**FOR IMMEDIATE RELEASE**
17 December 2018

**Rainbow Rare Earths Ltd ('Rainbow' or 'the Company') (LSE: RBW)**
**Maiden JORC Mineral Resource Estimate**

Rainbow, the rare earth element mining company, is pleased to announce a maiden Mineral Resource Estimate completed in accordance with JORC (2012) in respect of the Company's Gakara rare earths project in Burundi, East Africa ('Gakara' or 'the Project'), which is Africa's only producing rare earth mine.

**Highlights**

- Total Maiden JORC compliant Resource of over 1.2 million tonnes of ore covering a small fraction of the Gakara Project – confirming for the first time the scale of the deposit
- Three areas (Gasagwe, Murambi South and Gomvyi Centre) are very high grade vein stockwork deposits – totalling 12,491 tonnes of Total Mineral Resource at an average TREO grade of 55% (compared to average rare earth project grades of c.1-4% TREO)
- Kiyenzi is a very large, lower grade mineralised deposit with nearly 1.2 million tonnes Mineral Resource at an average grade of 2.2% TREO employing a cut-off of 1% TREO
- The Mineral Resource is based on only four out of the 28 mineralised prospects across Rainbow's existing Mining Licence – indicating significant further upside for future exploration
- The Exploration Target for very high grade vein ore (on a consistent 2016 basis) has increased by 70% following work undertaken across the deposit since IPO in January 2017
- Rainbow plans to rapidly bring Gomvyi Centre and Kiyenzi into production during 2019

**Martin Eales, CEO of Rainbow, said:** *"We are pleased to announce the maiden JORC-compliant Mineral Resource Estimate for the Gakara project, on time and on budget. The Mineral Resource, which is based on only four out of the 28 identified targets within our licence, shows over 1.2 million tonnes of ore, a considerable deposit in its own right, and provides further evidence that the Gakara deposit is a world-class source of rare earth oxides.*

*"Three of the areas are high-grade vein stockworks, and include 12,491 tonnes of ore Resource at 55% TREO. These alone will provide over two years' head feed for our planned ramp-up to 5,000t concentrate, and we will of course continue to explore these deposits further.*

*"The Kiyenzi deposit has been confirmed as a very large, lower grade deposit, which ties in with the airborne and ground gravity results previously announced. The currently modelled deposit amounts to nearly 1.2 million tonnes of ore at 2.2% TREO, and may well be related to a carbonatite source. This deposit is open in all directions and is an extremely exciting prospect as it presents a new opportunity for Rainbow to further develop its mining and processing capabilities.*

*"These results will provide us with confidence in our ability to obtain near and medium-term sources of ore, but more importantly point to the existence of a truly unique deposit, which we will continue to explore in the future."*

**JORC 2012 Maiden Mineral Resource Estimate**

Earlier in the year, Rainbow announced that it was working towards the completion of a maiden code-compliant Mineral Resource estimate for its Gakara Rare Earths project (the 'Project'), to be published by the end of 2018. This maiden Mineral Resource estimate, which is now complete, was undertaken on behalf of Rainbow by Benzu Minerals (Pty) Ltd ('Benzu' or 'BM'), and has been reported in accordance with the guidelines of the Joint Ore Reserve Committee (JORC) 2012 code.

The most recent previously-published technical report relating to the project by Rainbow was the 'JORC Competent Person's Report for the Gakara REE Project, Burundi' compiled by The MSA Group (Pty) Ltd ('MSA') and dated 30 September 2016, which was included in the Prospectus published in connection with the Company's IPO on the London Stock Exchange in January 2017.

Since then, a considerable amount of work has been carried out at the Project, including greenfields and brownfields exploration, drilling, mining, ore processing testwork, modelling, and ore processing and concentrate production. This work has produced a significant amount of new technical information and data that have materially changed the understanding of the ore deposit and the REE mineralisation it contains, and has enabled the calculation of a maiden Mineral Resource estimate.

Since 2011, Rainbow has kept detailed maps of over one thousand REE vein occurrences across its mining licence, from which it has defined 28 "prospects" or "targets" (which have typically been named after the nearest village or other geographic features).

The maiden Mineral Resource estimate has been based on just four of these 28 mineralised targets, and therefore represents only a small portion of the mining licence area that the Company will seek to exploit in the coming years.

To view the plan of the prospect areas within the mining licence area please copy and paste the following link: https://i1.wp.com/rainbowrareearths.com/wp-content/uploads/2018/12/MLareashowing-prospects.png

| Deposit Name | Mineral Resource | | | | | |
|---|---|---|---|---|---|---|
| | Measured (t) | Indicated (t) | Inferred (t) | Total Ore (t) | TREO Grade % | Contained TREO (t) |
| Gasagwe | 153 | 273 | 570 | 996 | 58.7 | 585 |
| Murambi South | 972 | 2,917 | 4,480 | 8,369 | 54.8 | 4,586 |
| Gomvyi Centre | - | 861 | 2,265 | 3,126 | 54.0 | 1,688 |
| **Total high grade deposits** | **1,125** | **4,051** | **7,315** | **12,491** | **54.9** | **6,859** |
| | | | | | | |
| Kiyenzi* | 58,671 | 297,274 | 837,033 | 1,192,978 | 2.2 | 26,570 |
| **Total** | **59,796** | **301,325** | **844,348** | **1,205,469** | **2.8** | **33,429** |

**Kiyenzi shown at 1% cut off grade. For detail on Kiyenzi Resources at higher cut-off grades see below.*

For each of these four areas, further tonnages can be classified under JORC as 'Target' additional to the Resource figures. Based on standard JORC methodology these Target tonnes are as follows:

| Deposit Name | Exploration Target (t) |
|---|---|
| Gasagwe | 1,026 |
| Murambi South | 6,622 |
| Gomvyi Centre | 5,132 |
| Kiyenzi | 1,065,170 |
| **Total** | **1,077,950** |

The 6,859 tonnes of TREO Resource contained in the Gasagwe, Murambi South and Gomvyi Centre deposits alone, all of which the Company expects to be mining in 2019, would provide more than two years' of concentrate production at 58% TREO based on the Company's target run rate of 5,000 tonnes of concentrate per annum, even before including any production from the much larger Kiyenzi body.

More detail on each of the four prospect areas is included below.

**Revised Exploration Target**

An Exploration Target is a statement of the exploration potential of a mineral deposit in a defined geological setting for which there has been insufficient exploration to estimate a Mineral Resource. In the CPR contained in Rainbow's 2017 IPO Prospectus, MSA estimated that Rainbow's entire Gakara Project had an Exploration Target range of between 20,000 – 80,000 tonnes of in situ high grade vein ore.

Following further regional mapping work carried out since the publication of the CPR, Rainbow's REE occurrence database has increased from approximately 800 records to over 1,200 records. Of these c.1,200 occurrences, some 840 are *in-situ*, an increase of some 320 records from the 520 data points used by MSA.

Employing a consistent methodology and estimation criteria to that which was used by MSA on the enlarged data set has allowed Benzu to update the Exploration Target to between 34,400 to 137,500 tonnes, representing an increase of over 70%.

The four project areas included in the Mineral Resource estimate comprise 8,290 – 33,161 tonnes of this revised Exploration Target for high grade vein ore, representing only 24% of the upper and lower tonnage figures.

Brownfields exploration is being carried out on an ongoing basis by Rainbow's geology team, with the potential for further uplifts to the Exploration Target. However, the focus of Rainbow's exploration programmes is on converting the Exploration Target tonnage into Resources to ensure continuous replenishment of the resource pipeline and hence the medium to long term life of mine.

**Kiyenzi**

The Kiyenzi deposit is characterised by the presence of REE mineralisation in the form of breccias. Kiyenzi can in simple terms be described as a lower grade but large volume deposit.

The REE-bearing bastnaesite/monazite are present in large breccia units, but also as large cleaner veins, as thin to microscopic veins and perhaps as xenocrysts within the host rocks. The 'invasion' of REE-rich fluids in the aplites and gneiss has generated a large mineralised body, in the form of a voluminous intrusion such as a pipe. The host rocks (gneiss and aplite) are hard, but heavily fractured, such fragmentation being likely the effect of a violent hydrothermal or phreatomagmatic process which would have also caused the formation of the breccias. The morphology of such complex deposit can be visualised as a 'breccia pipe', commonly described in the literature as a form of manifestation of a carbonatite system.

At present, Rainbow has identified this deposit type only at Kiyenzi within the mining licence area.

Diamond Drilling of the Kiyenzi target was carried out in two phases. Following the positive intersection of mineralised breccia in phase one (464m), the second phase of the drilling work (964m) was carried out between July and September 2018 with the objective of establishing the lateral and vertical extents of the REE-mineralised intersections and ultimately to model the orebody.

Following the grade assays obtained from selected core samples of the host rocks facies and also from cores for entire drill holes it became evident that the aplites and the gneiss also had the potential to be mineralised, especially in the drill sections surrounding the breccias. TREO grades of 1% to 5% in units logged as aplites as well as in gneisses can only be explained if some form of bastnaesite/monazite mineralisation has occurred.

Owing to the complexity and variability of the mineralisation, the calculations of the Mineral Resource estimate was performed based on grades and not only on the modelling of the geology. All models were carried out using the 'Implicit Modelling' algorithm of the Micromine software. The grade model was performed using the 'Inverse Distance Weighting' interpolation also run in Micromine. Both models were achieved by an independent consultant of Micromine.

*Kiyenzi mineral resource estimate at differing cut off grades*

| TREO Cut off grade % | Measured Resource (t) | Indicated Resource (t) | Inferred Resource (t) | Total Resource (t) | TREO Grade % | Contained TREO (t) |
|---|---|---|---|---|---|---|
| 1.0 | 58,671 | 297,274 | 837,033 | 1,192,978 | 2.23 | 26,570 |
| 2.0 | 26,523 | 146,087 | 339,250 | 511,860 | 3.27 | 16,716 |
| 3.0 | 13,138 | 90,921 | 128,354 | 232,413 | 4.29 | 9,970 |
| 4.0 | 7,511 | 60,734 | 37,069 | 105,314 | 5.31 | 5,591 |
| 5.0 | 4,139 | 35,012 | 3,093 | 42,244 | 6.77 | 2,859 |

The Mineral Resource tonnage estimate is highly sensitive to the grade cut-off employed. This indicates the presence of a considerable quantity of mineralisation within the deposit. It is possible that Kiyenzi is connected to the carbonatite source, conjectured to be the motherlode of the vein stockworks found across the mining licence area, and warrants further investigation. Indeed, the latest mineralogy, petrography, geochronology, structural and fluid inclusions data from a PhD study (in preparation) have finally confirmed that the Gakara REE mineralisation is derived from a carbonatitic source.

Rainbow has already achieved some encouraging yields and recoveries from test processing of Kiyenzi ore and intends to commence exploitation of this deposit during 2019. It is therefore intended to process the Kiyenzi material through the existing processing plant – however the

larger, lower grade ore body may well be amenable to further beneficiation, if further testwork and mineralogical tests prove positive. Furthermore, the large volume, lower grade resource will likely require a mining methodology very different to the methodology adopted to date to mine very high-grade veins within a friable, free-digging saprolitic country rock.

**Gasagwe**

The Gasagwe deposit is the area within the licence area where mining began during 2017. As such, much more is known about this deposit, and it therefore represents a fundamental benchmark for the delineation of JORC compliant Mineral Resource estimates in other vein stockwork prospects within the mining licence. The vast amount of geological data acquired during the past 1.5 years of mining has been applied to other deposits, allowing the degree of confidence to be considered sufficient to satisfy their classifications into Inferred, Indicated or Measured Resources.

The knowledge in relation to the Gasagwe vein structures and their mineralisation include the following:

- ***Vein Thicknesses***: 2,181 channel samples were cut at Gasagwe using 2m spacing per 1m level of exploitation. The thicknesses of each channel sample were measured using DGPS. The variation of the vein widths over tens of vertical metres have now been established and are well understood.
- ***Vein Morphology***: the channel samples have allowed for a greater understanding of the morphology of every vein (with cm accuracy), their continuation (and lack of continuation) laterally and at depth, and have enabled the creation of a model that can be applied with confidence to other similar stockworks in the licence.
- ***Grade***: with some 183 samples analysed from all mining levels (from initial surface to current mine level, c.40m below surface), the consistency of grades between surface and samples at depth has been clearly established.
- ***Density (or SG)***: in all previous, historic tonnage calculations, an assumed SG of 4t/$m^3$ was used. With the treatment of the Gasagwe ore at the Kabezi plant, real SG data have been determined, that can now be applied to volumes at Gasagwe but also on ores from other sites of the same type.
- ***Ore Processing***: all the ore mined at Gasagwe has been processed through the Kabezi plant. The final concentrate for every single batch exported has been sampled and the grade has proved to be consistently above the specified tenor of 54% TREO. Criteria such as recovery, yield, losses, mass balance, tailings etc. are now well established and can be used for ore from other mine sites.
- ***Mining***: the exploitation of the Gasagwe resource started in April 2017. Rainbow has reviewed the mining methods on several occasions with the aim of optimising the process. Such reviews are ongoing. The mining experience gained at Gasagwe, which include other key aspects such as the emplacement of waste dumps, the construction of access roads, the establishment of mining infrastructure, the process of

expropriating land for mining purpose and the environmental measures applicable to the mining processes will all be applied to future mine sites.

**Murambi South**

The Murambi mine site was opened in August 2018, and the trial mining and brownfields exploration exploration undertaken to date have been very effective in providing high-quality geological and resource data that have delivered a code compliant Mineral Resource estimate.

Some 53 REE veins have been uncovered by the development works (trenching, trial mining). Most of the occurrences have been sampled as well as mapped (thicknesses, directions, dips, appearances etc.). The recorded lateral extents of the veins vary from a mere metre up to 45m, the average being approximately 9m at this stage. Similarly, the thicknesses of every vein have been measured (from some 452 precise channel sampling data points) and vary from 1cm up to 24cm, the present average being c.7cm.

A detailed ground gravity survey covering the southwestern half of the mining block has generated a series of NW-SE lineaments some of which having been confirmed to be coinciding with bastnaesite/monazite veins, generally trending in the same direction as the gravity lineaments. If such correlation can be further proved through more trenching, then some of the veins could have strike lengths of over 125-150m. Such possibility was used in the calculation of the 'Exploration Target' tonnage at Murambi South.

**Gomvyi Centre**

The Gomvyi Centre prospect was selected as a potential near-future mine site because of the following factors:

- The bastnaesite/monazite veins indentified are of high grade and, more importantly, there is a population of large veins (>50cm) for which an in-situ source has not been established yet
- The veins appear to be structurally controlled and continuous over significant distances (50-100m if not more)
- The site is easily accessible as it is situated a mere 300m from an existing road
- The outlined mine site is sparsely populated, which should result in lower compensation costs

At the time of completing the Mineral Resource estimate the mine development and exploration works were ongoing. Further trenching is intended to help confirm some of the very long vein extensions referred to above which would materially increase the Resource that can be declared for this prospect area.

Rainbow's current plan is also to commence exploitation of the Gomvyi Centre prospect in 2019.

**Competent Person's Statement**

The Mineral Resource estimate was prepared by Benzu Minerals (Pty) Ltd for Rainbow Rare Earths Limited in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code, 2012 Edition. Benzu is a minerals exploration and resource consulting firm, which has been providing services and advice to the international mineral industry, focussing on Africa, since 2009.

Specifically, Rainbow's maiden Mineral Resource estimate was prepared by by Cesare Morelli who is a Competent Person as defined by the JORC Code 2012 Edition, having seven years' experience that is relevant to the REE mineralisation style and deposit type described in the Report. Cesare Morelli is a Fellow member of the Geological Society of South Africa as well as a member of the South African Council for Natural Scientific Professions (SACNASP 400304/11). Mr Morelli (Italian) has over 30 years' experience in minerals exploration in Africa including 18 years in diamond exploration with De Beers, managing projects in south, west and central Africa. Mr Morelli acts as Technical Director at Rainbow, for which he receives consulting fees.

****ENDS****

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**Notes to Editors:**

Rainbow's focus is the Gakara Project in Burundi, one of the highest-grade rare earths projects globally and the only African producer.

The Company began production of rare earth concentrates in Q4 2017 and has a ten-year distribution and offtake agreement with multinational thyssenkrupp Materials Trading secured for the sale of at least 5,000tpa of concentrate produced.

The Gakara basket is weighted heavily towards the magnet rare earths, including neodymium and praseodymium, which are driving demand and account for 70% of annual global REE sales due to their use in vital components in motors, generators, wind turbines, and electric vehicles.

**APPENDIX: Table 1 (JORC 2012)**

## Section 1 Sampling Techniques and Data

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***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.*<br>• *Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | • Samples used to assess the 4 deposits reported on derive from channel samples on REE veins, from rock chip samples and from drill core samples (specifically for Kiyenzi)<br>• All sampling protocols designed by the Company were adhered to and verified by the CP on a regular basis during site visits<br>• Channel samples and drill collar positions were surveyed using a DGPS system with mm accuracy<br>• Diamond Drilling (DD) samples were collected according to industry standards, fully described in the CPR, section 9 (see also next sections re drilling)<br>• Information derived from 1,482.5m of DD (30 holes) was used to provide the required confidence in producing a resource calculation for the Kiyenzi deposit<br>• All samples were routinely analysed by Rainbow geologists using the Company's hand-held Niton XRF. Selections of samples from channels and drilling submitted to laboratory for full chemical analyses |
| ***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).* | • Diamond/core drilling carried out using a Discovery II Man-Portable Rig<br>• Combination of HQ and NQ core sizes, depending on the hole depth and hardness of the lithologies encountered downhole<br>• Cores were marked but not oriented<br>• Three (of 30) DD holes at Kiyenzi were drilled vertically, the remainder (27) were drilled inclined either at 50° or 60°, depending on the angle of the hill slope. The angled holes were drilled on 4 directions: NW, SE, NE and SW |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • The core recovered from the core barrel was placed in aluminium core boxes by the drill crew and wooden depth markers were inserted at the end of each core run<br>• Cores were logged by the Geologists at drill site and re-logged once transported at the base camp core store.<br>• Logging included also calculations of Recovery and RQD (Rock Quality Designation)<br>• Despite common natural fracturing of the core, rendering drill penetration slow at times, core recoveries were deemed acceptable overall |
| ***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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • Cores were logged by the Geologists at drill site and re-logged once transported at the base camp core store.<br>• After completion of the core logging and taking of structural measurements, the core boxes were photographed at the drill site (box by box)<br>• Core logging included the recording of a comprehensive series of data in pre-designed logging templates<br>• 100% of the metres drilled were logged and recoded in the Project drilling database (MS Access)<br>• Logging was both qualitative and quantitative, depending on the field being logged |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • Cores were split in half by Rainbow staff at the base camp core store<br>• Further logging was done on the cut surfaces<br>• Drill core sampling was carried on holes that intersected mineralized breccias upon visual identification/logging and radiometric detection.<br>• Within such holes sampling was carried out within all and every lithological horizons that were deemed (or just suspected) to have the potential to contain REE mineralisation<br>• All samples were bagged and assigned unique sample numbers, recorded in the drill database<br>• Samples were transferred to HO in Bujumbura where they were prepared for consignment to labs (RSA, Canada)<br>• Sample preparation was carried out according to lab processes. ALS preparation code: PREP-31D<br>• Field QC procedures involve the insertion of certified reference material as assay standards, blanks and duplicates for the DD and channel samples. The insertion rate of these averaged 1: for every 50 “live” samples<br>• The sample sizes are considered appropriate to correctly represent the style of mineralisation |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***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.*<br>• *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.*<br>• *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 samples were submitted to ALS Minerals (Vancouver Canada) for REE assaying<br>• The laboratory used the following analytical methods: ME-MS81h (Elements by lithium borate fusion and ICP-MS) and ME-OGREE (Over limit REE by ICPAES for samples having grades >5% TREE)<br>• Hand-held XRF measurements were taken using a Niton XLt3 GOLDD+, according to prescribed protocols and calibration processes<br>• For all samples to be assayed at ALS, the Company's Quality QAQC protocol was strictly followed. The QAQC consists of the insertion of a Certified Standard, a Certified Blank and a Duplicate sample for every 50 samples submitted for analyses<br>• The analytical method is considered appropriate for this mineralisation style and is of industry standard<br>• The quality of the assaying and laboratory procedures are considered to be appropriate for this deposit type |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • All exploration programmes at the Project are carried out under the management of Rainbow's Chief Geologist based in Burundi<br>• The drilling programmes were managed by a consulting geologist specifically contracted for the mission<br>• Being a DD programme, no hole twinning was deemed necessary<br>• No adjustment to assay data was performed<br>• Verification activities were conducted by the CP during every site visit. The CP visited and assessed exploration programmes at an average of 1 visit every two months for the past 2 years<br>• Amongst other routine reviews, the key verifications included:<br>  ○ inspection of drilling activities, of core logging and related sampling;<br>  ○ inspection of trenching and related channel sampling;<br>  ○ review of sample data capture and recorded information;<br>  ○ verification of adherence to protocols and SOPs;<br>  ○ review of the project database for consistency, completeness and accuracy;<br>  ○ review of sample submission and QA/QC protocol and of assays thereof;<br>  ○ review and assessment of all data required to adhere to the JORC Code for reporting MRE.<br>• The database was continually validated by Rainbow's Chief Geologist, on receipt of assays from the lab.<br>• All the mining and exploration data/information were entered manually into the data capture template by the Geologist responsible for the specific task. This information was then sent to an independent Database and GIS Specialist for validation and capturing into a MS Access database<br>• The Project data are considered by the CP to be of sufficient quality to be used in a Mineral Resource Estimation |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***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.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • Positions of all drill hole collars and channel samples were surveyed using a Leica TS02 (5") R500 Reflectorless coupled with Bluetooth Total Station<br>• Drone topographic surveys were flown on a monthly basis over all 4 deposits explored, using a Phantom 4 equipped with a 20mp camera (cm accuracy)<br>• Topographic control points are established and surveyed at each exploration/mining site<br>• Geographic grid: WGS84, UTM zone 35S |
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • DD holes were located on a lose grid of between 15 and 33m depending on practicalities of drill pad construction on the steep slope<br>• Channel sampling: once a REE vein exposed by trenching, the surveyor delineates contour lines on the outcrop. A sample is then taken between 2 successive contour lines and given a number. The channels, which are 10cm wide, are cut using a petrol engine rock cutter or a chisel and hammer. 2 to 4kg of sample are collected and put in a pre-numbered bag. The distance between channels is 2m<br>• No compositing of samples was applied<br>• The density of the channel samples and the grid of the drilling holes are deemed to be adequate for the compilation of MRE models |
| ***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.*<br>• *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.* | • Except for 3 holes drilled vertically in the initial stage of the campaign, all other holes (27) were drilled inclined either at 50° or 60°, depending on the angle of the hill slope<br>• The angled holes were drilled on 4 directions: NW, SE, NE and SW, as o evident major structure could be recognized from mapping and from core information |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Standard operating procedures are used for the handling and transportation of samples to ensure a secure and auditable chain-of-custody from the field to the laboratory<br>• All samples collected by Rainbow's geologists are kept in guarded company facilities, either at the Mutambu base or at the Kabezi plant store, or at the Head Office in Bujumbura<br>• The drill cores were safely kept in metal trays in an old store annexed at the base camp in Mutambu<br>• All samples that Rainbow intends submitting to laboratories are delivered to commercial shipping agencies in Bujumbura, accompanied by a standard sample submission sheet with sample details and analytical instructions<br>• Before exportation of any sample consignment can take place, a written authorisation must be obtained from the authorities of the Ministry of Mines and Energy who verify the nature and content of the shipment |
| ***Audits or reviews*** | • *The results of any audits or reviews of sampling techniques and data.* | • Sample collection, submission, QA/QC protocol and assay database were reviewed by the CP on a regular basis during his visits to the Project<br>• All Project sampling/drilling data sent to an independent Database and GIS Specialist for validation and capturing into a MS Access database |

## Section 2 Reporting of Exploration Results

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***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.*<br>• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | • The CPR deals with the 2 mineral titles owned/controlled by Rainbow: a Mining Licence ("ML") and an Exploration Licence ("EL")<br>• Rainbow International Resources Limited ("RIR"), which is 100% held by Rainbow Rare Earths Limited ("Rainbow") was granted its EL for REE and associated minerals in the Gakara region by Presidential Decree No. 100/141 of 16 May 2011. The Decree was based on the Mineral Agreement ("Convention de Recherche Minière"), dated 9 May 2011, between the State of Burundi and RIR. The EL was valid for an initial period of three years and was renewed twice for periods of two years each time<br>• **The EL reached its final expiry date in July 2018**<br>• The ML was granted by the Burundi Ministries of Energy and Mining and Finance and Economic Development on 27 March 2015 through the execution of a "Convention Minière" (Mining Agreement) between the State of Burundi and RIR<br>• The ML was subsequently ratified by Presidential Decree No. 100/110 on 18 April 2015<br>• Following the grant of the ML, a new company, Rainbow Mining Burundi SM ("RMB") was created in which the State of Burundi acquired a 10% interest by Presidential Decree No. 100/194 of 16 June 2015<br>• The ML, which covers an area of approximately 39km$^2$, provides RMB (as well as Rainbow and its shareholders) with a guaranteed stability of fiscal and legal regimes which will be applicable to the mining operations over a **25-year validity period** of the ML |

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| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • A comprehensive and detailed account of the history of the Gakara Project, both in terms of exploration and mining, was compiled by MSA in their CPR dated Oct 2016<br>• The Gakara Mining Project from the 1930's to the 1970's was held and controlled by the Belgian company SOMUKI (Société Minière de Muhinga et de Kigali) and later by SOBUMINES, (51% owned by the Belgian Société Minerale de Karonge and 49% by the Government of Burundi) (Ntungwanayo et al., 2013)<br>• The first reports of the presence of REE in the Project area date back to 1936 when SOMUKI discovered bastnaesite in alluvial deposits<br>• From 1941 to 1942, research into the bastnaesite vein occurrences resumed and trial mining was undertaken from alluvial deposits but mainly from in-situ REE veins at Gakara. However, this operation was suspended due to unfavourable market conditions associated with the Second World War<br>• An increase in REE prices from 1947 to 1957 resulted in renewed mining activities at the Gakara and Rusutama deposits with a total of 2,137 tonnes of bastnaesite produced from these two deposits<br>• Exploration and mining stopped in 1957due to a fall in the global REE prices. In those years, it is believed that the main REE exploited were Cerium and Lanthanum<br>• SOBUMINES returned to the Gakara area in 1965, by which time the general understanding of the geochemistry, mineralogy and metallurgical characteristics of REE had advanced. Improved separation techniques resulted in higher purity of concentrates and better processing technology assisted in the extraction of individual REE oxides<br>• In the 1970's exploration and mining operations were extended to the other sites including Gasenyi, Murambi, Gasagwe and Mugere. Mining operations until 1978 comprised open pits (terraces and galleries) for most deposits except for Mugasenyi and Murambi, where underground mining was conducted due to the paucity of surface veins and the considerable thickness of overburden<br>• In 1978 SOBUMINES stopped all operations due to a decline in REE prices which rendered mining in the Gakara area uneconomical<br>• In summary during nearly 30 years of intermittent mining, approximately 5,000 t of high grade (>50 % TREO) bastnaesite/monazite ore was extracted, processed and exported with the majority derived from the Gakara mine<br>• From 1981 to 1985 BGR undertook an exploration and evaluation programme on six selected REE-bearing sites, within a framework of bilateral cooperation between the Burundian and the German Governments. Their "Feasibility Study" reported an estimated 5,000 tonnes of REE material at a grade of 50% TREO |

| Criteria | JORC Code explanation | Commentary |
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| | | available for mining at these six deposits. The Gasagwe deposit alone was estimated by BGR to contain approximately 2,800 tonnes of REE material<br>• Prior to the granting of the Gakara EL to Rainbow, no other exploration or mining licences were awarded in the Project area since the cessation of mining activities in the late 1970's |

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| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The Gakara REE deposit is located near Lake Tanganyika, on the western branch of the East African rift<br>• REE mineralisation in a carbonatitic context has been identified along the western branch of East African rift, about 60 km northward from Gakara in the alkaline complex of the Upper-Ruvubu containing the Matongo carbonatite<br>• This complex and the associated REE mineralisations have been dated around 600-700 Ma, i.e. during the Panafrican orogen<br>• Already in 1958 a tentative relationship between the Gakara REE deposit and carbonatites was suggested and, although never definitively confirmed, this hypothesis is commonly accepted.<br>• Except for the Archean Mugere complex the Gakara REE mineralisation is hosted in Mesoproterozoic rocks belonging to the Karagwe-Ankole polymetamorphic belt composed of metasediments and orthogneisses intersected by pegmatites which have been dated 969 Ma. The Gakara Property is mainly composed of rocks formed during the Mesoproterozoic, Kibaran orogenic event between 1,375 Ma and 985 Ma<br>• The Gakara REE mineralisation occurs as centimetric to decimetric vein stockworks and consists mainly of coarsely grained, locally brecciated, metasomatised monazite and bastnaesite<br>• New data from a PhD thesis ((Ntiharirizwa et al., in progress) has revealed the following critical information:<br>  ○ The fluids at the origin of the Gakara deposit as well as their P-T conditions of emplacement have been established. The mineralisation took place at temperatures between 400 and 450 °C in the upper crust with pressure variations under a brittle deformation regime<br>  ○ The transition from primary mineralisation (deposition of bastnaesite) to secondary mineralisation (formation of monazite) occurred in a hydrothermal continuity<br>  ○ New geochronological ages have been determined: the bastnaesite formed at 602 ± 7 Ma and the monazite formation followed at 589 ± 8 Ma. These ages are so close in the margin of error, that it is now proved that the secondary mineralisation (monazitic) has been established very quickly after primary mineralisation (bastnaesitic) |

| Criteria | JORC Code explanation | Commentary |
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| | | ○ The REE vein stockworks formed in a brittle regime of deformation and re-used/re-opened former heterogeneity of the gneissic and granitic host rocks. The fragmentation of the host rocks is enhanced by hydraulic fracturing, resulting in the formation of the REE bearing breccia facies as that found at. Kiyenzi<br>○ The composition of the fluids contained in the Gakara bastnaesites as well as the isotopic signatures indicate that the mineralisation precipitated first from a carbonatitic magma<br>○ The age (around 600 Ma) obtained for aplites from Gashirwe and Kiyenzi, suggest also that the REE mineralising event is related to an alkaline intrusion. The white aplite will be then a major regional guide for REE exploration through the Gakara area |
| ***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:*<br>○ *easting and northing of the drill hole collar*<br>○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>○ *dip and azimuth of the hole*<br>○ *down hole length and interception depth*<br>○ *hole length.*<br>• *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.* | • Information on drilling is given in previous sections of this table<br>• The CPR contains all the drilling information, data, tables, diagrams, maps and photographs<br>• There has been no exclusion of information |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***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.*<br>• *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.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • Besides the algorithms used in the Micromine "implicit modelling" and the "inverse distance" modelling, no weighting or high grade cutting techniques have been applied to the data reported<br>• Assay results are generally quoted rounded to 1 or 2 decimal place<br>• Metal equivalent values are not reported in this announcement |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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').* | • When exploration trenching is carried out and channel sampling undertaken, vein thicknesses are recorded in the field and are measured perpendicular to the plane of the vein. These represent true widths.<br>• With respect to the drilling data for the Kiyenzi deposit, true widths for mineralisation have not been calculated and as such only downhole lengths have been reported<br>• There contacts between breccia mineralised units and host rocks at Kiyenzi are very irregular and hence cannot be used to determine true intersection widths<br>• Broad trends and directions of the mineralisation were observed only once drill samples assays were received, processed, modelled and interpreted |
| ***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.* | • Selected maps and sections (with scales) and tabulations are presented in this announcement, while all maps, sections, tables, diagrams and photos are available in the CPR |
| ***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.* | • The accompanying document (CPR) is considered to represent a balanced report |

| Criteria | JORC Code explanation | Commentary |
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| ***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.* | • Regional mapping of the EL was completed resulting in the discovery and rock sampling of new REE occurrences<br>• Some 1,200 REE occurrences are now recorded in the Project database. Consequently, the Target inventory has increased from 20,000-80,000t of in-situ REE material to 34,000-137,000.<br>• A high-resolution airborne geophysical survey was flown resulting in the detection of a large large magnetic intrusion showing magnetic responses akin of known large carbonatite complexes<br>• Detailed ground gravity surveys completed on 3 of the deposits explored have generated linear gravity anomalies which appear to coincide with the occurrence of REE veins. This methodology has been used to assume continuation of veins between occurrence points<br>• Rainbow ore production processing plant has been used to carry our metallurgy tests on ores from future new mining sites, namely Murambi South and Kiyenzi |
| ***Further work*** | • *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • In order for Rainbow to guarantee a steady and sustainable supply of ROM ore every month to the plant, 4 to 5 new areas need to be explored every year, utilising the now tried and tested methodology using a combination of ground gravity, trenching and possibly drilling |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

| Criteria | JORC Code explanation | Commentary |
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| ***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.*<br>• *Data validation procedures used.* | • The database is continually updated and validated by Rainbow's Chief Geologist, on receipt of assays from the lab<br>• All the mining and exploration data/information are entered manually into the data capture template by the Geologist responsible for the specific task<br>• This information was then sent to an independent Database and GIS Specialist for validation and capturing into a MS Access database |
| ***Site visits*** | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • Verification activities were conducted by the CP during every site visit<br>• The CP visited and assessed exploration programmes at an average of 1 visit every two months for the past 2 years |

| Criteria | JORC Code explanation | Commentary |
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| ***Geological interpretation*** | • *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • The Gakara Project consists, on a broad, regional scale, in a REE mineralisation emplaced in the form of bastnaesite and monazite vein stockworks over a very large area of some 40km$^2$, enclosing individual areas (or prospects) where veins appear to occur as "clusters"<br>• The veins, at local scale, display some general trends and patterns (e.g. Gasagwe, Murambi South and Gomvyi Centre), but with the characteristic complexity of stockworks<br>• The complexity of the Gakara REE deposit and the variability of the orebodies render problematic the resource modelling and the criteria and parameters required to achieve Code compliance need to be tailored for each deposit type and specifically for each mine site<br>• So far three "orebody types" have been identified by Rainbow's geology team<br>• With the vast geological database gathered at the Gasagwe Mine during 1.5 years of mining and with the findings of more intensive brownfields works carried out at the Murambi South and Kiyenzi Prospects, the CP is of the opinion that Resources can be estimated in accordance with the JORC Code reporting standard<br>• The geological data acquired during the mining of the Gasagwe deposit will serve as real benchmark to establish MRE for other deposits. Such knowledge pertains to: REE vein continuity (laterally and at depth), vein morphology, vein thickness, grade variation, density/SG variation, ore processing and mining methods |

| Criteria | JORC Code explanation | Commentary |
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| ***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.* | • Each deposit was evaluated and resources calculated, separately, based on actual data in term of number of veins, real dimensions (measured vein thicknesses and lateral extensions, as exposed in surface trenches or in drill logs).<br>• The real lateral dimensions were then increased by a distance margin that was considered reasonable it the geological context of the deposit and based on the knowledge from the historic and Rainbow's mining experience<br>• Similarly, the depth extensions of the veins were extrapolated in tranches (5m, 10/15m, 20/30m)<br>• Each extrapolation, lateral and at depth, caused the reasonable confidence about continuity to decrease and based on this the various resources categories were defined<br>• For the Kiyenzi deposit, the dimensions and classification of the resources were performed using the "implicit modelling" and "inverse distance modelling" options in Micromine |

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| ***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.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>• *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.*<br>• *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | • All modellings were built, analysed and quantified using Micromine (MM) software<br>• Importing and validating data: all drilling data were validated using MM in built validation functions<br>• Wireframing and Sample Flagging: MM implicit modelling techniques were used to model the lithology provided in the sample logs. MM uses local and global Radial Basis Function's (RBF) to create implicit models. RBF is an interpolation method that uses polyharmonic and thin plate splines.<br>• Data preparation: The sample assays were composited to 1m intervals. Compositing reallocates variable assay intervals to regular lengths, producing uniform sample support for analysis and grade estimation. It works by calculating the length-weighted average of the intervals contributing to each new composite and is typically necessary when the data include short high-grade intervals (which is the case for the Kiyenzi deposit)<br>• 3D Block Modelling: Although it's possible to create a block model in MM during grade interpolation, it was more practical to create the model beforehand, without estimating any grades. Such a model is known as an empty or blank block model. Separating block model creation from grade interpolation allows you easily perform multiple interpolations on one model. The model must be large enough to cover the full extent of the input data, which in most cases consists of one or more wireframes and drill hole data-bases. The maximum cell dimensions allocated for the block model was 2mx2mx0.5m and the smallest was 0.4mx0.4mx0.1m. This was done to adequality fill each wireframe with block representing the total volumes. No rotation was applied to the blank block model. A lithology code was then given to each block<br>• Selecting a Modelling Interpolation Method: incorporating the level of spatial and statistical complexity using the Coefficient of Variance (COV) into a single classification scheme helped to identify the best modelling method to be used for the study area. Each combination of geometric and statistical complexity yields one of four generic ore deposit types. During the process of exploratory or classical analysis of the sample assay file the COV value was calculated to be 1.3. The project area exhibits relatively complex geometry suggesting that Type B ore deposit (namely skarn and base metal sulphide deposits). Based on this the |

Inverse Distance Weighting (IDW) was deemed to be the most suitable for Kiyenzi

- Grade Interpolation and Mineral Resource Estimation - Density: The wireframes created during the modelling process were allocated actual density attributes that were directly assigned to each cell with in the block model. A default density of 2.55 was given to cells that were not allocated to a wireframe.
- Grade Interpolation and Mineral Resource Estimation - Search Neighbourhood (SN): a SN was defined as there is a distance beyond which all other sample points become irrelevant. Only the samples falling within it are used to estimate the grade of the block under investigation. In MM the search neighbourhood may either be spherical or ellipsoidal. Grade continuity exhibits a preferred direction, and its size, shape, and orientation are chosen to match the continuity you see in the geology. A common starting point for radii in a classical (non-geostatistical) interpolation is to use 1.5 times the drill hole or sample spacing, which will ensure at least one input point either side of the current block is included
- Grade Interpolation and Mineral Resource Estimation – IDW: The Inverse Distance Weighting interpolation was used for grade interpolation, in which each sample is weighted according to some power of the inverse of its distance from the block to be estimated. In an IDW interpolation the SN controls both the selection of input points and the amount of weighting given to each point. Anisotropic inverse distance is best for when grade continuity varies according to direction, and it is only relevant in an ellipsoidal search. In order to tun the grade interpolation method the input consists of the 1m composited assay file, using the TREO% grade field and the blank block model. The output of this process consists of an initial grade block model. Multiple interpolation runs were performed, based on changing the ellipsoid radii and minimum point requirements for each interpolation run. Each run essentially looks at the variance between samples at increasing distances and also allows lowers the minimum point requirements.
- Blocks interpolated in the first run could be classified as measured resources. Similarly, blocks interpolated by the second run could be classified as indicated resources, and those interpolated by the third (and subsequent) runs could be

| Criteria | JORC Code explanation | Commentary |
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| | | classified as inferred resources. Progressively increasing the search radii across multiple interpolation runs is a simple way to indicate the quality of each block grade, on the assumption that the further a block is positioned from the input data the lower the quality of the estimate. This method is flexible enough to be used with or without variogram (geostatistical) modelling |
| ***Moisture*** | • *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | • Tonnages are estimated on a dry basis. |
| ***Cut-off parameters*** | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • No cut-off grade parameters were used for the Gasagwe, Murambi S and Gomvyi C resource calculations. Basic statistical analyses were run on TREO values for the entire sample data available for each site. The final grade used in the MRE statement is the average of such values<br>• For Kiyenzi, statistics were run and a grade/tonnage curve determined. A cut-off grade of 1% was selected as the most appropriate for this type of orebody (a large tonnage – low grade deposit). However, a range of cut off grades have also been considered<br>• Further metallurgy test and ore processing testworks are needed to establish the suitability of the current Rainbow plant to treat such material and to further refine the optimal cut off grade |
| ***Mining factors or assumptions*** | • *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | • Rainbow has been mining the Gasagwe deposit for the past 18 months and has therefore proved their capability in mining such a complex orebody<br>• The learnings of the current, ongoing mining activities will serve Rainbow as practical experience applicable to the mining of new, future sites, starting with Murambi South |

| Criteria | JORC Code explanation | Commentary |
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| ***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.* | • Rainbow's ore processing plant was commissioned in Q1 2018 and has been in production mode since then<br>• The plant has consistently managed to generate every month a high-grade REE concentrate, grading in average 58.2% TREO (Dec 17 to Oct 18)<br>• Rainbow plant has also been used to carry our Performance Tests on ores from future new mining sites, namely Murambi South and Kiyenzi<br>• Rainbow therefore has proved its capability and capacity in processing REE ore from its Gakara deposits |
| ***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.* | • Rainbow has completed all statutory and legal requirements in term of ESIA's in respect of all its operations.<br>• Rainbow has received from the Burundi Ministry of Environment certificates of compliance for: the EL, the ML, the Kabezi processing plant, the Gasagwe mine site and the Murambi mine site<br>• All mining sites have plans for the placement and management of waste rock dumps |
| ***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.*<br>• *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.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | • Density/SG data were measured in the field using the volume displacement method<br>• Core samples and rock samples were used. Samples from all lithologies were tested<br>• Additionally, selected core samples were also submitted the the A:S lab for SG measurements (using method code OA-GRA09a, bulk density after wax coating). |

| Criteria | JORC Code explanation | Commentary |
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| ***Classification*** | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *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).*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.* | • The Mineral Resource has been classified in the Measured, Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code).<br>• A range of criteria has been considered in determining this classification including:<br>  ○ Orebody geological interpretation<br>  ○ Mineralisation interpretation<br>  ○ Vein and grade continuity, laterally and vertically<br>  ○ General database quality and integrity<br>  ○ Drill hole and channel sample spacing<br>  ○ Quality of SG and topographic data<br>  ○ Modelling technique<br>  ○ Mining parameters and existing capabilities<br>  ○ Existing ore processing capabilities<br>• The Competent Person is in agreement with this classification of the resources for the 4 deposits evaluated |
| ***Audits or reviews*** | • *The results of any audits or reviews of Mineral Resource estimates.* | • No audit of the current resources has been carried out at this time |

| Criteria | JORC Code explanation | Commentary |
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| ***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.*<br>• *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.*<br>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | • The relative accuracy of the various resource estimates is reflected in the JORC resource categories and the CP assessments<br>• At the Measured and Indicated Resource classification level, the resources represent local estimates, based on actual vein dimensions, that can be used for further mining studies<br>• Inferred Resources are considered more speculative but within the context of the experience gained from the actual mining of the Gasagwe deposit as well as the historic mining data |