

## MILENJE RARE EARTH PROJECT SHOWS POTENTIAL

**Lotus Resources Limited (ASX: LOT, OTCQB: LTSRF) (Lotus or the Company)** is pleased to announce the Company has completed the second stage of its preliminary exploration work at the Company's **Milenje Rare Earth Prospect (Milenje)**, located 2km from the Company's flagship **Kayelekera Uranium Project (Kayelekera)**.

While the Company remains firmly focused on the recommencement of uranium production at Kayelekera, the rare earth grades at Milenje are highly promising and as such the Company is considering undertaking an exploration program at Milenje during 2023 to better understand the potential for rare earth mineralisation at the prospect.

### HIGHLIGHTS

- **The Company completed its second exploration program at the Milenje Hills Rare Earth Prospect, with work focusing on further trench sampling, an RC drill program and preliminary mineralogy studies**
- **The new samples from the trenching program confirmed high-grade rare earth elements (REE) including:**
  - Total Rare Earth Oxides (TREO) of up to 25.5%
  - Average TREOs 11.6% from the 11 samples
  - Critical REO of up to 5.6% (Dy, Eu, Nd, Pr, Tb, Y oxides) and average 2.48% across the 11 samples
- **The RC drill program intercepted several anomalous zones of gneisses which, though showing some elevated REE mineralisation, were lower than the surface (trench) samples**
  - Further structural mapping and interpretation is required to better understand the mineralisation controls
- **A follow up exploration program is being considered at Milenje for the 2023 field season**

### Keith Bowes, Managing Director of Lotus, commented:

*"This exploration program was carried out to follow up on the promising early trenching work carried out at Milenje by the Company in 2020/21. The new sampling at the existing trenches confirmed the exceptionally high REE assays reported previously (see ASX announcement 1 February 2021). Several of the samples from this new program returning TREO's grades greater than 15%. The mineralogy work (petrographic and scanning electron microscopy) showed that the rare earths were contained in the mineral allanite.*

*"The 15-hole RC drill program showed that while drilling did encounter some anomalous zones, the REE grades were lower than expected. Following a review of the program, we believe the*



*structures are more complex than originally anticipated, however the program has provided valuable information on lithologies and structures that can be used to better understand what is controlling the mineralisation.*

*Given this, an additional low-cost program at Milenje during 2023 is warranted to validate the updated structural information which from then a decision on a future drilling program can be made."*

### **Milenje Hills REO Prospect**

The Milenje Hills prospect is located 2km to the north of Lotus's Kayelekera deposit in the Karonga region of northern Malawi. The Milenje Hills prospect was first identified through ground surveys and mapping in 2014 whilst the previous owners of the asset were undertaking an exploration program for uranium mineralisation adjacent to the Kayelekera uranium resource.

### **Previous Exploration**

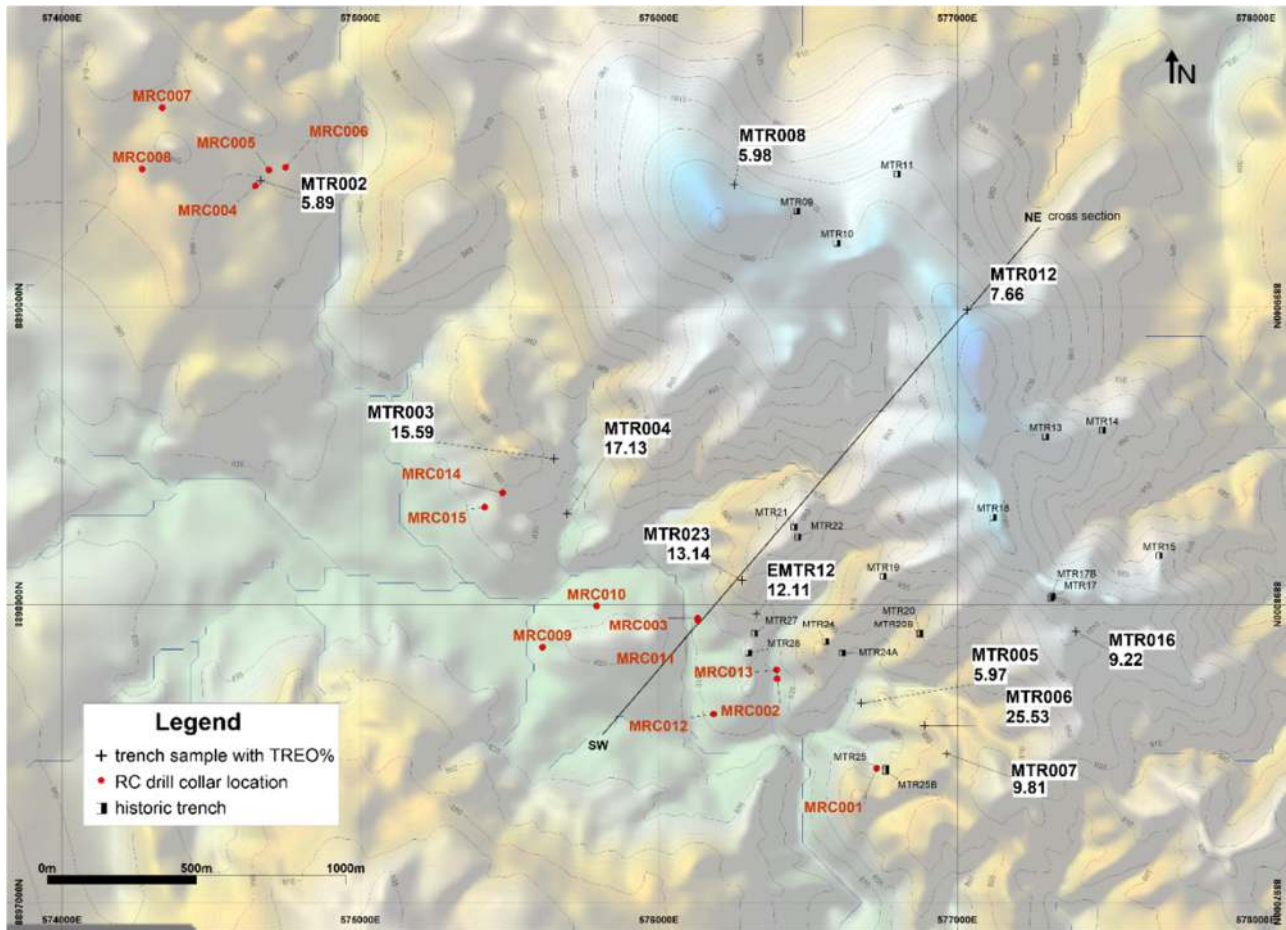
Lotus followed up on this historical work with a geophysical and trenching program in late 2020 (refer to ASX Announcement – 1 February 2021). The 2020 program of work comprised of additional radiometric and magnetometer surveys with mapping undertaken to define the extent of the rare earth oxide (REO) and rutile mineralisation (allanite and rutile bearing rocks) and to characterize the host rock in terms of mineralogy and chemistry.

Based on this work 23 pits and trenches were then excavated, logged and sampled at one metre spacings. The hand-dug trenches (Figure 1) were excavated over three main lithologies:

- microgranites
- pegmatitic granites
- biotite granite gneisses

The mineralisation is interpreted as being associated with allanite-rich pegmatite dykes and associated fluid alteration within associated granitoids. Importantly, the rare-earth assemblage identified includes significant portions of the high-value critical REOs of Neodymium (Nd), Europium (Eu), Terbium (Tb), Dysprosium (Dy), Yttrium (Y), and Praseodymium (Pr): up to 3.4% across all samples (refer to ASX Announcement – 1 February 2021). Of this, Neodymium and Praseodymium oxides represent on average ~20% of the TREO content of the assayed samples. These two elements, along with Dy and Tb are essential for the manufacture of permanent magnetics which make-up ~90% of the value of the REO market.





**Figure 1: Milenje Prospect Location Plan**

## 2022 Trench Sampling & Mineralogy

Eleven of the previously excavated trenches were selected for further assaying and mineralogical studies. Two of the trenches sampled were excavated in the microgranites (MTR16 and 17) and four trenches were cut across the pegmatitic granites (MTR24A & B, 25A and 26). The remaining trenches were excavated in predominantly biotite granite gneisses (see Figures 2 & 3).

The samples from the eleven trenches were analysed by ALS Laboratory Edenvale, Johannesburg using the XRF analytical method to confirm REO grades (see Table 1).





**Table 1: Trench Rock Sample Analyses**

Sample ID	Trench ID	TREO % (+Y)	HREO %	LREO%	Critical REO% (+Y)	NdPr Oxide %	NdPr/TREO ratio
2124	MTR002	5.89	0.11	5.78	1.21	1.16	0.20
2125	MTR003*	15.59	0.30	15.29	3.13	2.99	0.19
2126	MTR004	17.13	0.39	16.74	3.74	3.56	0.21
2127	MTR12	12.11	0.21	11.90	2.51	2.42	0.20
2128	MTR005	5.97	0.11	5.86	1.22	1.17	0.20
2129	MTR006*	25.53	0.58	24.95	5.64	5.39	0.21
2130	MTR007*	9.81	0.19	9.62	2.02	1.94	0.20
2131	MTR016	9.22	0.20	9.02	1.92	1.83	0.20
2132	MTR023	13.14	0.24	12.90	2.80	2.70	0.21
2133	MTR008	5.98	0.11	5.87	1.32	1.27	0.21
2134	MTR012*	7.66	0.18	7.48	1.72	1.64	0.21
<b>Average</b>		<b>11.64</b>	<b>0.24</b>	<b>11.40</b>	<b>2.48</b>	<b>2.37</b>	<b>0.20</b>
Note: 'Critical' REO have been defined here as Neodymium (Nd), Europium (Eu), Terbium (Tb), Dysprosium (Dy) and Yttrium (Y), and Praseodymium (Pr)							
*petrographic and SEM study sample							



**Figure 2: Milenje Trenches**





**Figure 3: Trench Lithologies** (REO mineralisation highlighted in yellow box)

Petrographic and scanning electron microscopy (SEM) studies were carried out by Diamantina Laboratories (Malaga) on four selected samples (Table 2).

**Table 2: Mineralogical Sample Analyses**

Sample ID	Trench ID	TREO % (+Y)	HREO %	LREO%	Critical REO% (+Y)	NdPr Oxide %	NdPr/TREO ratio
2125	MTR003	15.98	0.17	15.81	3.16	3.08	0.19
2129	MTR006	36.17	0.38	35.79	7.68	7.49	0.21
2130	MTR007	10.47	0.06	10.41	2.18	2.15	0.21
2134	MTR012	12.89	0.13	12.76	2.89	2.82	0.22
<b>Average</b>		<b>18.88</b>	<b>0.19</b>	<b>18.69</b>	<b>3.98</b>	<b>3.89</b>	<b>0.21</b>

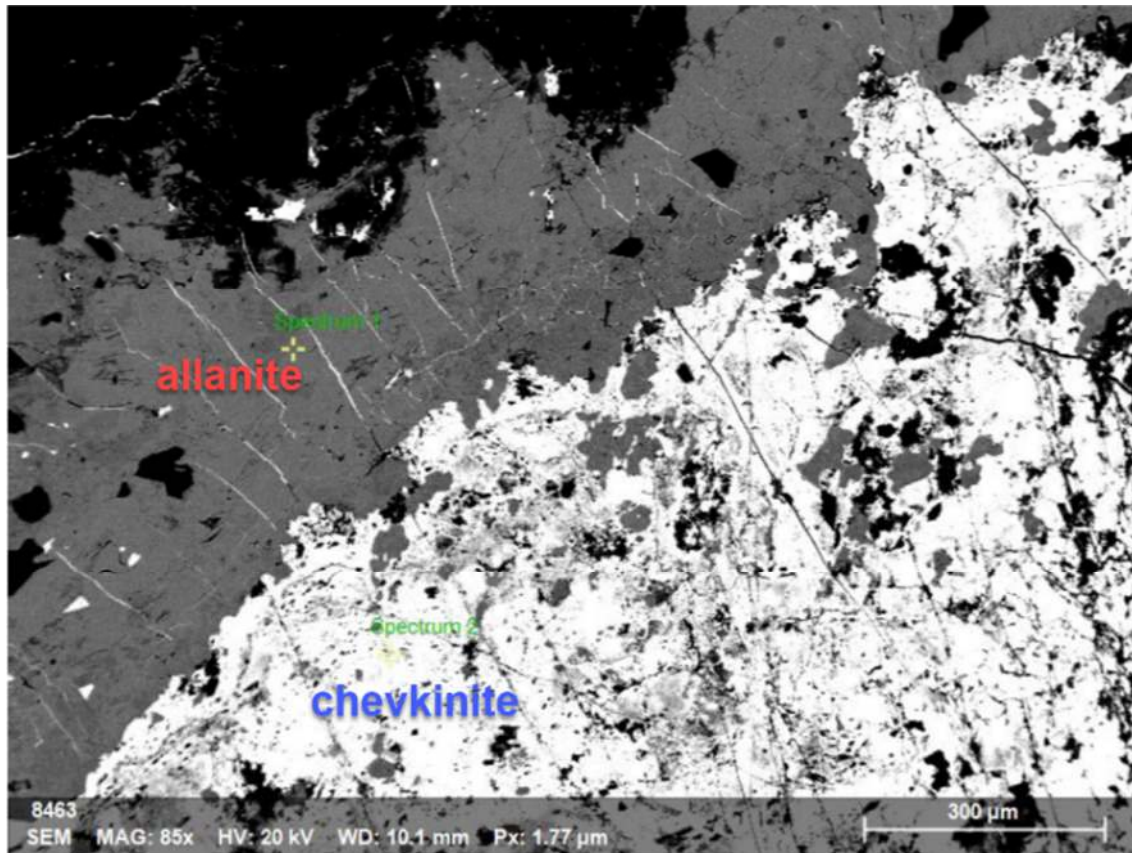
Polished thin sections were prepared from the four samples. Based on the analysis undertaken the samples were classified as quartz allanite rocks or quartz allanite hyalophane (feldspar) syenites with sample MTR006 classified as a chevkinite. Figure 4 shows the SEM image of MTR006 with the chevkinite and allanite association. This sample recorded the highest TREO (36.2%) with the energy dispersive x-ray analysis (EDS) showing  $\text{Pr}_2\text{O}_3$  and  $\text{Nd}_2\text{O}$  grades in spectrum 2 (Figure 4) of 2.5% and 6.5% respectively.

The main conclusions from the mineralogical study are as follows:

- Samples contain exceptionally high levels of the rare earth bearing mineral allanite together with concentrations of chevkinite, bastnasite and thorite.
- The rare earth titanium oxide mineral known as chevkinite is also present in some samples (MTR006)







**Figure 4: SEM image of rare earth mineralisation in sample MTR006 (25.5% TREO)**

Allanite is not the most common rare earth containing mineral (monazite, bastnasite and ionic clays being the most common) and there processing is less well known. However, Arafura's Nolan Bore Project in Australia (56Mt @ 2.6% TREO) has indicated a portion of the REO present are associated with allanite mineralisation<sup>1</sup>.

Extraction of REOs from allanite has been undertaken previously (Mary Kathleen Uranium [MKU], Queensland, Australia) and typically requires sulphation roasting at elevated temperature. Sulphation roasting, followed by water leaching recovered about 70-75% of the REE (Baillie and Hayton 1970<sup>2</sup>).

The mineralogical sample off cuts were analysed by ALS Brisbane using the same analytical techniques as those used by ALS in Johannesburg. The results from ALS Brisbane are shown in Table 2. It should be noted that the assayed mineralogical sample is not identical to the initial trench sample. Nevertheless, there is a good correlation between the sample results (Table 3) giving confidence in the high REE assays.

<sup>1</sup> <https://www.arultd.com/projects/nolans.html>

<sup>2</sup> Baillie, M.G. and Hayton, J.D. (1970). A process for the recovery of high-grade rare earth concentrates from Mary Kathleen uranium tailings, Proc. Int. Miner. Process. Congr. 9th, pp 334-345.



**Table 3: Comparison of TREO% between Mineralogical Sample Analyses (ALS Brisbane) and Trench Samples (ALS Johannesburg)**

Sample ID	Trench ID	ALS Brisbane	ALS Johannesburg
		TREO % (+Y)	TREO % (+Y)
2125	MTR003	15.98	15.59
2129	MTR006	36.17	25.53
2130	MTR007	10.47	9.81
2134	MTR012	12.89	7.66
<b>Average</b>		<b>18.88</b>	<b>14.65</b>

## RC Drilling

An RC drill program consisting of a total of 15 RC holes for 2,035m was completed (Figure 1). The drilling was initially planned to intersect mineralisation directly below the respective trench targets. However, due to very mountainous terrain it was not possible to place the drilling safely in the optimum locations. Thus, the initial drilling was re-designed to test for down-dip extensions to the nearest point at which a rig could be placed. Samples were collected at 1m intervals and were analysed by ALS Laboratory Edenvale, Johannesburg using XRF.

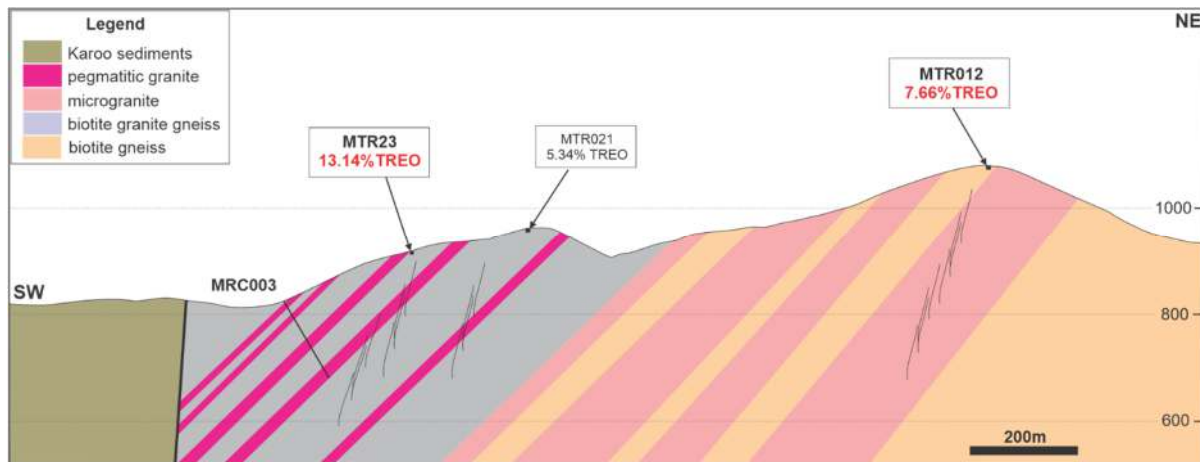
Although no high-grade results were obtained, several zones that are anomalous in rare earth mineralisation were intersected (Table 4).

The current interpretation of the combined trench and drilling results suggests that mineralisation may be associated with steeper oriented structures with a broadly south-west dipping units of alternating pegmatite, microgranite and biotite gneiss (Figure 5).

**Table 4: RC Drilling Results (0.2% TREO cut off, minimum 1m interval)**

Hole ID	Easting	Northing	RL	Depth	Azimuth	Dip	From (m)	To (m)	Interval (m)	TREO %
MRC001	576729	8897449	850	142	55	-60	92	94	2	0.30
MRC002	576396	8897749	819	133	55	-70	81	83	2	1.01
MRC003	576130	8897955	815	163	55	-70	16	17	1	0.47
and							32	33	1	0.20
and							109	110	1	0.36
and							120	121	1	0.24
MRC004	574648	8899403	878	79	65	-65	nsr			
MRC005	574693	8899456	893	151	0	-90	nsr			
MRC006	574749	8899465	900	148	55	-60	nsr			
MRC007	574336	8899664	905	163	0	-90	16	17	1	0.26
MRC008	574268	8899459	892	133	45	0	nsr			
MRC009	575610	8897855	820	157	55	-60	nsr			
MRC010	575791	8897996	825	130	55	-60	nsr			
MRC011	576130	8897948	814	169	0	90	28	31	3	0.53
and							143	144	1	0.61
MRC012	576183	8897631	812	138	55	-60	nsr			
MRC013	576394	8897779	825	79	0	90	1	2	1	0.82
MRC014	575476	8898374	852	127	55	-60	nsr			
MRC015	575416	8898326	842	123	55	-60	nsr			





**Figure 5: Cross section of Milenje** (refer Figure 1 for section location)

### Additional Work Programs

The Company believe more fundamental work is required to better understand the controls, formation and extent of the mineralisation prior to a new drill program. The Company is therefore considering undertaking further programs of work to better define the potential of these rare earths. A staged program consisting of the following activities is being considered:

- Detailed surface geochemistry
- Structural mapping
- Additional trenching
- Follow-up diamond drilling (smaller diamond rig should allow better access to required areas)





## Competent Persons' Statements

The information in this document that relates to exploration data is based on information provided by Mr Alfred Gillman. Mr. Gillman is a Fellow and Chartered Professional of the Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserve. Mr. Gillman consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

This announcement has been authorised for release by the Company's board of directors.

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## ABOUT LOTUS

Lotus Resources Limited (**ASX: LOT, OTCQB: LTSRF**) owns an 85% interest in the Kayelekera Uranium Project in Malawi. The Project hosts a current resource of 51.1Mlbs U<sub>3</sub>O<sub>8</sub> (see table below), and historically produced ~11Mlb of uranium between 2009 and 2014. The Company completed a positive Restart Study<sup>3</sup> which has determined an Ore Reserve of 23Mlbs U<sub>3</sub>O<sub>8</sub> and demonstrated that Kayelekera can support a viable long-term operation and has the potential to be one of the first uranium projects to recommence production in the future.

### Lotus Mineral Resource Inventory – June 2022<sup>4</sup>

Project	Category	Mt	Grade (U <sub>3</sub> O <sub>8</sub> ppm)	U <sub>3</sub> O <sub>8</sub> (M kg)	U <sub>3</sub> O <sub>8</sub> (M lbs)
Kayelekera	Measured	0.9	830	0.7	1.6
Kayelekera	Measured – RoM Stockpile <sup>5</sup>	1.6	760	1.2	2.6
Kayelekera	Indicated	29.3	510	15.1	33.2
Kayelekera	Inferred	8.3	410	3.4	7.4
Kayelekera	<b>Total</b>	<b>40.1</b>	<b>510</b>	<b>20.4</b>	<b>44.8</b>
Kayelekera	Inferred – LG Stockpiles <sup>6</sup>	2.4	290	0.7	1.5
Kayelekera	<b>Total All Materials</b>	<b>42.5</b>	<b>500</b>	<b>21.1</b>	<b>46.3</b>
Livingstonia	Inferred	6.9	320	2.2	4.8
<b>Total</b>		<b>49.4</b>	<b>475</b>	<b>23.3</b>	<b>51.1</b>

### Lotus Ore Reserve Inventory – July 2022<sup>7</sup>

Project	Category	Mt	Grade (U <sub>3</sub> O <sub>8</sub> ppm)	U <sub>3</sub> O <sub>8</sub> (M kg)	U <sub>3</sub> O <sub>8</sub> (M lbs)
Kayelekera	Open Pit - Proved	0.6	902	0.5	1.2
Kayelekera	Open Pit - Probable	13.7	637	8.7	19.2
Kayelekera	RoM Stockpile – Proved	1.6	760	1.2	2.6
Kayelekera	<b>Total</b>	<b>15.9</b>	<b>660</b>	<b>10.4</b>	<b>23.0</b>

<sup>3</sup> See ASX announcement dated 11 August 2002 for information on the Definitive Feasibility Study

<sup>4</sup> See ASX announcement dated 15 February 2022 for information on the Kayelekera mineral resource estimate. Lotus confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 15 February 2022 and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate in that announcement continue to apply and have not materially changed.

<sup>5</sup> RoM stockpile has been mined and is located near mill facility

<sup>6</sup> Low-grade stockpiles have been mined and placed on the medium-grade stockpile and are considered potentially feasible for blending or beneficiation, with studies planned to further assess this optionality.

<sup>7</sup> Ore Reserves are reported based on a dry basis. Proved Ore Reserves are inclusive of RoM stockpiles and are based on a 200ppm cut-off grade for arkose and a 390ppm cut-off grade for mudstone. Ore Reserves are based on a 100% ownership basis of which Lotus has an 85% interest. Lotus confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 11 August 2022 and that all material assumptions and technical parameters underpinning the Ore Reserve Estimate in that announcement continue to apply and have not materially changed



## Appendix 1

### RC Drilling Results (0.2%TREO cut off, minimum 1m interval)

Hole ID	Easting	Northing	RL	Depth	Azimuth	Dip	From (m)	To (m)	Interval (m)	TREO %
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MRC008	574268	8899459	892	133	45	0	nsr			
MRC009	575610	8897855	820	157	55	-60	nsr			
MRC010	575791	8897996	825	130	55	-60	nsr			
MRC011	576130	8897948	814	169	0	90	28	31	3	0.53
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MRC014	575476	8898374	852	127	55	-60	nsr			
MRC015	575416	8898326	842	123	55	-60	nsr			

### Trenching Sample Results

Sample ID	Trench ID	TREO % (+Y)	HREO %	LREO%	Critical REO% (+Y)
2124	MTR002	5.89	0.11	5.78	1.21
2125	MTR003*	15.59	0.30	15.29	3.13
2126	MTR004	17.13	0.39	16.74	3.74
2127	EMTR12	12.11	0.21	11.90	2.51
2128	MTR005	5.97	0.11	5.86	1.22
2129	MTR006*	25.53	0.58	24.95	5.64
2130	MTR007*	9.81	0.19	9.62	2.02
2131	MTR016	9.22	0.20	9.02	1.92
2132	MTR023	13.14	0.24	12.90	2.80
2133	MTR008	5.98	0.11	5.87	1.32
2134	MTR012*	7.66	0.18	7.48	1.72





## Appendix 2: JORC Code, 2012 Edition

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drilling described in this announcement comprised wholly reverse circulation “RC” drilling.</li> <li>A total of 15 holes for 2,035 m.</li> <li>All holes were geologically logged and down hole gamma logged.</li> <li>For intervals of interest, samples were collected over a sample length of 1m, each sample weighing approximately 0.5kg.</li> <li>RC samples were collected via a cone splitter at 1m intervals. All samples were collected and contained in poly-weave or plastic bags.</li> <li>The nominal drill diameter was 5 inches and all drill samples were bagged from the cyclone and weighed to provide some assessment of the average drill sample recoveries.</li> <li>All sampling was carried out under Lotus’s sampling protocols and QA/QC procedures as per industry best practice.</li> <li>All samples were riffle split into 80/20 proportions.</li> <li>Certified standards, duplicates and blanks were also inserted in the sample batches.</li> <li>All samples analysed using pressed powder XRF methods by either ALS Laboratory in Edenvale, Johannesburg or ALS Laboratory in Brisbane (refer text).</li> <li>Samples were driven by Lotus personnel to Lilongwe and air freighted by South African Airways to Johannesburg</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core</i></li> </ul>	<ul style="list-style-type: none"> <li>The Milenje prospect has been drilled using angled RC drilling.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>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).</i>	
<b>Drill sample recovery</b>	<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 preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>• For RC drilling, the nominal drill hole size was 5 inches and all drill samples were bagged from the cyclone and weighed to provide some assessment of the average drilling sample recoveries.</li> <li>• All RC drilling is conducted to industry best practice and Lotus QA/QC protocols whereby the hole is cleaned at the end of every metre interval by raising the bit slightly and blowing out the hole before drilling the next metre and ensuring water ingress into the hole whilst drilling is minimised.</li> <li>• No relationship between sample recovery and grade has been observed; studies to date show no correlation exists.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• All holes have been geologically logged (RC on 1m intervals) with recording of lithology, grain size and distribution, sorting, roundness, alteration, oxidation state, and colour, and stored in the database.</li> <li>• No routine geotechnical or structural data has been logged or recorded.</li> <li>• Oxidation, colour, alteration, roundness, sorting, sphericity, alteration and mineralisation are logged qualitatively. All other values are logged quantitatively.</li> <li>• All holes have been logged over their entire length (100%) including any mineralised intersections.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling</li> </ul>	<ul style="list-style-type: none"> <li>• All sampling was carried out using Lotus sampling protocols and QA/QC procedures as per industry best practice.</li> <li>• All RC samples were riffle split into 80/20 proportions. Larger rejects (&gt;20kg) samples were stored on site if they appeared mineralised or gave a count value of larger than 750cps on the scintillometer</li> <li>• Certified standards, duplicates and blanks were also inserted in the sample batches.</li> <li>• All samples analysed using pressed powder XRF methods by ALS Laboratory in Edenvale, Johannesburg.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>stages to maximise representivity of samples.</i></p> <ul style="list-style-type: none"> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were driven by Lotus personnel to Lilongwe and air freighted by South African Airways to Johannesburg.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Elemental analysis of samples was completed by ALS Laboratory Edenvale, Johannesburg, South Africa or ALS Laboratory in Brisbane (refer text).</li> <li>Elemental analysis of As, Ag, Be, Bi, Cd, Ce, Co, Cs, Dy, Er, Eu, Ga, Gd, Ge, Ho, In, La, Lu, Mo, Nb, Nd, Ni, Pb, Pr, Rb, Sb, Sc, Sm, Sn, Ta, Tb, Th, Ti, Tm, U, W, Y, Yb was determined by fusion/ICP-MS</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Data verification was undertaken using specialist mining software</li> <li>No adjustments to the data were necessary</li> </ul>





Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Trench sample locations are surveyed with a handheld GPS in WGS84 36S coordinate system</li> <li>Trench Sample Locations (WGS84 36S coordinate system)</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Data spacing is broad and results can only be considered as a preliminary identification of mineralisation in the region</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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> <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>Trench samples are orientated perpendicular to the strike of foliation.</li> <li>Mineralised zones dip around 50 degrees to the southwest and trenches are completed across the full width of the mineralised zones and extended into the unmineralized zones</li> <li>No orientation based sampling bias has been identified in the data.</li> <li>Rock samples are mineralogical samples</li> <li>Drilling was directed towards the north east in order to intersect the projected geology at roughly ninety degrees.</li> </ul>
<b>Sample security</b>	<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 was managed by Lotus.</li> <li>Samples were driven by Lotus personnel to Lilongwe and air freighted by South African Airways to Johannesburg and samples analysed at ALS Laboratory Edenvale, Johannesburg.</li> </ul>
<b>Audits or reviews</b>	<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>Data was validated by Lotus whilst loading into database. Any errors within the data are returned to site geologist for validation.</li> </ul>



## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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>The Milenje Hills REE Prospect is located in Malawi, in East Africa. The project site is located within the Kayelekera Village, in the Karonga District of Northern Malawi about 35km from the local centre of Karonga and 650km north of the national capital of Lilongwe.</li> <li>A formal and detailed Development Agreement for the neighbouring Kayelekera Uranium Project was approved by the Government of Malawi (GoM) and executed on 22nd February 2007. The Development Agreement provides a stable fiscal regime for at least 10 years from the commencement of production. A new Development Agreement for Kayelekera is currently being negotiated with GoM.</li> <li>The prospect is covered by a single licence, Mining Licence (ML0152), of 55.5 square kilometres originally granted on 9th April 2007 for an initial term of fifteen years and has been renewed for a further 15 years with expiry 2nd April 2036</li> <li>The tenement is in good standing and no known impediments exist.</li> </ul>
<b>Exploration done by other parties</b>	<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 previous exploration activities for REE mineralisation have been undertaken at Milenje Hills prior to the previous operators of the project (Paladin).</li> <li>Historic trench samples referred to in this announcement include the first exploration activities undertaken in relation to REE mineralisation at Milenje Hills by Paladin in 2014.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The local geology comprises mainly basement Proterozoic gneisses and biotite-rich granitoids dipping at a shallow angle of around 50 degrees to the southwest, against which Karoo beds which host the Kayelekera deposit have been juxtaposed by shearing along the Eastern Boundary Fault of the local basin.</li> </ul>
<b>Drill hole Information</b>	<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)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Refer Table 2 in the body of the report</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>– 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> <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>	
<b>Data aggregation methods</b>	<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 be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Metal equivalent values have not been used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	<ul style="list-style-type: none"> <li>• The intersection of the dipping geology and angled RC resulted in most the intersections representing true width.</li> </ul>





Criteria	JORC Code explanation	Commentary
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>See included plans and section.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All available historical exploration results have been included or referenced in this announcement.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Additional exploration work is being planned and will be announced when appropriate.</li> </ul>

