the Kwale Operations.



Criteria	Explanation	Comment
		Residues from the Kwale Operations Laboratory were placed in labelled jars and stored in numbered boxes inside a container near the prepatory lab facility.
		Remnant drill samples were packed in labelled wood pallets and stored in a dedicated storage shed facility.
		Sample tables are housed on a secure, network-hosted SQL database. Administration privileges are limited to two Base Titanium staff: Exploration Superintendent and the Business Applications Administrator.
		Data is backed up every 12 hours and stored in perpetuity on a secure, site backup server.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	IHC Robbins Geological Services validated the resource data and reviewed the completed block model in 2020, and considered the model fit for purpose.
		Base Resources Exploration and Resources Manager, Mr. Ian Reudavey reviewed the Bumamani geological interpretations, wireframes and assay and mineralogy data interpolations and following minor revisions considered the data fit for purpose.



# Section 2 Reporting of Exploration Results

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

Criteria	Explanation	Comment
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Bumamani project is located within SML 23, which is 100% held by Base Titanium, a wholly owned subsidiary of Base Resources.  SML 23 was initially granted in 2004 and extended in June 2022 to cover the Kwale North Dune and Bumamani Ore Reserves.  SML 23 is in good standing with the State Department for Mining and expires on 30 June 2025.  Local landowners are generally supportive of exploration and mining activities with established community relations and development programs in place.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No known historical exploration by third parties was undertaken in the Bumamani area.
Geology	Deposit type, geological setting and style of mineralisation.	The Bumamani deposits are primarily hosted in the 'Margarini Formation' comprising reddish-brown, well-sorted, fine-grained dune sands overlying clay fluviatile units, which in turn overlie a Mesozoic sandstone base, known as the Mazeras formation. All formations are locally enriched in HM, with the VHM suite dominated by ilmenite, with lesser rutile and zircon.
		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 Margarini sand dunes and the fluviatile formations.
		The eastern part of the Bumamani deposit, occurring at around 50-60m above sea level, is hosted in well drained, yellow to white, loose, marine sands occurring along an subtle arcuate topographic ridge. These sands are a result of marine transgression events before the mid-Pleistocene that resulted in raised beaches, reworking existing Margarini deposits and locally concentrating them into small high-grade deposits.



Criteria	Explanation	Comment
Drill hole Information	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:  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.  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.	Drilling by year used for the resource model build was as follows:  2017 stratigraphic drilling  39 RCAC drill holes (depth: max 75m, min 12m, average 25.8m)  Total 1,005m drilled.  2018 exploration drilling  134 RCAC drill holes (depth: max 27m, min 6m, average 13.0m).  Total 1,743m drilled.  2023 exploration drilling  58 RCAC drill holes (depth: max 22.5m, min 13.5m, average 17.1m).  Total 990m drilled.  2024 exploration drilling  12 auger drill holes (depth: max 15m, min 12m, average 14.5m).  Total 174m drilled.  See the drill hole location plan in Figure 5.  All drill holes were drilled vertically.  All collars were projected to the LIDAR topographical surface.  A tabulation of material drill holes is not included as exploration results are not being reported.



Criteria	Explanation	Comment
Data aggregation methods	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.  Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.  The assumptions used for any reporting of metal equivalent values should be clearly stated.	Exploration results are not being reported.  No metal equivalent values were used.  No aggregation of short length samples used as samples were consistently 1.5m intervals.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.  If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	The deposit sequences are sub-horizontal, and the vertically inclined holes are a fair representation of true thickness.
Diagrams	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.	See Figures 4 and 5 in the body of the announcement.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Exploration results are not being reported.



Criteria	Explanation	Comment
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	The Bumamani dunal and fossil beach material contains significantly lower slimes than the Kwale North Dune deposit. This characteristic is beneficial when mining the deposit concurrently with the Kwale North Dune to provide a blended feed to the processing plants.
Further work	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.	No further work is recommended or planned as the deposit is currently being mined and, with the planned cessation of mining activities at Kwale Operations in December 2024 following the depletion of existing Ore Reserves, there are no potential mine extensions that have not already been identified and assessed.



# 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	Explanation	Comment
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.  Data validation procedures used.	Field data was 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, SAMPLEID) and conflicts in related tables (e.g. downhole 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 assay data from the SQL database were imported into Micromine software for sectional interpretation.
		Validation steps included 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.
		A field diary was utilised by the site Geologist to record the hole name, date, depth, number of samples, time of start and finish, a description of the hole location relative to the previous hole and other relative observations. 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. Several validation checks were made of sample preparation data to ensure accurate data entry and application of correct procedure by Base Titanium staff. This included:
		<ul> <li>Comparison of pre-versus post-oven weights.</li> <li>Comparison of split weight versus de-slimed weight.</li> <li>Comparison of split weight versus field sample weight.</li> <li>All sample preparation data was sorted by each field and outliers were investigated.</li> </ul>
		Assay results were delivered via email in 45 sample batches from Kwale Operations' site laboratory. These were in the form of CSV text files and imported by batch number directly



Criteria	Explanation	Comment
		into the SQL database tables where pre-set algorithms converted weights to percentages and removed the moisture content. The calculated assay results are then checked manually for missing records and out-of-range or unrealistic values.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.  If no site visits have been undertaken indicate why this is the case.	The Competent Person is Base Titanium Exploration Manager, Mr Edwin Owino, and he is based at Kwale Operations and oversaw the drilling program and sample collection. The Competent Person is satisfied with the integrity of the database as well as the delineation of the geological boundaries having many years of experience at Kwale Operations.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.  Nature of the data used and of any assumptions made.	The geological interpretation was undertaken by the Base Titanium Exploration Manager by using field logs and observations, assays, HM sink logs, XRF oxide chemistry and mineralogy data.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The data spacing for the project is considered sufficient for grade and mineralogical continuity.
	The use of geology in guiding and controlling Mineral Resource estimation.	Three mineralised geological zones and a basement zone were identified and are used as constraints in the Mineral Resources estimation.
	The factors affecting continuity both of grade and geology.	The uppermost zone at Bumamani, referred to as Ore Zone 1, is a dark red brown, predominantly fine, well-sorted silty sand with very little induration. It is also characterised by clean, well-sorted and polished HM with a high value mineral assemblage.
		Ore Zone 20 flanks Ore Zone 1 to the east and is hosted in well-sorted medium to coarse fossil beach sands characterised by low slimes and induration. The HM is well-sorted and polished, containing elevated rutile and zircon as well as a higher-titanium ilmenite than typical for the Kwale deposits.
		Ore Zone 4 underlying both Ore Zone 1 and Ore Zone 20 is a sandy-clay fluviatile unit with low-level sorting and common lateritic fragments. The HM from this zone contains both gangue silicates and lateritic aggregates.
		All three formations have a regional strike direction of about 40 degrees East of North and range in age from mid-Pliocene to Pleistocene.
		The Basement Zone is mostly a clay-rich, fluviatile unit with a difficult-to-impossible washability. The HM from this zone is typically dominated by trash minerals.



Criteria	Explanation	Comment
		All interpreted geology zones show a strong correlation between the field logs, HM sink logs and XRF oxide chemistry and mineralogy, giving confidence to these interpretations.
Dimensions	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.	The Bumamani Mineral Resources estimate is approximately 1,100m along strike and 150-300m across strike on average. The deposit thickness averages 11m.  The typical thickness of Ore Zone 1, Ore Zone 20 and Ore Zone 4 is approximately 8.5m, 7m and 2.5m, respectively.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.  The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.  The assumptions made regarding recovery of by-products.  Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).  In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.  Any assumptions behind modelling of selective mining units.  Any assumptions about correlation between variables.  Description of how the geological interpretation was used to control the resource estimates.  Discussion of basis for using or not using grade cutting or capping.	The Bumamani Mineral Resource estimation was undertaken using Micromine Origin 2023 software. The estimation techniques used are based upon revision and modification (as required) of parameters developed during previous modelling of the Bumamani deposit.  Interpolation was constrained within the geological domains and utilised search ellipse dimensions developed from variography, with a dynamic ellipse orientation controlled by strike and dip trend points of the geological domain.  Inverse Distance Weighting to the power of three was used to interpolate assay grades (HM, Slimes, Oversize) and mineralogy (Ilmenite, Rutile and Zircon).  This resource estimate has been constrained to a designated mining area within SML 23, as the area outside of the current operational envelope is not considered to have prospects for eventual economic extraction, given the absence of mining tenure, the planned close of Kwale Operations, the low HM grade, small volumes of mineralisation identified, and high cost and timeframes of land acquisition.  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 Y and X axes, which was 100m x 50m. The vertical thickness of the cell was the average drill sample interval i.e., 1.5m.  No assumptions were made behind the modelling of selected mining units.  No assumptions were made about the correlation behind variables.  Validation was undertaken by swath plots, population distribution analysis and visual inspection.



Criteria	Explanation	Comment
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content	The Mineral Resources estimate is on a dry tonnes basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The economic cut-off of Kwale Operations is between 1% and 1.5% HM dependent upon mineral assemblage and product prices, and historically Kwale Operations Mineral Resources estimate reporting has used a 1% HM cut-off grade.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	The hydraulic mining method currently used at the Kwale Operations is also used at Bumamani. The slime content and generally low levels of induration in the Bumamani deposit provide support for this mining method.  Based on the operational experience to date the Competent Person considers there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The existing concentrator and mineral separation plant at Kwale Operations have proven capable of processing the Bumamani material with recoveries achieving ranges aligned with historical production.  Based on the operational experience to date the Competent Person considers there are no metallurgical factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.
Environmental factors or assumptions	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	Environmental factors for Bumamani are well established and managed as they form a continuation of the current operational plan. The Competent Person considers there are no environmental factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.



Criteria	Explanation	Comment
	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.	Course tailings are deposited in the mined out pit voids of both the Kwale Central Dune and Kwale North Dune before being capped with a layer of co-disposed of fine and coarse tails as the first step in rehabilitation of those areas. The excess fine tails not used for co-disposal are deposited in the site tailings storage facility. There is no plan to return tailings to the Bumamani pit void, and it will be re-shaped to a stable landform upon the cessation of mining as the first step in rehabilitation.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.  The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.  Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	A fixed dry bulk density of 1.7 (t/m³) was assumed for the Bumamani Mineral Resources estimate, based on operational experience of mining the Kwale Central Dune and Kwale South Dune deposits.  Ongoing production reconciliation has shown this to be a reasonable assumption and more reliable than bulk density algorithms.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.  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).  Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resources classification for the Bumamani deposit was based on drill hole spacing, sample interval and the distribution and influence of composite mineralogical samples.  The classification of the Measured, 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), confidence in the downhole drilling data and supporting criteria as noted above.  As Competent Person, Base Titanium Exploration Manager, Mr. Edwin Owino, considers that the result appropriately reflects a reasonable view of the deposit categorisation.
Audits or reviews.	The results of any audits or reviews of Mineral Resource estimates.	Internal peer review was undertaken by Ian Reudavey, Base Resources Exploration and Resource Manager, with a focus on the process and output of the geology interpretation, database integrity and consideration of whether wireframes reflect the geological interpretation and grade interpolations. Mr. Reudavey was satisfied with these facets.



Criteria	Explanation	Comment
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.  The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.  These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Variography was undertaken to determine the drill hole support of the selected JORC Code classification.  Validation of the model vs drill hole grades was undertaken by direct observation and comparison of the results on screen.  The resource statement is a global estimate for the entire known extent of the Bumamani deposit within SML 23.  Production data shows reasonable correlation with the resource estimate.



## Glossary

Assemblage	The relative proportion of heavy mineral components, principally ilmenite, rutile, zircon and, where applicable, leucoxene, monazite and garnet.
Base Titanium	Base Titanium Limited.
Competent Person	The JORC Code requires that a Competent Person be a Member or Fellow of The Australasian Institute of Mining and Metallurgy, 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.
Cut-off grade	The lowest grade of mineralised material that is thought to be economically mineable and available.  Typically used by Base Resources to define which material is reported in a Mineral Resources estimate.
DTM	Digital Terrain Model.
GARN	Garnet, a valuable heavy mineral.
Grade	A physical or chemical measurement of the characteristics of the material of interest. In this context, the grade is always a percentage and the characteristics are heavy mineral, oversize, slime and the various product minerals (ilmenite, rutile etc).
Heavy mineral or HM	In mineral sands, minerals with a specific gravity greater than 2.85 t/m <sup>3</sup> .
ILM	Ilmenite, a valuable heavy mineral.
Indicated	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	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 neighbourhood around an interpolated point decreases as a function of distance.
JORC Code	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition, 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.
Kwale Operations or Kwale Project	The Company's 100% owned Kwale Mineral Sands Operations in Kenya.
LEUC	Leucoxene, a valuable heavy mineral.
LIDAR survey	LIDAR is a remote sensing technology that measures distance by illuminating a target with a laser and analysing the reflected light to produce a DTM.



Measured	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.
Modifying Factors	Modifying Factors are considerations used to convert Mineral Resources to Ore Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.
MON	Monazite, a valuable heavy mineral that contains rare earth elements.
NQ	Specification of drilling rods (and bits) with an outer diameter of 76mm.
Ore Reserves	Ore Reserves are the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.
OS	Oversize material, for Kwale and Ranobe it is defined as material >1mm in size
Probable	A Probable Ore Reserve is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.
Proved	A Proved Ore Reserve is the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.
QEMSCAN	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 plot. Used to graphically compare data distributions.
RCAC	Reverse circulation air core.
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.
RUT	Rutile, a valuable heavy mineral.
SL	Slimes, fine material (defined as <45µm at Kwale and <63µm at Ranobe) that is a waste product from the processing of mineral sands.
SML 23	Kwale Special Mining Lease No. 23



Sterilisation	Material that is depleted from Mineral Resources or Ore Reserves, but which was not mined. This material still remains in ground following mining activity and, in the Competent Person's opinion, it has no reasonable prospects for eventual economic extraction.
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 or XRF	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.
ZIR	Zircon, a valuable heavy mineral.

---- ENDS -----

### For further information contact:

### Australian media queries

Sodali & Co Cameron Gilenko and Michael Weir Tel: +61 (8) 6160 4900

### **UK Media Relations**

Tavistock Communications
Jos Simson and Gareth Tredway
Tel: +44 (0) 207 920 3150

This release has been authorised by Base Resources' Disclosure Committee.

#### **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.

