ASX, AIM and Media Release

1 October 2015

2015 Mineral Resources and Ore Reserves Update for Kwale

The Ore Reserves and Mineral Resources for Base Resources Limited's (ASX & AIM: BSE) ("**Base**") 100% owned and operated Kwale Project as at 30 June 2015 are summarised in the table below along with the 2014 Ore Reserves and Mineral Resources for comparison.

	2015								2014							
Category	Material (Mt)	In Situ HM (Mt)	HM (%)	SL (%)	OS (%)	HM Assemblage ILM (%)	HM Assemblage RUT (%)	HM Assemblage ZIR (%)	Material (Mt)	In Situ HM (Mt)	HM (%)	SL (%)	OS (%)	HM Assemblage ILM (%)	HM Assemblage RUT (%)	HM Assemblage ZIR (%)
Mineral Resources																
Measured	114.8	5.55	4.9	26	2	51	13	6	123.9	6.38	5.2	26	2	51	13	6
Indicated	28.3	0.86	3.0	27	3	50	13	6	28.9	0.87	3.0	27	3	50	13	6
Total	**143.0**	**6.41**	**4.4**	**26**	**3**	**51**	**13**	**6**	**152.7**	**7.25**	**4.7**	**26**	**3**	**51**	**13**	**6**
Ore Reserves																
Proved	95.0	5.01	5.3	26	2	54	13	6	82.5	4.41	5.3	25	1	54	14	6
Probable	15.4	0.54	3.4	26	3	50	13	6	53.6	2.13	4.0	27	3	48	13	5
Total	**110.4**	**5.54**	**5.0**	**26**	**2**	**54**	**13**	**6**	**136.1**	**6.51**	**4.8**	**26**	**2**	**52**	**13**	**6**

Table subject to rounding errors

The total Kwale Mineral Resources as at 30 June 2015 were estimated to be 143.0Mt at an average heavy mineral ("HM") grade of 4.4 per cent. Within this are Ore Reserves estimated to be 110.4Mt at an average HM grade of 5.0 per cent. Ore Reserves and Mineral Resources have all been reported in accordance to the JORC Code (2012 edition). Accordingly, the information in these sections should be read in conjunction with the respective explanatory Mineral Resources and Ore Reserve information included in Appendix 1.

Ore Reserves

The 2015 Kwale Ore Reserve is a total of 110.4Mt @ 5.0 per cent HM and 26 per cent slimes containing 5.54Mt of HM and is quoted as at 30 June 2015.

The 2015 Kwale Ore Reserves incorporate mining depletion during year, the updated Mineral Resources model compliant with the JORC Code (2012 edition) as announced on 14 October 2014, updated technical studies required for the Kwale Ore Reserves to comply with the JORC Code (2012 edition) and production experience gained from operations. The Central Dune Ore Reserves at 30 June 2015 decreased by 16.8Mt of ore and 0.80Mt of in situ HM, due to mining depletion during the year of 9.5Mt of ore containing 0.84Mt of in situ HM and the difference due to the other changes discussed above. Whilst mining has not yet commenced on this deposit, South Dune Ore Reserves at 30 June 2015 decreased by 8.9Mt of ore and 0.17Mt of in situ HM due to the changes discussed above.

Table 1: Ore Reserves for the Kwale Project at 30 June 2015 compared with 2014 Ore Reserves.

	2015								2014							
Category	Ore	In Situ HM	HM	SL	OS	HM Assemblage			Ore	In Situ HM	HM	SL	OS	HM Assemblage		
						ILM	RUT	ZIR						ILM	RUT	ZIR
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)
Central Dune																
Proved	48.3	3.21	6.6	24	0	56	13	6	42.6	2.94	6.9	24	0	56	13	6
Probable	5.8	0.18	3.2	28	2	52	13	6	28.4	1.28	4.5	24	1	54	14	6
Total	**54.2**	**3.39**	**6.2**	**25**	**1**	**56**	**13**	**6**	**71.0**	**4.19**	**5.9**	**24**	**1**	**56**	**13**	**6**
South Dune																
Proved	46.7	1.80	3.9	28	3	49	14	6	39.9	1.47	3.7	27	2	51	14	6
Probable	9.5	0.35	3.7	25	3	49	13	6	25.2	0.85	3.4	29	5	42	12	5
Total	**56.2**	**2.15**	**3.8**	**27**	**3**	**49**	**14**	**6**	**65.1**	**2.32**	**3.6**	**28**	**3**	**48**	**13**	**6**
Total Ore Reserves																
Proved	95.0	5.01	5.3	26	2	54	13	6	82.5	4.41	5.3	25	1	54	14	6
Probable	15.4	0.54	3.4	26	3	50	13	6	53.6	2.13	4.0	27	3	48	13	5
Total	**110.4**	**5.54**	**5.0**	**26**	**2**	**54**	**13**	**6**	**136.1**	**6.51**	**4.8**	**26**	**2**	**52**	**13**	**6**

Mineral Resources

The 2015 Kwale Mineral Resource is a total of 143.0Mt @ 4.4 per cent HM and 26 per cent slimes containing 6.41Mt HM and is quoted as at 30 June 2015.

The Central Dune Mineral Resources at 30 June 2015 are 69.4Mt @ 5.4% HM, decreased due to mining depletion during the year of 9.7Mt of ore containing 0.84Mt of in situ HM. The South Dune Mineral Resources at 30 June 2015 are unchanged from the June 2014 Mineral Resource estimate. The June 2015 Mineral Resource estimate has decreased overall by 6% for material tonnes and by 12% for HM tonnes when compared with the previous 2014 Mineral Resource estimate.

Table 2: Mineral Resource estimate for the Kwale Project at 30 June 2015 compared with 2014 Mineral Resource estimate.

	Kwale Mineral Resources – as at 30 June 2015								Kwale Mineral Resources – as at 30 June 2014							
Category	Ore	In Situ HM	HM	SL	OS	HM Assemblage			Ore	In Situ HM	HM	SL	OS	HM Assemblage		
						ILM	RUT	ZIR						ILM	RUT	ZIR
	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)
Central Dune																
Measured	54.5	3.37	6.2	25	0	55	14	6	63.6	4.20	6.6	25	0	55	14	6
Indicated	15.0	0.41	2.7	29	2	52	13	6	15.6	0.42	2.7	29	2	52	13	6
Total	**69.4**	**3.78**	**5.4**	**26**	**1**	**54**	**13**	**6**	**79.1**	**4.62**	**5.8**	**26**	**1**	**54**	**13**	**6**
South Dune																
Measured	60.3	2.18	3.6	28	4	46	13	6	60.3	2.18	3.6	28	4	46	13	6
Indicated	13.3	0.45	3.4	26	4	47	13	6	13.3	0.45	3.4	26	4	47	13	6
Total	**73.6**	**2.63**	**3.6**	**27**	**4**	**46**	**13**	**6**	**73.6**	**2.63**	**3.6**	**27**	**4**	**46**	**13**	**6**
Total Mineral Resources																
Measured	114.8	5.55	4.9	26	2	51	13	6	123.9	6.38	5.2	26	2	51	13	6
Indicated	28.3	0.86	3.0	27	3	50	13	6	28.9	0.87	3.0	27	3	50	13	6
Total	**143.0**	**6.41**	**4.4**	**26**	**3**	**51**	**13**	**6**	**152.7**	**7.25**	**4.7**	**26**	**3**	**51**	**13**	**6**

Mineral Resources & Ore Reserve Governance

A summary of the governance and internal controls applicable to Base's Mineral Resources and Ore Reserves processes are 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 resource models, and with results using alternate modelling methodologies;
- Visual validation of block model against raw composite data; and
- Use of external Competent Persons to assist in the preparation of JORC Mineral Resources updates.

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 Reserve updates intimated with material changes in the above assumptions;
- Optimisation using appropriate software packages for open pit evaluation;
- Design based on optimisation results; and
- Use of external Competent Persons to assist in the preparation of JORC Ore Reserves updates.

Competent Person Statement

Ore Reserves

The information in this report that relates to 2015 Kwale Central Dune Ore Reserve is based on information compiled by Mr. Scott Carruthers. The information in this report that relates to 2015 Kwale South Dune Ore Reserve is based on information compiled by Mr. Per Scrimshaw and Mr. Scott Carruthers. Mr. Scrimshaw and Mr. Carruthers are both Members of The Australasian Institute of Mining and Metallurgy. Mr. Scrimshaw is employed by Entech, a mining consultancy engaged by Base to prepare Ore Reserve estimation for the Kwale Project. Mr. Carruthers is employed by Base. Mr. Scrimshaw and Mr. Carruthers have 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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr. Scrimshaw and Mr. Carruthers consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

Mineral Resources

The information in this report that relates to Mineral Resources are based on information compiled by Mr. Greg Jones and Mr. Scott Carruthers who are Members of The Australasian Institute of Mining and Metallurgy. Mr. Jones is the Principal for GNJ Consulting and has been retained by Base to conduct Mineral Resource estimation for the Kwale Project. Mr. Carruthers is employed by Base. Mr. Jones and Mr. Carruthers have 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 Competent Persons as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr. Jones and Mr. Carruthers consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

Supporting Information Required Under ASX Listing Rules, Chapter 5

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

Section 1, Section 2, Section 3 and Section 4 of JORC Table 1 can be found in Appendix 1.

Requirements applicable to the Mineral Resource Estimate

A summary of the information used to prepare the Mineral Resource estimates as presented in this report is as follows.

The Kwale Project is located on Special Mining Lease No. 23 (“SML 23”)(lying within the Kwale exploration license area comprising an area of 56 km^2) which is located approximately 50 kilometres south of Mombasa and approximately 10 kilometres inland from the Kenyan coast (Figure 1).

The Kwale Project comprises two areas, separated by the Mukurumudzi River, that contain economically viable concentrations of heavy minerals. These are the Central and the South deposits. A third deposit, the Kwale North Dune is not currently included in published resources.

The project was initially owned by Tiomin Resources Inc. (“Tiomin”) who conducted drilling in 1997 and then by Base Resources who drilled out the Central and South deposits during October-December 2010 drilling phase covering the Exploration License 173 in Figure 2.

The rocks of the area are essentially of sedimentary origin and range in age from Upper Carboniferous to Recent. Three divisions are recognised: the Cenozoic rocks, the Upper Mesozoic rocks (not exposed on the area) and the Duruma Sandstone Series giving rise to the dominant topographical feature of the area: the Shimba Hills.

The Magarini sands form a belt of low hills running parallel to the coast. They rest with slight unconformity on the Shimba grits and Mazeras sandstone. This formation was deposited during Pliocene times and consists of unconsolidated sediments derived from the Duruma Sandstone Series. The Magarini sands are believed to be of aeolian origin, deposited as coastal dunes after conditions of intense erosion.

The Kwale Project deposits are a subset of the Magarini sands and are generally poorly stratified and contain a fraction of clay and silt of around 24 - 30 per cent. Heavy minerals, mainly ilmenite, rutile and zircon, are locally concentrated within the Magarini sands giving rise to deposits such as Central and South.

The right to mine the Kwale Project's Central Dune and South Dune deposits was granted to the Kwale Project's previous owner by the Government of Kenya under SML23 on 6 July 2004. The SML23 was assigned to Base Titanium Limited (a wholly owned subsidiary of Base Resources Limited) in July 2010, with consent from the Commissioner of Mines and Geology of the Government of Kenya.

The SML23 has a term of 21 years from 6 July 2004, and provides the right to carry out mining operations for the production of ilmenite, rutile and zircon and is renewable on materially the same terms.

The environment and land use in the Kwale County is defined as humid and intensive subsistence agriculture/mixed farming/forestry. The approximate population for the Kwale County is 500,000 persons.

Tiomin conducted drilling in 1997 over the Kwale Project using a variety of drilling methodologies. Subsequent to acquiring the project, Base Resources carried out drilling using primarily reverse circulation air core (“RCAC”) via Wallis Drilling and a small number of hand auger holes. The RCAC drilling was conducted in two campaigns, from October to November 2010 and then in January to February 2013.

Previous resource estimation work was carried out by Tiomin in 2006 and then by Base in 2010 via a consulting company, Creative Mined Pty Ltd, and under the direction of the Competent Person, Scott Carruthers.

RCAC drilling was used to obtain 1 to 3m samples from which approximately 1.2 - 2.5kg was collected using a rotary splitter beneath a cyclone. Samples were then dried, weighed, and screened for material less than 45µm (slimes) and +1mm (oversize).

Approximately 100 grams of the screened sample was then subjected to a HM float/sink technique using the heavy liquid, tetra-bromo-ethane (TBE with an SG of 2.92 - 2.96gcm^{-3}). The resulting HM concentrate was then dried and weighed as were the other separated constituent size fractions (the minus 45µm material being calculated by difference).

Mineral assemblage composites were prepared by Base (via Allied Mineral Laboratories) in order to characterise the mineralogical and chemical characteristics of specific mineral species and magnetic fractions. These mineral assemblage composite samples were subjected to magnetic separation using a Carpco magnet capturing various magnetic and non-magnetic fractions which were then subjected to XRF analysis. The XRF analysis was then used to calculate by formula and ratios, the percentage of mineral species that constitute the valuable and non-valuable HM.

Drill hole, collar and assay data was captured and managed in the form of an MS Access database. Key tables were then exported into MS Excel for checking out of range values and modifying header information prior to being imported into the mining software package Datamine™ using standard routines.

A standard precision analysis was conducted on the key assay fields: HM, slimes or clay ("SL") and oversize ("OS")[1] for both laboratory and drill rig or field duplicate samples. Normal scatter and QQ plots were prepared for HM, SL and OS for laboratory and drill rig or field duplicates. All mineral assemblage composites[2] were reviewed as part of the Mineral Resource estimation and modifications were made to sample allocation where geological interpretations were modified from what was originally intended.

A topographic DTM was prepared by Base in GEMCOM™ format which was based on a LIDAR survey.

Three geological domains have been identified at the Central deposit by previous work and two of those domains are also present at the South deposit. These were used and honoured during the geological interpretation and some modifications to the location of geological contacts were made between different domains.

Construction of the geological grade model was based on a combination of coding model cells and drill holes below open wireframe surfaces, comprising topography, geology and basement. Model cell sizes and sub splitting was conducted in a manner that would allow for an effective translation of Datamine™ into GEMCOM™ format.

Conventional cell sizes based on the drill hole and sample spacing were selected following a number of estimation trials for different grade sizes. A final model cell dimension of 100m x 100m x 3m in the XYZ directions was selected for the Central deposit allowing for sub splits down to 25m x 25m x 20cm. A final model cell dimension of 50m x 50m x 3m in the XYZ directions was selected for the South deposit allowing for sub splits down to 12.5m x 12.5m x 20cm.

A moving or variable search ellipse (sometimes called dynamic search ellipse) was used to prepare a more representative grade interpolation into the block model. The anisotropy of the search ellipse was based on domain based variography which highlighted the longest search direction (within the dominant geological domain which had the greatest number of samples and continuity) for each of the deposits. All other domains were found to broadly align to this.

Interpolation was undertaken for the primary grade fields (HM, SL and OS), non-numeric fields (mineral assemblage composite ID) and index fields (hardness). Inverse distance weighting ("IDW") to a power of 3 was used for primary assay fields whilst nearest neighbour was used to interpolate index and non-numeric.

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[1] For a definition of these assay fields please refer to Appendix 1.
[2] For a description of the mineral assemblage composites please refer to Appendix 1.

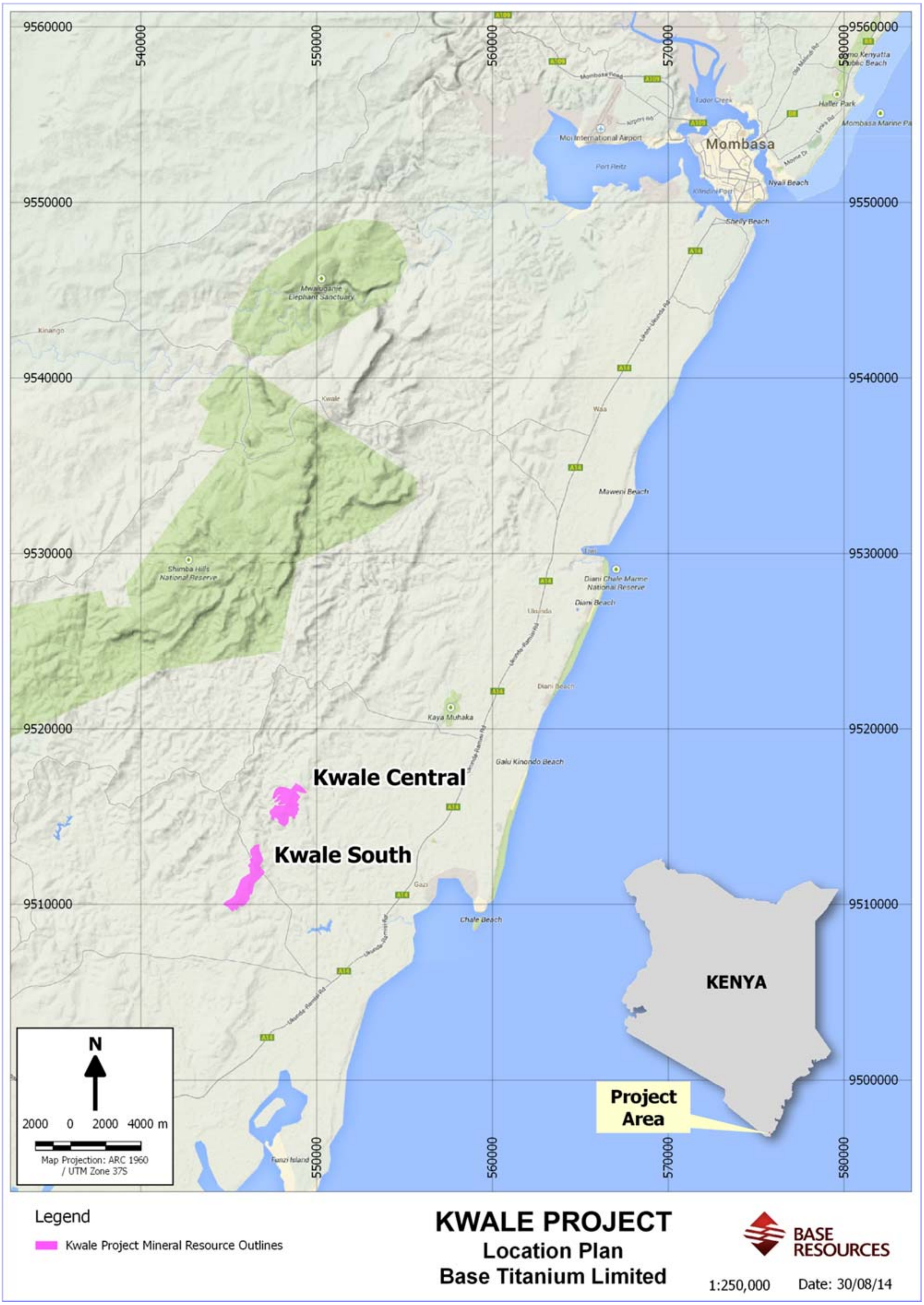

Figure 1: Plan showing location of Kwale Project deposits; Kwale Central Dune and Kwale South Dune.

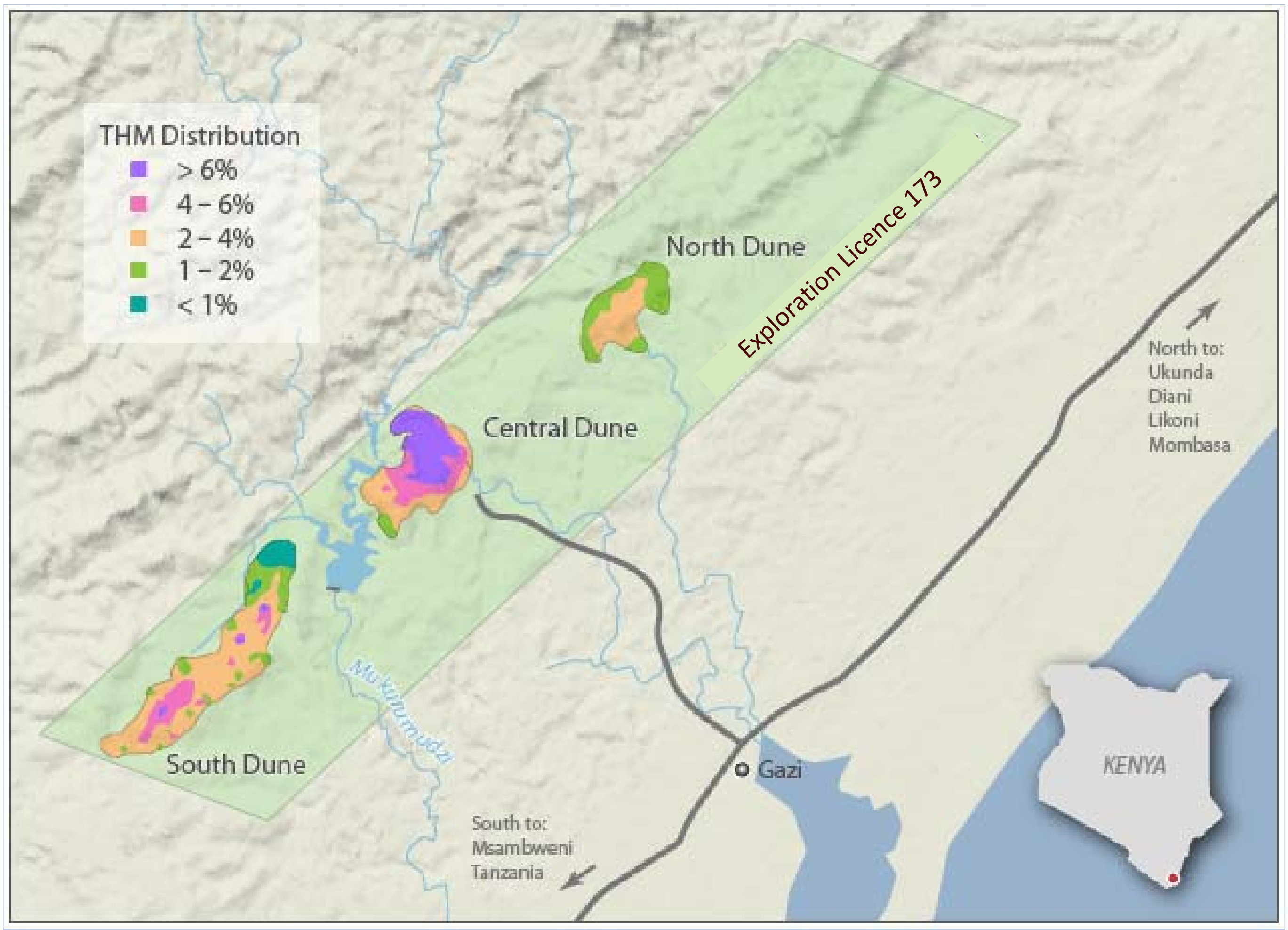

Figure 2: Location of Kwale deposits with respect to Exploration License 173.

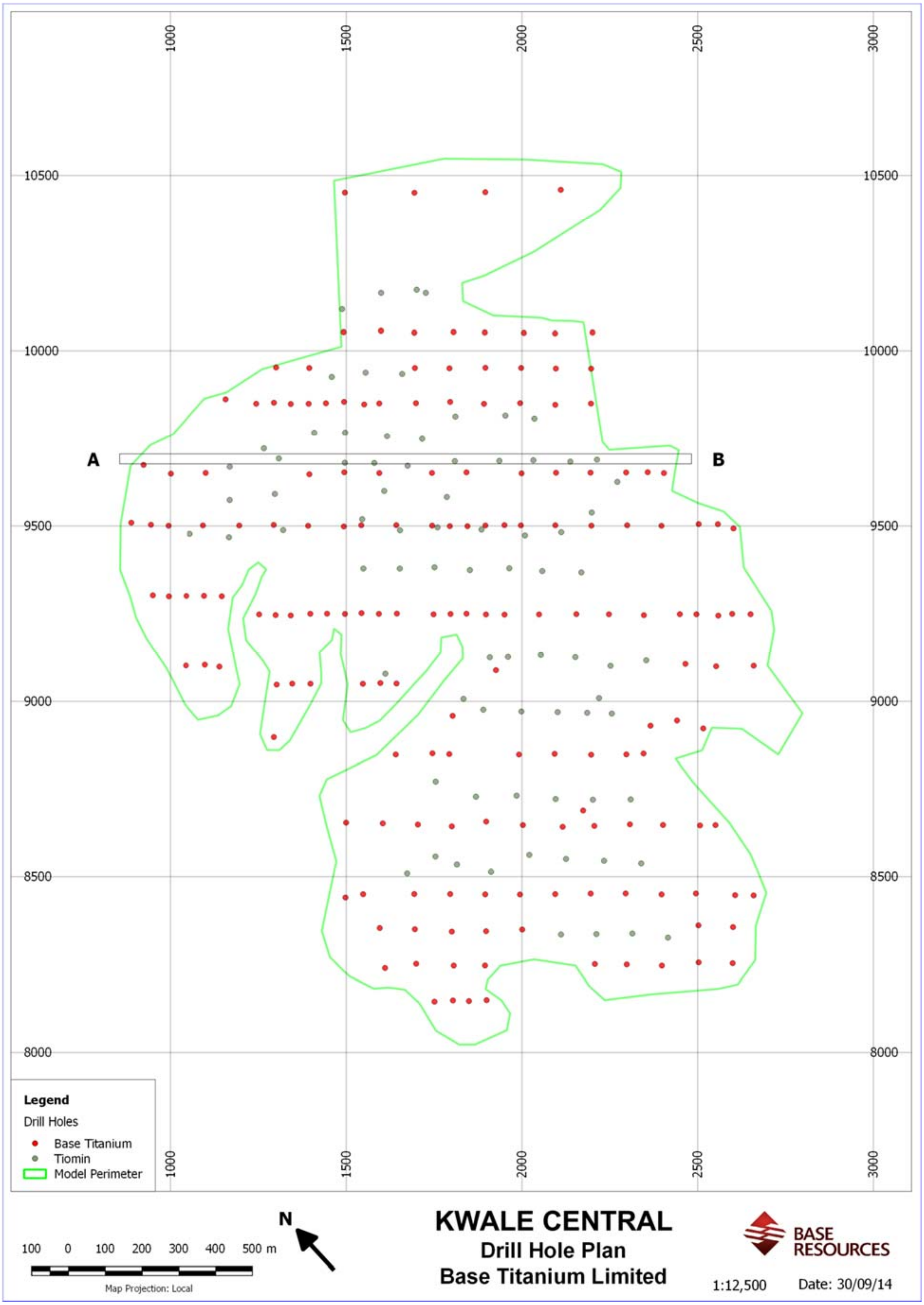

Figure 3: Plan showing Kwale Central Dune, location of drill holes used for resource estimation and resource modelling boundary (local mine grid).

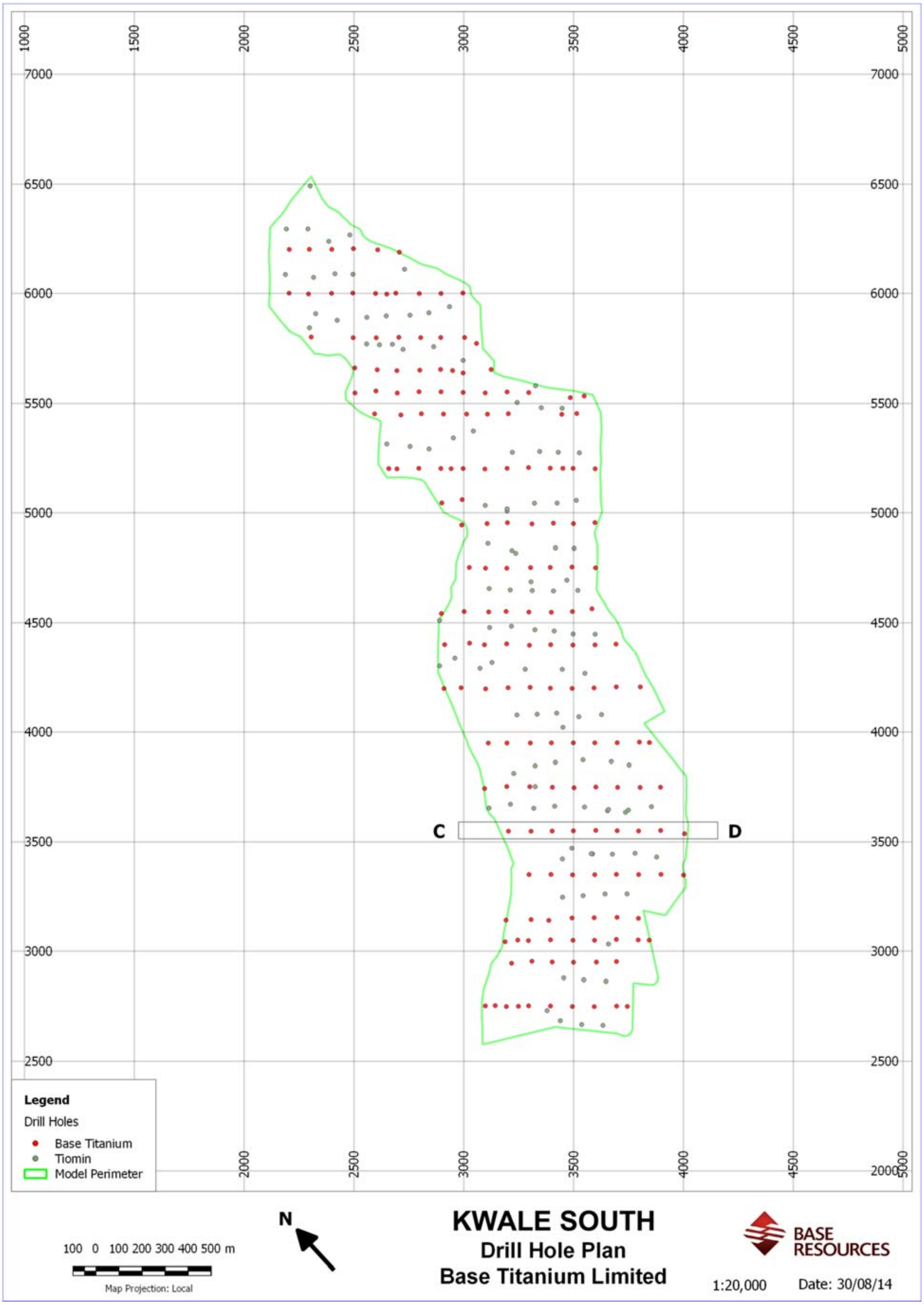

Figure 4: Plan showing Kwale South Dune, location of drill holes used for resource estimation and resource modelling boundary (local mine grid).

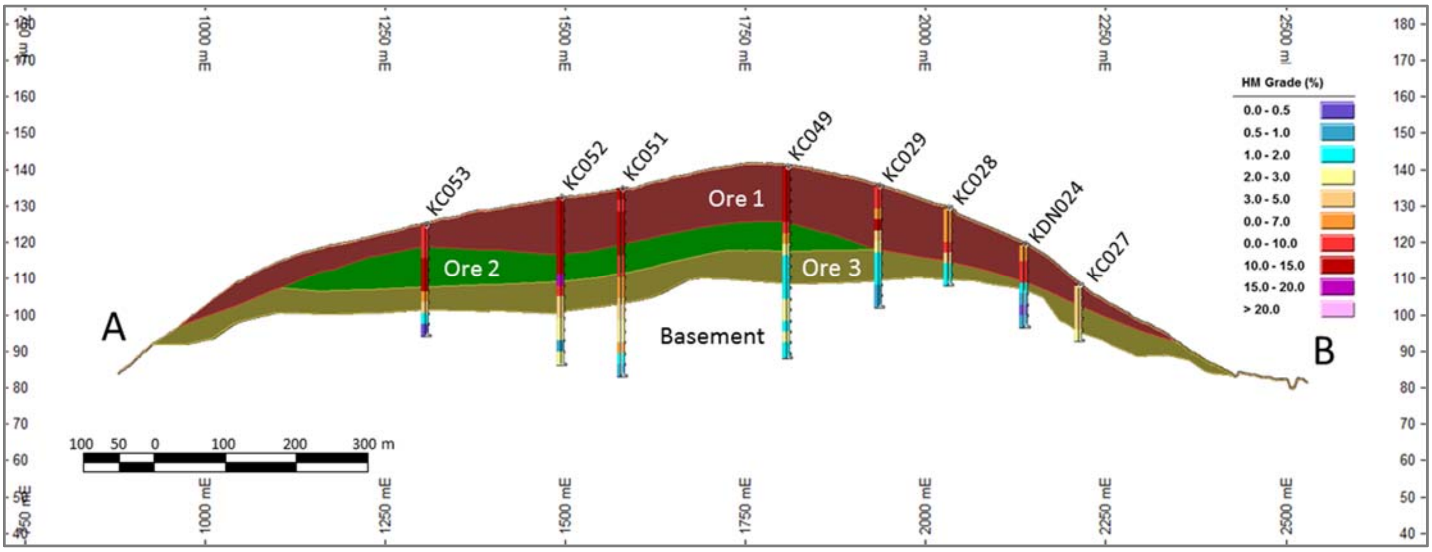

Figure 5: Schematic cross-section of the Kwale Central Dune showing geology and HM grade relationships between geological domains (5 x vertical axis). Refer to Figure 5 for location of cross-section 'A - B'.

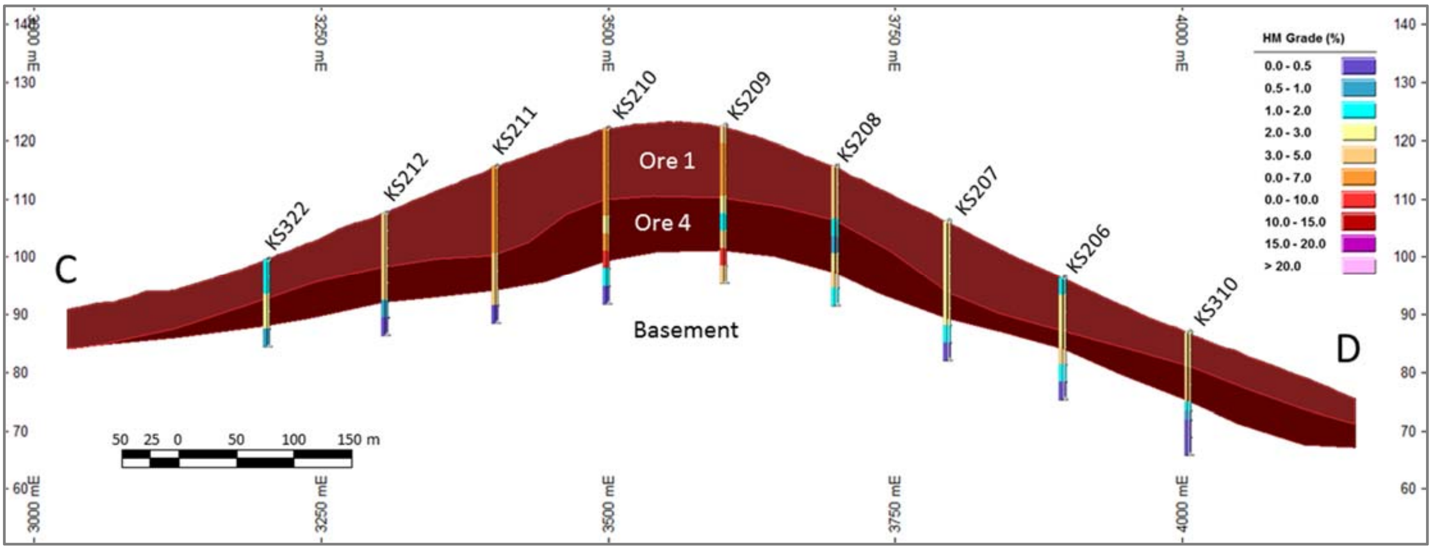

Figure 6: Schematic cross-section of the Kwale South Dune showing geology and HM grade relationships between geological domains (5 x vertical axis). Refer to Figure 6 for location of cross-section 'C - D'.

Requirements applicable to the Ore Reserves Estimate

In addition to the above information used prepare the Mineral Resource estimates, a summary of the further information used to prepare the Ore Reserve estimates as presented in this report is as follows.

The 2015 Kwale Ore Reserves incorporate the updated Mineral Resources model compliant with the JORC Code (2012 edition), as announced on 14 October 2014, mining depletion to 30 June 2015, updated technical studies required for the Kwale Ore Reserves to be reported in accordance with the JORC Code (2012 edition), and production experience gained from operations. Measured Mineral Resources are converted to Proved Ore Reserves and Indicated Mineral Resources are converted to Probable Ore Reserves. Inferred Mineral Resources are excluded from reporting.

Mining commenced at the Kwale Project in October 2013 on the higher grade Central Dune deposit. First production of ilmenite and rutile began in December 2013. zircon production commenced in February 2014, as did the first bulk shipment from Base's owned and operated Likoni port facility.

Taking into consideration experience gained from mining operations at Kwale Central Dune, open pit optimisation studies were conducted using CAE NPV Scheduler software, followed by detailed pit design and scheduling (using GEOVIA Surpac and Minesched software). Operating cost inputs were collated by Base Titanium's cost accounting department, revenue parameters based on industry forecast by TZMI consultants and processing recoveries based on plant design specifications.

The mining operations at Kwale are based on a conventional dozer trap mining unit (DMU), using Caterpillar D11T dozers to feed the DMU. Mining blocks are notionally designed on 200m x 100m dimensions, though the size varies depending on ore grade and thickness to minimise operating cost. For high grade, high thickness ore, the block size is reduced to approximately 160 x 80m. Due to the geometry of the deposit, minimum mining width never drops below the mining block size.

Appropriate modifying factors have been considered in mine design. The mining method employed is non-selective and there is no ore/waste discrimination. Economic cut-off is determined by cashflow method on a cell basis, however sub-economic regions are included as a planned diluting material where they are deemed unable to be selectively mined. Basement material reporting within the pit design is likewise included as a planned dilution material. There has been no further application of mining dilution factors.

Mining recovery considers the operating experience at Kwale to date and includes limiting the maximum depth of ore zone 3 material in the Central Dune to 3m, more heavily penalising the amount of material rejected at the DMU for ore zone 3 and the exclusion of material identified in the Resource Model as hard.

Lower grade areas have been removed from the 2015 Ore Reserve estimation, largely due to limiting the maximum depth of ore zone 3 material in the Central Dune to 3m (refer to Figure 7) and a curtailment of the extension of the economic pit boundary on the Western side of the South Dune (refer to Figure 8).

The ore is processed via screens, thickeners and spirals, as in almost every other mineral sands operation, to produce a concentrate. This is processed using magnetic and conductor separators to produce ilmenite and rutile products. The remaining material is further processed using classifiers, wet tables and cleaned with conductor separators to produce zircon and recover further rutile. This is not an unusual process for mineral sands, but has been tailored to suit the higher than normal proportion of kyanite, which has similar physical properties to zircon.

Base has all agreements in place to allow ongoing mining and processing. The company operates a comprehensive Stakeholder Engagement Plan in concert with a Community Development Plan. Close liaison with stakeholders is maintained through the operation of series of liaison committees representing those affected by the mines presence.

The right to mine the Kwale Project's Central Dune and South Dune deposits was granted to the Kwale Project's previous owner by the government of Kenya under Special Mining Lease No. 23 on 6 July 2004 (Kwale SML). The Kwale SML was assigned to Base Titanium Limited (a wholly owned subsidiary of Base Resources Limited) in July 2010, with consent from the Commissioner of Mines and Geology of the Government of Kenya.

The Kwale SML has a term of 21 years from 6 July 2004, and provides the right to carry out mining operations for the production of ilmenite, rutile and zircon and is renewable on materially the same terms.

All required infrastructure necessary for operation is complete, including construction of the process plant, 132 kV power line, 8km bitumen access road from the highway, camp, ship loading facility and an 8 Gl dam on the Mukurumudzi River has been constructed that will supply most of the water for the project, supplemented by a bore field.

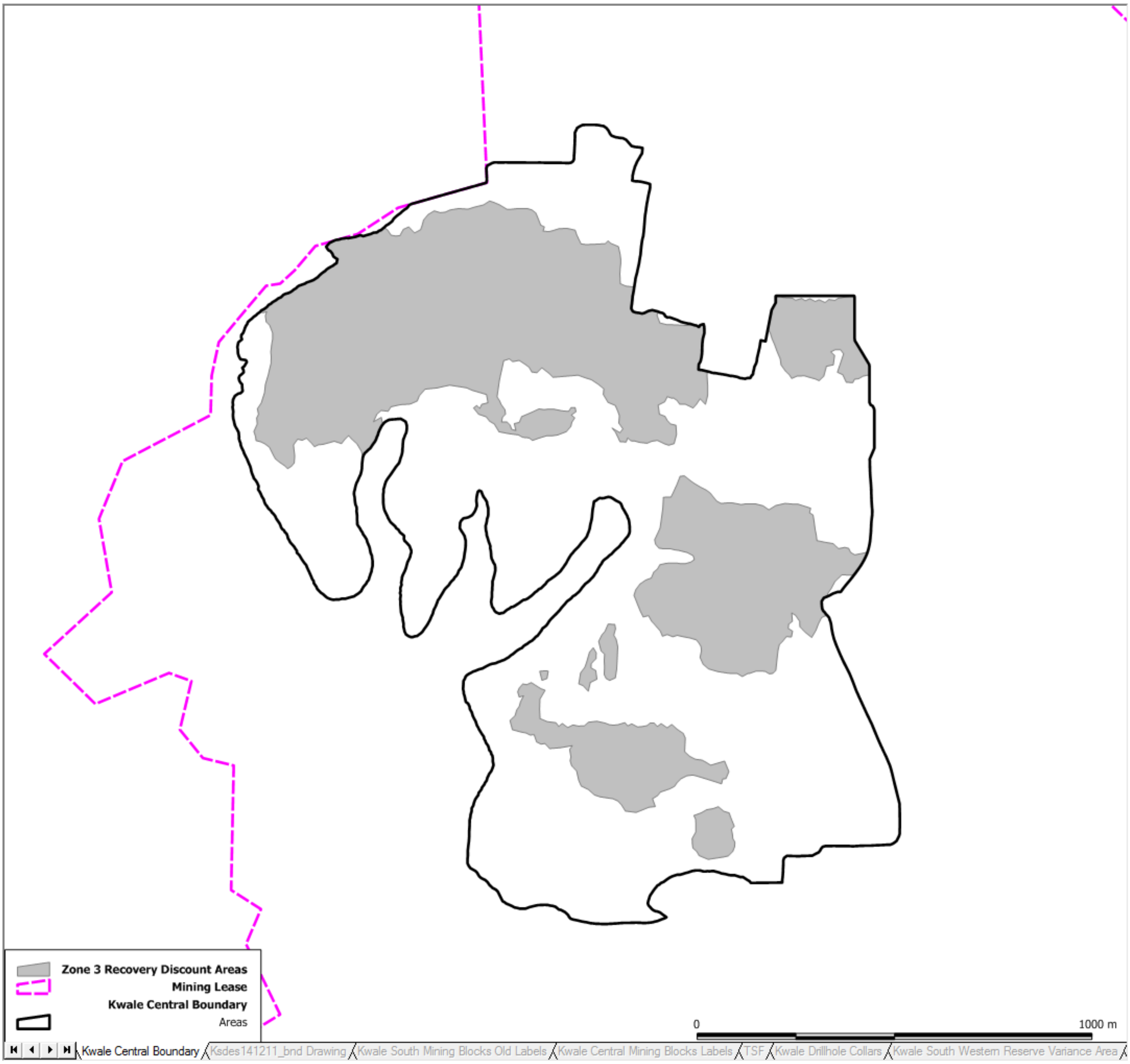

Figure 7: Plan showing Kwale Central Dune deposit and areas where ore zone 3 recovery has been limited to 3m depth (local mine grid) in the 2015 Ore Reserve estimate.

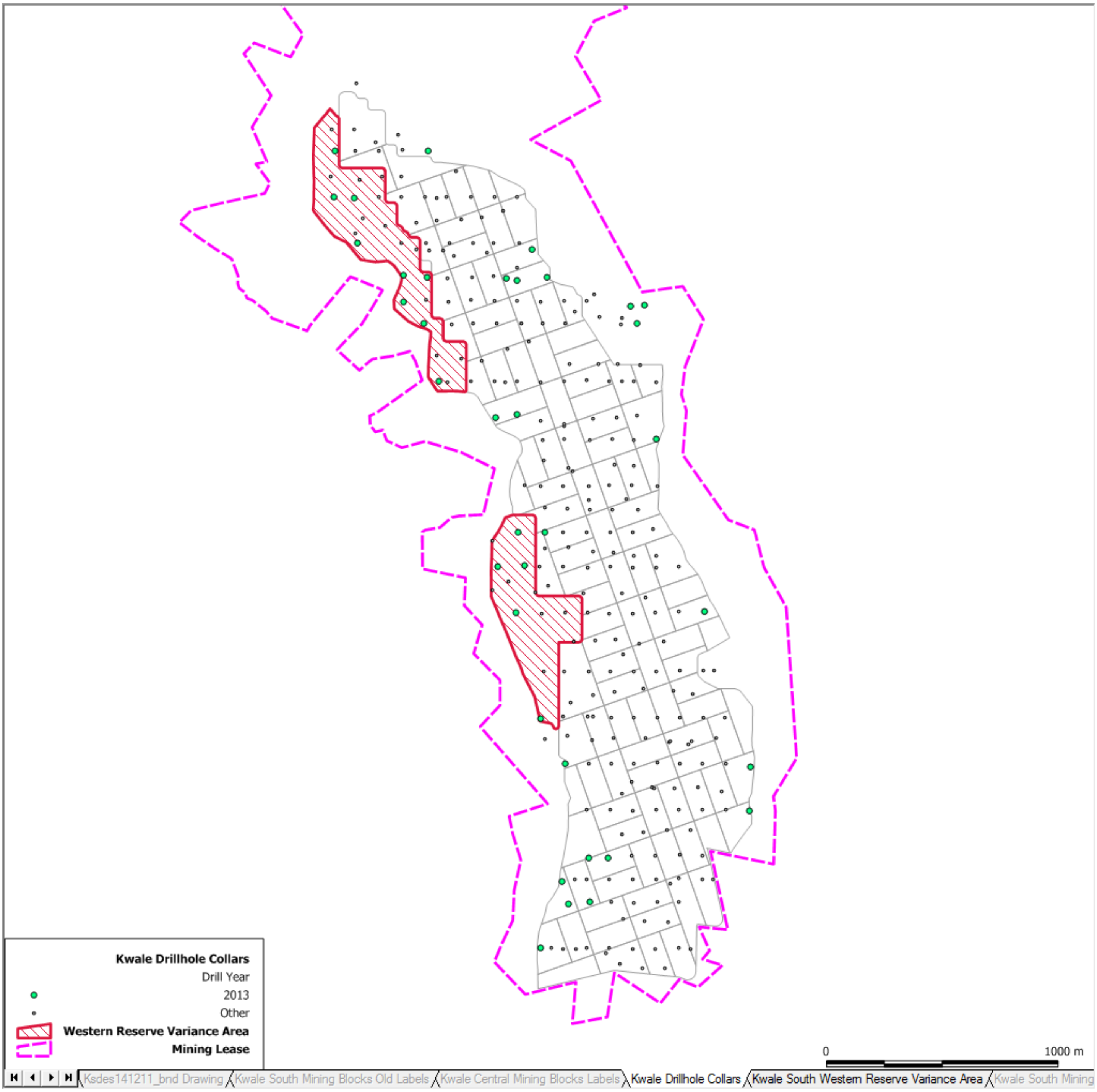

Figure 8: Plan showing Kwale South Dune deposit, location of drill holes, mining blocks and areas in previous Ore Reserve no longer included in the 2015 Ore Reserve estimate (local mine grid).

APPENDIX 1: Table 1, JORC Code 2012

Section 1: Sampling Techniques and Data

Criteria	Explanation	Comment
Sampling techniques	*Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	*The Kwale Central and Kwale South deposits were drilled and sampled using Reverse Circulation Air-Core (RCAC), top drive rotary open hole and hand auger drill holes.*
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	*Duplicate field and laboratory samples were taken at accepted industry standard ratios of approximately 1 in 20 to 1 in 40.*
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	*RCAC drilling was used to obtain a 1 to 3 m samples from which approximately 1.2-2.5 kg was collected using a rotary splitter beneath a cyclone. The sample was then dried, de-slimed (material less than 45 µm removed) and then oversize (material +1mm) was removed.* *Approximately 100g of the resultant sample was then subjected to a heavy mineral (HM) float/sink technique using tetra-bromo-ethane (TBE: SG=2.92-2.96 gcm-3).* *The resulting HM concentrate was then dried and weighed. Some of the HM concentrate samples were grouped together to form mineral assemblage composite samples.* *These mineral assemblage composite samples then undergo a magnetic separation using a Carpco magnet. The magnetic and non-magnetic fractions are then subjected to XRF analysis.* *The XRF analysis is then used to calculate by formula and ratios, the percentage of mineral species that constitute the HM.*

Criteria	Explanation	Comment
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	*RCAC drilling utilising 55mm diameter air-core accounts for approximately 75 per cent of the total drilling for the Kwale Project. All holes are drilled vertical with no downhole surveying to confirm hole direction.* *Top drive Rotary and auger (mechanised and hand) represent the other approximately 25 per cent of total drilling metres*
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	*Base logged sample quality at the rig as either good, moderate or poor, with 'good' meaning not contaminated and of an appropriate sample size (recovery), 'moderate' meaning not contaminated, but sample over or undersized, and 'poor' meaning contaminated or grossly over/undersized.* *Ground conditions were slightly damp, with approximately 25 per cent silt/clay, meaning that best sample quality was achieved by slow penetration with as little water injection as possible.*
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	*Sampling on the drill rig is observed to ensure that rotary splitter remains clean and water is used to flush the cyclone after each drill string (3 m).*
	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.	*No relationship is believed to exist between grade and sample recovery. The high percentage of clay and low hydraulic inflow of groundwater results in a sample size that is well within the expected size range.*
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.*	*Tiomin conducted some logging of colour and sometimes lithology and Base collected detailed qualitative logging of geological characteristics to allow a comprehensive geological interpretation to be carried out.*
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	*Logging of RCAC samples recorded estimated slimes, washing, colour, lithology, dominant grainsize, coarsest grainsize, sorting, induration type, hardness, estimated rock and estimated HM.*
	The total length and percentage of the relevant intersections logged.	*All drill holes were logged in full and approximately 100 per cent of samples were assayed and used in the resource estimation exercise.*

Criteria	Explanation	Comment
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.	*Tiomin collected the sample for the full 3 m and split the sample manually.* *Base rotary split the samples on the drill rig. Samples were split and logged wet however any artesian water that was intersected was noted. Approximately one quarter of the original sample was retained.* *The sample size was approximately 1.2-2.5 kg and considered to be appropriate compared with the grain size of the material being sampled.*
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	*Sample preparation is consistent with industry best practice.*
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	*QA/QC in the form of laboratory and rig duplicates were used to monitor laboratory performance. Laboratory and rig duplicates were submitted at the rate of approximately 1 in 40 each for a combined submission rate of one in 20.*
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	*Analysis of sample duplicates was undertaken by standard geostatistical methodologies to test for bias and to ensure that sample splitting was representative.*
	Whether sample sizes are appropriate to the grain size of the material being sampled.	*Given that the grain size of the material being sampled is sand and approximately 70 to 300 µm, an approximate sample size of 2.5 kg is more than adequate.*

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.*	*Tiomin used a standard flow sheet and detailed QA/QC was undertaken.* *The Base laboratory flow sheet deslimes the sample prior to oven drying to prevent clay minerals being baked onto the HM grains. A separate sample was split and dried to determine moisture content, which was then back calculated to correct the assayed grades.* *Every 20th sample was duplicated. HM was separated from light minerals by a sink/float process using TBE.* *The sample analysis process produced the following assays:* - *heavy mineral ('HM') > 45 µm, < 1 mm, > 2.96 SG* - *slime ('SL') < 45 µm* - *oversize ('OS') > 1 mm* *To maintain QA/QC, two duplicate assaying procedures were implemented.* *Every 20th sample in the laboratory was split and both sub-samples processed through the entire assaying procedure.* *Two samples were collected at the rig at every 20th sample and subjected to the complete assaying process.* *Every day, five standard samples were subjected to moisture content, desliming and oversize determinations to ensure samples were not exhibiting bias.* *The HM mineralogy was determined by compositing samples from the same geological domain or ore zones in order to obtain sufficient HM on which to conduct a mineralogical examination.* *The mineralogy composites were selected based on the geological zones along a line of drilling. This resulted in 1-3 samples from each zone along a line (the main limiting factor to the number of samples being a minimum sample mass of 40 g for HM).*

Criteria	Explanation	Comment
		The heavy mineral from each sample was separated magnetically using a Carpco induced-roll magnet into four fractions: magnetite fraction, ilmenite fraction, magnetic others and non-magnetics. Each was weighed and then assayed by XRF, the results of which were used to estimate proportions of ilmenite, rutile, zircon and other minerals for each sample.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	*All assaying for the Kwale Central and Kwale South deposits was carried out by Western GeoLabs (WGL) with the exception of some check assays which were carried out either Diamantina Laboratories (Diamantina) or Independent Diamond Laboratories (IDL).* *No blanks, standards or duplicates were submitted by Base as part of the drilling program at the Central and South deposits.*
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	*Verification of intersections was limited to checking for variance between logged estimates of grade and the assayed grades. Where there was unexplained variance, samples were re-submitted for assay.*
	The use of twinned holes.	*Twinned holes were used on a limited basis and were used as verification of down hole continuity of geology and assayed grades on a broad basis.*
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	*The Tiomin data was presented as a Microsoft Access database. No comment may be made about Tiomin's data entry procedures.* *Data collected by Base was entered digitally in the field and uploaded to Microsoft Access and managed as a database.*
	Discuss any adjustment to assay data.	*Minor adjustments to assay data was made prior to model interpolation, including removal of obvious outliers and setting of absent data to half the value of assay threshold values.*

Criteria	Explanation	Comment
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.*	*Tiomin surveyed drill holes by differential global positioning system ('DGPS').* *Base used a real time kinematic global positioning system ('RTK GPS').*
	Specification of the grid system used.	*The grid system used is the Arc1960 (zone 37 South). Modelling was conducted in a rotated local mine grid.*
	Quality and adequacy of topographic control.	*A LiDAR survey was conducted in November 2013 and this was used to provide the elevations of the drill holes, and is accurate to +/- 15 cm.*
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.	*Based on the experience of GNJ Consulting the data spacing and distribution through the drill hole programs Is considered adequate for the assigned Mineral Resource classifications. HM grade continuity was verified using variography of the discrete geological domains.*
	Whether sample compositing has been applied.	*No sample compositing or de-compositing has been applied. The majority of sampling was taken on 3 m intervals with some 1 m intervals drilled for geological boundary definition on a vertical basis. Sample length weighting was used during the interpolation process.*
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.*	*Sample orientation is vertical and approximately perpendicular to the dip and strike of the mineralisation resulting in true thickness estimates. Drilling and sampling is carried out on a regular rectangular grid that is broadly aligned and in a ratio consistent with the anisotropy of the orebody.*
	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.	*There is no apparent bias arising from the orientation of the drill holes with respect to the strike and dip of the deposit.*
Sample security	*The measures taken to ensure sample security.*	*All samples are numbered, with samples split and residues stored along with HM sinks.*
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	*GNJ Consulting conducted a review of the Kwale Central deposit Mineral Resource estimate completed by Base in May 2014.*

Section 2: Reporting of Exploration Results

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 resource lies within the granted Special Mining Lease No.23. Mining is currently taking place on the Kwale Central deposit. An ad valorem royalty of 2% is payable to the previous owners, and a 2.5% royalty is payable to the Kenyan government.*
	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.	*There are no known impediments to the security of tenure for the Kwale Project deposits.*
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	*The previous owners of the project (Tiomin Kenya Ltd) undertook exploration over the Kwale Project as detailed above.*
Geology	*Deposit type, geological setting and style of mineralisation.*	*The Kwale Central and South deposits are an aeolian detrital heavy mineral sand deposit style.*
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.*	*There are no drill hole results that are considered material to the understanding of the exploration and resource drill out. Identification of the wide and thick zone of mineralisation is made via multiple intersections of drill holes and to list them all would not give the reader any further clarification of the distribution of mineralisation throughout the deposit.*

Criteria	Explanation	Comment
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	*No grade cutting was undertaken, nor compositing or aggregation of grades made prior or post the grade interpolation into the block model. Selection of the bottom basal contacts of the mineralised domains were made based on discrete logging and grade information collected and assayed by Base and Tiomin.*
	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.	*No metal equivalents were used for reporting of Mineral Resources.*
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	*All drill holes are vertical and perpendicular to the dip and strike of mineralisation and therefore all interceptions are approximately true thickness.*
	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 (eg '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.*	*Refer to main body of report.*

Criteria	Explanation	Comment
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.*	*Reporting of results is restricted to Mineral Resource estimates generated from geological and grade block modelling.*
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.*	*Mineral assemblage composites were taken from composited drill hole samples from similar geological horizons and processed to determine mineralogical species.*
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	*Further work via infill mineral assemblage composite sampling is recommended in order to further the confidence in the current Measured and Indicated Mineral Resource. For the South deposit, minor amounts of edge definition and infill drilling would raise the Indicated portion of the Mineral Resource to a Measured classification.*
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	*Refer to main body of report.*

Section 3: Estimation and Reporting of Mineral Resources

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.*	*The surveying, logging and assay data is stored in a Microsoft Access database.* *The drill logs were recorded electronically at the rig for the Base drilling program, and the hole locations recorded by hand-held GPS at the time of drilling. The hand-held GPS locations were used by the RTK GPS operator to locate the holes.* *Each field of the drill log database was verified against allowable entries and any keying errors corrected.* *At the completion of each hole, an entry was made to a hand-written drilling diary. The diary recorded the hole name, date, depth, number of samples, time of start and finish, a description of the location of the hole in relation to the last hole and other things. Such a diary provides valuable evidence if there is an error in hole naming or surveying.*
	Data validation procedures used.	*Visual and statistical comparison was undertaken to check the validity of results.*
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.	*No site visit was undertaken by GNJ Consulting during the modelling exercise as they are familiar with the deposit and style of mineralisation.*
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	*The geological interpretation was undertaken by GNJ Consulting using all logging and sampling data and observations.*
	Nature of the data used and of any assumptions made.	*Interpretation of geological surfaces was restricted to the main mineralised envelope utilising HM sinks and geology logging.*

Criteria	Explanation	Comment
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	*Any alternative geological interpretations would necessitate a reassignment of mineral composite ID (for mineral assemblage testwork). These are carefully selected to align with discrete geological domains and a re-assignment of those domain boundaries would require new mineral composites to be assayed or for those composite ID's to be removed from the interpolation.*
	The use of geology in guiding and controlling Mineral Resource estimation.	*The Mineral Resource estimate was controlled by the geological / mineralised surfaces and beneath the topographic surface.*
	The factors affecting continuity both of grade and geology.	*The Kwale Project deposits sits on top of an erosional high which is dissected by streams. The extent of geological and mineralised zones is constrained by the erosional surface surrounding the basement high.*
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 Kwale Central deposit is approximately 2 km long, 600-1400m wide and approximately 20-40 m thick on average. Mineralisation is present from surface over the majority of the deposit.* *The Kwale South deposit is approximately 4 km long, 300-900m wide and approximately 12-20 m thick on average. Mineralisation is present from surface over the majority of the deposit.*

Criteria	Explanation	Comment
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 mineral resource estimate was conducted using CAE Mining software (Datamine). Inverse distance weighting techniques were used to interpolate assay grades from drill hole samples into the block model and nearest neighbour techniques were used to interpolate index values and nonnumeric sample identification into the block model.* *The regular dimensions of the drill grid and the anisotropy of the drilling and sampling grid allowed for the use of inverse distance methodologies as no the clustering of samples was required.* *Appropriate and industry standard search ellipses were used to search for data for the interpolation and suitable limitations on the number of samples and the impact of those samples was maintained. An inverse distance weighting of three was used so as not to over smooth the grade interpolations.* *Hard domain boundaries were used and these were defined by the geological surfaces that were interpreted, however a moving or dynamic search ellipse was used to account for variations in the dip, trend and plunge of mineralisation.*
	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 resource estimate was checked against previous resource estimates and these were detailed in the report. The final resource estimate for the Central and South deposits was a similar tenor of tonnage and grade as previous resource estimates.* *Reconciliation of current mining operations validates the resource estimate with respect to production and this will be further improved with the new bulk density formula.*
	The assumptions made regarding recovery of by-products.	*No assumptions were made during the resource estimation as to the recovery of by-products.*
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	*All potentially deleterious elements were included as part of the mineral composite analysis and were included in the modelling report.*

Criteria	Explanation	Comment
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	*The average parent cell size used for the interpolation for the Kwale Central deposit was approximately the standard drill hole spacing in the X and Y direction. Given that the average drill hole spacing was 100 m east-west and 100 m north-south and with 3 m samples the parent cell size was 100 x 100 x 3 m (where the Z or vertical direction of the cell was nominated as the same distance as the sample length).* *For the Kwale South deposit the average parent cell size used was approximately half that for the average drill hole spacing in the north-south and east-west directions and the same as the dominant sample spacing down hole. This resulted in a parent cell size of 50 x 50 x 3 m.*
	Any assumptions behind modelling of selective mining units.	*No assumptions were made regarding the modelling of selective mining units however it is assumed that a form of dry mining will be undertaken and the cell size and the sub cell splitting will allow for an appropriate dry mining ore reserve to be prepared. Any other mining methodology will be more than adequately catered for with the parent cell size that was selected for the modelling exercise for each deposit.*
	Any assumptions about correlation between variables.	*No assumptions were made about correlation between variables.*
	Description of how the geological interpretation was used to control the resource estimates.	*The Mineral Resource estimate was controlled to an extent by the geological / mineralisation and basement surfaces.*
	Discussion of basis for using or not using grade cutting or capping.	*Grade cutting or capping was not used during the interpolation because of the regular nature of sample spacing and the fact that samples were not clustered nor wide spaced to an extent where elevated samples could have a deleterious impact on the resource estimation.* *Sample distributions were reviewed and no extreme outliers were identified either high or low that necessitated any grade cutting or capping.*

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.	*Validation of grade interpolations were done visually In CAE Studio (Datamine) software by loading model and drill hole files and annotating and colouring and using filtering to check for the appropriateness of interpolations.* *Statistical distributions were prepared for model zones from both drill holes and the model to compare the effectiveness of the interpolation. Along strike distributions of section line averages (swath plots) for drill holes and models were also prepared for comparison purposes.*
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	*Tonnages were estimated an assumed dry basis. This is based on test work carried out on the bulk density which was determined on a dry weight basis.*
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	*Cut-off grades for HM were used to prepare the reported resource estimate. These cut-off grades were defined by Base and GNJ Consulting as being based on current operating parameters at the Kwale operation.*
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.*	*No specific mining method is assumed other than potentially the use of dry mining via dozer trap. This allows for a moderately selective mining process while still maintaining bulk economies of scale. To this end no minimum thickness was assumed for the reporting of the mineral resource and sections of the model that were of a discontinuous nature were excluded from reporting.* *Given the thickness of the Kwale Central and South deposits this is not considered to be an issue for dozer trap mining.*

Criteria	Explanation	Comment
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.*	*No metallurgical assumptions were used. All of the grade values of the mineral assemblage are evaluated to be within acceptable limits for economic exploitation.*
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.*	*No assumptions have been made regarding possible waste and process residue however disposal of by-products such as SL, sand and oversize are normally part of capture and disposal back into the mining void for eventual rehabilitation. This also applies to mineral products recovered and waste products recovered from metallurgical processing of heavy mineral.*

Criteria	Explanation	Comment
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.*	*Earlier bulk density formulae for the Kwale Project were a simple single value conversion factor that does not take into account variations in HM, clay and packing factor. This was considered by GNJ Consulting and other workers to be a conservative approach.* *An extensive program of testwork was designed by GNJ Consulting and implemented by Base utilising a procedure to collect Troxler nuclear density meter measurements and HM and SL assays. These were used in the development of an algorithm to estimate the bulk density of in situ material within the deposit based on variable HM and clay (SL).*
	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.	*This sampling was undertaking within the mineralised ore zones of the Kwale Central deposit during mining operations and representative sampling was undertaken for those domains.* *It is considered appropriate to utilise the new bulk density algorithm for the Kwale South deposit given that the geological units are closely related and part of the same sequence (given the close local proximity this is also a reasonable assumption).*
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	*Assumptions were made regarding packing factor of sand, bulk density of HM, sand and clay in the development of the bulk density algorithm. The algorithm was refined using nuclear density meter measurement of the soil profile being sampled.* *Ongoing testwork is planned to take place in order to further refine and build a database of results to support the ongoing use of the bulk density algorithm.* *Once mining commences on the Kwale South deposit bulk density testwork will continue to be undertaken.* *The use of a bulk density algorithm is considered industry standard practice for the estimation of mineral sands Mineral Resources.*

Criteria	Explanation	Comment
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	*The resource classification for the Kwale Central and South deposits was based on the following criteria: drill hole spacing; experimental semi-variograms; the quality of QA/QC processes; and the distribution of mineral assemblage composites.*
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	*The classification of the Measured and Indicated Mineral Resources for the Kwale Central and Kwale South deposits were supported by all of the criteria as noted above.*
	Whether the result appropriately reflects the Competent Person's view of the deposit.	*As a Competent Person, GNJ Consulting Principal Greg Jones 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 the Mineral Resource estimate for the Kwale Central and Kwale South deposits has been undertaken at this point in time.*
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.*	*There was no geostatistical process undertaken for the interpolation (such as variography or conditional simulation) during the resource estimation of the Kwale Central and Kwale South deposits.* *However, qualitative assessment of the mineral resource estimate along with comparison with previous resource estimates (within a tolerance of +/- 5 per cent) points to the robustness of this particular resource estimation exercise.*
	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.	

Criteria	Explanation	Comment
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	*At the time of the resource estimation, minimal production data was available as the Kwale Central operation had only been producing for approximately 6 to 8 months. During this time however it was apparent that material tonnes had been underestimated from the block model compared with production and this was likely to be caused by the low bulk density conversion factor (1.7 gcm-3) used for the previous resource estimates.* *It is anticipated that the new bulk density algorithm which generates an average bulk density approximately 8 to 10 per cent higher (between 1.8 and 1.9 gcm-3) will align model estimates more closely with that of production results.*

Section 4: Estimation and Reporting of Ore Reserves

Criteria	Explanation	Comment
Mineral Resource estimate for conversion to Ore Reserves	*Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	*Mineral Resource Estimate by GNJ Consulting 2014 – the 2014 Mineral Resource Update.* *Mineral Resources are inclusive of the Ore Reserves.*
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.*	*One of the competent persons worked on site at the time the Ore Reserve estimate was completed and visited the pit several times per week.*
Study status	*The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	*The most recent study prior to operations commencing was a detailed feasibility study.* *The project is now operational and study inputs are based on operational costs, design and mine plan.*
Cut-off parameters	*The basis of the cut-off grade(s) or quality parameters applied.*	*Cut-off is economic by maximum cash flow method. A value model is constructed that assigns costs and revenue after application of appropriate process recoveries.* *There is no ore/waste definition due to the mining method employed*

Criteria	Explanation	Comment
Mining factors or assumptions	*The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* *The mining dilution factors used.* *The mining recovery factors used.* *Any minimum mining widths used.* *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* *The infrastructure requirements of the selected mining methods.*	*Mineral Resources are converted to Ore Reserves by pit optimization as a guide for detailed design and scheduling.* *The project is currently being mined using a dozer trap method.* *The pit slopes are generally about 50 degrees in ore zone 1 and 45 degrees in ore zone 2 and 3 and the study uses more conservative slope angles of 35 degrees.* *The ore is mined in blocks measuring between 160 x 60 meters to 200 x 100 meters. The geometry of the deposit is large enough that minimum mining width never drops below these block sizes.* *No inferred material is included in the study* *There is no ore/waste discrimination and sub-economic material that cannot be selectively mined is included as planned dilution in the ore feed* *Mining Recovery of ore zone 3 material is discounted by truncating design to no more than 3m of this material.* *Material with Hardness = 5 is discounted entirely in design* *Infrastructure is in place and operational*

Criteria	Explanation	Comment
Metallurgical factors or assumptions	*The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* *Whether the metallurgical process is well-tested technology or novel in nature.* *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* *Any assumptions or allowances made for deleterious elements.* *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	*The ore is processed via screens, thickeners and spirals as in almost every other mineral sands operation to produce a concentrate. This is processed using magnetic and conductor separators to produce ilmenite and rutile products. The remaining material is further processed using classifiers, wet tables and cleaned with conductor separators to produce zircon and recover some more rutile.* *This is not an unusual process for mineral sands, but has been tailored to suit the higher than normal proportion of kyanite, which has similar physical properties to zircon.* *The plant design was based on the results of metallurgical test work conducted as part of the definitive feasibility study.* *Test work on site is ongoing to find ways to improve zircon and rutile recovery.* *Wet plant design recovery is 95.7%, 93.3%, 96.4% for Ilmenite, Rutile and Zircon respectively* *Dry plant design recovery is 99%, 97%, 77.8% for Ilmenite, Rutile and Zircon respectively*
Environmental	*The status of studies of potential environmental impacts of the mining and processing operation.* *Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	*All environmental approvals are in place and there is also a monitoring and reporting process.* *There is no waste material.* *There are two tailings streams: sand and clay. The sand tails are clean sand having been washed in concentrator. The clay tails are flocculated and thickened prior to pumping.* *There is an approved tailing storage facility, which is a dam with walls constructed from sand tails to contain the clay tails.*

Criteria	Explanation	Comment
Infrastructure	*The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	*A 132 kV power line has been erected and supplies electricity to the site. An 8km bitumen access road from the highway has been constructed. There is a camp that was built to house construction employees that is being used to house operational shift workers. Base constructed a dedicated storage shed ship loading facility to export bulk products; containerised product is shipped through Mombasa Port's container terminal. An 8 Gl dam on the Mukurumudzi River has been constructed to supply most of the water for the project, supplemented by a bore field.*
Costs	*The derivation of, or assumptions made, regarding projected capital costs in the study.* *The methodology used to estimate operating costs.* *Allowances made for the content of deleterious elements.* *The source of exchange rates used in the study.* *Derivation of transportation charges.* *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* *The allowances made for royalties payable, both Government and private.*	*Capital has been expended and is sunk.* *Operating costs were collated by the finance department.* *Deleterious minerals kyanite and monazite are present. A large section of the plant is devoted to separating kyanite from zircon. Monazite is present in small amounts and it is mixed with the slime tails and disposed of.* *All Revenue and Costs inputs are in USD.* *The cost of transportation from the plant to the port is in accordance with the transport contract.* *Treatment costs were derived from the actual costs from August to October 2014.* *Royalties of 2.5% and 2% are payable to the Kenyan government and the previous owners respectively, though for this study a more conservative 7% has been used.*

Criteria	Explanation	Comment
Revenue factors	*The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	*Sales price forecasts current at the time of the Ore Reserve estimate were used.* *Product price forecasts are supplied by TZMI, industry consultants.*
Market assessment	*The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* *A customer and competitor analysis along with the identification of likely market windows for the product.* *Price and volume forecasts and the basis for these forecasts.* *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	*Demand for ilmenite, rutile and zircon is linked to movements in world GDP. Historically demand has grown on average at 3% per annum. Base engages TZMI to conduct regular market assessments. Whilst details are confidential, the latest report indicates that prices are expected to remain flat for at least 12 months.*
Economic	*The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	*As an operating mine with sunk construction cost, no feasibility study will be undertaken as part of this ore reserve estimation. However, the inputs to the optimization process are the price forecasts of TZMI and operating cost data from Base Titanium's finance department.* *Economic analysis is based on discounted operating surplus (at 10% discount rate) and sensitivities have been conducted on Revenue, Operating Fixed and Variable costs.*

Criteria	Explanation	Comment
Social	*The status of agreements with key stakeholders and matters leading to social licence to operate.*	*Base has all agreements in place to allow ongoing mining and processing. The company operates a comprehensive Stakeholder Engagement Plan in concert with a Community Development Plan. Close liaison with stakeholders is maintained through the operation of series of liaison committees representing those affected by the mines presence.*
Other	*To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* *Any identified material naturally occurring risks.* *The status of material legal agreements and marketing arrangements.* *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study.* *Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	*The material legal agreements relating to the Kwale Mine are the Special Mining Lease No.23 and Investment Agreement with the Government of Kenya. Both legal instruments remain valid, legally binding and enforceable as warranted by the Government most recently in September 2012 in a direct agreement with the company and the Lenders.*
Classification	*The basis for the classification of the Ore Reserves into varying confidence categories.* *Whether the result appropriately reflects the Competent Person's view of the deposit.* *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	*Based on the geological resource estimation categories: measured = proved, indicated = probable, inferred = excluded from reserve estimation.*

Criteria	Explanation	Comment
Audits or reviews	*The results of any audits or reviews of Ore Reserve estimates.*	*No audit or review of this Ore Reserve estimate has been undertaken.*
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which 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.* *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	*Experience of mining at Kwale indicates that the lowest geological domain (ore zone 3) has exaggerated thickness and grade of HM in the model when compared to reality. Because of this experience, the thickness of ore zone 3 has been limited in this reserve estimate to a maximum of 3m.* *The statement refers to global estimates* *No particular modifying factors have a material impact on Ore Reserve viability, even the limiting of ore zone 3 to 3m only removes low grade marginal material. The bulk of the operating margin is derived from the overlying geological zones: ore zone 1 and ore zone 2.*

GLOSSARY

Mineral Resource	A Mineral Resource is 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.
Measured Resource	A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.
Inferred Resource	An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
Indicated Resource	An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.
Ore Reserve	An Ore Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource.
Competent Person	The JORC Code requires that a Competent Person must be a Member or Fellow of The Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a 'Recognised Professional Organisation'. A Competent Person must have a minimum of five years' experience working with the style of mineralisation or type of deposit under consideration and relevant to the activity which that person is undertaking.
JORC	The Joint Ore Reserves Committee: The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code'), as published by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.
Variography	A geostatistical method that investigates the spatial variability and dependence of grade within a deposit. This may also include a directional analysis.
LIDAR survey	LIDAR is a remote sensing technology that measures distance by illuminating a target with a laser and analysing the reflected light.
DTM	Digital Terrain Model
XRF analysis	A spectroscopic method used to determine the chemical composition of a material through analysis of secondary X-ray emissions, generated by excitation of a sample with primary X-rays that are characteristic of a particular element.
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.

CORPORATE PROFILE

Base Resources Limited   ABN 88 125 546 910

DIRECTORS

Keith Spence	Non-Executive Chairman
Tim Carstens	Managing Director
Colin Bwye	Executive Director
Sam Willis	Non-Executive Director
Michael Anderson	Non-Executive Director
Michael Stirzaker	Non-Executive Director
Malcolm Macpherson	Non-Executive Director

COMPANY SECRETARY

Chadwick Poletti

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