

9 October 2023

ASX Market Announcements  
Level 6, Exchange  
Centre 20 Bridge Street  
Sydney NSW 2000

## REVIEW OF RARE EARTH ELEMENTS IN RIO GRANDE CARBONATITES CONFIRMS STRONG GRADES

### Highlights:

- **Best diamond drill hole intercepts include:**
  - TED-11-008, which returned 24.7 metres grading 1.27% TREO or 12,700 ppm TREO from 10 metres
  - TED-11-005, which returned 18.6m meters grading 0.75% or 7,500 ppm TREO from 6 metres
- **Best individual result is from an oxidised carbonatite sample grading 2.16% or TREO 21,618 ppm.**
- **The oxidised carbonatite has an average of 0.63% or 6,300 ppm of Total Rare Earth Oxides (TREO).**
- **The most abundant REE are cerium (Ce), lanthanum (La) and neodymium (Nd), representing about 45%, 30% and 15% of the basket, respectively.**
- **Niobium was also detected with an average of 1,000 to 1,400 ppm Nb<sub>2</sub>O<sub>5</sub> in the fresh and oxidised carbonatite, respectively. Occasionally values of up to 4.09% Nb<sub>2</sub>O<sub>5</sub> occur.**
- **Results are based on assays from drill holes in only one of six known carbonatites on Aguia's tenements. Priority will be given to exploration and assessment of the other five carbonatites.**
- **At the same time, the Company remains totally committed to the development of the Tres Estradas Phosphate Project ('TEPP') which is a key priority. The potential for a rare earths co-product will be assessed.**

**Sydney, Australia: Aguia Resources Limited (ASX:AGR)** has recently reviewed the historical results from diamond drill holes from a 2011 drill campaign of the Tres Estradas carbonatite, with a particular focus on rare earth elements (REE). A total of 19 diamond drill holes have REE assays, including 113 samples of oxidised carbonatite (sapolite) and 431 samples of fresh, unweathered carbonatite.

On 14 November 2011, the Company reported to the market the discovery of the Tres Estradas Carbonatite<sup>(1)</sup>. Over time, systematic drilling programs confirmed an audited Mineral Resource of 83.21 Mt of Measured and Indicated resources grading 4.11% P<sub>2</sub>O<sub>5</sub> and 21.85 Mt of Inferred Resources with an average grade of 3.0% P<sub>2</sub>O<sub>5</sub>. This mineral resource comprises 5.3 Mt of high-grade oxidised material from the surface, which includes 796,000 tonnes of Measured resources grading 10.18% P<sub>2</sub>O<sub>5</sub> and another 3.83 Mt of Indicated resources grading 9.21% P<sub>2</sub>O<sub>5</sub><sup>(2)</sup>.

Because Agüia was the first company to recognise the potential of the region, the Company was able to secure various prospective targets that subsequently resulted in the greenfield discoveries of another five carbonatites: Santa Clara, Joca Tavares, Porteira, Mato Grande and Passo Feio, totalling 6 carbonatites that belong to Agüia covering some 141 km<sup>2</sup> (See Figure 1 below).

The exploration program and assaying at the time, being some 12 years ago, focused on the phosphate contained within the carbonatites with REE not regarded as a priority. Given the growing demand for REE, underpinned by the world transitioning to clean energy, means Agüia's six projects, one of which already contains highly encouraging mineralisation, present the Company with considerable potential upside. As such, more extensive exploration is planned and analysis of more historical test work.

**Agüia's Non-Executive Chairman Warwick Grigor commented:** *“One of my first tasks upon joining the Company has been to very quickly assess and the potential for rare earth elements. This historical data confirms this thesis and the results are highly encouraging based on a limited number of assays, so I am confident we are just scratching the surface. Now that we have confirmed REE grades and presence of the mineralisation, we are now planning more extensive sampling and exploration for REE and niobium across all six known carbonatites and particularly the five that have not been investigated yet. Companies get excited if they have one carbonatite on their ground; Agüia has six. Thus, there is an incredible opportunity to unlock additional value from these rocks, which are proven source of phosphate as well. The higher phosphorous and REE oxidised grades have the potential to add considerable leverage to the assets.”*

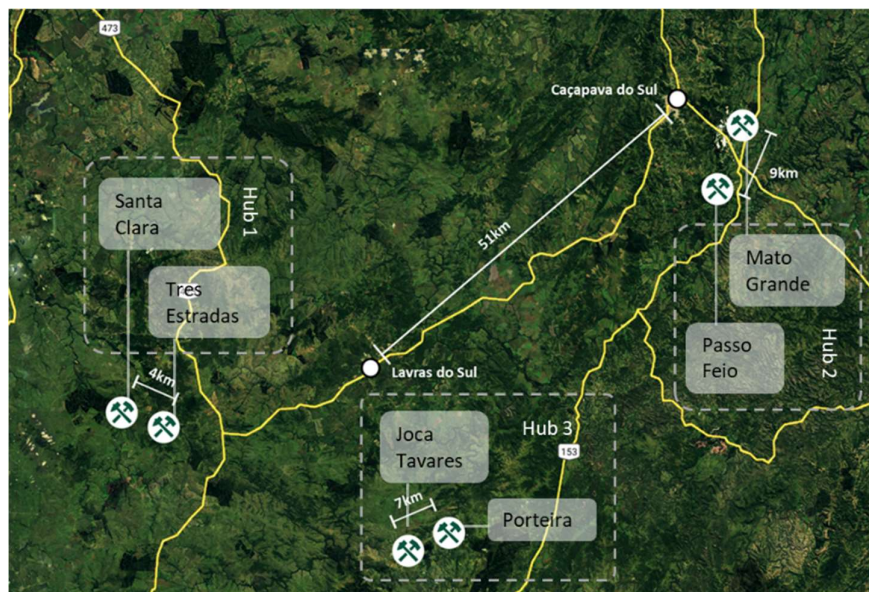
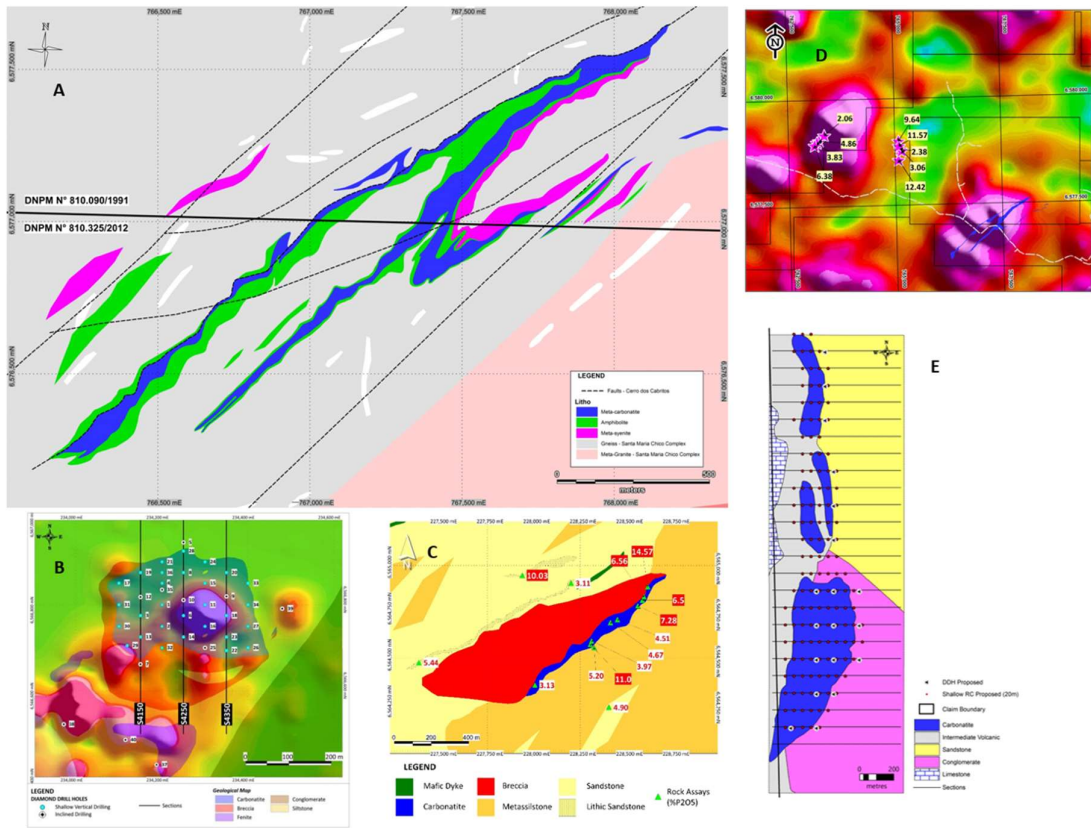


Figure 1. Satellite image of the Six Rio Grande Carbonatites that were discovered by Agüia.





**Figure 2.** Geological maps of the (A) Tres Estradas, (B) Joca Tavares, (C) Porteira, (D) Santa Clara and (E) Mato Grande carbonatites.



**Figure 3.** Outcrops of (A) Joca Tavares, (B) Tres Estradas, (C) Santa Clara and (D) Porteira carbonatites.

**Table 1**

Diamond drill hole intercepts from the Tres Estradas Carbonatite

Hole #	Mineralised intervals (TREO)	Mineralised intervals (TREO)
	Cut off 0.2%	Cut off 0.5%
<b>TED-11-001</b>	38.50m @ 0.26% TREO (from surface)	2.0m @ 0.67% TREO (from 14.0m)
<b>TED-11-002</b>	<b>29.27m @ 0.51%</b> TREO (from surface)	19.50m @ 0.61% TREO (from 2.60m), Incl. 2.53m @ 0.87% TREO (from 11.70m), Incl. 2.50m @ 1.45% TREO (from 19.60m)
<b>TED-11-003</b>	<b>21.63m @ 0.43%</b> TREO (from surface)	13.05m @ 0.57% TREO (from 1.50m)
<b>TED-11-004</b>	46m @ 0.32% TREO (from surface)	8.60m @ 0.56% TREO (from 0.60m), and 1.30m @ 0.58% TREO (from 37.05m)
<b>TED-11-005</b>	<b>30m @ 0.57%</b> TREO (from surface)	18.65m @ 0.75% TREO E <sub>2</sub> O <sub>3</sub> (from 1.30m), Incl. 8.80m @ 0.92% TREO (from 6.20m), Incl. 1.20m @ 2.17% TREO (from 6.20m)
<b>TED-11-006</b>	97.60m @ 0.24% TREO (from surface)	4.0m @ 0.46% TREO (from 83.0m)
<b>TED-11-007</b>	13.60m @ 0.25% TREO (from surface) and 41.25 @ 0.21% TREO (from 29.80m)	Assays below 0.5% TREO
<b>TED-11-008</b>	<b>27m @ 0.97%</b> TREO (from surface)	24.70m @ 1.27% TREO (from 0.0m), Incl. 4.0m @ 1.45% TREO (from 10.30m)
<b>TED-11-009</b>	7.40m @ 0.23% TREO (from 3.0m)	Assays below 0.5% TREO
<b>TED-11-010</b>	48.30m @ 0.25% TREO (from surface)	1.10m @ 0.62% TREO (from 5.50m), And 0.77m @ 0.65% TREO (from 46.75m)
<b>TED-11-011</b>	23m @ 0.24% TREO (from 11.0m)	Assays below 0.5% TREO
<b>TED-11-013</b>	1.13m @ 0.81% TREO (from 10.72m)	1.13m @ 0.81% TREO (from 10.72m)
<b>TED-11-016</b>	3.80m @ 0.40% TREO (from 14.0m)	Assays below 0.5% TREO
<b>TED-11-018</b>	5.50m @ 0.32% TREO (from 3.55m)	Assays below 0.5% TREO

Please refer to the following ASX announcements for historical references:

- (1) 14 Nov 2011 – New Phosphate Discovery – Tres Estradas Project in Southern Brazil.
- (2) 21 March 2023 – Updated BFS of Phosphate Project, Confirms Robust Economics.

## AUTHORISED FOR ISSUE TO ASX BY THE BOARD OF AGUIA RESOURCES LIMITED

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**About Aguia:**

About Aguia: Aguia Resources Limited, ("Aguia") is an ASX listed multi-commodity company (AGR:ASX) with pre-production phosphate and metallic copper projects located in Rio Grande do Sul, the southernmost state of Brazil. Aguia has an established and highly experienced in-country team based in Porto Alegre, the capital of Rio Grande do Sul. Aguia is committed to advancing its existing projects into production whilst continuing to pursue other opportunities within the sector.

**JORC Code Competent Person Statements:**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr. Fernando Tallarico, who is a member of the Association of Professional Geoscientists of Ontario. Dr. Tallarico is a full-time employee of the company. Dr. Tallarico has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Dr. Tallarico consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Caution regarding forward-looking information:**

This press release contains "forward looking information" within the meaning of applicable Australian securities legislation. Forward looking information includes, without limitation, statements regarding the next steps for the project, timetable for development, production forecast, mineral resource estimate, exploration program, permit approvals, timetable and budget, property prospectivity, and the future financial or operating performance of the Company. Generally, forward looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including, but not limited to: general business, economic, competitive, geopolitical and social uncertainties; the actual results of current exploration activities; other risks of the mining industry and the risks described in the Company's public disclosure. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities law.

**JORC Code, Table 1**  
**Section 1 Sampling Techniques and Data**  
 (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The procedures for rock chip sampling and diamond drilling were compliant with mineral industry standards.</li> <li>Samples are sent to laboratories that are commercial fee-for-service testing facilities and are independent of Agua.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>Hole locations are picked up using hand-held GPS. Sampling is carried out using comprehensive Agua protocols and QAQC procedures as per industry best practice</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation is generally visual</li> <li>Half core diamond drill samples in mineralized material are generally collected at 1m intervals and sent to the laboratory for assay; however lengths will vary to generally between 0.5 and 1.5m to honour geological boundaries where required.</li> <li>The drilling samples generated in 2011 diamond drilling campaign (19 holes) were sent to ALS laboratories in Belo Horizonte and analysed using method ICP ME-MS81 – Lithium tetra borate fusion. Elements assayed for include Ba, Ce, Co, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Mo, Nb, Nd, Pr, Sb, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb and Zr which is considered suitable for the type of mineralisation</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Core Drilling - Drilling utilized HQ equipment for weathered material and NQ for fresh rock. Downhole surveys are performed on 3-metre intervals using a Maxibore down-hole tool. No core orientation has been carried out.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul style="list-style-type: none"> <li>Core Drilling - Recovery by sample and by drill run was recorded; core recovery generally exceeds 97%</li> </ul>
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond Drilling - Due to the coherent nature of the fresh rock and homogenous nature of the mineralisation sample recovery is not</li> </ul>

Criteria	JORC Code explanation	Commentary
		an issue. In the saprolite recovery is maximised using short drill runs and best drilling practices.
	<ul style="list-style-type: none"> <li>• <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mineralisation is homogenous throughout the mineralized intervals, with no relationship between sample recovery and grade on any type of drilling.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond – logging is considered suitable for inclusion in resource estimations, metallurgical studies and preliminary mining studies. The lack of orientated core and geotechnical logging prior to cutting precludes the use in detailed mining studies</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond logging includes rock type, alteration, structure and qualitative magnetism. No core orientation has been carried out, with structural measurements being limited to alpha angles only. All core is photographed dry before being cut</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>The total length and percentage of the relevant intersections logged</i></li> </ul>	<ul style="list-style-type: none"> <li>• 100% of the relevant intersections of all drilling are logged</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Solid core is sawn in half, with half being sent for assay and half being retained for reference. Friable core is split down the center line using a spatula or similar tool, with half being retained and half sent for assay.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> </ul>	<ul style="list-style-type: none"> <li>• For all sampling and drilling, samples are dried and crushed, and then milled to 75% passing 80 mesh using LM mills at the laboratory.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The sample preparation techniques are industry standard and are considered appropriate for the mineralisation being investigated</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Industry standard procedures are employed, including ensuring non-core samples are adequately homogenized before assay and archive samples are collected</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No field duplicate samples or second half sampling was done. The target mineralization is largely homogeneous.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample sizes are considered appropriate to the grain size of the</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>sampled.</i>	material being assayed
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> </ul>	<ul style="list-style-type: none"> <li>The ICP method used is industry standard and considered appropriate for the analysis of Rare Earth Elements.</li> <li>Sample preparation and analysis was completed at ALS's Belo Horizonte laboratory in Brazil using standard crushing and pulverization techniques.</li> <li>The prepared pulps are analysed by a lithium borate fusion ICP ME-MS81. Elements assayed for include Ba, Ce, Co, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Mo, Nb, Nd, Pr, Sb, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb and Zr which is considered suitable for the type of mineralisation</li> <li>The preparation and analytical procedures are appropriate for the type of mineralization sampled and are reliable to deliver the total content of the analysed compounds.</li> </ul>
	<ul style="list-style-type: none"> <li><i>make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> </ul>	<ul style="list-style-type: none"> <li>Where utilised, hand held XRF is an Delta Analyser CS-4000 by Innov-X Systems</li> </ul>
	<ul style="list-style-type: none"> <li><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument</i></li> </ul>	<ul style="list-style-type: none"> <li>There is a calibration plate supplied by INOVV-X-Systems for the calibration of the Portable X Ray Fluorescence equipment.</li> </ul>
	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Fine and coarse blank standards prepared from barren quartz veins.</li> <li>One each of the above company supplied standards is included in each batch of 43 samples, in addition to a pulp duplicate.</li> <li>One batch of 43 samples is sent monthly for umpire laboratory testing.</li> <li>Additionally, Aguia relies on the analytical quality control measured implemented by the ISO accredited laboratory used.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> </ul>	<ul style="list-style-type: none"> <li>The AGR procedures consists an internal double check and, when required an independent verification during the independent audit process.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The use of twinned holes.</i></li> </ul>	<ul style="list-style-type: none"> <li>Given this is the initial programme at TE South no twin holes have been drilled</li> </ul>
	<ul style="list-style-type: none"> <li><i>Documentation of primary data, data entry procedures, data verification,</i></li> </ul>	<ul style="list-style-type: none"> <li>Data is manually entered onto logging sheets on site by Aguia geologists. This</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>data storage (physical and electronic) protocols.</i></p>	<p>data is then entered into a digital database consisting of Excel workbooks. Assay data from the laboratory is merged into the downhole sample sheets. All original logging sheets and digital data are stored. Digital data is regularly backed up.</p> <ul style="list-style-type: none"> <li>Data is yet to be externally audited; external audits of previous drilling has confirmed the veracity of work carried out</li> </ul>
	<ul style="list-style-type: none"> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>There is no adjustment to assay data</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> </ul>	<ul style="list-style-type: none"> <li>All borehole collars were surveyed according to the local UTM coordinate system (South American Datum 1969 – SAD69, Zone 21S), using differential GPS equipment before drilling started, and once drilling had been completed.</li> </ul>
	<ul style="list-style-type: none"> <li><i>Specification of the grid system used.</i></li> </ul>	<ul style="list-style-type: none"> <li>SAD 1969 UTM system, Zons 21S</li> </ul>
	<ul style="list-style-type: none"> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>A topographic survey of the project area was completed using differential GPS technology.</li> <li>The survey consisting of lines spaced 25 metres apart, and control lines spaced 100 metres apart.</li> <li>The topographic survey generated contour lines at 1-metre intervals in the meta-carbonatite area. Contour lines at 5-metre intervals were obtained for the remaining area using shuttle radar topography mission (SRTM) and orthorectified Geoeye images with 0.5 metre resolution.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>Diamond Drilling - Diamond holes (inclined) at Tres Estradas are being drilled on 100m spaced lines, with spacing along drill lines determined by carbonatite outcrop</li> </ul>
	<ul style="list-style-type: none"> <li><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>The data spacing and distribution is considered suitable for the style of mineralisation being tested, and will be suitable for use in Mineral Resource and Reserve estimations</li> </ul>
	<ul style="list-style-type: none"> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>For the purposes of reporting of results no sample compositing has been applied</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>The bulk nature of the mineralisation indicates that sampling bias will not be introduced by changing drilling direction</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Given the bulk and homogenous nature of the mineralisation it is considered that there is no sampling bias</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Chain of custody is managed by Aguia. Samples are stored on site. Assay samples are sent by freight express to the relevant laboratories.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Tres Estradas – Audit by SRK Consulting in 2012 and late 2014 indicated that techniques utilised by Aguia were in line with generally accepted industry best practices. The same audit found no issues with the data (in reference to 2011 drilling campaign have been reported)</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Tres Estradas 810.090/1991 (Tres Estradas) and 810.996/2010 (Joca Tavares), combined cover a total 1896.23 hectares</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Tres Estradas and Joca Tavares Discoveries of phosphate rich rocks at TE and JT were made by a joint exploration programme between Companhia Brasileira do Cobre and Santa Elina in 2007/2008 during a gold exploration programme. This involved an integrated geochemical/geological/geophysical and drilling programme. The gold results were disappointing, causing Santa Elina to withdraw</li> </ul>

Criteria	JORC Code explanation	Commentary
		from the JV, however +6% phosphate values were noted in assaying of soils and drill core.
Geology	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Tres Estradas</li> </ul> <p>The mineralisation is a carbonatite hosted phosphate deposit, with apatite as the phosphate bearing mineral. The NE-SW trending carbonatite is probably Mid-Proterozoic in age, and has been affected by Neo-Proterozoic shearing and metamorphism. It is hosted in the Santa Maria Chico Granulite Complex, within the Taquarembo Domain of the Achaean to Proterozoic Sul-rio-grandense Shield.</p>
Drill hole Information	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drillhole information is listed in the appropriate tables in this document, and presented in maps and sections</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill intersections are length weighted. A nominal 0.2% TREO lower cutoff is used, and there is no upper cut applied to intersections.</li> <li>• Intercept limits was guided by lithological interpretation during core-logging.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>shown in detail.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Metal equivalent were not reported</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling is targeted to intersect the full width of the interpreted steeply dipping carbonatite bodies</li> </ul>
	<ul style="list-style-type: none"> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> </ul>	<ul style="list-style-type: none"> <li>Diamond holes are drilled at an acute angle to the steeply to vertically dipping carbonatite bodies, hence downhole widths will be greater than true widths. For drillholes drilled at -60°, true mineralisation widths will generally be in the order of 40-60% of downhole intersection lengths – this is shown in more detail on included cross sections.</li> </ul>
	<ul style="list-style-type: none"> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>Down hole lengths are reported</li> <li>Relationships between true lengths and true thickness are shown in cross sections</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>Refer to maps and sections in release</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>Results from 2011 drilling campaign have been reported</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>Geological mapping and interpretation is used as a base for included drill hole plans and sections</li> </ul>
Further work	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral</i></li> </ul>	<ul style="list-style-type: none"> <li>As presented in the text of this report</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>extensions or depth extensions or large-scale step-out drilling).</i></p> <ul style="list-style-type: none"> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• As presented in the text of this report</li> </ul>