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Quarterly Activities Report for the Period Ended 31 March 2015



Production Summary	Quarter ended 31 March 2015	Quarter ended 31 December 2014	Quarter ended 31 March 2014	Year to date 31 March 2015	Year to date 31 March 2014
Mining					
Tonnes	362,197	398,067	151,638	362,197	151,638
Grade	46.24%	51.29%	53.17%	46.24%	53.17%
- Garnet	25.79%	30.05%	28.31%	25.79%	28.31%
- Ilmenite	15.82%	16.95%	18.23%	15.82%	18.23%
- Zircon	4.06%	3.81%	6.02%	4.06%	6.02%
- Rutile	0.57%	0.46%	0.61%	0.57%	0.61%
SCP Production & Processing					
Tonnes processed	147,913	154,031	118,806	147,913	118,806
Tonnes produced					
- Garnet concentrate	75,125	72,277	40,036	75,125	40,036
- Ilmenite concentrate	32,121	30,625	20,620	32,121	20,620
- Zircon/Rutile concentrate	11,723	11,490	8,190	11,723	8,190
% zircon in concentrate	72.78%	73.17%	79.87%	72.78%	79.87%
% rutile in concentrate	12.83%	12.32%	4.22%	12.83%	4.22%
Sales (wmt)					
- Zircon/Rutile concentrate	12,792	10,608	6,916	12,792	6,916
- Ilmenite concentrate	-	5,418	-	-	-
- Garnet concentrate	162,466	39,998	-	162,466	-

Xolobeni Project

- One of the world's largest undeveloped mineral sands resources.
- Mining Right Application submitted on 4 March 2015.
- Consultants continue to scope work for a definitive bankable feasibility study.
- Awaiting decision in relation to Kwanyana Prospecting Permit.

Corporate and Cash

Securities: 404m shares and 11m options.

Maiden Profit of US\$8.38m for 2014.

Cash: Cash decreased by US\$2.1m to US\$2.1m as at 31 March 2015, plus US\$6.4m in trade and other receivables

Debt: Wogen Pre-Financing Facility fully repaid.

WesBank provided ZAR45m (US\$3.8m) equipment finance facility, with ZAR28m (US\$2.3m) utilised for equipment re-financing.

Working Capital Facility drawn to US\$3m was extended by supportive shareholders to 30 September 2015.

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TORMIN – OPERATIONAL PERFORMANCE

Safety, Environment & Community

There were no LTI's reported for the quarter.

The Company has now achieved 896,246 hours without a lost time injury (LTI) since October 2013.

A revised Environmental Management Program ("EMP") was submitted to the Department of Mining and Resources ("DMR") on 5 March 2015. Various amendments followed and the final submission was accepted by the Department on 27 March 2015.

The EMP Amendment was granted by the DMR subsequent to the quarter end on 14 April 2015. The Company may now proceed to finalise the rezoning of the additional area granted under the EMP with the Matzikama Municipality and finalise all other authorizations to access the additional land area.

The Company can immediately initiate the Garnet Stripping Plant ("GSP") expansion and the shorter route pumping tailings return lines without the above mentioned approvals impeding on progress.

Mining

During the March quarter 362,167 tonnes (2% below Budget) of Run of Mine ("ROM") ore grading 46.24% Valuable Heavy Mineral ("VHM") was mined consisting of a garnet grade 25.79%, ilmenite grade 15.82% and zircon grade 4.06%

The Company commenced initial Mining in the Southern High Grade area of the Mining Lease.

This Southern and Northern areas had previously been un-mined due to a final assessment of their Conservation Value, which was established during the Quarter.

Access to these previously quarantined areas gives the Company approximately another 3kms of Mining Area.

Mining of the Southern Area which consists of VHM Grades containing up to 12% Zircon was curtailed with a view to conserving this material for blending with lower grade and replenished ROM mining Ore blocks.

Access roads to the Northern Beaches of the lease have also become available due to recent Departmental authorisations. These Northern Blocks have a higher concentration of Garnet and mining of them may be delayed until the GSP is installed in the latter part of the year.

The Company is expecting a significant reduction in mining machinery hours due to the completion of the Tailings Return System ("TRS") to the beach being installed during the latter part of the quarter. This will save significant costs incurred in the cartage of tails.

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The granting of the EMP 102 Amendment will allow the removal and relocation to the plant site of remaining produced ilmenite concentrates previously stockpiled on the beach, and which will now mitigate any stockpile losses arising from tidal erosion.

The combined effect of previously removing stockpiled garnet and current ilmenite stockpiles from the beach will result in processing efficiency due to the stockpiles creating an over-concentration of garnet in the ROM Ore Feed.

Mining costs were aligned with budget targets on a unit rate basis for the quarter.

The Company received proposals from Jan Du Nul, one of the World's largest dredging companies on methodology for mining the shore break area between the low tide and the wave formation. The studies indicate that material beyond the wave crest formation seaward can be mined by conventional dredging methods and deposited on land.

A proposal was also received by IHC, to investigate mining studies of the shore break area. The study will commence in Quarter 2, 2015.

In addition proposals for sampling the areas seaward of the low tide covered by the Company's Prospecting Permits have also been solicited.

Primary purpose of this study is to determine the deposition of VHM, which is known and develop a sampling and exploration technique which will allow a Resource Categorization.

Processing

Heavy Mineral Concentrate ("HMC") production through the two Primary Beach Concentrators ("PBC") produced 99,712 tonnes for the March quarter. This was 33% below budget. The balance of Secondary Concentrator Plant ("SCP") feed of some 48,000 tonnes was sourced as direct feed from high grade ROM material, which required no primary concentration.

The reduced production was primarily due to a planned three day shutdown for the installation of the TRS to the beach.

The Company has installed two tailings return lines. The first line discharges 1.3kms in a southerly direction from the Processing Plant and the second discharges directly in front of the SCP. The shorter route will come into full operation in the current month now that EMP approval has been obtained.

Furthermore, the installation of a new seawater intake system and pickup point will allow a more consistent flow of water into the process water dams. Combined with the tailings return system and uninterrupted process water supply, the Company is expecting an improvement in the quality of finished non-mag concentrates produced.

The Company processed 147,913 tonnes through the SCP in the March quarter which was on budget.

SCP plant recoveries overall were in line with or above budget targets for all valuable heavy minerals.

Production of final Ilmenite, Garnet and Non-Magnetic Zircon/Rutile concentrates was below budget due to the planned three day shutdown.

Zircon/rutile concentrate production for the quarter was 11,723 tonnes versus budget of 13,719 tonnes. Contained zircon in the concentrate was in line with budget target at 72.78% zircon, whilst rutile was above budget at 12.83% contained rutile in concentrate.

For the March quarter, ilmenite concentrate production was 32,121 tonnes versus budget of 28,612 tonnes, and garnet concentrate production was 75,125 tonnes versus budget of 72,050 tonnes.

Total processing unit cash costs for the quarter were above budget due to lower non-magnetic concentrate production.

Tormin Sales and Marketing

Sales revenue for the March quarter was on budget at US\$18.2m.

Tormin shipments / sales for the March quarter were:

- 12,792 tonnes of zircon / rutile concentrate to Wogen Pacific Ltd ("Wogen") under the terms of a long term offtake agreement.
- 79,994 tonnes of garnet concentrate shipped under an offtake agreement with Garnet International Resources Pty Ltd ("GMA").
- 82,472 tonnes of garnet concentrate stockpiled under an offtake agreement with GMA.

The Company continues to explore further options in relation to value adding by final processing all non-magnetic zircon / rutile concentrate, as well as ilmenite concentrate through a standalone Magnetic Separation Plant ("MSP"), both within South Africa and abroad.

During the Quarter, the Company has received various Quality Claims for certain shipments of its Zircon / Rutile Concentrate. The company is confident of its processes, in terms of sampling and analysis.

General product Pricing and Quality Claim Terms remain a topic of discussion with the Company's offtake partner Wogen and its customer base.

The Company continues to ensure it obtains the most economic prices for its product on the best possible terms including protection against spurious customer claims.

Garnet concentrate production will continue to be supplied and sold under the contract with GMA and stockpiled within South Africa. The garnet concentrate will then be shipped at GMA's discretion.

The Company continues to move toward finalizing Ilmenite concentrate sales within the first half of 2015.

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Tormin Resource and Offshore Prospecting Activities

The Company reviewed its annual Resource assessment during the quarter.

The Company commissioned the Tormin Mineral Sands Project ("Tormin" or "Tormin Project") in January 2014, and has previously reported that a prospecting right for the offshore area immediately adjacent to Tormin was awarded towards the end of 2012. The offshore prospecting area covers an area of 12km² and extends 1km out to sea from the low-water mark and covers the full length of the existing 12km Tormin tenement.

The established geology of the region confirms that the source of the Tormin beach deposit is eroded paleo strandlines and Heavy Mineral-rich offshore zones. The dynamic tides and wave action serves to replenish the beaches by transporting sediment from deeper waters and concentrating the Heavy Mineral Sands ("HMS") below the high water mark.

To date, 99% of the beach mined has replenished through normal tidal movements.

Approximately 1.075m tonnes have been mined at the Tormin Project to the date of the review (31 December 2014), although included in those tonnages are areas which have been mined up to five times.

The nature of the resource replenishment is typical of modern day beach placer deposits found along the West Coast of South Africa and the Southeastern Tamil Nadu coast of India. The Company is unable to report a replenishment grade or quantity under the 2012 JORC code. Resource replenishment is occurring as evident by mining of the same areas, but further data is needed to predict the long term trend of replenishment.

The Company continues to conduct grade reconciliation and sample grading on a daily basis as part of the mining operation to correlate between stated Resource and actual Resource in terms of quantity, grade and replenishment.

The Company has completed its first year of mining and processing at its Tormin Project and further mining and production from replenished areas will provide greater detail and certainty on the validity of the replenished areas in the current year.

A reconciliation of the Tormin Resource is as follows:

Category	Resource (Million Tonnes)	Total (% HM)	Ilmenite (%HM)	Zircon (%HM)	Rutile (%HM)	Garnet (%HM)
Indicated Resource – Dec 2013	2.70	49.40%	10.60%	3.40%	0.70%	25.30%
Tonnes Mined	1.07	55.30%	16.90%	5.02%	0.65%	32.55%
Inferred Resource – Dec 2014	2.70	38.14%	10.05%	2.21%	0.46%	25.22%

Note: individual minerals are reported as a percentage of the total resource.

The remaining grade is based on 108 samples from exploration pits in unmined areas as well as 25 pit/trench samples from mined areas that have undergone replenishment.

The inferred resource is based on the reasonable prospect for the economic extraction of the material, as has occurred during the past year.

Re-mining of the replenished Ore Blocks has been successfully done on the Tormin Mining Area up to 5 times. The current replenishment dataset is of insufficient size and timeframe to allow this potential replenished resource to be classified and is therefore not JORC compliant.

Whilst initial exploration work has been undertaken on the replenished areas, the fact remains that the beach constantly changes with both tidal movement and mining.

The Company completed all Regulatory requirements in relation to its Prospecting Right Application which extends its prospecting area 10km seaward—or a total of 120km².

A decision is expected relevant to the granting of the Prospecting Permit in Quarter 2, 2015.

CORPORATE

The Company reported for the year ended 31 December 2014. The Tormin Mineral Sands Project (“Tormin” or the “Tormin Project”) was successfully commissioned in January 2014 and has completed its first 12 months of operations which have proven to be a success, underpinning a Group profit after income tax benefit of US\$8.38 million.

The Blastrite matter has been deferred to oral evidence to be heard in June 2015. The Company will proceed to strenuously oppose the application. The existing garnet offtake agreement with GMA and the supply of garnet concentrate pursuant to that agreement continues unabated.

The Company is in discussions with downstream processing plant operators to develop joint venture operating arrangements with a view to optimising the valuable heavy mineral component of its concentrate.

The Company is still considering financing options for its impending expansion initiatives relating to the GSP and a Tailings Scavenger Spiral Circuit (“TSP”). The major Shareholders who previously provided a working capital facility have extended the term of the loan to 30 September 2015 to allow the Company to explore all options with traditional financiers.

The Company obtained a ZAR45m (US\$3.75m) equipment financing during the quarter with WesBank (a division of FirstRand Bank – one of the major South African banks), and utilised ZAR28m (US\$2.33m) for yellow equipment re-financing.

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The remaining debt on the Pre-Financing Agreement with Wogen was repaid in March 2015.

Cash Flow

At 31 March 2015, the Company had US\$2.1m in cash, a decrease of US\$2.1m from the previous quarter. The decrease in cash holdings arose primarily due to payment terms on garnet stockpile sales, with trade and other receivables at 31 December 2014 of US\$3.8m increasing to US\$7.1m as at 31 March 2015.

Xolobeni

The Company submitted a Mining Right Application ("MRA") on 4 March 2015 which was duly acknowledged by the DMR. The Company has mandated and mobilised the respective consultants to undertake the next stage of the public participation process with a view to registering all interested and effected parties' comments. The Company then has 44 days to compile and submit an Environmental Scoping Study from the date of the MRA acceptance by the DMR.

Whilst timelines are tight, the Company is confident the MRA can be managed in accordance with the Act and its requirements.

Outlook

The Company has commenced Phase 1 of the TSP and Phase 2 PBC and SCP Scavenger Circuits. Project management has been established and is operational.

The TSP involves the re-processing of the tailings stream which is currently discharged back onto the beach and will result in another approximately 180,000 tonnes of HMC product being available for treatment through the SCP.

The GSP remains subject to financing and approval. Capital estimates for the GSP, including an upgraded ilmenite circuit, are approximately US\$3.5m with a six month project delivery timeframe.

Sales guidance for the coming quarter should be in the order of 11,000 to 12,000 tonnes of zircon/rutile concentrate. Sales of zircon/rutile concentrate will depend on the pricing received from customers and the Company remains in discussions with Wogen to ensure it receives the best possible price for its product.

The Company is in a position to take advantage of any incremental increase in zircon pricing and has significant upside in the sale of ilmenite concentrate.

Securities on Issue

Issued securities at quarter-end comprise:

- 404,941,571 fully paid ordinary shares listed on the ASX.
- 10,000,000 Unlisted Options exercisable at \$0.20 on or before 31 December 2015.
- 1,000,000 Unlisted Options exercisable at \$0.35 on or before 31 December 2015.

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Terms and Explanations

EMP Environmental Management Program

DMR Department of Mining and Resources

GSP Garnet Stripping Plant

HM Heavy Mineral

LTI Lost Time Injury

MRA Mining Right Application

PBC Primary Beach Concentrator

ROM Run of Mine

SCP Secondary Concentrator Plant

TRS Tailings Return System

TSP Tailings Scavenger Plant

VHM Valuable Heavy Mineral

WMT Wet Metric Tonnes

APPENDIX 1 - RESOURCE STATEMENT

The Tormin and Xolobeni Mineral Resources based on mined material reconciliation as at 31 December 2014 for the Tormin Resource is as follows – note individual minerals reported as a percentage of the total heavy mineral concentration.

The mineral resource estimations previously reported under JORC 2004 for the Tormin Resource, are re-presented with updated disclosure of Table 1 from JORC 2012.

PROJECT	Category	Ore Mt	HM %	Ilmenite (% in HM)	Zircon (% in HM)	Rutile (% in HM)	Garnet (% in HM)
Tormin	Inferred	2.7	38.14%	26.35%	5.8%	1.22%	66.11%
Xolobeni	Measured	224	5.7%	54.5%			
	Indicated	104	4.1%	53.7%			
	Inferred	18	2.3%	69.6%			
		346.0	5.0%	54.0%			
Total MRC		348.7	5.3%	51.7%			

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APPENDIX 2 – LISTING OF TENEMENTS

The following information is provided pursuant to ASX Listing Rules 5.3.3:

Country	Location	Number	Type of Right	Status	Change since last Quarter	Beneficial Interest
South Africa	Tormin	(WC)30/5/1/2/2/163MR	Mining	Approved	N/A	100%
	Tormin	(WC)30/5/1/2/2/162MR	Mining	Approved	N/A	100%
	Tormin	(WC)30/5/1/1/2/10036PR	Prospecting	Approved	N/A	100%
	Tormin	(WC)30/5/1/1/2/10199PR	Prospecting	Under Application	N/A	100%
	Xolobeni	EC30/5/1/1/2/6PR	Prospecting	Approved	N/A	100%
	Kwanyana	EC30/5/1/1/2/10025PR	Prospecting	Under Application	N/A	100%

The Company has no interests held in any farm-in or farm-out agreements.

Competent Persons Statement

The information in this announcement which relates to Exploration Results, Mineral Resources or Ore Reserves for Xolobeni is based on information compiled by Mr Allen Maynard, who is a Member of the Australian Institute of Geosciences ("AIG"), a Corporate Member of the Australasian Institute of Mining & Metallurgy ("AusIMM") and independent consultant to the Company. Mr Maynard is the Director and principal geologist of AI Maynard & Associates Pty Ltd and has over 35 years' of exploration and mining experience in a variety of mineral deposit styles. Mr Maynard has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. Mr Maynard consents to inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this announcement which relates to Exploration Results, Mineral Resources or Ore Reserves for Tormin is based on information compiled by Mr Adriaan Du Toit, who is a Member of the Australian Institute of Mining & Metallurgy (AusIMM) and an independent consultant to the Company. Mr du Toit is the Director and principal geologist of AEMCO PTY LTD and has over 23 years' of exploration and mining experience in a variety of mineral deposits and styles. Mr du Toit has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). The information from Mr du Toit was prepared under the JORC Code 2012 Edition. Mr du Toit consents to inclusion in the report of the matters based on this information in the form and context in which it appears.

JORC CODE – 2012 EDITION Table 1 : Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All field and lab results obtained and entered into the onsite database is verified by a supervisor. All results are double checked and verified. A standard is made on the site and sent to the laboratory with each batch of samples as a quality check. External calibration is done every 6 months.
<i>Site visits</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> A site visit was undertaken by the competent person to the mine, geology department, mine laboratory and head office during November 2014. Open pits, in situ samples, ROM and product were reviewed during the site visits.
<i>Geological interpretation</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Resource volume reconciliation from 2014 production data compare favourable with earlier resource estimates by Steemson, 2006 & 2007 and work done by the Trans Hex Group. RC drilling data undertaken by Trans Hex was used and compared with 21 bulk samples to produce the 2007 resource statement. Mine production grade data from 2014 was compared with resource data and a regression analysis done on the XY plots. A very low correlation was found (R2=0.006). The average predicted percentage HMS from the resource model for the areas mined was 45% while the production data for the same areas was higher at 58% HMS (Garnet, Imenite, Zircon, Rutile, Leucoxene). Continuity of grade outside the block model is not proven and has therefore not been included in the resource model. The bottom of the resource (being a placer deposit) is limited by the bedrock contact and coastal cliffs. The resource is open towards the ocean surf zone.
<i>Dimensions</i>	<ul style="list-style-type: none"> The extent and variability of the Mineral Resource expressed as length (along strike or 	<ul style="list-style-type: none"> The deposit has a strike length along the coastline within the mining lease of ~9000m and an

Criteria	JORC Code explanation	Commentary
	<p><i>otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></p>	<p>average width from the cliff to within the surf zone of 123m. It is developed from surface to a maximum depth of 6.25m. The average resource thickness is 3.5m.</p>
<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> • <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i> • <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> • <i>The assumptions made regarding recovery of by-products.</i> • <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i> • <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> • <i>Any assumptions behind modelling of selective mining units.</i> • <i>Any assumptions about correlation between variables.</i> • <i>Description of how the geological interpretation was used to control the resource estimates.</i> • <i>Discussion of basis for using or not using grade cutting or capping.</i> • <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i> 	<ul style="list-style-type: none"> • The 2007 Steemson resource was interpreted using the data and results from 236 hand auger holes (402.3m) and 336 reverse circulation holes (1049.35m) drilled during 1989 to 1991 by Trans Hex. The current resource was signed off on 31 October 2011 by Mr Allen Maynard as the competent person. Mr Maynard is the director and principle geologist of Al Maynard & Associates Pty Ltd (Perth, WA). • All original analyses were conducted by MINTEK using microscopic point counting-, x-ray and scanning electron microprobe techniques. • Bulk sampling done by MSR in 2005 were sent to SGS Johannesburg for grain counting. Bulk sampling was used to confirm the historical Trans Hex drill data and results. The bulk sample results were generally the same or better than the Trans Hex drilling results. • An analysis cut off of 0.1% zircon (MINTEK) was used and a resource cutoff grade of 0.3% zircon (Steemson, 2007). • Resource modeling was done using only RC drilling results using a polygonal method. Resource blocks were constructed in the southern mining area so that they were orthogonal to the drill traverses. In the northern area, resource block are trapezoidal in plan view. Resource blocks were extended half way between drill lines and 10m from the drill holes in section. • Recovery studies (three stage spiral circuit) by Multotec and Mintek in 2012 showed that an overall circuit can produce a concentrate of 11.66% Zircon into 60.8% of the feed mass with a Zircon recovery of 86.6%. Metallurgical sizing work was done in 2005 by Bateman Minerals Ltd. • Mine production during 2014 achieved a 74% Zircon recovery. • Reconciliation of 2014 mine production data (January to August 2014) with the resource model

Criteria	JORC Code explanation	Commentary
		data indicate a 13% higher HMS concentrate (58%) than the average 45% HMS grade predicted over the same area.
Moisture	<ul style="list-style-type: none"> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> The resource tonnages are based on a dry basis. Most of the material is fully saturated when mined but are free draining.
Cut-off parameters	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> The original Steemson resource 0.3% zircon cut-off grade was based on a 70% zircon recovery and a zircon price of US\$ 700/tonne.
Mining factors or assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	<ul style="list-style-type: none"> A definitive feasibility study on the deposit was done in 2006 by K'Enyuka and a BFS study review by HBH consultants The dynamic beach environment results in a cyclic depositional and erosion of the beach surface. Historical studies by Trans Hex have found a weighted average change over 9 months of up to -9% loss or up to -7% increase. Mining is opencast using coffer type dams constructed with excavators. The pits generally only remain open during low tide, except where beach conditions allow larger more stable protection bunding to be constructed. Construction and mining methods are similar to that being used for beach diamond mining along the west coast of South Africa and Namibia. There is no stripping ratio as material is from surface onto bedrock. Natural replenishment of the resource is taking place as the open pits are filled with HMS material from the surf zone during the next high tide. Current data indicates no correlation ($R^2=0.04$) between the original resource grade and the replenishment grade for the same mine block area. The average replenishment grade of zircon in all areas already mined is 3.70%, this is almost equal to the original resource grade over these same blocks of 3.71%. In general it appears that the resource gets replenished about 60-75% after each mined event –

Criteria	JORC Code explanation	Commentary
		<p>meaning it loses about 25-40% of its grade after each mined event. This replenishment is erratic and replenishment may only be 35% of the original grade in some places, while in other areas there are a 34% increase over and above the original zircon concentration. It is estimated that most areas can be economically mined at least 3 times. The replenishment rates mentioned above is based on mining data from February to October 2014 and as such represent a very small timeframe and dataset. Further work in this regard is therefore needed to get a good statistical trend on replenishment.</p>
<p><i>Metallurgical factors or assumptions</i></p>	<ul style="list-style-type: none"> <i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i> 	<ul style="list-style-type: none"> Extensive metallurgical testing has been done before the current processing plant that is now in operation were designed. These include the following studies: 2002 -2003 Spiral test work and trials by Multotec Process Equipment (Pty) Ltd and Mintek – Johannesburg. 2003 Grain analysis by SGS Lakefield including THM, Magnetic Separation and XRF analyses. Also ilmenite fraction analyses for smelter feedstock. 2003 Magnetic separation work by Diamantina laboratory in Perth 2005 Bateman Minerals (Pty) Ltd electrostatic separation study 2007 Processing and recovery tests by Titanatek Pty Ltd - Queensland 2007 & 2009 Metallurgical testwork by AMMTEC Ltd – Australia 2007 Metallurgical upgrade test work by Multotec Process Equipment Pty Ltd – Kempton Park, RSA.
<p><i>Environmental factors or assumptions</i></p>	<ul style="list-style-type: none"> <i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts,</i> 	<ul style="list-style-type: none"> The mine has an approved environmental management programme and has been subject to an environmental impact assessment. There are no environmental directives in place against the mining operation. There is a 10m stability buffer zone between the coastal cliffs and the beach where no mining

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	<p>is allowed. It would appear that the original resource model allowed for at least a 5m buffer zone.</p> <ul style="list-style-type: none"> • A conservation areas have been proposed in the mining area where no mining is allowed. This has not resulted in any part of the current indicated resource being sterilized. • All mining voids get naturally filled with beach sand material during high tide and there is therefore no rehabilitation liability in this regard. • Tailings get dumped onto the beach where it is distributed and settled along the coastline under natural wave and sea current action. There are no pollutants introduced with the tailings and the material is inert.
Bulk density	<ul style="list-style-type: none"> • <i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i> • <i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i> • <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i> 	<ul style="list-style-type: none"> • The bulk density is based on an accurate calculation of the specific gravity of the silica and heavy mineral sand content fraction of each sample. It is therefore not a fixed density and appears to fluctuate between 1.9 and 2.4 as per the formula below: • $SG=1.5+(0.009 \times HM)$.
Classification	<ul style="list-style-type: none"> • <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> • <i>Whether appropriate account has been taken of all relevant factors (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).</i> • <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i> 	<ul style="list-style-type: none"> • The current resource classification is an indicated resource. • It is based on the historical drilling and bulk sampling done to date. • It has been signed off in 2011 by Mr Allen Maynard of AI Maynard & Associates Pty Ltd as the competent person on the resource statement. • No new resource statement has been issued since 31 October 2011. No new review of this resource statement has been done.

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<i>Audits or reviews</i>	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<ul style="list-style-type: none"> The current JORC resource of 2.7 million tonnes @ 49.4% HM compare very favourably with the June 1992 Historical Foreign Estimate(HFE) by A van den Westhuizen and PD Danchin that classified the Geelwal (Steenvas) and Karoo (Geelwal) area into 3 003 881 tonnes proven, 221 088 tonnes indicated and 891 528 tonnes inferred. A total HFE resource of 4.1 million tonnes @ 30% HM. Another HFE in 1998 by Trans Hex (Barnex – RBM) reported an estimated resource of 6 million tonnes @ 2.78% zircon. Anglovaal reported in 1983 a resource of 11.8 million tonnes @ 8.4% zircon over 5m depth over the same area.
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The Geelwal Karoo HMS deposit have been known and investigated over the past 57 years with the earliest detailed investigation by Trans Hex in 1989. The deposit was first documented in 1931 by Haughton. The deposit is well understood but due to the dynamic nature of the environment and movement of the upper part of the deposit (due to erosion and wave action deposition) and variable nature of the deposit, grade different resource estimates have been produced e.g. Geological Survey Bulletin #25 of 1957. The current JORC resource statement represent the lowest tonnage reported in comparison to HFE and appear to be conservative. Estimated resource grades also appear to be conservative as production grades of HMS during 2014 is 13% higher that the mine model resource grade (mine resource grade 45% and production 58%). The production grade is also higher than the reported indicated resource grade of 49.4% HM.