



1<sup>st</sup> June 2023

## **ASX ANNOUNCEMENT**

# **BURRACOPPIN PROJECT**

## **96Mt MAIDEN INFERRED (JORC 2012) COMBINED MINERAL RESOURCE ESTIMATE**

### **HIGHLIGHTS**

- **Maiden Inferred (JORC 2012) Mineral Resource Estimate for the Company's multi-commodity Rare Earth Elements (REE) + kaolin/halloysite project, comprising;**
  - **36Mt at 1,356ppm Total Rare Earth Oxides (TREO) of Rare Earth bearing material (using 400ppm TREO cut-off) within the -45µm size fraction, contained within the global resource**
    - **This equates to 20,000t of combined TREO products**
  - **An estimated global inferred resource of 96Mt @ ISO-B 80 (using an ISO-Brightness (ISO-B) cut-off of 70) of kaolinite/halloysite bearing material, comprising**
    - **51Mt @ ISO-B 83 of ultra bright white kaolinite/halloysite (>80 ISO-B) bearing material and;**
    - **29Mt @ ISO-B 78 of bright white kaolinite/halloysite (>75<80 ISO-B) bearing material and,**
    - **16Mt @ ISO-B 73 of white kaolinite/halloysite (>70<75 ISO-B) bearing material**
      - **This equates to 36.9Mt of kaolin product & 2.1Mt of halloysite product**
- **Resource is within less than 5% of Ragusa's 100% owned tenure with significant resource expansion upside potential**
- **The Burracoppin Project has multi-commodity development potential with REE product + kaolin/halloysite (compared to stand-alone REE projects)**

Ragusa Minerals Limited (ASX: RAS) ("Ragusa" or "Company") is pleased to advise that it has completed its maiden mineral resource estimate (JORC 2012) at the Company's 100% owned multi-commodity REE and kaolinite/halloysite Burracoppin Project in Western Australia.

A maiden 96Mt at 80 ISO-B inferred kaolinite/halloysite resource has been defined at the project using an ISO-B cutoff of 70, which includes 36Mt at 1,356ppm TREO (using a 400ppm cut-off). Refer Table 1 for REO resource details and Table 2 for global kaolinite/halloysite resource details.

Ragusa Chair, Jerko Zuvela said *“The Company is very excited to have completed its maiden JORC 2012 inferred Mineral Resource Estimate at our 100% owned Burracoppin Project – a true multi-commodity development opportunity for highly valued and strategic critical minerals, including TREO/Rare Earth Elements (REE) and kaolin/halloysite.*

*The shallow and high-grade REE mineralisation alongside the kaolinite and halloysite is very exciting and adds significant potential to the project.”*

**Table 1.** Burracoppin Inferred Mineral Resource Estimate of Rare Earth Oxides using a cut-off of 400ppm TREO

Rare Earth Oxide Resource														
VOLUME	TOTAL	DENSITY	-45µm	-45µm	TREO	TREO	La2O3	CeO2	Pr6O11	Na2O3	Sm2O3	Dy2O3	Tb4O7	Y2O3
(m <sup>3</sup> )	(t)	(g/cm <sup>3</sup> )	%	(t)	(ppm)	(t)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
23,339,000	35,709,000	1.53	41.3	14,731,000	1356.4	20,000	320.4	634.1	62.5	204.2	28.1	11.7	2.6	54.6

**Table 2.** Burracoppin Inferred Mineral Resource Estimate of Halloysite and Kaolinite bearing material using an ISO-B cut-off of 70

Global Resource														
ISO-B	VOLUME	Total	DENSITY	ISO Brightness	-45µm	-45µm	Halloysite	Halloysite	Kaolinite	Kaolinite	Al2O3	Fe2O3	SiO2	TiO2
%	(m3)	(t)	(g/cm <sup>3</sup> )	%	%	(t)	%	(t)	%	(t)	%	%	%	%
<b>White 70 - 75</b>	10,516,000	16,080,000	1.53	73	41.2	6,630,000	3.6	238,000	73.2	4,852,000	31.8	1.2	52.3	1.1
<b>Bright 75 - 80</b>	19,002,000	29,073,000	1.53	78	47.2	13,720,000	3.9	528,000	79.3	10,886,000	34.0	0.9	50.8	0.6
<b>Ultra Bright &gt;80</b>	33,233,000	50,847,000	1.53	83	49.2	25,013,000	5.3	1,321,000	84.4	21,116,000	35.5	0.6	49.6	0.5
<b>TOTAL</b>	62,751,000	96,008,000		80	47.2	45,363,000	4.6	2,087,000	81.2	36,854,000	34.5	0.8	50.3	0.6

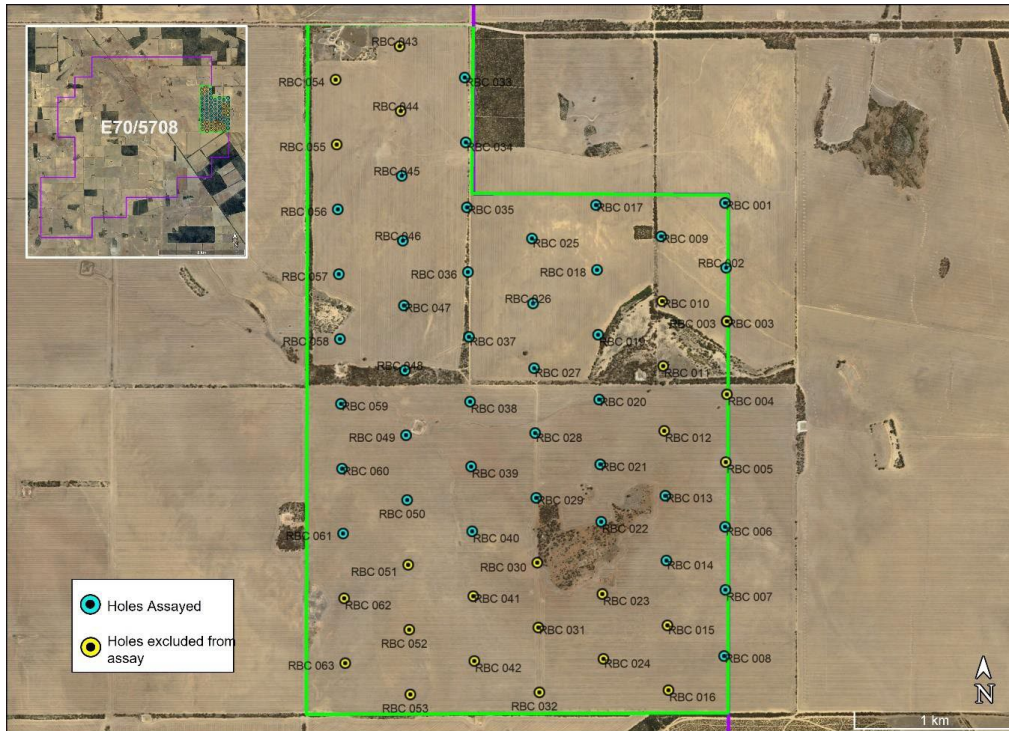


Figure 1. Burracoppin Project – Sample Location Plan

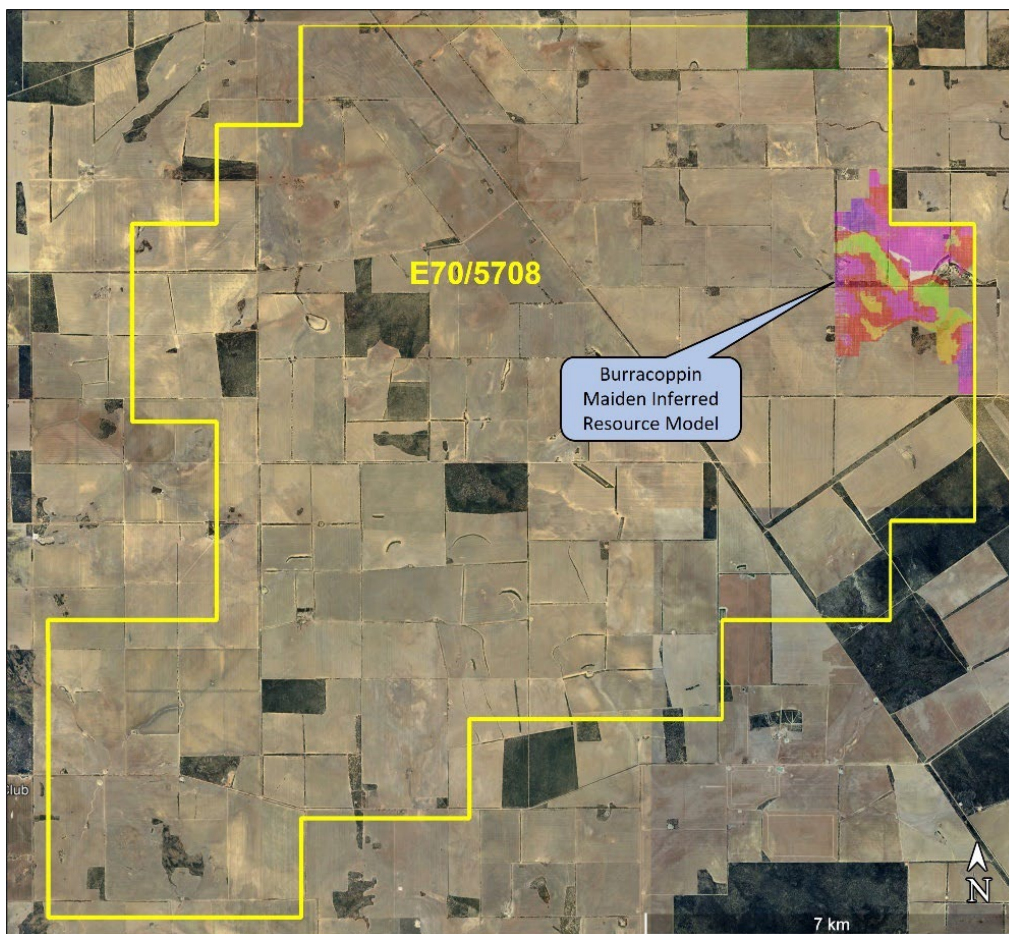


Figure 2. Burracoppin Project – Resource as a subset of tenure

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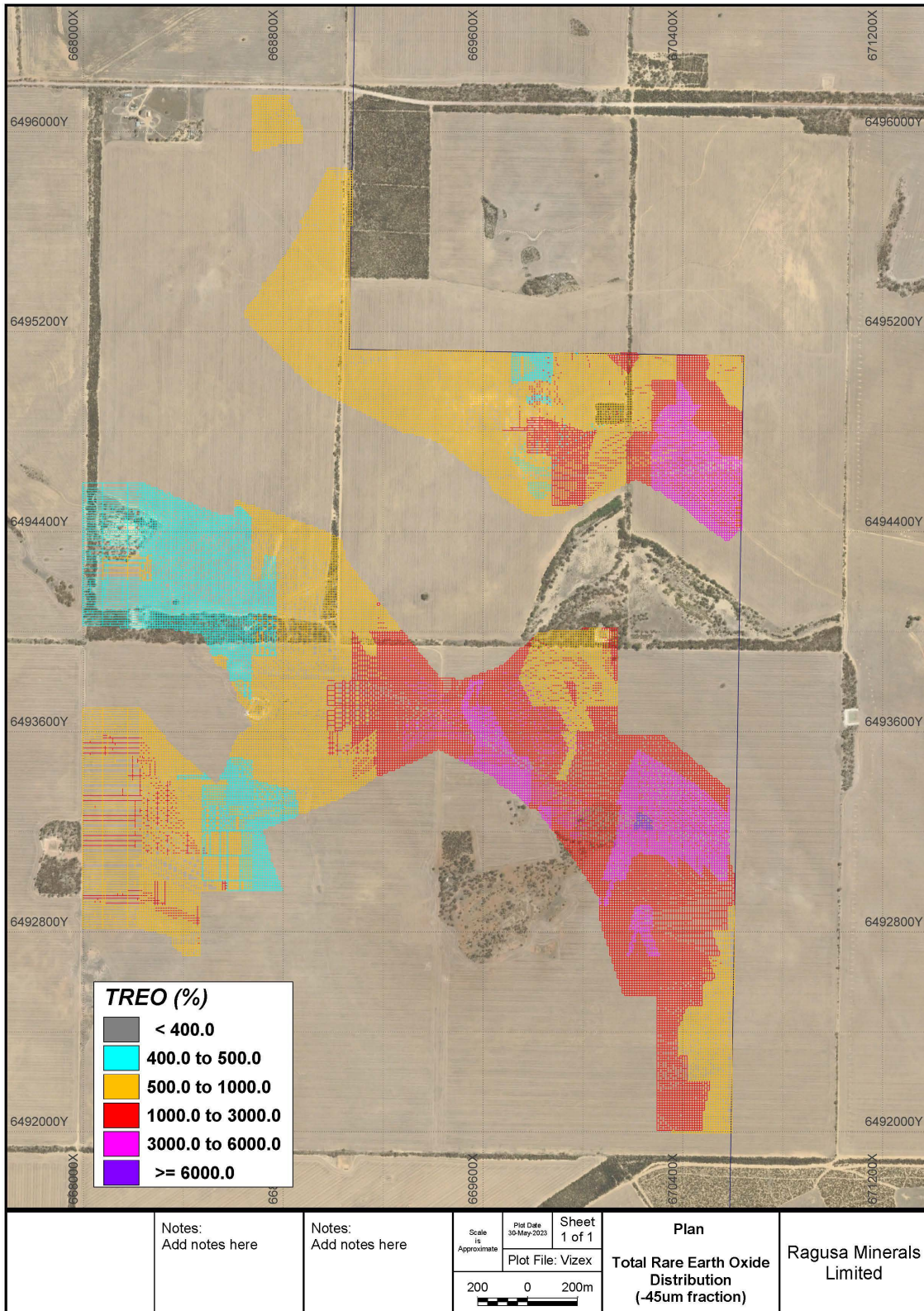


Figure 3. Burracoppin Project – Indicative TREO distribution in plan view



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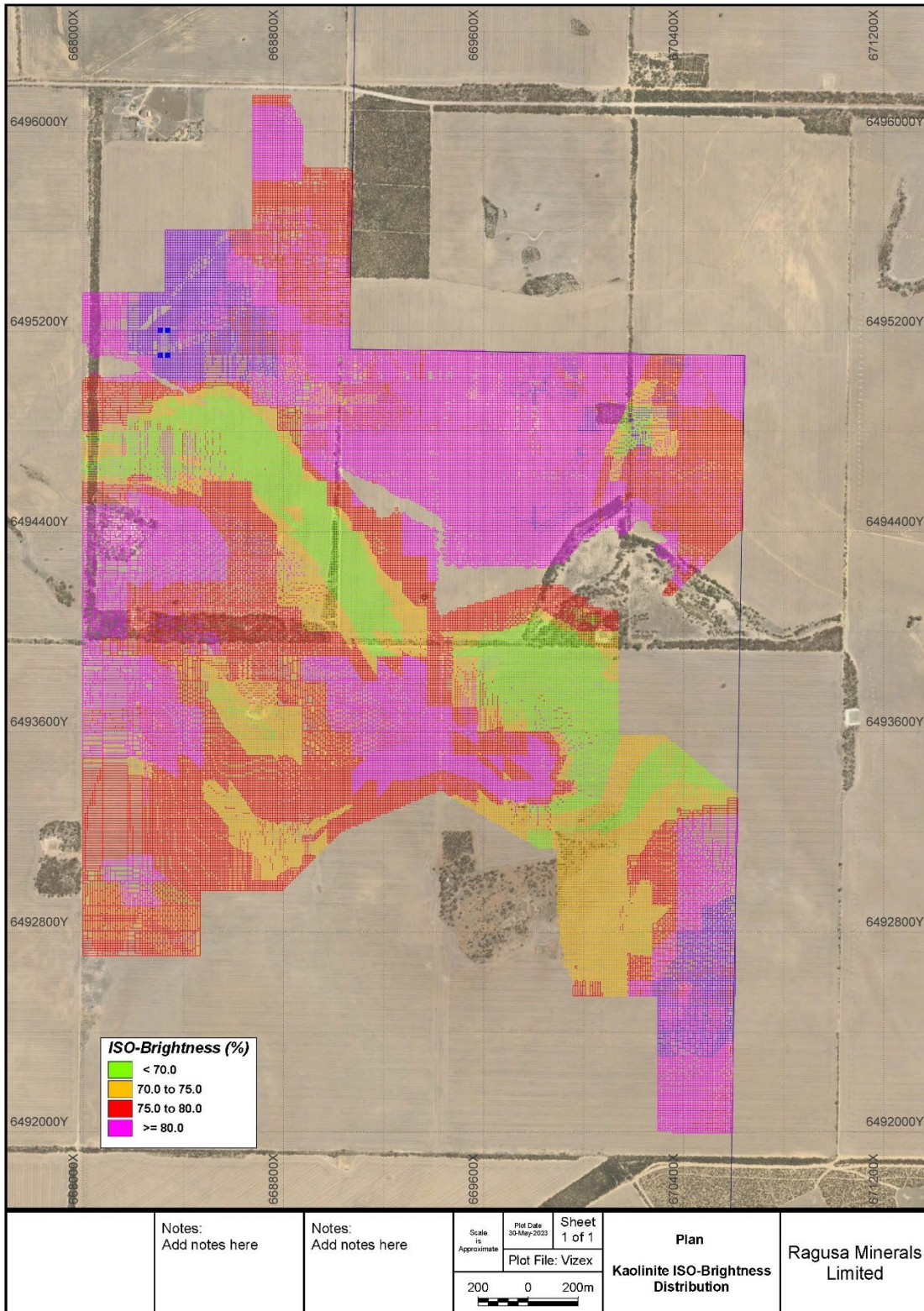


Figure 4. Burracoppin Project – Indicative ISO-Brightness distribution in plan view



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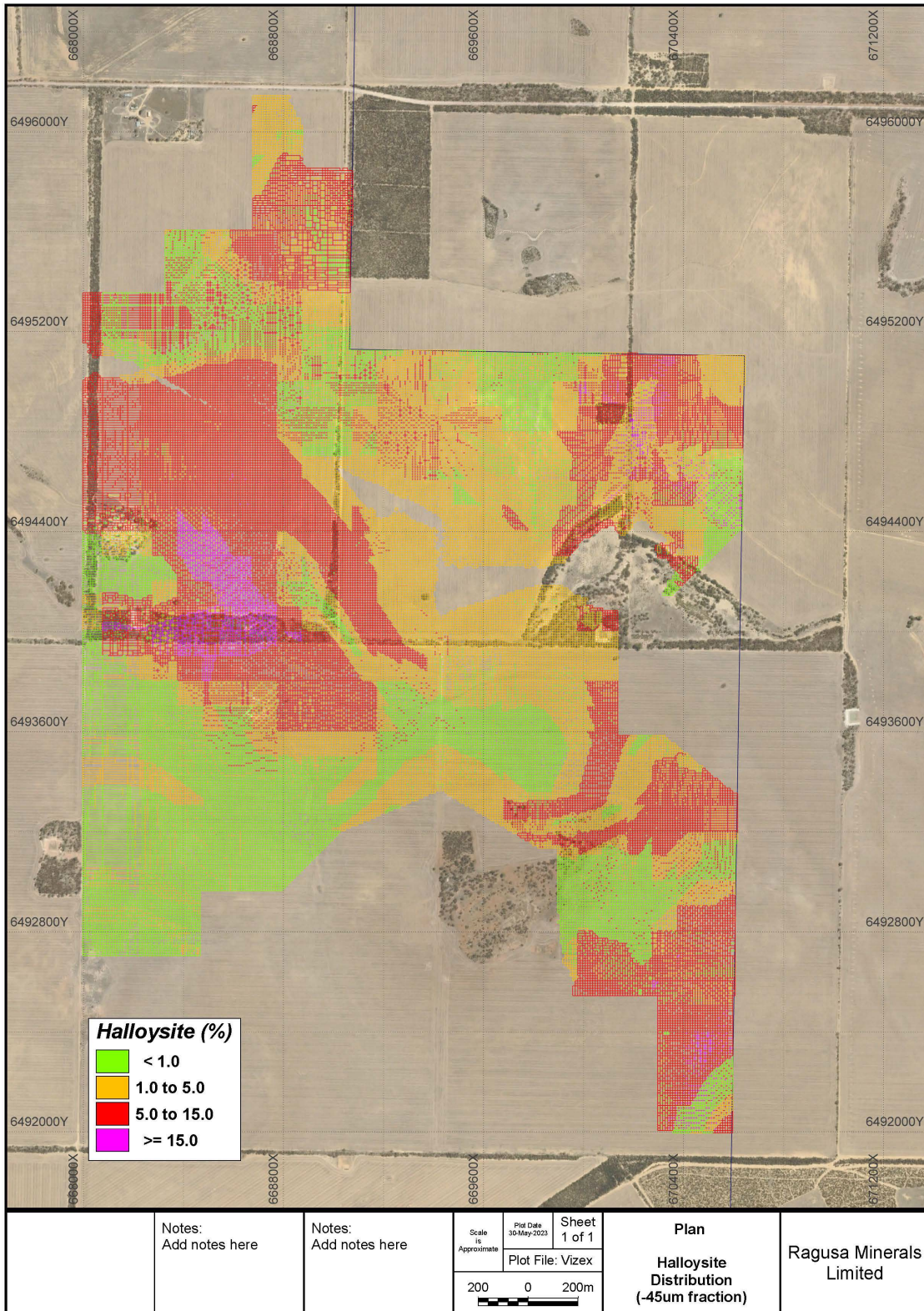


Figure 5. Burracoppin Project – Indicative Halloysite distribution in plan view

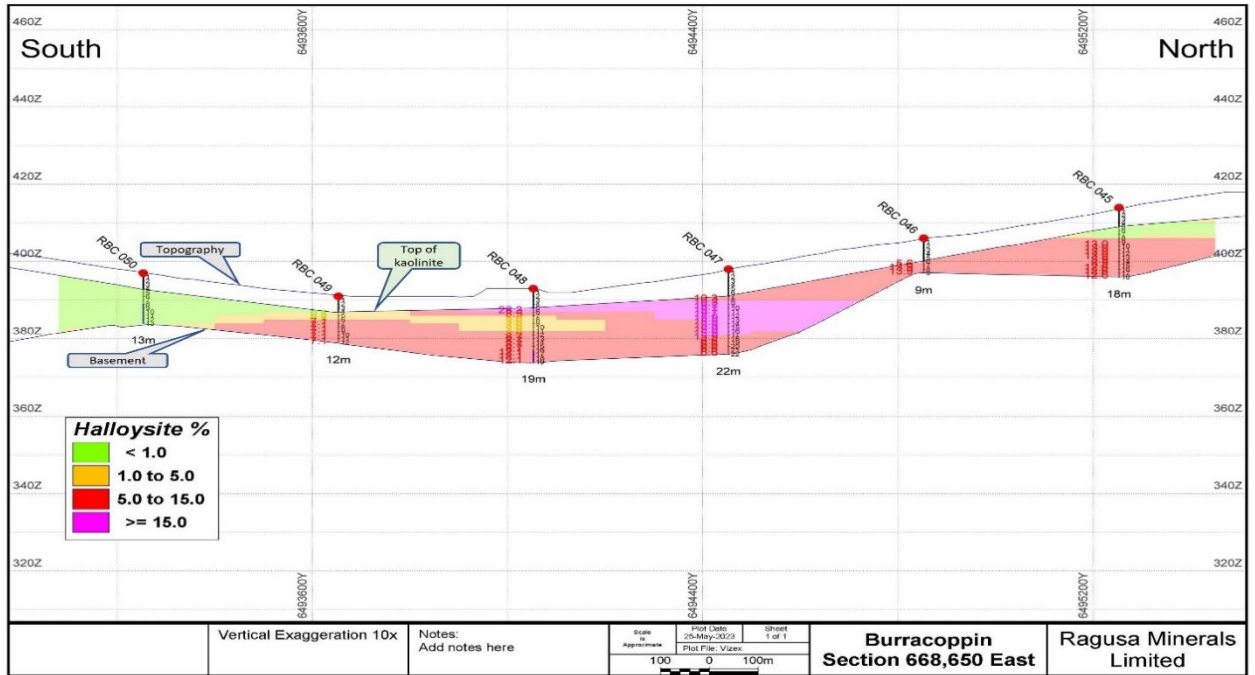


Figure 6. Burracoppin Project – Section 668, 650 East Halloysite content

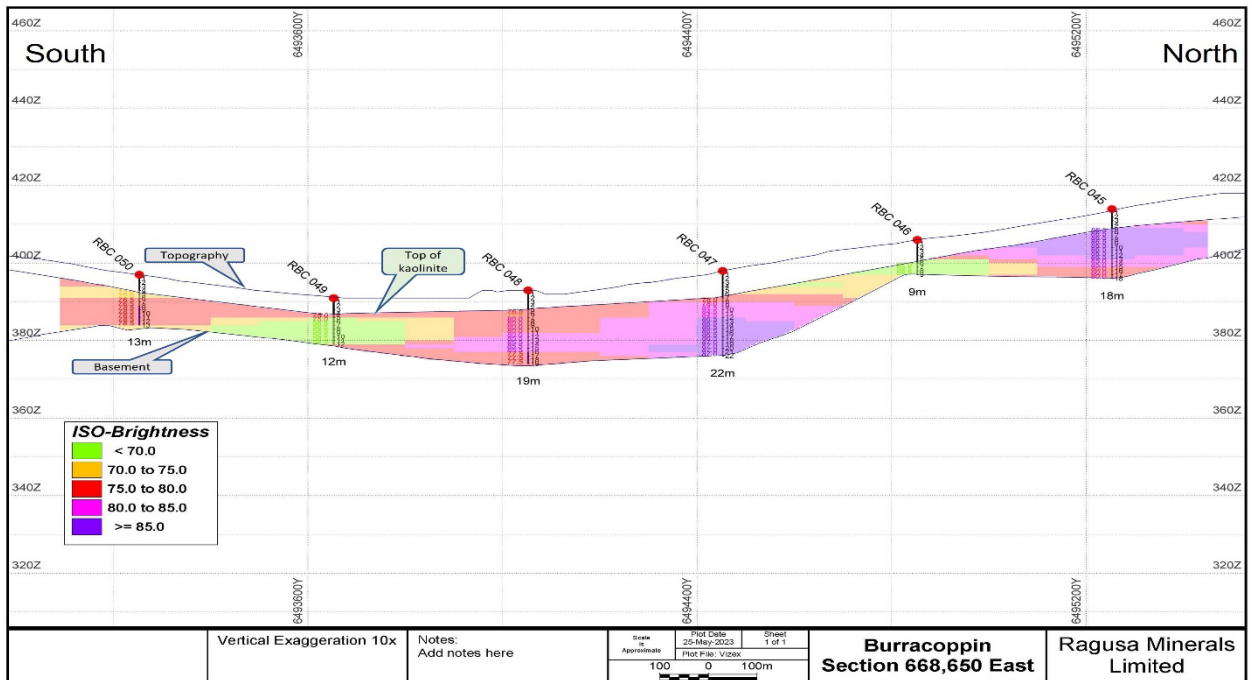


Figure 7. Burracoppin Project – Section 668, 650 East ISO-Brightness



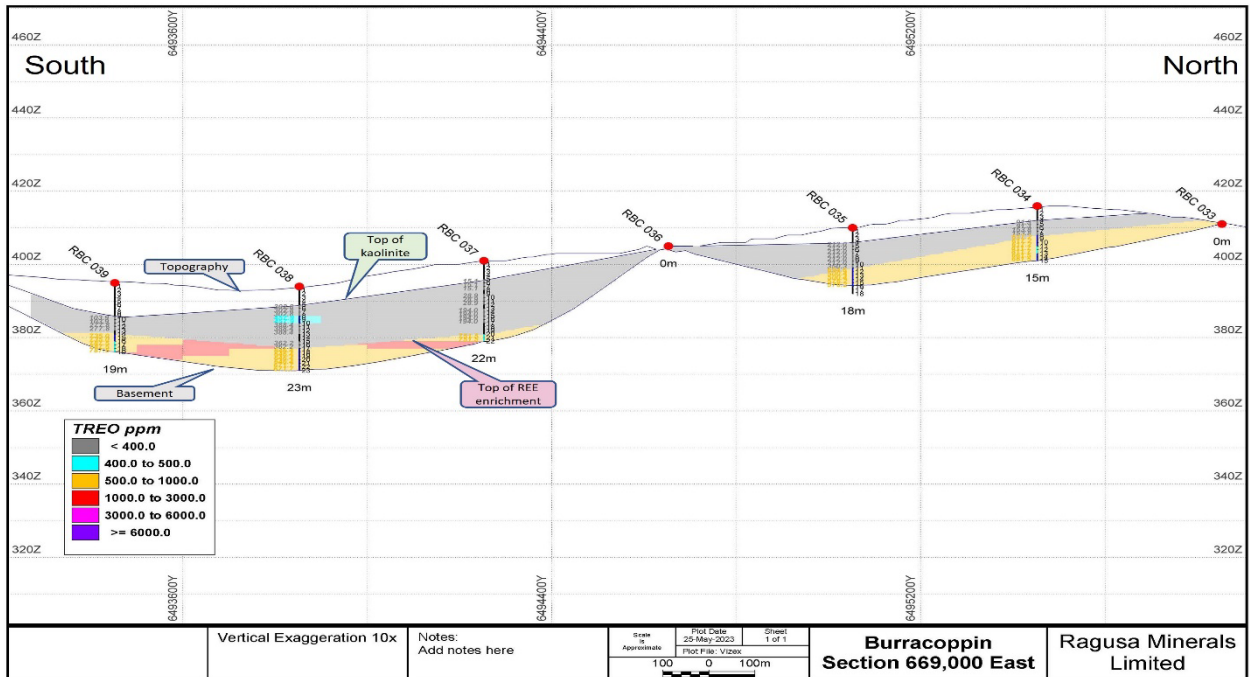


Figure 8. Burracoppin Project – Section 669,000 East Total Rare Earth Oxide content

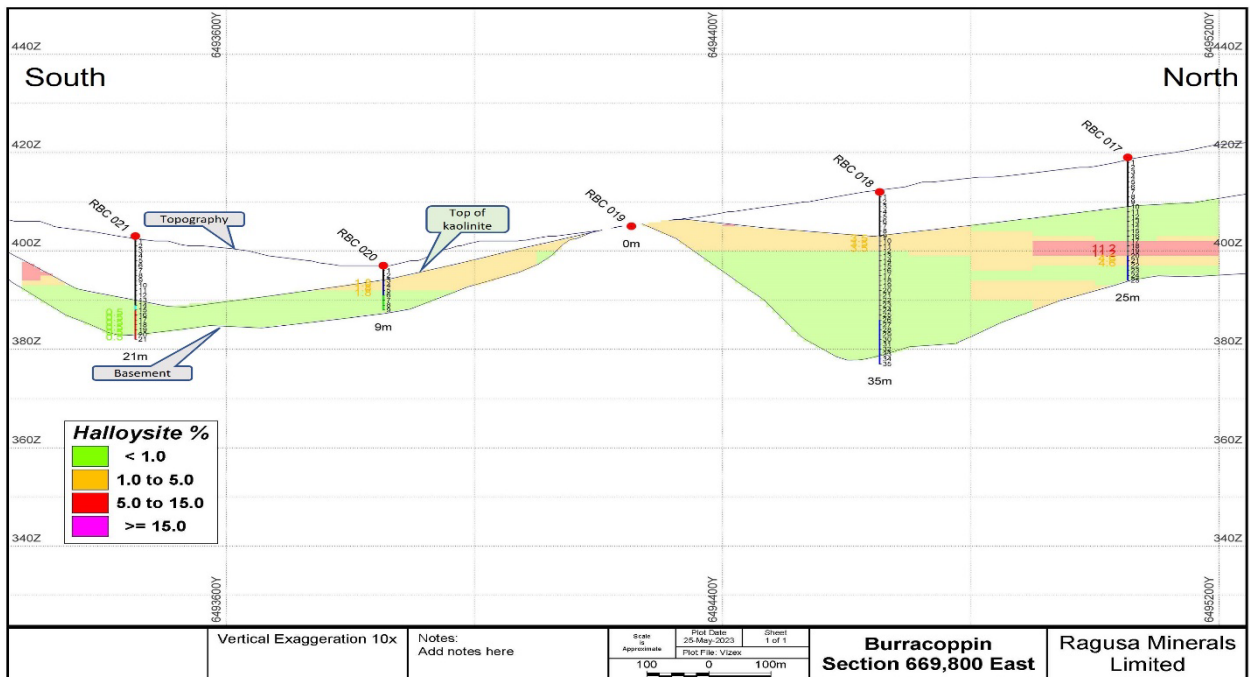


Figure 9. Burracoppin Project – Section 669, 800 East Halloysite content



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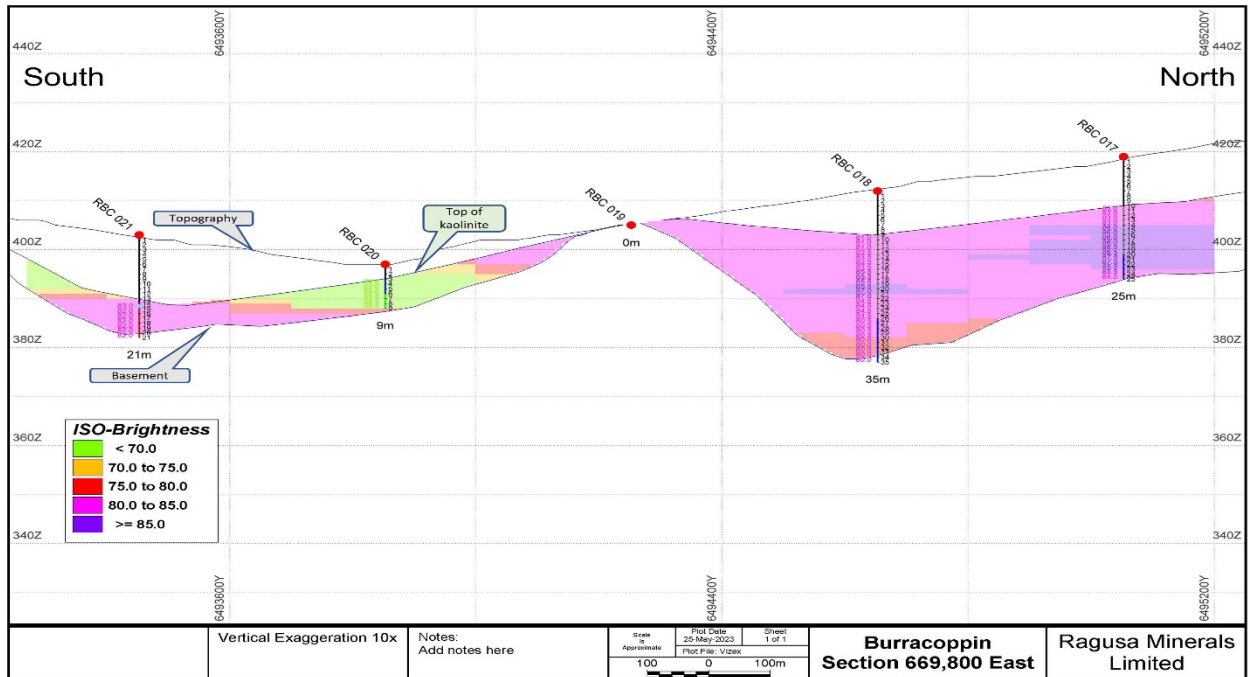


Figure 10. Burracoppin Project – Section 669, 800 East ISO-Brightness content

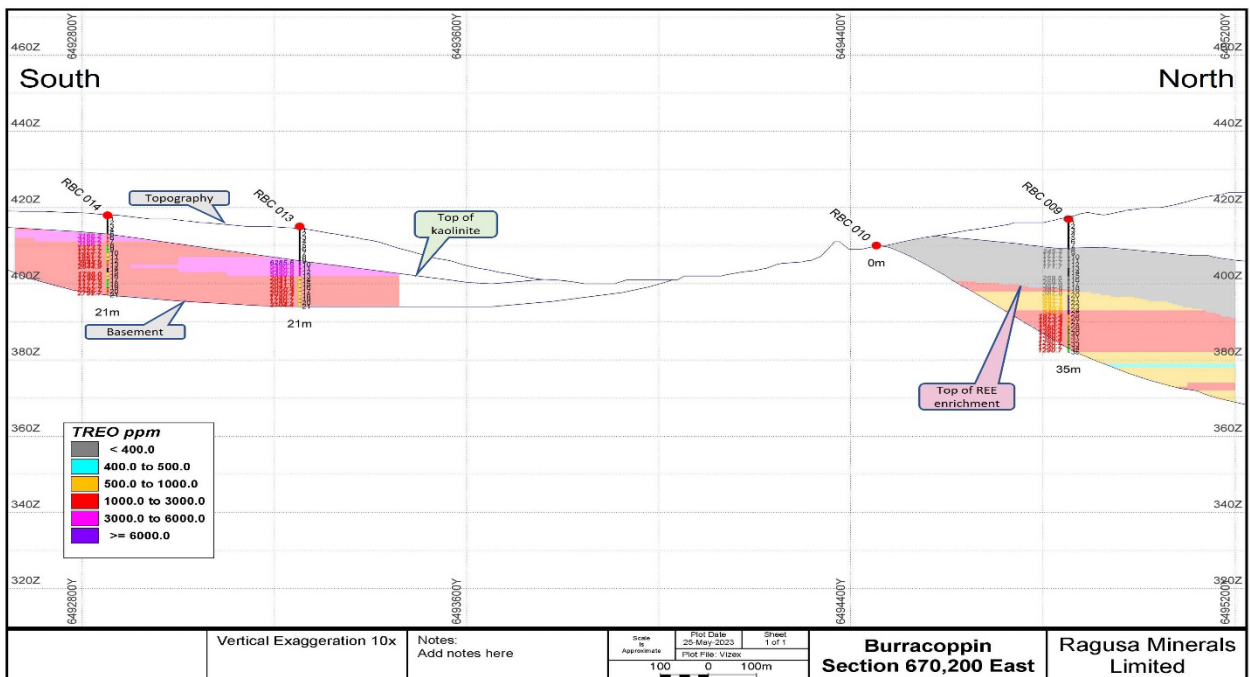


Figure 11. Burracoppin Project – Section 670, 200 East Total Rare Earth Oxide content

RESOURCE SUMMARY

Project Geology

The Burracoppin Project area can be described as having gently undulating surface topography with occasional low outcrop of weathered granite as an exposure of the underlying basement granite. The majority of the area consists of shallow surface soils +/- residual surface lateritisation (colluvium) in parts

between 0 – 2m thick. Surface sediments blend into saprolitic clays typically between 0m and 10m thick overlying a kaolinitic unit that eventually grades into decomposed granite (as a precursor to the kaolinite) above a fresh granite basement.

Kaolinite is a weathering product of the underlying granite where the majority of the feldspar +/- mica within the original granite has become altered into kaolin but the rock retains the original quartz +/- minor accessory mineral content. The resultant kaolinite is a rock comprised predominantly of kaolin clay and residual quartz fragments from the original granite often in a ~50:50 ratio. In the case of the Burracoppin deposit, some of the kaolin has subsequently become dehydrated to form halloysite where the flat plates of kaolin have been rolled into cylindrical nanotubes. This material is a highly sought after nano particle due to its significantly increased particle surface area for use in nanotechnology, carbon capture, hydrogen storage, renewable energy, fine porcelain, etc.

Rare earth elements (REE) are also found to have been mobilized from the underlying granite and concentrated within the kaolinite zone above through either adsorption onto the clay particles or entrained within. The elevated REE grades (as high as >0.5% total REE in this data set) are typically in the lower section of the kaolinite zone immediately above the decomposed granite basement. The REE content reported in this resource only reflects the -45µm size fraction. It is unknown if the REE grades continue through all size fractions.

### Drilling

Air core drilling using a Toyota Landcruiser mounted Mantis drill rig was used to drill holes on 400m intervals both along lines (north – south orientation) and between lines in an offset diamond pattern. Holes were drilled vertically using an approximate 3 inch diameter blade drill bit with entire samples collected at 1m intervals into green plastic sample bags. Drill holes ranged between 1m and 35m deep averaging 13.6m across the project area and were designed to terminate at the granite basement interface.

A total of 63 holes and 1,143m were drilled.

Drill holes were located using hand held GPS with a +/- 5m accuracy in the horizontal plane. Vertical accuracy is far worse and was not relied upon for the estimation. Given the effective 400m x 400m grid pattern, the inferred category of the estimated resource and the flat lying non directional style of mineralisation, the Competent Person considers any locational discrepancy of drill hole collars to be insignificant and will not have a material effect on the overall resource.

### Sampling

Entire 1m samples were collected from the base of the cyclone during drilling and placed in sequential order in numbered green plastic sample bags in rows of 10. Each sample was logged in the field by field technician for colour, lithology, sample recovery etc and a subsample was retained in chip trays.

Composite samples were subsequently designed after review of the logging information and inspection of the individual chipped samples and were based primarily on colour changes downhole. Composite widths averaged 3m and ranged from 1m to 6m. Samples were collected in the field with a piece of PVC pipe using a spearing technique from the top of the sample through to the bottom of the sample in a diagonal fashion. One spear was collected for each sample selected as part of the relative composite for equal representivity, and placed into a labelled fine weave calico sample bag for submission to the laboratory.



Samples logged as kaolinite totalled 553 from which 198 composite samples were collected. A subset of composite samples totalling 147 from 37 holes were then selected based on mineralized thickness and lateral kaolinite continuity between holes. These samples were used in the resource estimation and the resource boundary was adjusted accordingly. As a result, a percentage of the area remains containing known mineralisation (based on logged kaolinite) that has not been included in the estimation. Refer Tables 3, 4 and 5 for the composite assays.

### Laboratory Analysis

Samples were delivered to the Bureau Veritas (BV) Laboratory in Canning Vale, Perth personally by the company geologist, then sent internally to the BV facility for analysis.

Sample preparation steps conducted on each sample were:

1. Dry, weigh and Stage Crush to -6.3mm on receipt.
2. Weigh and riffle split a sub sample approximately 750g.

Sample Sizing:

1. Blunge using an Agitair flotation cell to agitate at ~55-60% solids 800 rpm for 15 minutes.
2. Wet screen sample at +180µm, -180µm, +45µm and -45µm.
3. Filter, dry, retain and weigh each fraction.
4. Report results.

Analysis Test Work:

1. Riffle split the -45µm fraction into 4 aliquots.
2. ISO-Brightness testing on the -45µm fractions
3. X-Ray Fluorescence (XRF) for: Fe<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, CaO, K<sub>2</sub>O, Mn, Na<sub>2</sub>O, MgO, P, S, TiO<sub>2</sub>, Cl and LOI.
4. ICP MS analysis using a Lithium Borate Fusion for: Ce, La, Y, Dy, Er, Eu, Gd, Ho, Lu, Nd, Pr, Sm, Tb, Tm and Yb.
5. X- Ray Diffraction (XRF) to quantify kaolinite, halloysite and other clay minerals.

## DATA

### Drillhole Data

Separate drill hole collar and assay files were imported as excel spreadsheets into Micromine. Data in the assay file was first de-composited into 1m intervals, then combined with the collar information in the creation of a drill hole database for use in estimation.

### Zone Wireframes

Mineralisation is considered to be in a relatively flat lying deposit with an undulating contact with both basement and topography due to the nature of meteoric weathering in the formation of the regolith profile. The erosional surface has exposed areas of granitic outcrop considered to be expressions of the basement lithology in the area.

As such, modelling was based on an interpreted semi continuous body in all lateral directions with no particular strike or dip. The kaolinized clay zone was considered the mineralized zone for interpolation of assay data.

A basement wireframe was developed from digitized sectional strings with points snapped to logged basement intersections in each drill hole. Sectional strings were contained within a lateral boundary string and subsequently used to create a digital terrain model (DTM) of the basement interface layer. Samples (if any) beneath this layer were zoned 0 and considered as basement. This data was not used for interpolation.

Topographic data was extracted from the Copernicus GLO 30 Digital Elevation Model for the Burracoppin project area. The data packet was contoured in QGIS and exported to Micromine as contour strings. The contour strings were restricted within an external boundary string and a DTM was created of the topographical surface. The Copernicus DEM has a 30m pixel resolution and a reported relative vertical accuracy of <2m for slopes below or equal to 20%. The competent person considers this level of accuracy appropriate for this level of estimation and resource categorization. Drill hole samples beneath this layer were zoned 2 reflecting overburden.

The top of mineralisation wireframe was created in the same fashion as the basement wireframe. Sectional strings were digitized by snapping to points at the top of the first logged kaolinite sample in each drill hole. Sectional strings were restricted within a lateral boundary string for the project area and used to create a DTM of the top of mineralisation. Drill hole samples beneath the top of mineralisation surface and above the basement layer were zoned 1 to be used in interpolation of mineralisation. Halloysite distribution within the kaolinite showed no particular spatial preference so no attempt was made to isolate for its separate interpolation.

Interpretation of the REE data revealed a consistent zone within the broader mineralisation of REE enrichment in the lower section of the kaolinite. Using a TREO cut-off of 400ppm, sectional strings were digitized by snapping to the relevant point in each drill hole as an upper layer. A lateral boundary string was created and used in conjunction with the sectional strings to create a DTM of the upper surface of REE enrichment. Drill hole samples between the upper REE surface and the base of kaolinite mineralisation were re-zoned 21 as a subset of zone 1 for the purposes of REE interpolation only.

#### **Data Zoning**

Samples in the drill hole database were assigned a zone number using the zone wireframes to correspond with the respective zone number in the prototype block model. This zone number was used to determine which samples applied to which zone during the interpolation.

### **RESOURCE ESTIMATION**

#### **Zone Modelling**

##### **Model Prototype Construction**

A model prototype was constructed within a lateral area boundary using the wireframes described in the previous section. Cells were constructed using a parent size of 100m in the X direction, 100m in the Y direction and 1m in the Z direction with the model orientated north – south. Sub cells were created along zone boundaries to a minimum of 10m in the X direction, 10m in the Y direction and 0.5m in the Z direction if required to reflect the variable nature of zone interfaces. From top down, the following zone



numbers were allocated to the prototype model coincident with the zoning applied to the drill hole data set:

- From topographical surface down: 2
- From top of mineralisation down: 1
- From top of REE 400ppm cut-off down: 21
- From basement down: 0

No internal waste was defined in this model.

The final prototype model was cut to the drill holes used in the estimation and to within the lease boundary (E70/5708).

### Estimation Methodology

Both Ordinary Kriging (OK) and Inverse Distance (ID) interpolation methods were investigated for use in the estimation. Variograms were created for several representative variables and trial interpolation was conducted with OK. A similar approach was taken using ID for the same variables and comparisons made for representativity and smoothing against drill hole data. Results of OK were considered overly smoothed and not satisfactorily reflective of the hard data in the drill holes in their immediate vicinity due to the widely spaced and limited data further restricted by down hole compositing.

The ID method was chosen due to its better interpolation performance against real data. Estimation was conducted systematically in three stages with wider or less onerous search parameters with the objective of the third search filling any remaining empty cells from previous searches. A description of search characteristics is as follows:

#### 1. Rare Earth Element Variables

##### SEARCH 1

- Model filter: Ore = 21
- Data filter: Ore = 21
- Fields: La2O3, CeO2, Pr6O11, Nd2O3, Sm2O3, Dy2O3, Tb4O7, Y2O3, TREO
- ID power: 2
- Search geometry: Ellipsoid
- Axis Orientation: Geological plunge, west sense
- Strike: 0
- Dip: 0
- X radius: 450
- Y radius: 450
- Z radius: 4
- Number of sectors: 4
- Maximum samples per sector: 18
- Minimum total samples: 4
- Search Identification: REO\_S = 1

##### SEARCH 2 - Same as above except for:

- Model filter: Ore = 21, REO\_S = 100
- Z radius: 10
- Search Identification: REO\_S = 2

SEARCH 3 - Same as above except for:

- Model filter: Ore = 21, REO\_S = 100
- Minimum total samples: 2
- X radius: 900
- Y radius: 900
- Z radius: 20
- Search Identification: REO\_S = 3

## 2. Low Grade Rare Earth Element Variables

SEARCH 1 (single search only)

- Model filter: 1
- Data filter: Ore = 1
- Fields: La2O3, CeO2, Pr6O11, Nd2O3, Sm2O3, Dy2O3, Tb4O7, Y2O3, TREO
- ID power: 2
- Search geometry: Ellipsoid
- Axis Orientation: Geological plunge, west sense
- Strike: 0
- Dip: 0
- X radius: 900
- Y radius: 900
- Z radius: 20
- Number of sectors: 4
- Maximum samples per sector: 18
- Minimum total samples: 2
- Search Identification: REO\_S = 4

## 3. Clay Variables

SEARCH 1

- Model filter: Ore = 21 or 1
- Data filter: Ore = 21 or 1
- Fields: -45µm, ISO-B, Al2O3, Fe2O3, SiO2, TiO2.
- ID power: 2
- Search geometry: Ellipsoid
- Axis Orientation: Geological plunge, west sense
- Strike: 0
- Dip: 0
- X radius: 450
- Y radius: 450
- Z radius: 5
- Number of sectors: 4
- Maximum samples per sector: 18
- Minimum total samples: 4
- Search Identification: CLY\_S = 1



SEARCH 2 - Same as above except for:

- Model filter: CLY\_S = 100
- Z radius: 10
- Search Identification: CLY\_S = 2

SEARCH 3 - Same as above except for:

- Model filter: CLY\_S = 100
- Minimum total samples: 2
- X radius: 900
- Y radius: 900
- Z radius: 20
- Search Identification: CLY\_S = 3

#### 4. Halloysite

SEARCH 1

- Model filter: Ore = 21 or 1
- Data filter: Ore ≠ 2 or 0
- Missing data treatment: 0
- Fields: Halloysite
- ID power: 3
- Search geometry: Ellipsoid
- Axis Orientation: Geological plunge, west sense
- Strike: 0
- Dip: 0
- X radius: 350
- Y radius: 350
- Z radius: 3
- Number of sectors: 4
- Maximum samples per sector: 18
- Minimum total samples: 2
- Search Identification: HAL\_S = 1

SEARCH 2 - Same as above except for:

- Model filter: Ore ≠ 2 or 0, HAL\_S = 100
- X radius: 600
- Y radius: 600
- Z radius: 4
- Search Identification: HAL\_S = 2

SEARCH 3 - Same as above except for:

- Model filter: Ore ≠ 2 or 0, HAL\_S = 100
- Minimum total samples: 2
- X radius: 900
- Y radius: 900

- Z radius: 20
- Search Identification: HAL\_S = 3

## 5. Kaolinite

## SEARCH 1

- Model filter: Ore = 21 or 1
- Data filter: Ore ≠ 2 or 0
- Missing data treatment: Ignored
- Fields: Kaolinite
- ID power: 2
- Search geometry: Ellipsoid
- Axis Orientation: Geological plunge, west sense
- Strike: 0
- Dip: 0
- X radius: 450
- Y radius: 450
- Z radius: 4
- Number of sectors: 4
- Maximum samples per sector: 18
- Minimum total samples: 4
- Search Identification: MIN\_S = 1

## SEARCH 2 - Same as above except for:

- Model filter: MIN\_S = 100
- X radius: 450
- Y radius: 450
- Z radius: 10
- Search Identification: MIN\_S = 2

## SEARCH 3 - Same as above except for:

- Model filter: MIN\_S = 100
- Minimum total samples: 2
- X radius: 900
- Y radius: 900
- Z radius: 20
- Search Identification: MIN\_S = 3

A thorough review of the complete model was conducted with results deemed satisfactory for the models inferred level of confidence. A uniform bulk density of 1.53 g/cm<sup>3</sup> was applied to the estimated mineralized zones as in-situ dry bulk density. This figure was derived from the neighbouring project which lies directly adjacent to the Burracoppin project on its eastern side. The neighbouring project assumed the value of 1.53 g/cm<sup>3</sup> based on similar kaolinized granite deposits in Australia, with values ranging from 1.4 g/cm<sup>3</sup> - 1.9 g/cm<sup>3</sup>.

**RESOURCE CLASSIFICATION**



The resource in its entirety has been categorised as Inferred in accordance with the JORC Code (2012). Drilling density is wide spaced and although variography indicated data ranges between 800m and 1,200m, it was considered this was a function of the limited data set in the first instance. The inherent geology suggests a high degree of uniformity from an elemental and kaolinite content perspective however the same cannot be said for the formation of halloysite and to a similar degree, REE mineralisation. This is due to the poorly understood influences and causes of dehydration and resultant levels of alteration of kaolinite as the precursor to halloysite formation.

Future work should include closer spaced drilling and preferably smaller and more consistent compositing of samples. A greater data set will improve the variography and possibly lend itself to better performance using ordinary kriging as an estimation method.

A global cut-off grade of >70 ISO-B was applied in the reporting of the resource for clay variables, halloysite and kaolinite. No additional cut-off was applied to halloysite as it is a co-product of mining kaolinite and would not, not be mined below any arbitrary cut-off.

A cut-off grade of >400ppm TREO was applied to the interpretation and reporting of REO mineralisation. This was sourced from similar REO projects reported in Australia with cut-off grades ranging between 300ppm TREO and 500ppm TREO. There is also quite a distinct break in mineralisation at that level in the assay data.

#### ENDS

*This announcement has been authorised by Jerko Zuvela, the Company's Chair.*

*For more information on Ragusa Minerals Limited and to subscribe for regular updates, please visit our website at [www.ragusaminerals.com.au](http://www.ragusaminerals.com.au) or contact us via [admin@ragusaminerals.com.au](mailto:admin@ragusaminerals.com.au).*

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#### Reference to Previous ASX Releases:

This document refers to the following third party ASX releases:

31<sup>st</sup> May 2021 – Latin Resources Ltd (ASX: LRS), 207Mt Maiden Inferred (JORC 2012) Mineral Resource Estimate Noombenberry Kaolin-Halloysite Project, WA

Ragusa confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Ragusa confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

**Forward Looking Statements:** Statements regarding plans with respect to the Company's mineral properties are forward looking statements. There can be no assurance that the Company's plans for development of its mineral properties will proceed as expected. There can be no assurance that the Company will be able to confirm the presence of mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of the Company's mineral properties.

#### Competent Person's Statement

*The information contained in this ASX release relating to Exploration Results has been reviewed by Mr Olaf Frederickson. Mr Frederickson is a Member of the Australasian Institute of Mining and Metallurgy and 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. Mr Frederickson is an Executive Director of Ragusa Minerals Ltd and consents to the inclusion in this announcement of this information in the form and context in which it appears.*

### ABOUT RAGUSA MINERALS LIMITED

Ragusa Minerals Limited (ASX: RAS) is an Australian company with an interest in the following projects – NT Lithium Project (including Litchfield and Daly River Lithium Projects) in Northern Territory, Monte Cristo Gold Project in Alaska, Burracoppin Halloysite Project in Western Australia, and Lonely Mine Gold Project in Zimbabwe.

The Company has an experienced board and management team with a history of exploration, operational and corporate success.

Ragusa leverages the team's energy, technical and commercial acumen to execute the Company's mission - to maximize shareholder value through focussed, data-driven, risk-weighted exploration and development of our assets.

**Table 3. Drillhole Collar Information**

Hole ID	Easting	Northing	RL	Dip	Azimuth	Total Depth
RBC 001	670626	6495053	429	-90	360	20
RBC 002	670626	6494653	425	-90	360	29
RBC 003	670625	6494323	417	-90	360	11
RBC 004	670618	6493872	408	-90	360	9
RBC 005	670604	6493454	410	-90	360	8
RBC 006	670593	6493054	424	-90	360	14
RBC 007	670589	6492654	425	-90	360	19
RBC 008	670574	6492254	421	-90	360	21
RBC 009	670174	6494853	421	-90	360	35
RBC 010	670226	6494453	414	-90	360	0.1
RBC 011	670226	6494053	405	-90	360	0.1
RBC 012	670226	6493653	409	-90	360	9
RBC 013	670226	6493253	418	-90	360	21
RBC 014	670226	6492853	421	-90	360	21
RBC 015	670226	6492453	422	-90	360	5
RBC 016	670226	6492053	421	-90	360	0.1
RBC 017	669826	6495053	424	-90	360	25
RBC 018	669826	6494653	419	-90	360	35
RBC 019	669826	6494253	411	-90	360	0.1
RBC 020	669826	6493853	403	-90	360	9
RBC 021	669826	6493453	405	-90	360	21
RBC 022	669826	6493053	414	-90	360	0.1
RBC 023	669826	6492653	418	-90	360	0.1
RBC 024	669826	6492253	418	-90	360	0.1
RBC 025	669426	6494853	415	-90	360	25
RBC 026	669426	6494453	414	-90	360	0.1
RBC 027	669426	6494053	405	-90	360	0.1
RBC 028	669426	6493653	398	-90	360	21
RBC 029	669426	6493253	408	-90	360	0.1
RBC 030	669426	6492853	411	-90	360	0.1
RBC 031	669426	6492453	412	-90	360	9
RBC 032	669426	6492053	413	-90	360	0.1
RBC 033	669026	6495853	415	-90	360	0.1
RBC 034	669026	6495453	419	-90	360	15
RBC 035	669026	6495053	414	-90	360	18

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RBC 036	669026	6494653	408	-90	360	0.1
RBC 037	669026	6494253	406	-90	360	22
RBC 038	669026	6493853	399	-90	360	23
RBC 039	669026	6493453	399	-90	360	19
RBC 040	669026	6493053	401	-90	360	0.1
RBC 041	669026	6492653	407	-90	360	20
RBC 042	669026	6492253	410	-90	360	22
RBC 043	668626	6496053	410	-90	360	10
RBC 044	668626	6495653	421	-90	360	10
RBC 045	668626	6495253	417	-90	360	18
RBC 046	668626	6494853	406	-90	360	9
RBC 047	668626	6494453	402	-90	360	22
RBC 048	668626	6494053	397	-90	360	19
RBC 049	668626	6493653	395	-90	360	12
RBC 050	668626	6493253	401	-90	360	13
RBC 051	668626	6492853	409	-90	360	28
RBC 052	668626	6492453	411	-90	360	28
RBC 053	668626	6492053	416	-90	360	26
RBC 054	668226	6495853	411	-90	360	17
RBC 055	668226	6495453	417	-90	360	16
RBC 056	668226	6495053	411	-90	360	0.1
RBC 057	668226	6494653	401	-90	360	23
RBC 058	668226	6494253	394	-90	360	20
RBC 059	668226	6493853	394	-90	360	0.1
RBC 060	668226	6493453	402	-90	360	26
RBC 061	668226	6493053	408	-90	360	31
RBC 062	668226	6492653	416	-90	360	12
RBC 063	668226	6492253	422	-90	360	11

Table 4. Rare Earth Element assay results

HOLE ID	Depth		Sample		-45µm	La	Ce	Pr	Nd	Sm	Dy	Tb	Y	TREO
	From m	To m	ID	Interval	%	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
RBC 001	6	8	01_1	2	48.1	47	86.5	8	26	4.5	1.5	<0.5	5	218
RBC 001	8	13	01_2	5	50.0	83	144	14	40.5	5.5	2.5	0.5	7	362
RBC 001	13	15	01_3	2	46.5	162	253	22	69	9	3	1	10	644
RBC 001	15	16	01_4	1	45.8	172	281	26	76	10.5	3	1	11	709
RBC 001	16	19	01_5	3	40.2	210	344	30	89.5	11	3.5	1	12	854
RBC 001	19	20	01_6	1	42.8	377	516	44	118	14	4.5	1	14	1322
RBC 002	14	17	02_1	3	52.3	728	1260	12	392	47.5	13	3	38	3186
RBC 002	17	20	02_2	3	50.8	752	1380	13	402	46	16	3.5	59	3415
RBC 002	20	22	02_3	2	52.5	524	1100	11	427	63	34	7.5	128	3011
RBC 002	22	23	02_4	1	50.9	234	493	54	188	27.5	16.5	3.5	58	1347
RBC 002	23	27	02_5	4	45.7	221	475	52	186	27	17.5	4	76	1333
RBC 002	27	29	02_6	2	25.8	201	410	46	160	21.5	10.5	2	57	1134
RBC 006	4	8	06_1	4	50.8	16	23	2	7	1.5	1	<0.5	3	65
RBC 006	8	12	06_2	4	45.9	25	39.5	4	11.5	2.5	1	<0.5	5	109
RBC 006	12	13	06_3	1	30.5	94	158	18	51	7.5	3	0.5	14	428
RBC 006	13	14	06_4	1	20.5	71	127	14	42	5.5	3.5	0.5	13	344
RBC 007	4	8	07_1	4	55.5	19	33	4	10.5	1.5	1	<0.5	4	90
RBC 007	8	12	07_2	4	57.3	51	97	10	32.5	5	2.5	0.5	9	255
RBC 007	12	16	07_3	4	53.7	59	108	12	37.5	6	3	0.5	10	291
RBC 007	16	19	07_4	3	39.4	114	200	18	61	10	4	1	16	522
RBC 008	7	11	08_1	4	53.1	39	70.5	8	23	4	2.5	<0.5	9	192
RBC 008	11	15	08_2	4	54.6	51	91.5	10	31	5	2.5	0.5	9	247

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RBC 008	15	19	08_3	4	44.5	73	118	12	36.5	6	3	0.5	10	318
RBC 008	19	21	08_4	2	35.9	174	257	24	72.5	10.5	4.5	1	18	689
RBC 009	8	9	09_1	1	30.5	68	84	10	27	4	1.5	<0.5	7	245
RBC 009	9	13	09_2	4	57.9	41	66	6	19.5	3.5	1	<0.5	4	172
RBC 009	15	17	09_3	2	55.9	64	102	10	31.5	5	2	<0.5	6	270
RBC 009	17	20	09_4	3	46.5	84	148	16	49.5	7	3	0.5	9	388
RBC 009	20	23	09_5	3	46.8	126	241	24	74	9.5	3.5	1	9	597
RBC 009	23	25	09_6	2	50.4	121	212	20	64.5	9.5	3.5	1	9	541
RBC 009	25	28	09_7	3	43.3	403	728	96	306	42.5	9	2.5	21	1973
RBC 009	28	32	09_8	4	36.7	316	467	56	195	27.5	9.5	2.5	28	1360
RBC 009	32	35	09_9	3	37.8	275	482	50	170	25	8.5	2	32	1291
RBC 013	9	10	13_1	1	38.5	852	2540	28	1040	150	49	11	145	6286
RBC 013	10	13	13_2	3	31.2	621	2630	16	601	83.5	43.5	9	247	5491
RBC 013	13	16	13_3	3	28.9	357	709	80	292	41.5	22	4.5	121	2042
RBC 013	16	18	13_4	2	28.5	361	740	82	286	39	21.5	4.5	104	2050
RBC 013	18	20	13_5	2	23.7	301	622	72	265	39	20.5	4	94	1781
RBC 013	20	21	13_6	1	23.3	397	739	80	291	40.5	24	5	102	2104
RBC 014	5	8	14_2	3	39.8	608	1180	12	486	62.5	27.5	6.5	63	3168
RBC 014	8	10	14_3	2	39.7	270	494	52	202	27	15	3.5	40	1374
RBC 014	10	12	14_4	2	36.4	365	699	72	246	31	15	3	65	1852
RBC 014	12	14	14_5	2	34.7	537	907	94	331	40.5	27	5	174	2645
RBC 014	15	17	14_6	2	35.3	361	672	70	251	30.5	14	3	53	1798
RBC 014	17	19	14_7	2	40.1	276	425	42	137	16.5	8	1.5	46	1178
RBC 014	19	21	14_8	2	26.7	489	1040	10	390	51.5	23	5	133	2793
RBC 017	10	14	17_1	4	52.1	64	119	10	33	5	2	<0.5	6	291
RBC 017	14	18	17_2	4	55.1	51	87	8	25.5	4	1.5	<0.5	4	221
RBC 017	18	20	17_3	2	51.2	85	131	12	41.5	6	2	0.5	9	351
RBC 017	20	22	17_4	2	53.0	111	177	16	53	8	3	0.5	9	461
RBC 017	22	24	17_5	2	49.5	131	227	20	66	10	3.5	1	10	576
RBC 017	24	25	17-6	1	49.2	96	146	15	47	7.5	3	1	10	402
RBC 018	9	12	18-1	3	44.1	37	57	5	15.5	3	1	<0.5	4	150
RBC 018	12	16	18-2	4	55.0	55	87	8	24	3.5	1	<0.5	3	222
RBC 018	16	20	18-3	4	56.1	37	54.5	5	17	2.5	1	<0.5	3	146
RBC 018	20	22	18-4	2	56.1	42	61.5	5	18	3	1	<0.5	3	163
RBC 018	22	26	18-5	4	52.5	92	154	14	45.5	6.5	2.5	0.5	7	393
RBC 018	26	30	18-6	4	45.9	124	221	22	71.5	11.5	5	1	23	593
RBC 018	30	35	18-7	5	43.0	114	182	18	57	8.5	3	0.5	12	487
RBC 020	3	6	20-1	3	47.3	199	260	22	68.5	9	4	1	18	713
RBC 020	6	9	20-2	3	34.4	436	564	42	116	12.5	4	1	14	1443
RBC 021	14	15	21-2	1	36.3	176	355	38	124	17.5	7.5	1.5	34	932
RBC 021	15	21	21-3	6	28.2	651	1400	15	574	88	39	8.5	151	3833
RBC 025	8	11	25-1	3	53.7	99	147	14	42.5	5.5	2	<0.5	6	387
RBC 025	11	15	25-2	4	50.3	54	82	8	26	4	1.5	<0.5	5	220
RBC 025	15	18	25-3	3	49.0	94	146	15	47.5	6.5	2	<0.5	10	391
RBC 025	18	20	25-4	2	44.4	196	318	32	103	14.5	4.5	1	16	841
RBC 025	20	23	25-5	3	43.9	220	375	39	136	20	6	1.5	28	1018
RBC 025	23	25	25-6	2	41.6	176	307	33	110	15	4.5	1	22	822
RBC 028	5	7	28-1	2	35.1	38	45	4	13	2	1	<0.5	3	129
RBC 028	7	12	28-2	5	46.7	58	84.5	8	24.5	3.5	1.5	<0.5	6	227
RBC 028	12	14	28-3	2	48.3	60	91	11	34	4.5	2	<0.5	9	262
RBC 028	14	18	28-4	4	45.4	167	739	38	117	17	6.5	1.5	28	1376
RBC 028	18	21	28-5	3	36.8	1120	1760	19	651	92	35	7.5	164	4982
RBC 034	4	6	34-1	2	39.7	21	35.5	3	11	2	0.5	<0.5	2	91
RBC 034	6	8	34-2	2	45.2	34	61	5	19	3	1	<0.5	3	154
RBC 034	8	11	34-3	3	43.5	142	244	24	75.5	9.5	2.5	0.5	8	617

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RBC 034	11	13	34-4	2	39.4	189	320	31	97	12	3	1	11	812
RBC 034	13	15	34-5	2	38.1	153	267	25	72.5	10	2.5	0.5	10	661
RBC 035	4	10	35-1	6	50.7	49	79.5	8	26	3.5	1.5	<0.5	6	212
RBC 035	10	11	35-2	1	46.6	86	128	13	42.5	5.5	2	0.5	8	350
RBC 035	11	12	35-3	1	45.8	156	259	26	85.5	11.5	4.5	1	20	695
RBC 035	12	14	35-4	2	43.2	120	187	19	58.5	8.5	2.5	0.5	11	500
RBC 035	14	16	35-5	2	31.3	136	220	22	68	9	3.5	0.5	11	576
RBC 037	5	8	37-1	3	47.8	3	6.5	<1	1.5	0.5	<0.5	<0.5	1	15
RBC 037	9	12	37-2	3	55.9	6	11.5	1	3.5	1	<0.5	<0.5	1	29
RBC 037	13	17	37-3	4	56.5	41	74.5	7	25	4	1.5	<0.5	5	194
RBC 037	20	22	37-4	2	45.3	153	291	32	103	13.5	4.5	1	13	751
RBC 038	5	8	38-1	3	50.6	110	88	12	30	3.5	1.5	<0.5	5	303
RBC 038	8	10	38-2	2	51.6	161	146	17	43	5	2	<0.5	5	458
RBC 038	10	13	38-3	3	50.6	120	143	12	33.5	4	2	<0.5	5	388
RBC 038	15	17	38-4	2	54.7	99	119	14	46	6	2.5	<0.5	9	362
RBC 038	17	21	38-5	4	48.2	141	232	24	82.5	12.5	5	1	24	646
RBC 038	21	23	38-6	2	42.0	160	243	24	77.5	11.5	5	1	23	672
RBC 039	9	11	39-1	2	48.4	24	38.5	3	12	2	1	<0.5	4	104
RBC 039	11	13	39-2	2	49.3	65	101	11	34	5	2	<0.5	8	278
RBC 039	14	16	39-3	2	45.6	171	271	29	90.5	12.5	4.5	1	18	735
RBC 039	16	19	39-4	3	32.7	176	303	31	91.5	12	4.5	1	21	788
RBC 045	5	9	45-1	4	49.1	37	65.5	6	23	3.5	1.5	<0.5	5	174
RBC 045	9	13	45-2	4	50.8	53	91	10	30	4.5	1.5	<0.5	6	239
RBC 045	13	15	45-3	2	53.4	74	127	13	41	6	1.5	<0.5	6	327
RBC 045	15	18	45-4	3	38.8	85	144	14	44.5	6.5	2	<0.5	8	370
RBC 046	6	7	46-1	1	17.3	16	23	2	8	1	0.5	<0.5	3	64
RBC 046	7	9	46-2	2	22.0	9	12.5	1	4.5	1	0.5	<0.5	3	38
RBC 047	7	9	47-1	2	53.9	36	62.5	6	20	3	0.5	<0.5	3	160
RBC 047	9	12	47-2	3	55.7	54	92	9	30	4	1	<0.5	4	237
RBC 047	12	18	47-3	6	58.7	74	135	14	44.5	6	2	<0.5	8	346
RBC 047	18	22	47-4	4	61.1	51	81.5	9	27.5	4	1.5	<0.5	6	221
RBC 048	5	6	48-1	1	48.6	13	22	2	6	1	0.5	<0.5	3	57
RBC 048	6	7	48-2	1	65.3	25	41	4	13	2	1	<0.5	3	109
RBC 048	7	12	48-3	5	64.7	30	51.5	5	16.5	2.5	1	<0.5	5	136
RBC 048	12	16	48-4	4	55.2	60	94.5	9	27.5	4.5	1.5	<0.5	6	247
RBC 048	16	19	48-5	3	39.4	104	160	16	51.5	6.5	3	0.5	13	435
RBC 049	4	6	49-1	2	34.1	40	66	6	19.5	3	1.5	<0.5	6	173
RBC 049	6	12	49-2	6	18.8	13	16.5	1	4.5	0.5	1	<0.5	5	50
RBC 050	4	6	50-1	2	51.0	12	14.5	1	4	0.5	<0.5	<0.5	2	41
RBC 050	6	8	50-2	2	71.2	10	12	<1	3	1	<0.5	<0.5	2	34
RBC 050	8	13	50-3	5	54.1	95	179	19	64	8.5	3	0.5	14	473
RBC 057	6	7	57-1	1	22.5	17	50.5	3	10	1.5	1.5	<0.5	7	111
RBC 057	7	10	57-2	3	51.1	74	142	11	32	4.5	1	<0.5	6	329
RBC 057	10	14	57-3	4	56.4	44	69	6	21.5	3	1.5	<0.5	6	185
RBC 057	14	15	57-4	1	55.9	75	118	12	38	6	2	<0.5	9	317
RBC 057	15	17	57-5	2	53.2	37	55.5	5	17.5	3	1	<0.5	5	151
RBC 057	17	20	57-6	3	52.6	68	97.5	10	28.5	4.5	2	<0.5	8	266
RBC 057	20	23	57-7	3	53.3	60	93.5	9	29	4.5	2.5	<0.5	11	257
RBC 058	5	9	58-1	4	37.4	26	47.5	4	14.5	2	1	<0.5	5	122
RBC 058	9	12	58-2	3	44.0	39	74.5	7	25.5	4	1.5	<0.5	7	194
RBC 058	12	15	58-3	3	55.9	107	189	19	64	10	4	1	15	504
RBC 058	15	20	58-4	5	43.1	93	168	17	54.5	7.5	3.5	0.5	16	446
RBC 060	4	5	60-1	1	40.1	6	8	<1	2.5	0.5	<0.5	<0.5	2	23
RBC 060	5	8	60-2	3	35.1	5	7.5	<1	2	<0.5	<0.5	<0.5	2	20
RBC 060	8	10	60-3	2	47.8	5	8	<1	2	<0.5	<0.5	<0.5	1	19

RBC 060	10	13	60-4	3	54.8	36	61.5	5	16.5	2	0.5	<0.5	3	152
RBC 060	13	15	60-5	2	47.8	59	91	9	25	3	1	<0.5	5	234
RBC 060	15	20	60-6	5	40.5	125	206	19	56	6.5	2	<0.5	7	512
RBC 060	20	22	60-7	2	41.2	186	271	24	69	9	2.5	0.5	10	696
RBC 060	22	26	60-8	4	44.5	280	408	39	115	14	4.5	1	21	1079
RBC 061	4	6	61-2	2	53.6	3	7	<1	1.5	0.5	<0.5	<0.5	2	17
RBC 061	6	9	61-3	3	59.4	3	5.5	<1	2	0.5	<0.5	<0.5	3	17
RBC 061	9	11	61-4	2	50.1	9	17.5	1	5.5	1	0.5	<0.5	5	48
RBC 061	11	13	61-5	2	53.9	23	39.5	3	12	1.5	1	<0.5	5	105
RBC 061	13	16	61-6	3	55.1	32	54	5	17	3	1	<0.5	4	142
RBC 061	16	19	61-7	3	43.8	61	112	11	34	4.5	1.5	<0.5	8	283
RBC 061	19	23	61-8	4	36.9	122	230	21	67	9.5	3	0.5	13	573
RBC 061	23	25	61-9	2	37.7	292	467	40	120	17.5	6.5	1.5	21	1182
RBC 061	25	28	61-10	3	36.4	265	397	36	106	13.5	5	1	19	1030
RBC 061	28	29	61-11	3	31.4	250	352	31	87	12	3.5	1	15	919

Table 5. Complete ISO-B, XRF and XRD assay results

HOLE ID	Depth		Sample		-0.045mm	ISO-B	Fe <sub>2</sub> O <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	Halloysite	Kaolinite
	From m	To m	ID	Interval	%		%	%	%	%	%
RBC 001	6	8	01_1	2	48.07	80.5	0.62	36.3	0.39	3	92
RBC 001	8	13	01_2	5	50.02	82.5	0.49	34.6	0.48	3	80
RBC 001	13	15	01_3	2	46.47	80.0	0.69	33.3	0.48	10	67
RBC 001	15	16	01_4	1	45.80	83.5	0.43	33.1	0.48	4	71
RBC 001	16	19	01_5	3	40.19	73.5	0.83	32.4	0.53	7	65
RBC 001	19	20	01_6	1	42.83	78.5	0.7	32.9	0.5		76
RBC 002	14	17	02_1	3	52.34	76.5	1.28	36.5	2.06		95
RBC 002	17	20	02_2	3	50.84	77.0	1.19	36	2.8		93
RBC 002	20	22	02_3	2	52.53	83.5	0.6	37.2	0.61	24	71
RBC 002	22	23	02_4	1	50.94	80.5	0.74	37.1	0.55	40	57
RBC 002	23	27	02_5	4	45.65	82.5	0.75	36	0.5	18	79
RBC 002	27	29	02_6	2	25.83	74.0	0.81	26.8	0.47	12	55
RBC 006	4	8	06_1	4	50.78	84.0	0.56	37.5	0.32		97
RBC 006	8	12	06_2	4	45.93	84.0	0.52	34.4	0.4	15	69
RBC 006	12	13	06_3	1	30.49	71.5	1.67	30.2	0.39	12	55
RBC 006	13	14	06_4	1	20.53	39.0	3.41	24.5	0.58	8	28
RBC 007	4	8	07_1	4	55.55	86.0	0.42	37.9	0.29	11	86
RBC 007	8	12	07_2	4	57.32	88.5	0.17	37.6	0.39	17	78
RBC 007	12	16	07_3	4	53.68	87.0	0.39	34.9	0.38		84
RBC 007	16	19	07_4	3	39.43	75.0	0.97	32.3	0.45		76
RBC 008	7	11	08_1	4	53.07	84.0	0.62	36.7	0.38	1	96
RBC 008	11	15	08_2	4	54.59	84.5	0.3	37.1	0.37	16	79
RBC 008	15	19	08_3	4	44.52	82.5	0.33	31.8	0.21	19	51
RBC 008	19	21	08_4	2	35.86	73.0	0.9	31.4	0.44	13	58
RBC 009	8	9	09_1	1	30.53	60.0	1.31	33	0.38	2	89
RBC 009	9	13	09_2	4	57.89	88.0	0.28	38.3	0.18	8	90
RBC 009	15	17	09_3	2	55.94	87.5	0.26	38.1	0.29	5	92
RBC 009	17	20	09_4	3	46.52	86.0	0.21	37	0.37	30	65
RBC 009	20	23	09_5	3	46.83	81.0	0.71	31.4	0.34	13	58
RBC 009	23	25	09_6	2	50.43	83.0	0.69	34.4	0.33		83
RBC 009	25	28	09_7	3	43.29	80.0	0.68	31.2	0.32	8	61
RBC 009	28	32	09_8	4	36.65	76.5	0.95	32	0.41	11	64
RBC 009	32	35	09_9	3	37.76	71.5	1.29	32.1	0.64	10	66
RBC 013	9	10	13_1	1	38.46	75.5	1.19	30.8	1.93	13	75

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RBC 013	10	13	13_2	3	31.23	66.5	0.88	26.8	2.17	5	63
RBC 013	13	16	13_3	3	28.85	73.0	0.71	25.8	2.07		63
RBC 013	16	18	13_4	2	28.48	70.5	0.67	26.3	2.28	13	52
RBC 013	18	20	13_5	2	23.65	69.0	0.73	24.9	2.29	9	57
RBC 013	20	21	13_6	1	23.28	54.5	1.67	25.1	1.68	3	66
RBC 014	5	8	14_2	3	39.82	72.0	1.04	33.8	2.9		93
RBC 014	8	10	14_3	2	39.68	77.5	1.2	33.4	2.76		95
RBC 014	10	12	14_4	2	36.40	68.5	1.05	31.8	3.34		94
RBC 014	12	14	14_5	2	34.67	75.0	0.86	33.8	2.9		93
RBC 014	15	17	14_6	2	35.27	76.5	1.51	31.7	4.11	13	75
RBC 014	17	19	14_7	2	40.05	66.5	1.68	32.2	1.4		84
RBC 014	19	21	14_8	2	26.70	66.0	1.44	26.4	3.16	8	66
RBC 017	10	14	17_1	4	52.12	83.0	0.63	37.8	0.3		98
RBC 017	14	18	17_2	4	55.12	86.0	0.53	37.8	0.2		98
RBC 017	18	20	17_3	2	51.24	86.5	0.37	38.1	0.33	11	86
RBC 017	20	22	17_4	2	53.04	87.5	0.26	38.2	0.36	5	93
RBC 017	22	24	17-5	2	49.52	85.5	0.62	38.1	0.39		98
RBC 017	24	25	17-6	1	49.17	84.5	0.6	37.8	0.43		97
RBC 018	9	12	18-1	3	44.08	81.0	0.62	37.1	0.53	4	93
RBC 018	12	16	18-2	4	54.99	83.5	0.48	37.9	0.39		98
RBC 018	16	20	18-3	4	56.14	85.5	0.54	38	0.28		98
RBC 018	20	22	18-4	2	56.09	87.0	0.53	38	0.22		98
RBC 018	22	26	18-5	4	52.48	84.5	0.58	35.4	0.29		88
RBC 018	26	30	18-6	4	45.91	80.5	0.66	31.5	0.28		70
RBC 018	30	35	18-7	5	43.03	80.0	0.84	32.4	0.29		75
RBC 020	3	6	20-1	3	47.33	69.0	1.43	34.5	1.04	2	92
RBC 020	6	9	20-2	3	34.35	56.5	1.96	30.9	2.16		87
RBC 021	14	15	21-2	1	36.25	83.0	0.56	29.6	1.83		76
RBC 021	15	21	21-3	6	28.25	82.0	1.02	32	3.47	<1	83
RBC 025	8	11	25-1	3	53.70	82.0	0.57	37	0.49	5	91
RBC 025	11	15	25-2	4	50.25	84.5	0.48	36.1	0.51	6	85
RBC 025	15	18	25-3	3	49.03	84.0	0.31	34.1	0.56	7	72
RBC 025	18	20	25-4	2	44.37	80.0	0.82	33.2	0.69	7	69
RBC 025	20	23	25-5	3	43.91	79.0	0.9	33.1	0.61	6	71
RBC 025	23	25	25-6	2	41.64	81.5	0.63	33	0.66	3	77
RBC 028	5	7	28-1	2	35.09	81.5	0.96	31.3	0.5		96
RBC 028	7	12	28-2	5	46.70	81.5	0.94	35.4	0.39		97
RBC 028	12	14	28-3	2	48.26	76.0	0.99	35.2	0.42		97
RBC 028	14	18	28-4	4	45.39	81.5	0.94	34.6	0.39		90
RBC 028	18	21	28-5	3	36.81	76.0	1.6	34.6	0.64	12	77
RBC 034	4	6	34-1	2	39.67	77.5	0.55	35.2	0.42	9	83
RBC 034	6	8	34-2	2	45.17	74.5	0.65	32.8	0.42	2	79
RBC 034	8	11	34-3	3	43.54	81.5	0.46	32.1	0.48		73
RBC 034	11	13	34-4	2	39.35	85.0	0.84	31.1	0.59	5	65
RBC 034	13	15	34-5	2	38.06	73.5	1.87	26.2	0.46		62
RBC 035	4	10	35-1	6	50.74	82.0	0.49	34.8	0.39	1	84
RBC 035	10	11	35-2	1	46.58	87.0	0.65	33.5	0.37	5	73
RBC 035	11	12	35-3	1	45.80	81.0	1.1	35.6	1.01	2	78
RBC 035	12	14	35-4	2	43.19	85.0	1.02	31.8	0.39	8	63
RBC 035	14	16	35-5	2	31.35	63.5	2.38	28.5	0.45	3	55
RBC 037	5	8	37-1	3	47.78	66.5	1.59	36.3	0.45	6	89
RBC 037	9	12	37-2	3	55.86	75.0	2.12	36.6	0.39		94
RBC 037	13	17	37-3	4	56.46	65.5	2.61	33.2	0.62		79
RBC 037	20	22	37-4	2	45.28	56.0	2.77	29.6	0.55		58
RBC 038	5	8	38-1	3	50.56	80.5	0.92	36.4	0.76	12	82

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RBC 038	8	10	38-2	2	51.59	82.0	0.8	37.5	0.56	19	77
RBC 038	10	13	38-3	3	50.59	82.5	0.76	37.3	0.49	12	84
RBC 038	15	17	38-4	2	54.69	79.0	1.29	36.3	0.37	16	75
RBC 038	17	21	38-5	4	48.20	74.0	1.28	33.4	0.41	5	69
RBC 038	21	23	38-6	2	42.04	75.0	1	34	0.45	3	75
RBC 039	9	11	39-1	2	48.37	79.5	0.68	36.8	0.51	<1	96
RBC 039	11	13	39-2	2	49.32	76.5	0.87	35.2	0.51		88
RBC 039	14	16	39-3	2	45.58	78.0	0.99	34.5	0.51	1	83
RBC 039	16	19	39-4	3	32.67	74.0	1.25	29.7	0.46	3	76
RBC 045	5	9	45-1	4	49.11	86.5	0.22	37.5	0.44		97
RBC 045	9	13	45-2	4	50.76	86.5	0.28	37.6	0.3	13	82
RBC 045	13	15	45-3	2	53.38	85.0	0.27	34.2	0.36	6	75
RBC 045	15	18	45-4	3	38.82	80.0	0.81	31.3	0.42	13	58
RBC 046	6	7	46-1	1	17.28	57.0	1.45	26.7	0.45	6	75
RBC 046	7	9	46-2	2	22.04	59.5	1.19	29.7	0.42	14	74
RBC 047	7	9	47-1	2	53.92	78.0	0.41	37.9	0.31	10	86
RBC 047	9	12	47-2	3	55.73	84.5	0.34	37.5	0.35	20	77
RBC 047	12	18	47-3	6	58.66	86.5	0.21	37.9	0.34	16	81
RBC 047	18	22	47-4	4	61.08	87.0	0.2	36.1	0.25	7	84
RBC 048	5	6	48-1	1	48.57	76.5	0.61	36.2	0.64	28	67
RBC 048	6	7	48-2	1	65.33	72.5	0.6	37	0.47	8	89
RBC 048	7	12	48-3	5	64.74	80.0	0.36	37.9	0.45	4	92
RBC 048	12	16	48-4	4	55.20	85.5	0.49	36.4	0.46	9	83
RBC 048	16	19	48-5	3	39.42	77.5	1.04	32.2	0.46	12	63
RBC 049	4	6	49-1	2	34.07	75.0	1.47	29.4	0.56	1	73
RBC 049	6	12	49-2	6	18.79	58.5	0.82	25.4	1.08	7	68
RBC 050	4	6	50-1	2	50.96	72.0	1.55	34.9	0.43		93
RBC 050	6	8	50-2	2	71.19	76.5	1.56	36.9	0.26		97
RBC 050	8	13	50-3	5	54.08	78.5	1.3	32.7	0.31		86
RBC 057	6	7	57-1	1	22.49	51.5	2.16	29.3	0.69	7	77
RBC 057	7	10	57-2	3	51.13	80.5	0.55	36.8	0.55	8	87
RBC 057	10	14	57-3	4	56.41	81.5	0.47	37.5	0.55	8	87
RBC 057	14	15	57-4	1	55.91	81.5	0.51	37.3	0.6	8	89
RBC 057	15	17	57-5	2	53.24	81.5	0.56	37.4	0.33		95
RBC 057	17	20	57-6	3	52.57	81.5	0.62	37.2	0.5	1	94
RBC 057	20	23	57-7	3	53.25	80.0	0.6	37.3	0.47	7	88
RBC 058	5	9	58-1	4	37.44	80.0	0.74	33.6	0.46		94
RBC 058	9	12	58-2	3	43.95	84.5	0.69	33.8	0.4		97
RBC 058	12	15	58-3	3	55.90	80.5	0.92	34.2	0.36		83
RBC 058	15	20	58-4	5	43.12	82.0	0.66	32.2	0.47		78
RBC 060	4	5	60-1	1	40.09	74.0	1	34.2	0.33	2	86
RBC 060	5	8	60-2	3	35.12	82.0	0.47	34.1	0.43	<1	90
RBC 060	8	10	60-3	2	47.80	83.5	0.48	34.8	0.47		89
RBC 060	10	13	60-4	3	54.79	84.0	0.49	34.2	0.37		79
RBC 060	13	15	60-5	2	47.83	81.0	0.71	34.1	0.59		77
RBC 060	15	20	60-6	5	40.48	80.0	0.76	33.5	0.55		77
RBC 060	20	22	60-7	2	41.20	76.5	1.02	31	0.56	<1	63
RBC 060	22	26	60-8	4	44.55	74.0	1.23	29.1	0.78	4	49
RBC 061	4	6	61-2	2	53.60	81.0	0.91	35.2	0.29		87
RBC 061	6	9	61-3	3	59.36	75.0	0.93	34	0.67		85
RBC 061	9	11	61-4	2	50.08	78.0	0.94	34.3	0.43		84
RBC 061	11	13	61-5	2	53.91	80.5	0.73	37.1	0.45		87
RBC 061	13	16	61-6	3	55.07	74.0	0.89	33.1	0.33		74
RBC 061	16	19	61-7	3	43.75	73.5	0.95	29.2	0.4		53
RBC 061	19	23	61-8	4	36.89	77.0	0.85	31.9	0.49	2	61

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RBC 061	23	25	61-9	2	37.69	66.5	1.4	31.2	0.5		58
RBC 061	25	28	61-10	3	36.42	76.0	0.76	29	0.42		50
RBC 061	28	29	61-11	3	31.44	66.0	1.6	26.3	0.44	2	29

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## JORC Code, 2012 Edition – Table 1 report-Burracoppin

### 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> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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>Samples were taken at 1m intervals downhole using an industry standard air-core rig with an open blade bit.</li> <li>Samples were returned via compressed air via the drill string inner tube.</li> <li>The entire metre for each sample was collected into green plastic sample bags and placed sequentially on the surface next to the drill hole.</li> <li>Each sample was logged and a matchbox sized sub-sample was retained in chip trays.</li> <li>Sample composites were then designed based on logging and collected using a spearing technique diagonally through the main sample from top to bottom with a piece of PVC pipe.</li> <li>Approximately 1 – 2kg of sample material was collected to make up each composite sample.</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>Air-core drilling using an open blade bit.</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> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to</li> </ul>	<ul style="list-style-type: none"> <li>Entire 1m samples collected into green plastic bags and laid sequentially next to the drillhole.</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<i>preferential loss/gain of fine/coarse material.</i>	
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> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples logged in the field primarily for lithology and colour onto hard copy log sheets, then transferred into excel spreadsheets in the office.</li> <li>• Representative sub-samples collected into chip trays.</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> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <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> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample composites were designed based on logging information and collected in the field.</li> <li>• A spearing technique was used to collect sub samples from each plastic sample bag into fine weave calico bags according to composite design.</li> <li>• Spearing was performed diagonally through the main sample from top to bottom with a piece of PVC pipe.</li> <li>• Approximately 1-2kg of sample material was collected to make up each composite sample. No sub sampling conducted in the field.</li> <li>• Equivalent sized sub-samples were collected from each metre sample.</li> <li>• Sample preparation was conducted by Bureau Veritas in the laboratory according to industry standard techniques.</li> <li>• Sample preparation involved:             <ul style="list-style-type: none"> <li>- Dry, weigh and stage crush to -6.3mm</li> <li>- Liberation using blunging followed by wet screen to +180um, -180 to +45um, -45um.</li> <li>- Filter, dry and weigh each size fraction.</li> </ul> </li> </ul>
Quality of assay data and laboratory tests	<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> <li>• <i>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.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks,</i></li> </ul>	<ul style="list-style-type: none"> <li>• Laboratory techniques are industry standard.</li> <li>• The -45µm sample was sub sampled into splits for analysis of brightness, XRF, ICP analysis and XRD analysis to determine chemical compositions and mineralogical compositions respectively.</li> <li>• XRF used to determine elemental contents.</li> <li>• ICP with fusion digest used to determine rare earth element contents.</li> <li>• XRD used to determine Halloysite and Kaolinite content.</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<i>duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	
<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> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Verification was conducted with the use of blanks and repeats in the laboratory.</li> <li>• No field duplicates taken.</li> </ul>
<i>Location of data points</i>	<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> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample points recorded in the field with handheld GPS. Sample locations align with aerial photography of sample sites.</li> <li>• Topographic information extracted from Copernicus GLO 30 Digital Elevation Model for the Burracoppin project area. The data packet was contoured in QGIS and exported to Micromine as contour strings. The contour strings were restricted within an external boundary string and a DTM was created of the topographical surface. The Copernicus DEM has a 30m pixel resolution and a reported relative vertical accuracy of &lt;2m for slopes below or equal to 20%.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <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> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drillholes located on a 400m grid in a diamond pattern.</li> <li>• Samples taken at 1m intervals downhole.</li> <li>• Samples composited for submission to the lab based on geological logging.</li> <li>• Samples composited predominantly based on colour.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Holes drilled vertically into an undulating but flat lying weathering profile above the underlying granite.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples delivered directly to the lab by geologist.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews conducted.</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>E70/5708 and E77/2774 were acquired by Ragusa Minerals Limited as announced 5 July 2021.</li> <li>Both tenements are in good standing.</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>No other exploration conducted previously.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Weathered kaolinite outcropping in places but mostly covered with superficial recent soils. Kaolinised profile extends down to a maximum of approximately 60m before transitioning to fresh granite.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All drilling information including collar and assay data included in the body of the report.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>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.</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>No data aggregation.</li> <li>No top caps or bottom caps applied to the data set.</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<p><i>be 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>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <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>Downhole intersections represent true thickness of the mineralised body in that location.</li> </ul>
<i>Diagrams</i>	<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>Plan and sections of sample locations attached.</li> </ul>
<i>Balanced reporting</i>	<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>All samples reported</li> </ul>
<i>Other substantive exploration data</i>	<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>Not applicable</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <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>Initial testwork to be conducted on a subset of samples with elevated REE to test for amenity for liberation.</li> <li>Closer spaced drilling will be conducted to improve and expand on the current mineral resource estimation.</li> </ul>

**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
<i>Database integrity</i>	<ul style="list-style-type: none"> <li><i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between</i></li> </ul>	<ul style="list-style-type: none"> <li>All data was loaded directly from laboratory ascii files into excel and checked for duplicated data, missing data, sample intervals, etc.</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<p><i>its initial collection and its use for Mineral Resource estimation purposes.</i></p> <ul style="list-style-type: none"> <li>• <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Data validated visually in excel and spatially in 3D space within Micromine.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Cp has visited site many times, supervised some of the drilling and carried out some of the logging and sampling.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>• High confidence is placed in the geological interpretation given the relatively simple nature of the deposit with reference to the data spacing. Confidence in the distribution of REE and halloysite in particular is reduced do to the variable nature of these components.</li> <li>• No alternative interpretation possible. No folding or significant faulting evident within the project area. Any alternative model of erosional or weathering surfaces is considered to only have a mild impact on the outcome.</li> <li>• Geology is used to guide the estimation only in relation to weathering surfaces.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The mineral resource estimation covers an area of approximately 2.65km in the east – west direction and 3.16km in the north – south direction. The resource varies vertically significantly due to interactions between weathering and erosional surfaces and ranges from 0m (basement outcrop) to 52m. Depth to mineralisation ranges from &lt;1m (immediately below topsoil) to approximately 13m at its deepest.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>• <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average</i></li> </ul>	<ul style="list-style-type: none"> <li>• Micromine mining software was used for data preparation, geological modelling and data interpolation into a prototype model of the area.</li> <li>• The model was constructed using parent cell sizes of X = 100, Y = 100, Z = 1 with sub cells down to X = 10, Y = 10 and Z = 0.5 at zone interfaces. Cell were centred on drill holes and there were 3 floating parent cells between fixed data points in both the X and the Y directions. Cells in the Z direction were designed with 1 sample per cell.</li> <li>• Statistics and variography were performed on a number of key variables to establish appropriate search parameters.</li> <li>• Trial ordinary kriging against inverse distance interpolation runs were conducted to determine a preferred interpolation method. OK was deemed to excessively smooth the spatially limited data set so ID was the preferred method.</li> <li>• Interpolation was conducted in separate</li> </ul>

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	<p><i>sample spacing and the search employed.</i></p> <ul style="list-style-type: none"> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<p>stages for different variables subject to their individual characteristics. The interpolated model was successively built at each stage.</p> <ul style="list-style-type: none"> <li>• Interpolation for each variable was conducted in rounds of successively larger searches with decreasing confidence with the search round recorded within the cell.</li> <li>• Estimation parameters have been listed in the body of the announcement.</li> <li>• Validation was conducted visually against drill hole data and the interpolation parameters were adjusted to suit on an iterative basis if results were not acceptable at any given point during the estimation.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>• <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Tonnages are estimated on an in-situ dry basis using an assumed universal density of 1.53 g/cm<sup>3</sup>.</li> <li>• No moisture data has been incorporated</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>• <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The global cut-off grade of ISO-B 70 was applied based on assumed blended saleable quality.</li> <li>• The 400ppm TREO cut-off was adopted from several similar third party values used. The commercial basis for this is yet to be determined.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Based mining assumptions for shallow strip mining in free digging material were used.</li> <li>• The CP is of the opinion the deposit meets the criteria for reasonable prospects for eventual economic extraction based on similar currently operating kaolinite mines</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>• <i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No metallurgical factors have been taken into account.</li> </ul>

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Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No assumptions have been made regarding residue disposal.</li> <li>It is anticipated the clay and REE components will be extracted and sold leaving a majority fine quartz sand residue of approximately 50% of the volume mined.</li> <li>This may also be sold as an industrial product or backfilled into the void after mining.</li> <li>An operation is expected to chemical additive free and produce an inert tail.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>A uniform bulk density of 1.53 g/cm<sup>3</sup> was applied to the estimated mineralized zones as in-situ dry bulk density. This figure was derived from the neighbouring project which lies directly adjacent to the Burracoppin project on its eastern side. The neighbouring project assumed the value of 1.53 g/cm<sup>3</sup> based on similar kaolinized granite deposits in Australia, with values ranging from 1.4 g/cm<sup>3</sup> - 1.9 g/cm<sup>3</sup>.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The entire resource is categorised as inferred in accordance with the JORC code (2012).</li> <li>Data density is not sufficient for any higher categorisation at this stage.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews have been conducted.</li> </ul>
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> <li>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,</li> </ul>	<ul style="list-style-type: none"> <li>The accuracy of the mineral resource estimate is reflected in the inferred category assigned to the estimate and is considered the appropriate level of confidence for this data set.</li> <li>The estimate is considered global based on the relatively sparse data set and is considered to have an inferred level of confidence at a global scale. Locally, the</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<p>estimates may have greater variability although this attempted to be accounted for with the estimation methodology employed.</p> <ul style="list-style-type: none"> <li>The deposit is not mined so comparison against production data is not possible.</li> </ul>

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