ionic
rare earths

ASX: IXR

ASX Announcement

01 February 2024

MAKUUTU PHASE 5 INFILL TRANCHE 2 DRILL ASSAY RESULTS

- **Clay hosted rare earth intersections achieved in all 20 infill core drill holes received, including;**
  - **5.3 metres at 1,044 ppm TREO from 2.7 metres in RRMDD784**
  - **17.1 metres at 1,003 ppm TREO from 4.8 metres in RRMDD778**
  - **16.2 metres at 713 ppm TREO from 4.0 metres in RRMDD771**
  - **11.0 metres at 691 ppm TREO from 4.0 metres in RRMDD770**
  - **14.6 metres at 684 ppm TREO from 6.1 metres in RRMDD772**
- **Samples for the remaining 52 holes are being analysed; and**
- **Makuutu's basket contains 71% magnet and heavy rare earths content, and is one of the most advanced heavy rare earth projects globally available as a source for new supply chains emerging across Europe, the US, and Asia.**

Ionic Rare Earths Limited ("IonicRE" or "the Company") (ASX: IXR) is pleased to advise Tranche 2 drill results from the Phase 5 resource infill and extension drilling at its 60 per cent owned Makuutu Heavy Rare Earths Project ("Makuutu" or "the Project") in Uganda. The results reported are for 20 core drillholes drilled as infill and extension holes to Area A of the current Makuutu 2022 Mineral Resource Estimate (MRE) (ASX: 3 May 2022, see Table 4).

The Company is progressing the development at the Makuutu Heavy Rare Earths Project through local Ugandan operating entity Rwenzori Rare Metals Limited ("RRM"). IonicRE has agreed terms with partners in RRM on moving to 94% ownership which is expected to occur in H1 2024.

Assay results for 76 holes of the 128-hole Phase 5 resource infill and extension drilling program completed on Retention Licence (RL) 00007 have now been received. The program is intended to increase resource estimation confidence from inferred to indicated status on resource Areas A and B, and to test extensions of those areas to expand the mineral resource area. Figure 1 is a plan of the Makuutu MRE and exploration target areas with MRE Areas A and B located on the western end of the deposit located within RL00007.

Intersections compiled above the MRE lower cut-off of 200ppm Total Rare Earth Oxide less Cerium Oxide (TREO-CeO_2) are listed in Table 1 and shown diagrammatically in plan view in Figure 2.

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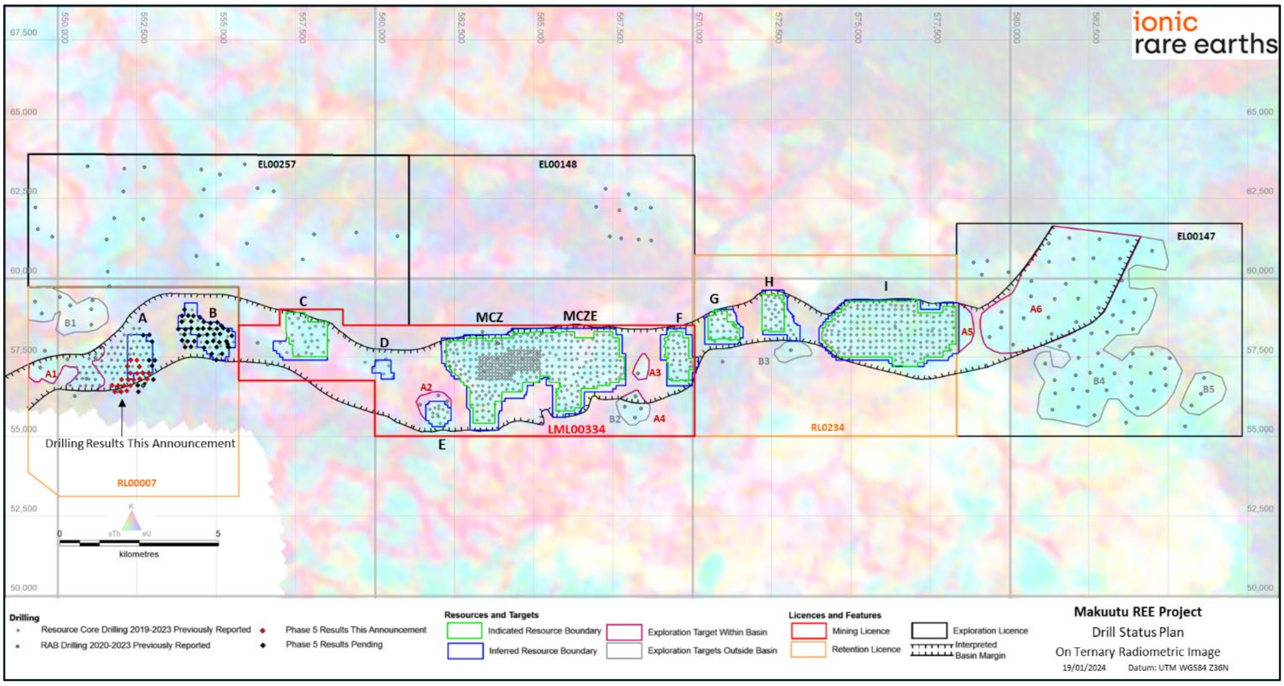

Figure 1: Makuutu project drill status plan showing location of infill and extension drilling results on licence RL00007, MRE Areas A and B.

Drilling was on a 200-metre spaced pattern with eleven (11) of the drill holes being extensions to the MRE and nine (9) are MRE Area A infill holes. Figure 2 shows the core hole locations (diamond shape) with intersection thickness (point size) and TREO grade (point colour) with the reported 200 metre spaced holes with bold hole numbers and the previously reported drill holes in italic hole numbers. Previously reported regional exploration RAB drill holes are also shown (round points).

The 11 extension holes were drilled up to 500 metres south and southwest the boundary of MRE Area A, mostly within the Makuutu mineralised trend. This extension drilling shows mineralisation continues beyond the MRE.

The infill holes to date continued zones of thicker and often higher-grade intervals than the original 400 metre spaced drill holes used to estimate the inferred resource. Best intersections include;

- RRMDD778, with 17.1 metres at 1,003ppm TREO from 4.8 metres depth; and
- RRMDD771, with 16.2 metres at 713ppm TREO from 4.0 metres depth.

The remaining 52 drill holes are currently at the laboratory in Perth being analysed.

Following the receipt of results, an updated resource estimation will be completed.

Table 1 Phase 5 resource infill and extension results above MRE cut-off grade of 200ppm TREO-CeO_2.

Drill Hole ID	Depth From (metres)	Length (metres)	TREO (ppm)	TREO-CeO_2 (ppm)	HREO (ppm)	CREO (ppm)	Hole Purpose
RRMDD768	3.8	13.7	558	361	135	183	Infill Area A
RRMDD769	3.3	9.7	638	421	186	228	Infill Area A
RRMDD770	4.0	11.0	691	452	167	231	Infill Area A
RRMDD771	4.0	16.2	713	495	242	281	Infill Area A
RRMDD772	6.1	14.6	684	508	230	282	Infill Area A
RRMDD773	8.3	3.3	312	217	87	108	Infill Area A
RRMDD773	15.6	3.7	265	207	92	111	Infill Area A
RRMDD774	4.7	8.6	295	215	84	107	Extension
RRMDD774	20.5	4.3	485	407	215	245	Extension
RRMDD775	5.3	8.1	478	323	135	172	Extension
RRMDD776	3.3	13.6	591	390	171	208	Infill Area A
RRMDD777	3.7	12.1	297	216	80	104	Extension
RRMDD777	23.8	1.9	293	206	98	117	Extension
RRMDD778	4.8	17.1	1003	823	550	556	Extension
RRMDD779	3.9	6.9	565	396	173	217	Infill Area A
RRMDD780	3.5	11.4	517	369	148	196	Extension
RRMDD781	3.8	11.5	591	469	191	256	Extension
RRMDD782	17.1	2.8	259	201	95	110	Extension
RRMDD783	3.4	8.1	678	559	245	305	Extension
RRMDD784	2.7	5.3	1044	739	301	402	Extension
RRMDD785	0.7	3.9	416	256	95	130	Extension
RRMDD786	5.9	5.6	416	313	116	164	Extension
RRMDD787	1.6	9.7	495	377	159	208	Extension

NSI=No significant intercept above cut-off grade

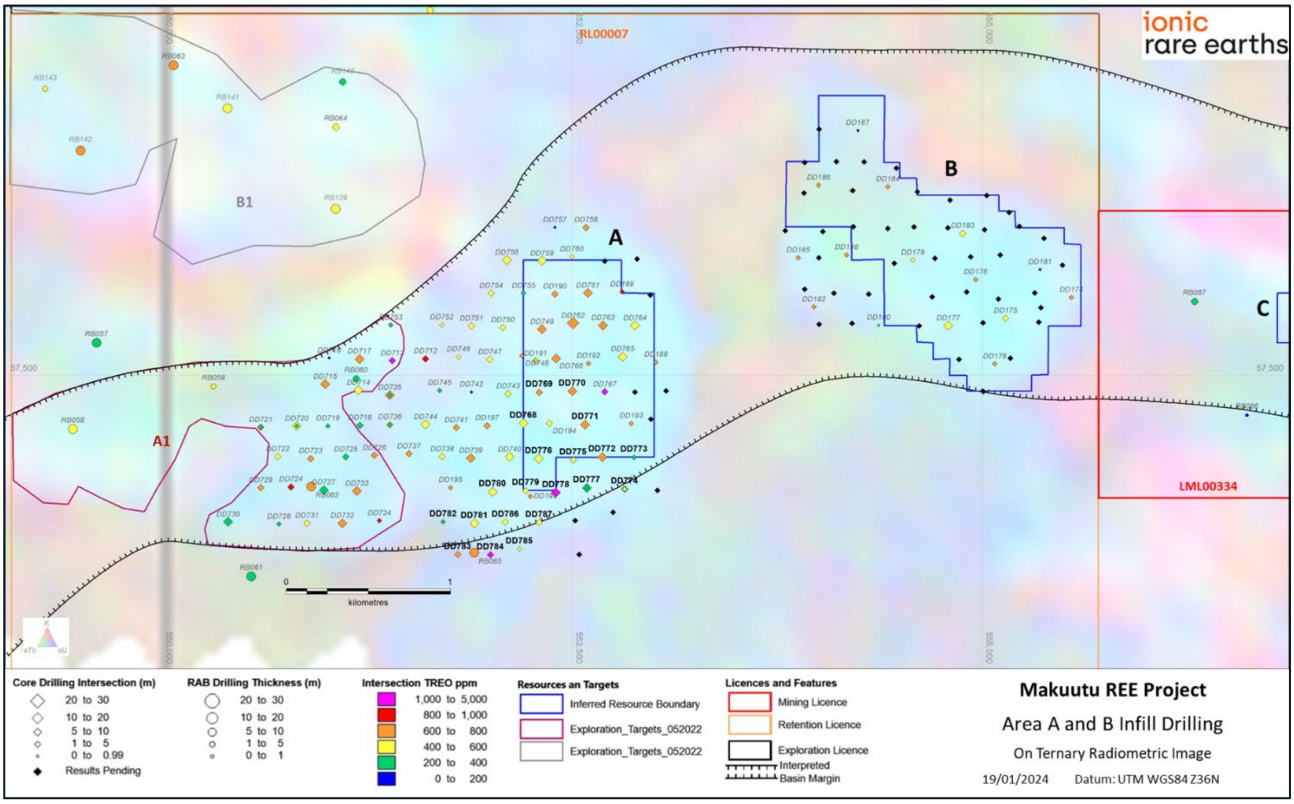

Figure 2: Drilling results Phase 5 resource infill and extension on RL00007. Results this announcement black hole number annotation.

Authorised for release by the Board.

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Table 2: Makuutu Rare Earth Project Resource Tabulation of REO Reporting Groups at 200ppm $TREO-CeO_2$ Cut-off Grade (ASX: 3 May 2022).

Resource Classification	Tonnes (millions)	TREO (ppm)	$TREO-CeO_2$ (ppm)	LREO (ppm)	HREO (ppm)	CREO (ppm)	Sc_2O_3 (ppm)
Indicated	404	670	450	500	170	230	30
Inferred	127	540	360	400	140	180	30
Total	532	640	430	480	160	220	30

Notes: Tonnes are dry tonnes rounded to the nearest 1.0Mt.
All ppm rounded from original estimate to the nearest 10 ppm which may lead to differences in averages.
TREO = Total Rare Earth Oxide

Table 3: Mineral Resources by Area (ASX: 3 May 2022), RL00007 Resource Areas shaded.

Classification	Indicated Resource			Inferred Resource			Total Resource		
Area	Tonnes (millions)	TREO (ppm)	$TREO-CeO_2$ (ppm)	Tonnes (millions)	TREO (ppm)	$TREO-CeO_2$ (ppm)	Tonnes (millions)	TREO (ppm)	$TREO-CeO_2$ (ppm)
A				13	580	390	13	580	390
B				26	410	290	26	410	290
C	31	580	400	3	490	350	35	570	400
D				6	560	400	6	560	400
E				18	430	280	18	430	280
Central Zone	151	780	540	12	670	460	163	770	530
Central Zone East	59	750	490	12	650	430	72	730	480
F	18	630	420	7	590	400	25	620	410
G	9	750	500	5	710	450	14	730	480
H	6	800	550	7	680	480	13	740	510
I	129	540	350	19	530	350	148	540	350
Total Resource	**404**	**670**	**450**	**127**	**540**	**360**	**532**	**640**	**430**

Rounding has been applied to 1Mt and 10ppm which may influence averaging calculations.

About Ionic Rare Earths Ltd

Ionic Rare Earths Limited (ASX: IXR or IonicRE) is set to become a miner, refiner and recycler of sustainable and traceable magnet and heavy rare earths needed to develop net-zero carbon technologies.

The Makuutu Rare Earths Project in Uganda, 60% owned by IonicRE, moving to 94% ownership in H1 2024, is well-supported by existing tier-one infrastructure and is on track to become a long-life, low Capex, scalable and sustainable supplier of high-value magnet and heavy rare earths oxides (REO). In March 2023, IonicRE announced a positive stage 1 Definitive Feasibility Study (DFS) for the first of six (6) tenements to progress to mining licence which was awarded in January 2024. The

Makuutu Stage 1 DFS defined a 35-year life initial project producing a 71% rich magnet and heavy rare earth carbonate (MREC) product basket and the potential for significant potential and scale up through additional tenements.

Ionic Technologies International Limited ("Ionic Technologies"), a 100% owned UK subsidiary acquired in 2022, has developed processes for the separation and recovery of rare earth elements (REE) from mining ore concentrates and recycled permanent magnets. Ionic Technologies is focusing on the commercialisation of the technology to achieve near complete extraction from end of life / spent magnets and waste (swarf) to high value, separated and traceable magnet rare earth products with grades exceeding 99.9% rare earth oxide (REO). In June 2023, Ionic Technologies announced initial production of high purity magnet REOs from its newly commissioned Demonstration Plant. This technology and operating Demonstration Plant provides first mover advantage in the industrial elemental extraction of REEs from recycling, enabling near term magnet REO production capability to support demand for early-stage alternative supply chains.

As part of an integrated strategy to create downstream supply chain value, IonicRE is also evaluating the development of its own magnet and heavy rare earth refinery, or hub, to separate the unique and high value magnet and heavy rare earths dominant Makuutu basket into the full spectrum of REOs plus scandium.

This three-pillar strategy completes the circular economy of sustainable and traceable magnet and heavy rare earth products needed to supply applications critical to electric vehicles, offshore wind turbines, communication, and key defence initiatives.

IonicRE is a Participant of the UN Global Compact and adheres to its principles-based approach to responsible business.

Competent Persons Statement

The information in this Report that relates to Exploration Results for the Makuutu Project is based on information compiled by Mr. Geoff Chapman, who is a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM). Mr. Chapman is a Director of geological consultancy GJ Exploration Pty Ltd that is engaged by Ionic Rare Earths Ltd. Mr. Chapman has sufficient experience 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' (JORC Code). Mr. Chapman consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Information in this report that relates to previously reported Exploration Targets and Exploration Results has been cross-referenced in this report to the date that it was originally reported to ASX. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcements.

The information in this report that relates to Mineral Resources for the Makuutu Rare Earths deposit was first released to the ASX on 3 May 2022 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

The information in this report that relates to Ore Reserves for the Makuutu Rare Earths deposit was first released to the ASX on 20 March 2023 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

The information in this report that relates to Production Targets or forecast financial information derived from production the production target for the Makuutu Rare Earths deposit was first released to the ASX on 20 March 2023 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that all material assumptions and technical parameters underpinning the Production Targets or forecast financial estimates in the announcement continue to apply and have not materially changed.

Forward Looking Statements

This announcement has been prepared by Ionic Rare Earths Limited and may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Ionic Rare Earths Limited. Actual values, results or events may be materially different to those expressed or implied in this document. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this document speak only at the date of issue of this document. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Ionic Rare Earths Limited does not undertake any obligation to update or revise any information or any of the forward-looking statements in this document or any changes in events, conditions, or circumstances on which any such forward looking statement is based.

Appendix 1: Drill Hole Details This Announcement (Datum UTM WGS84 Zone 36N)

Drill Hole ID	UTM East (m.)	UTM North (m.)	Elevation (m.a.s.l.)	Drill Type	Hole Length EOH (m.)	Azimuth	Inclination
RRMDD768	552203	57206	1158	DD	19.2	000	-90
RRMDD769	552300	57395	1159	DD	15.0	000	-90
RRMDD770	552501	57402	1157	DD	17.0	000	-90
RRMDD771	552580	57198	1155	DD	22.5	000	-90
RRMDD772	552684	57000	1151	DD	23.6	000	-90
RRMDD773	552878	56999	1147	DD	28.5	000	-90
RRMDD774	552821	56806	1150	DD	28.6	000	-90
RRMDD775	552507	56983	1153	DD	23.7	000	-90
RRMDD776	552296	56991	1154	DD	20.0	000	-90
RRMDD777	552590	56812	1150	DD	32.2	000	-90
RRMDD778	552401	56784	1148	DD	24.7	000	-90
RRMDD779	552217	56796	1148	DD	15.2	000	-90
RRMDD780	552015	56788	1147	DD	17.1	000	-90
RRMDD781	551905	56596	1142	DD	27.0	000	-90
RRMDD782	551713	56605	1136	DD	21.7	000	-90
RRMDD783	551803	56406	1139	DD	18.0	000	-90
RRMDD784	552002	56405	1138	DD	10.7	000	-90
RRMDD785	552179	56440	1133	DD	6.3	000	-90
RRMDD786	552093	56603	1143	DD	19.8	000	-90
RRMDD787	552298	56601	1138	DD	15.0	000	-90

Appendix 2: RAB Drilling Analytical Results RRMDD712 to RRMDD767 including highlighted Intersections >200 ppm TREO-CeO2.

(Note: Rounding will cause minor value differences)

Hole ID	From m	To m	Int. m	La_2O_3 ppm	CeO_2 ppm	Pr_2O_3 ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_2O_3 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm	TREO ppm	Regolith Zone	>200ppm $TREO-CeO_2$ Interval Length (m)	>200ppm $TREO-CeO_2$ Interval TREO ppm
RRMDD768	0.00	1.56	1.56	104.7	171.4	18.1	57.2	10.4	1.7	7.3	1.1	6.4	1.2	3.8	0.7	3.8	0.6	35.8	424	Hardcap		
RRMDD768	1.56	3.15	1.59	123.7	533.1	21.0	64.2	10.4	1.6	6.7	1.1	6.5	1.2	3.4	0.6	3.6	0.6	31.2	809	Hardcap		
RRMDD768	3.15	3.80	0.65	132.5	523.3	27.1	87.2	15.0	2.6	11.4	1.6	9.3	1.7	5.1	0.7	5.6	0.7	41.4	865	Transition		
RRMDD768	3.80	4.63	0.83	229.3	294.8	54.2	206.5	36.9	5.8	21.8	2.5	12.6	1.9	5.1	1.1	4.5	0.7	44.2	922	Mottled		
RRMDD768	4.63	5.45	0.82	138.4	211.9	32.0	114.1	20.2	3.5	13.4	1.6	9.3	1.5	4.4	1.1	4.0	0.5	36.3	592	Mottled		
RRMDD768	5.45	6.19	0.74	133.7	223.6	36.1	123.1	20.6	3.7	15.4	2.0	12.2	2.2	6.4	1.2	5.5	0.8	60.3	647	Mottled		
RRMDD768	6.19	6.93	0.74	120.8	203.3	33.6	125.4	23.3	4.3	18.6	2.4	14.8	2.7	7.3	1.1	5.9	1.0	67.6	632	Mottled		
RRMDD768	6.93	7.71	0.78	119.0	216.8	35.4	144.1	26.2	4.7	20.1	2.8	14.7	2.6	6.8	1.1	5.2	0.8	71.6	672	Clay		
RRMDD768	7.71	8.49	0.78	103.9	213.1	32.3	119.6	23.1	4.6	20.2	3.1	15.6	2.7	7.0	1.0	6.1	0.9	69.8	623	Clay		
RRMDD768	8.49	9.40	0.91	80.2	173.8	23.1	91.6	18.8	4.2	21.6	3.0	19.6	3.8	10.2	0.8	9.2	1.3	102.7	564	Upper Saprolite		
RRMDD768	9.40	10.30	0.90	77.6	173.8	22.1	87.6	18.5	3.9	19.9	2.9	18.8	3.5	9.6	0.7	8.8	1.2	98.9	548	Upper Saprolite		
RRMDD768	10.30	11.14	0.84	82.3	183.6	22.0	87.7	17.6	3.8	21.0	2.6	16.6	3.2	9.1	0.7	7.3	1.0	85.6	544	Lower Saprolite		
RRMDD768	11.14	11.98	0.84	76.7	167.1	18.7	77.0	18.9	3.6	21.2	2.5	16.9	3.1	8.0	0.5	6.4	0.8	81.3	503	Lower Saprolite		
RRMDD768	11.98	12.82	0.84	77.8	166.4	19.0	71.2	15.1	2.5	14.7	2.0	12.2	2.3	6.0	0.6	4.2	0.7	66.4	461	Lower Saprolite		
RRMDD768	12.82	13.66	0.84	89.7	186.7	20.5	71.7	11.5	1.9	10.5	1.4	8.5	1.6	4.8	0.7	3.8	0.6	67.2	481	Lower Saprolite		
RRMDD768	13.66	14.62	0.96	85.5	189.8	20.8	68.8	11.7	1.8	9.5	1.5	7.6	1.6	4.6	0.7	4.1	0.7	60.6	469	Lower Saprolite		
RRMDD768	14.62	15.58	0.96	83.4	187.9	20.5	71.6	13.1	2.2	10.5	1.4	7.7	1.5	4.4	0.6	3.6	0.5	53.7	463	Lower Saprolite		
RRMDD768	15.58	16.54	0.96	74.8	167.7	18.1	64.5	11.6	2.0	10.0	1.3	7.6	1.7	4.7	0.6	3.8	0.6	55.9	425	Lower Saprolite		
RRMDD768	16.54	17.50	0.96	91.5	203.9	21.9	73.2	12.1	2.0	10.4	1.3	7.5	1.4	4.3	0.8	3.6	0.5	45.1	479	Lower Saprolite	**13.70**	**558**
RRMDD768	17.50	19.20	1.70	74.6	164.6	18.1	62.9	10.7	1.9	8.9	1.3	7.8	1.4	4.6	0.6	3.8	0.5	43.0	405	Saprock		
RRMDD769	0.00	1.25	1.25	140.1	296.0	29.0	99.1	18.0	3.1	13.8	2.1	10.8	1.9	4.9	0.7	4.8	0.7	46.2	671	Hardcap		
RRMDD769	1.25	2.50	1.25	141.9	380.8	29.2	94.5	16.7	2.6	10.4	1.5	8.6	1.4	4.2	0.8	4.1	0.6	39.4	737	Hardcap		
RRMDD769	2.50	3.30	0.80	117.2	177.5	25.5	85.6	14.0	2.4	9.2	1.3	7.1	1.3	4.0	0.7	3.7	0.6	32.6	483	Transition		
RRMDD769	3.30	4.27	0.97	114.0	223.6	31.5	119.0	23.7	4.7	21.6	2.8	17.6	3.3	9.3	0.9	8.2	1.1	93.8	675	Clay		
RRMDD769	4.27	5.23	0.96	106.6	216.8	30.0	112.9	23.8	4.7	22.0	3.0	17.8	3.4	9.7	0.9	8.3	1.2	99.8	661	Clay		
RRMDD769	5.23	6.23	1.00	120.8	238.3	33.3	120.1	21.9	4.3	18.8	2.6	16.4	2.9	8.0	0.7	6.0	0.9	74.9	670	Clay		
RRMDD769	6.23	7.23	1.00	111.3	226.0	30.0	114.8	20.0	3.6	16.9	2.3	13.6	2.4	6.8	0.8	5.2	0.7	61.1	616	Clay		
RRMDD769	7.23	8.14	0.91	98.5	221.1	27.1	101.8	20.5	3.5	18.8	2.5	15.1	2.8	7.9	0.7	6.7	0.9	70.4	598	Upper Saprolite		
RRMDD769	8.14	9.05	0.91	104.1	218.0	27.2	108.6	20.9	3.6	17.5	2.7	15.4	2.6	7.0	0.8	6.3	0.8	78.6	614	Upper Saprolite		
RRMDD769	9.05	9.96	0.91	93.9	205.1	25.0	97.0	17.3	3.3	15.9	2.2	12.9	2.4	6.6	0.6	5.4	0.6	60.3	549	Upper Saprolite		
RRMDD769	9.96	10.85	0.89	101.7	220.5	25.5	95.3	17.7	3.2	16.5	2.2	13.8	2.6	7.0	0.7	5.8	0.8	66.2	580	Upper Saprolite		
RRMDD769	10.85	11.57	0.72	96.4	215.6	24.8	91.0	18.4	3.0	16.0	2.1	12.5	2.5	7.5	0.7	6.5	0.8	65.1	563	Lower Saprolite		
RRMDD769	11.57	12.29	0.72	89.8	196.5	21.3	75.9	14.4	3.0	18.7	2.8	20.0	4.7	15.0	0.8	12.8	1.9	167.6	645	Lower Saprolite		
RRMDD769	12.29	13.00	0.71	95.9	194.7	21.5	81.3	19.1	3.8	27.9	4.3	30.6	7.2	21.4	0.9	17.8	2.6	350.5	880	Lower Saprolite	**9.70**	**638**
RRMDD769	13.00	15.00	2.00	80.8	178.1	18.8	66.0	11.3	2.0	10.1	1.4	8.4	1.6	5.1	0.6	4.7	0.7	52.7	442	Saprock		
RRMDD770	0.00	1.79	1.79	267.4	633.9	52.3	161.5	24.8	4.0	16.6	2.5	13.5	2.4	6.2	0.7	5.8	0.8	63.5	1256	Hardcap		
RRMDD770	1.79	3.58	1.79	186.5	515.9	41.3	140.6	23.4	3.6	14.8	2.3	11.7	2.1	5.8	0.7	5.2	0.7	51.4	1006	Hardcap		
RRMDD770	3.58	4.00	0.42	82.2	189.8	17.9	65.6	10.9	2.0	8.8	1.5	8.8	1.7	5.0	0.7	5.1	0.8	47.1	448	Transition		
RRMDD770	4.00	4.95	0.95	118.5	175.0	25.1	82.2	12.1	2.0	9.1	1.4	7.7	1.5	4.3	0.9	4.4	0.7	42.7	487	Mottled		
RRMDD770	4.95	5.90	0.95	144.8	262.9	30.9	102.1	17.7	3.3	13.0	2.0	10.0	1.9	5.5	1.1	4.9	0.8	51.7	652	Mottled		
RRMDD770	5.90	6.85	0.95	40.9	69.3	9.2	32.7	5.9	1.0	5.8	1.0	6.1	1.3	4.2	0.9	3.9	0.6	42.0	225	Mottled		
RRMDD770	6.85	7.80	0.95	59.1	109.9	12.4	43.3	7.7	1.3	6.8	1.1	6.9	1.4	4.8	0.9	4.1	0.7	49.7	310	Mottled		
RRMDD770	7.80	8.40	0.60	86.7	181.8	19.6	70.3	12.6	2.4	11.9	1.9	10.8	2.2	6.4	0.9	6.1	0.9	75.7	490	Clay		
RRMDD770	8.40	9.39	0.99	143.1	294.8	32.3	109.9	19.0	3.0	15.3	2.0	10.9	2.1	6.3	1.1	5.5	0.7	70.0	716	Clay		
RRMDD770	9.39	10.27	0.88	506.6	906.6	171.0	635.7	112.8	18.8	87.1	11.7	60.7	10.8	28.2	1.0	21.5	3.0	332.7	2908	Upper Saprolite		
RRMDD770	10.27	11.21	0.94	107.0	206.4	26.9	106.5	20.7	3.5	17.3	2.6	13.5	2.5	6.9	1.0	6.1	0.9	73.4	595	Lower Saprolite		
RRMDD770	11.21	12.15	0.94	78.0	163.4	20.8	78.4	16.0	2.7	14.2	2.0	10.5	2.0	5.5	1.0	5.0	0.6	58.2	458	Lower Saprolite		
RRMDD770	12.15	13.09	0.94	82.0	167.7	21.8	90.4	20.2	3.8	21.6	3.2	19.2	3.9	11.1	1.0	10.0	1.4	124.6	582	Lower Saprolite		

Hole ID	From m	To m	Int. m	La_2O_3 ppm	CeO_2 ppm	Pr_2O_3 ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_2O_3 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm	TREO ppm	Regolith Zone	>200ppm TREO-CeO_2 Interval Length (m)	>200ppm TREO-CeO_2 Interval TREO ppm
RRMDD770	13.09	14.03	0.94	87.4	181.8	21.1	81.2	14.1	2.5	13.6	1.7	9.5	2.0	6.0	1.0	5.0	0.8	77.0	505	Lower Saprolite		
RRMDD770	14.03	14.96	0.93	78.5	175.0	19.8	69.3	13.0	2.6	10.4	1.5	7.8	1.5	4.2	1.0	3.6	0.6	56.1	445	Lower Saprolite	10.96	691
RRMDD770	14.96	15.98	1.02	68.7	154.8	17.7	61.1	11.4	2.3	9.9	1.6	8.7	1.7	4.8	1.0	4.5	0.7	55.9	405	Saprock		
RRMDD770	15.98	17.00	1.02	66.7	142.5	16.1	59.1	11.2	1.9	10.0	1.4	8.1	1.6	4.7	0.8	4.3	0.6	52.8	382	Saprock		
RRMDD771	0.00	1.82	1.82	111.1	633.9	18.1	52.8	8.7	1.4	6.1	1.0	6.1	1.2	3.6	0.5	3.7	0.6	30.0	879	Hardcap		
RRMDD771	1.82	3.64	1.82	178.9	864.8	32.5	94.0	13.9	2.4	9.6	1.6	8.5	1.6	4.6	0.5	5.2	0.7	40.4	1259	Hardcap		
RRMDD771	3.64	3.96	0.32	136.6	732.1	24.6	77.9	11.8	1.9	9.4	1.6	8.1	1.6	4.7	0.8	4.6	0.7	46.1	1063	Transition		
RRMDD771	3.96	4.88	0.92	181.8	221.7	34.8	106.7	15.9	2.2	11.3	1.6	8.9	1.8	5.2	1.0	5.6	0.8	55.6	655	Clay		
RRMDD771	4.88	5.79	0.91	148.4	211.3	32.3	103.1	15.4	2.1	10.8	1.5	8.6	1.6	4.3	1.0	4.4	0.7	46.0	591	Clay		
RRMDD771	5.79	6.35	0.56	140.7	254.3	33.8	112.0	18.7	2.9	11.2	1.6	7.8	1.5	4.2	1.1	4.5	0.7	41.9	637	Clay		
RRMDD771	6.35	6.90	0.55	126.1	202.1	29.4	102.1	17.7	2.6	11.2	1.6	7.7	1.4	4.3	1.0	4.1	0.6	40.3	552	Clay		
RRMDD771	6.90	7.86	0.96	123.1	218.7	29.4	94.7	14.4	2.4	9.0	1.4	6.7	1.2	3.5	1.2	3.6	0.5	33.5	543	Clay		
RRMDD771	7.86	8.46	0.60	141.3	250.6	34.8	122.5	19.1	2.7	11.3	1.8	8.5	1.6	4.3	1.4	3.9	0.5	44.3	649	Clay		
RRMDD771	8.46	9.05	0.59	134.3	222.3	31.2	106.8	16.6	2.5	11.6	1.7	8.8	1.5	4.7	1.3	4.1	0.6	46.7	595	Clay		
RRMDD771	9.05	9.97	0.92	155.4	292.4	47.7	181.4	30.0	4.8	21.3	2.9	14.3	2.4	6.2	1.1	5.0	0.7	65.5	831	Clay		
RRMDD771	9.97	10.88	0.91	108.8	207.0	29.0	109.9	20.4	3.5	17.7	2.7	14.8	2.8	7.8	1.0	6.7	1.0	78.5	612	Clay		
RRMDD771	10.88	11.37	0.49	113.8	215.6	29.0	105.6	18.7	3.3	17.0	2.7	15.1	2.7	8.0	1.0	6.6	1.0	90.9	631	Clay		
RRMDD771	11.37	12.17	0.80	103.7	219.9	28.6	113.4	22.5	3.6	20.7	2.9	16.7	3.2	9.1	1.0	7.5	1.1	102.9	657	Upper Saprolite		
RRMDD771	12.17	12.97	0.80	92.8	183.6	21.9	79.4	15.2	3.0	16.9	2.6	15.2	2.9	8.3	1.0	6.5	1.0	99.1	549	Upper Saprolite		
RRMDD771	12.97	13.77	0.80	93.1	190.4	24.0	90.5	18.7	3.7	21.6	3.4	19.7	3.9	11.6	0.8	9.8	1.4	139.1	632	Upper Saprolite		
RRMDD771	13.77	14.68	0.91	75.9	169.5	21.6	84.4	18.4	3.7	17.8	2.9	15.3	3.1	8.7	0.8	7.6	1.2	91.8	523	Upper Saprolite		
RRMDD771	14.68	15.59	0.91	114.0	260.4	40.1	211.1	44.2	7.1	37.1	4.8	23.1	3.9	9.4	0.8	6.7	0.9	101.3	865	Upper Saprolite		
RRMDD771	15.59	16.50	0.91	87.4	191.6	22.9	89.3	18.4	3.5	17.6	2.7	13.7	2.5	6.3	0.7	5.4	0.8	67.1	530	Upper Saprolite		
RRMDD771	16.50	17.40	0.90	82.0	180.6	18.8	63.5	12.0	1.9	10.9	1.7	10.1	1.9	5.1	0.6	4.6	0.6	55.7	450	Upper Saprolite		
RRMDD771	17.40	18.30	0.90	98.3	210.1	21.4	70.6	11.9	2.2	14.3	2.3	14.7	3.0	8.8	0.8	8.5	1.2	97.8	566	Lower Saprolite		
RRMDD771	18.30	19.20	0.90	97.6	204.5	20.7	73.9	12.5	2.5	17.2	2.5	16.1	3.4	10.4	0.8	9.6	1.4	118.2	591	Lower Saprolite		
RRMDD771	19.20	20.11	0.91	107.4	258.0	32.6	150.5	49.5	11.5	98.3	15.9	114.2	29.0	87.0	0.9	81.0	12.6	1320.7	2369	Lower Saprolite	16.15	713
RRMDD771	20.11	21.31	1.20	99.7	218.7	24.5	82.6	14.5	2.7	12.1	1.8	9.4	2.0	5.6	0.8	5.2	0.8	64.6	545	Saprock		
RRMDD771	21.31	22.50	1.19	60.5	138.8	15.3	58.8	11.6	2.1	8.9	1.2	8.5	1.8	4.5	0.6	4.6	0.7	51.3	369	Saprock		
RRMDD772	0.00	1.76	1.76	92.8	175.7	20.7	70.5	12.9	2.0	11.0	1.8	10.0	2.0	5.7	0.9	5.9	0.9	60.2	473	Soil		
RRMDD772	1.76	3.49	1.73	86.8	341.5	16.1	51.0	9.3	1.5	6.5	1.0	6.2	1.3	3.5	0.6	3.9	0.6	32.4	562	Soil		
RRMDD772	3.49	5.21	1.72	92.9	696.5	20.4	72.9	13.7	2.2	9.8	1.8	10.0	1.9	5.1	0.4	5.7	0.8	45.7	980	Hardcap		
RRMDD772	5.21	6.06	0.85	148.9	275.2	28.9	86.8	13.5	2.2	9.2	1.4	8.0	1.5	4.4	0.8	4.6	0.8	42.5	629	Transition		
RRMDD772	6.06	6.48	0.42	157.7	173.8	35.5	123.6	19.9	3.2	13.3	1.9	10.2	1.9	4.6	0.9	4.8	0.7	49.3	601	Clay		
RRMDD772	6.48	7.28	0.80	316.7	398.0	88.4	339.4	60.8	10.5	43.5	5.4	26.4	4.1	9.0	0.9	6.1	0.8	90.5	1400	Clay		
RRMDD772	7.28	8.08	0.80	73.1	108.7	17.8	62.2	10.9	2.0	8.6	1.2	8.0	1.6	4.8	0.9	4.8	0.7	49.9	355	Clay		
RRMDD772	8.08	8.89	0.81	89.5	130.8	21.1	73.0	12.9	2.5	12.2	2.0	13.8	3.0	9.2	0.8	9.2	1.4	112.3	494	Clay		
RRMDD772	8.89	9.66	0.77	74.0	135.1	21.3	81.3	14.3	2.6	14.1	2.2	14.4	3.2	9.8	0.7	9.3	1.5	119.2	503	Clay		
RRMDD772	9.66	10.43	0.77	67.1	142.5	20.4	81.5	13.7	2.5	11.9	1.8	11.4	2.3	6.9	0.7	6.7	1.0	74.7	445	Clay		
RRMDD772	10.43	11.20	0.77	75.2	149.3	23.6	93.0	16.9	3.0	13.5	1.9	11.8	2.5	7.2	0.7	6.9	1.0	81.7	488	Clay		
RRMDD772	11.20	11.94	0.74	74.9	132.1	25.6	104.0	20.4	3.3	14.9	2.2	13.0	2.7	7.6	0.6	7.0	1.0	80.5	490	Clay		
RRMDD772	11.94	12.68	0.74	95.8	154.8	35.2	143.5	27.9	4.9	20.0	2.8	16.9	3.3	8.3	0.6	7.9	1.1	90.0	613	Clay		
RRMDD772	12.68	13.42	0.74	54.7	101.2	15.5	58.9	10.8	1.9	9.2	1.4	9.0	1.8	5.4	0.6	5.6	0.8	58.9	336	Clay		
RRMDD772	13.42	14.00	0.58	770.5	746.9	145.0	542.4	94.4	18.6	81.0	10.5	53.1	8.6	18.6	0.7	12.4	1.6	199.4	2704	Clay		
RRMDD772	14.00	14.37	0.37	54.8	99.4	14.1	52.4	9.0	1.8	7.6	1.1	7.2	1.5	4.4	0.7	4.5	0.7	52.6	312	Clay		
RRMDD772	14.37	15.31	0.94	62.4	119.2	19.1	75.1	13.6	2.5	10.9	1.5	9.3	1.9	5.5	0.6	5.3	0.8	62.1	390	Upper Saprolite		
RRMDD772	15.31	16.25	0.94	81.2	146.8	25.9	110.1	21.9	4.5	21.8	3.2	20.7	4.2	11.7	0.6	10.7	1.5	130.8	596	Upper Saprolite		
RRMDD772	16.25	17.17	0.92	97.7	191.6	38.1	160.4	40.8	10.4	57.6	10.6	66.2	14.4	43.7	0.7	38.7	5.6	467.3	1244	Upper Saprolite		
RRMDD772	17.17	18.09	0.92	85.0	158.5	29.8	132.4	28.5	6.7	36.7	6.2	42.8	9.6	28.5	0.6	26.3	4.0	298.4	894	Upper Saprolite		
RRMDD772	18.09	19.02	0.93	78.3	142.5	24.8	109.5	22.7	4.8	24.6	3.4	20.9	4.4	12.9	0.6	11.4	1.6	141.0	603	Upper Saprolite		
RRMDD772	19.02	19.85	0.83	70.4	125.3	19.9	86.7	16.4	3.1	14.7	1.9	10.8	2.1	5.5	0.6	5.4	0.7	58.5	422	Lower Saprolite		
RRMDD772	19.85	20.68	0.83	58.6	116.2	15.0	58.7	10.6	1.9	8.7	1.3	7.4	1.6	4.6	0.6	4.6	0.7	53.8	344	Lower Saprolite	14.62	684
RRMDD772	20.68	22.14	1.46	59.5	126.5	15.1	60.3	11.2	2.2	11.3	1.5	9.6	2.3	6.5	0.7	6.0	0.9	86.1	400	Saprock		
RRMDD772	22.14	23.60	1.46	61.3	129.6	15.5	55.1	9.9	2.0	8.4	1.3	7.3	1.5	4.3	0.7	3.9	0.7	52.7	354	Saprock		

																					>200ppm $TREO-CeO_2$ Interval	
Hole ID	From m	To m	Int. m	La_2O_3 ppm	CeO_2 ppm	Pr_2O_3 ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_2O_3 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm	TREO ppm	Regolith Zone	Length (m)	TREO ppm
RRMDD773	0.00	1.35	1.35	78.7	141.3	15.9	54.9	9.5	1.6	7.8	1.2	7.4	1.5	4.4	0.8	4.2	0.7	45.1	375	Soil		
RRMDD773	1.35	2.70	1.35	72.9	541.7	14.9	47.0	8.5	1.3	6.1	1.0	5.8	1.1	3.5	0.6	3.8	0.6	33.1	742	Hardcap		
RRMDD773	2.70	4.05	1.35	86.1	481.5	19.4	69.2	11.5	2.0	8.6	1.3	8.1	1.5	4.4	0.5	4.9	0.7	40.0	740	Hardcap		
RRMDD773	4.05	4.57	0.52	126.1	146.8	26.2	89.1	15.5	2.5	12.3	1.8	10.5	2.2	6.6	1.2	6.4	1.0	62.7	511	Transition		
RRMDD773	4.57	5.51	0.94	75.2	140.0	14.9	51.6	9.4	1.5	7.3	1.1	6.6	1.3	4.0	0.8	4.1	0.6	37.0	355	Clay		
RRMDD773	5.51	6.45	0.94	59.5	62.2	11.3	38.4	6.5	1.1	5.6	0.8	5.4	1.0	3.1	0.7	3.6	0.5	31.0	231	Clay		
RRMDD773	6.45	7.39	0.94	32.6	36.9	6.5	22.0	3.9	0.8	3.2	0.5	3.5	0.7	2.5	0.6	2.7	0.4	23.4	140	Clay		
RRMDD773	7.39	8.28	0.89	31.4	38.3	6.5	23.8	4.4	0.8	4.2	0.6	4.0	0.9	2.6	0.7	2.8	0.4	27.6	149	Clay		
RRMDD773	8.28	9.16	0.88	37.1	47.9	9.0	33.0	6.1	1.1	5.9	0.8	5.9	1.2	4.0	0.7	3.9	0.5	40.6	198	Clay		
RRMDD773	9.16	9.96	0.80	89.4	139.4	18.1	62.2	10.7	2.1	10.2	1.5	8.1	1.6	4.7	0.6	4.7	0.6	50.7	404	Upper Saprolite		
RRMDD773	9.96	10.76	0.80	96.4	127.1	19.8	68.8	11.8	2.3	10.0	1.4	8.4	1.6	5.2	0.6	4.4	0.6	49.4	408	Upper Saprolite		
RRMDD773	10.76	11.54	0.78	41.9	71.7	10.5	38.3	7.2	1.3	7.1	1.0	7.3	1.4	4.6	0.7	4.9	0.7	50.3	249	Upper Saprolite	**3.26**	**312**
RRMDD773	11.54	12.32	0.78	24.9	116.7	6.7	24.5	4.7	1.0	4.7	0.7	4.4	1.0	3.0	0.4	3.2	0.5	32.3	229	Upper Saprolite		
RRMDD773	12.32	13.10	0.78	25.9	200.2	6.8	24.5	4.9	1.0	4.6	0.7	4.4	1.0	3.1	0.5	3.4	0.5	31.0	312	Upper Saprolite		
RRMDD773	13.10	13.89	0.79	22.6	113.0	5.9	21.5	4.5	0.8	4.3	0.6	4.4	0.9	3.0	0.5	3.1	0.4	29.7	215	Upper Saprolite		
RRMDD773	13.89	14.74	0.85	26.9	145.0	6.8	26.2	5.2	0.9	5.0	0.7	4.8	1.0	2.8	0.5	3.3	0.5	30.9	261	Upper Saprolite		
RRMDD773	14.74	15.59	0.85	34.9	68.3	10.0	36.3	7.0	1.3	5.6	0.8	5.4	1.1	3.2	0.5	3.6	0.5	33.3	212	Upper Saprolite		
RRMDD773	15.59	16.44	0.85	40.0	64.6	12.3	43.9	8.4	1.7	6.9	1.0	6.4	1.3	4.1	0.5	4.6	0.7	44.4	241	Upper Saprolite		
RRMDD773	16.44	17.40	0.96	50.2	58.6	14.4	53.1	10.2	2.2	8.4	1.2	7.4	1.6	4.5	0.5	4.6	0.7	46.1	264	Lower Saprolite		
RRMDD773	17.40	18.36	0.96	60.8	55.6	14.9	57.4	10.2	2.4	10.1	1.4	8.9	1.8	5.3	0.5	5.4	0.8	53.0	288	Lower Saprolite		
RRMDD773	18.36	19.31	0.95	53.0	55.6	11.4	46.7	9.3	2.1	9.6	1.3	8.8	1.7	5.4	0.5	5.0	0.8	55.0	266	Lower Saprolite		
RRMDD773	19.31	20.26	0.95	39.6	63.3	8.8	32.2	6.4	1.6	7.0	0.9	5.9	1.2	3.8	0.5	3.6	0.5	42.3	218	Lower Saprolite	**3.72**	**265**
RRMDD773	20.26	21.21	0.95	37.6	62.9	8.6	32.2	5.8	1.4	5.8	0.8	4.6	0.9	2.9	0.4	2.6	0.3	30.9	198	Lower Saprolite		
RRMDD773	21.21	22.16	0.95	28.1	46.2	6.7	23.3	4.0	0.9	3.7	0.4	3.3	0.6	2.0	0.5	1.9	0.3	20.4	143	Lower Saprolite		
RRMDD773	22.16	23.11	0.95	23.0	43.1	5.8	20.3	3.5	0.9	3.1	0.5	2.8	0.5	1.9	0.4	1.9	0.2	16.3	124	Lower Saprolite		
RRMDD773	23.11	24.06	0.95	28.7	52.7	7.0	26.1	4.7	1.1	4.0	0.6	3.4	0.7	1.9	0.4	2.1	0.3	22.1	156	Lower Saprolite		
RRMDD773	24.06	24.98	0.92	26.9	45.2	6.1	21.2	4.3	0.9	3.0	0.4	2.8	0.5	1.8	0.4	1.8	0.3	18.2	134	Lower Saprolite		
RRMDD773	24.98	26.74	1.76	28.9	55.8	7.0	24.5	5.1	1.0	4.0	0.6	3.5	0.7	2.1	0.4	2.1	0.3	22.1	158	Saprock		
RRMDD773	26.74	28.50	1.76	25.1	45.5	6.2	22.6	4.1	1.0	3.6	0.5	3.1	0.6	1.8	0.4	1.9	0.3	20.2	137	Saprock		
RRMDD774	0.00	1.79	1.79	78.0	332.9	15.8	52.7	8.9	1.5	7.6	1.2	7.6	1.5	4.4	0.6	4.3	0.7	41.5	559	Hardcap		
RRMDD774	1.79	3.58	1.79	95.9	344.0	20.2	67.0	11.1	1.8	9.1	1.5	8.6	1.8	5.1	0.7	5.5	0.8	50.2	623	Hardcap		
RRMDD774	3.58	4.66	1.08	94.2	259.2	20.4	69.4	13.0	2.2	11.2	1.7	10.3	2.0	6.1	0.8	6.4	0.8	57.3	555	Transition		
RRMDD774	4.66	5.20	0.54	93.5	143.1	19.6	66.7	11.5	2.1	10.4	1.6	10.3	2.0	6.3	0.9	6.3	1.0	60.6	436	Clay		
RRMDD774	5.20	5.73	0.53	79.2	102.2	16.7	57.4	9.4	1.8	8.7	1.4	8.5	1.8	5.5	0.8	5.5	0.8	51.3	351	Clay		
RRMDD774	5.73	6.56	0.83	70.3	91.1	15.9	52.6	8.7	1.7	7.5	1.3	7.9	1.6	4.7	0.8	4.9	0.8	48.4	318	Clay		
RRMDD774	6.56	7.38	0.82	76.9	103.9	17.4	59.7	10.8	1.9	8.6	1.3	7.9	1.6	4.9	0.8	4.7	0.7	49.8	351	Clay		
RRMDD774	7.38	8.18	0.80	64.5	75.3	13.7	50.3	9.3	1.5	7.0	1.2	6.8	1.5	4.4	0.7	4.0	0.7	44.7	286	Clay		
RRMDD774	8.18	8.98	0.80	54.2	62.0	13.2	46.5	8.5	1.6	6.7	1.1	7.0	1.5	4.7	0.7	4.1	0.6	47.0	259	Clay		
RRMDD774	8.98	9.79	0.81	67.8	77.9	16.2	56.7	10.1	1.9	8.1	1.4	7.6	1.6	4.9	0.7	4.3	0.7	49.9	310	Clay		
RRMDD774	9.79	10.64	0.85	66.6	77.4	14.9	49.8	8.2	1.8	6.9	1.1	6.4	1.3	3.9	0.6	3.6	0.6	40.3	283	Clay		
RRMDD774	10.64	11.49	0.85	84.6	56.9	16.3	53.9	9.7	1.8	7.2	1.1	6.5	1.4	3.9	0.6	3.3	0.6	39.4	287	Clay		
RRMDD774	11.49	12.35	0.86	38.5	44.7	9.7	35.3	6.5	1.2	5.2	1.0	5.6	1.2	3.6	0.5	3.2	0.5	36.7	193	Clay		
RRMDD774	12.35	13.27	0.92	42.0	79.2	11.0	38.6	6.6	1.4	6.2	1.0	6.3	1.4	4.0	0.5	4.0	0.6	45.0	248	Clay	**8.61**	**295**
RRMDD774	13.27	14.19	0.92	27.2	25.4	7.5	27.1	4.6	1.1	4.6	0.8	5.0	1.1	3.4	0.5	3.7	0.5	35.2	148	Clay		
RRMDD774	14.19	15.11	0.92	49.6	43.6	11.9	43.9	7.8	1.6	6.7	1.1	6.5	1.4	4.3	0.5	4.1	0.6	46.2	230	Clay		
RRMDD774	15.11	16.03	0.92	20.4	20.5	5.6	21.6	4.9	0.9	3.7	0.7	3.9	0.9	2.8	0.5	2.9	0.4	27.8	117	Clay		
RRMDD774	16.03	16.94	0.91	18.6	15.2	5.4	20.2	4.0	0.9	3.9	0.5	3.8	0.8	2.7	0.4	2.7	0.4	26.5	106	Clay		
RRMDD774	16.94	17.89	0.95	19.8	87.6	5.4	21.1	3.9	0.9	3.6	0.7	4.1	0.9	2.8	0.5	2.8	0.4	28.6	183	Clay		
RRMDD774	17.89	18.84	0.95	16.7	52.3	4.5	18.4	3.2	0.7	3.0	0.6	3.5	0.8	2.4	0.5	2.7	0.4	25.4	135	Clay		
RRMDD774	18.84	19.80	0.96	22.8	71.0	5.8	23.9	4.5	1.2	3.8	0.7	5.1	1.1	3.3	0.5	3.4	0.5	36.4	184	Clay		
RRMDD774	19.80	20.47	0.67	24.2	30.8	6.5	23.9	4.7	1.1	4.4	0.7	4.5	1.0	2.9	0.5	2.9	0.4	30.9	139	Upper Saprolite		
RRMDD774	20.47	21.14	0.67	17.6	26.8	4.7	17.7	3.6	0.7	2.8	0.5	3.2	0.7	2.2	0.5	2.6	0.4	24.0	108	Upper Saprolite		
RRMDD774	21.14	22.04	0.90	33.4	39.1	9.0	33.9	6.2	1.2	5.0	0.8	4.6	1.1	3.4	0.5	2.9	0.4	34.3	176	Lower Saprolite		
RRMDD774	22.04	22.94	0.90	52.1	85.5	19.9	72.6	12.8	2.4	8.2	1.2	6.8	1.1	3.5	0.5	3.1	0.4	32.3	302	Lower Saprolite		

																					>200ppm TREO-CeO_2 Interval	
Hole ID	From m	To m	Int. m	La_2O_3 ppm	CeO_2 ppm	Pr_2O_3 ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_2O_3 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm	TREO ppm	Regolith Zone	Length (m)	TREO ppm
RRMDD774	22.94	23.84	0.90	25.3	34.8	7.4	27.4	4.9	1.0	3.7	0.6	3.9	0.7	2.2	0.5	2.2	0.3	23.4	138	Lower Saprolite		
RRMDD774	23.84	24.75	0.91	213.4	192.9	73.2	306.8	65.4	15.6	72.4	11.5	68.4	14.6	43.3	0.5	36.2	5.4	473.7	1593	Lower Saprolite	4.28	485
RRMDD774	24.75	25.61	0.86	170.1	64.0	35.5	142.3	25.6	6.3	31.2	4.7	27.9	6.3	18.2	0.4	15.0	2.2	222.9	773	Saprock		
RRMDD774	25.61	26.85	1.24	36.5	44.5	7.5	28.1	4.8	1.1	5.4	0.8	4.8	1.3	3.7	0.4	3.1	0.5	56.8	199	Saprock		
RRMDD774	26.85	28.08	1.23	30.1	58.3	7.2	27.6	5.9	1.3	4.9	0.8	5.0	1.2	3.3	0.4	3.3	0.5	45.3	195	Saprock		
RRMDD774	28.08	28.60	0.52	28.4	62.6	6.1	22.4	4.3	1.0	3.5	0.5	3.5	0.7	2.5	0.5	2.6	0.4	22.6	162	Saprock		
RRMDD775	0.00	1.43	1.43	89.5	166.4	19.0	65.0	11.8	2.0	9.7	1.5	8.9	1.7	5.3	0.8	5.3	0.8	53.1	441	Soil		
RRMDD775	1.43	3.13	1.70	100.5	968.0	18.1	57.6	10.1	1.6	7.0	1.2	6.7	1.4	4.2	0.5	4.6	0.6	36.2	1218	Hardcap		
RRMDD775	3.13	4.83	1.70	128.4	1437.2	24.8	78.6	13.6	2.2	9.4	1.8	8.9	1.7	4.6	0.5	4.7	0.7	41.7	1759	Hardcap		
RRMDD775	4.83	5.26	0.43	208.2	543.0	38.8	123.6	18.9	3.4	13.6	2.0	10.9	2.1	5.9	0.7	5.6	0.9	54.5	1032	Transition		
RRMDD775	5.26	6.03	0.77	49.3	130.8	13.4	50.0	8.7	1.6	7.8	1.3	7.7	1.7	4.9	0.9	4.8	0.7	52.3	336	Clay		
RRMDD775	6.03	6.80	0.77	52.3	76.7	13.2	47.1	9.0	1.6	7.5	1.2	7.4	1.6	5.2	1.0	4.8	0.7	51.7	281	Clay		
RRMDD775	6.80	7.57	0.77	48.8	84.3	14.6	58.1	11.6	2.2	11.2	1.9	10.7	2.4	7.2	1.0	6.5	1.0	76.7	338	Clay		
RRMDD775	7.57	8.33	0.76	72.7	135.7	21.7	82.5	15.4	3.1	15.6	2.6	14.5	3.1	9.0	1.2	8.1	1.3	104.3	491	Clay		
RRMDD775	8.33	9.37	1.04	140.1	216.2	34.0	130.1	24.1	4.5	19.7	3.0	18.6	3.5	10.3	1.0	8.9	1.5	115.7	731	Clay		
RRMDD775	9.37	10.30	0.93	178.3	323.1	40.1	148.1	25.6	5.1	20.7	3.0	18.7	3.4	9.4	0.8	8.0	1.2	102.1	888	Clay		
RRMDD775	10.30	11.22	0.92	139.0	223.6	34.9	121.3	22.3	4.5	19.1	3.0	16.8	3.4	9.9	1.0	9.0	1.4	109.0	718	Clay		
RRMDD775	11.22	11.81	0.59	44.9	111.7	16.5	68.5	13.9	2.5	9.0	1.4	7.8	1.5	4.3	0.5	3.4	0.5	40.1	326	Clay		
RRMDD775	11.81	12.40	0.59	35.1	110.6	10.6	41.3	7.7	1.5	5.2	0.9	5.3	1.0	2.8	0.5	3.1	0.4	28.2	254	Clay		
RRMDD775	12.40	13.37	0.97	28.3	65.5	7.9	35.2	6.1	1.2	4.9	0.7	4.2	0.8	2.4	0.5	2.4	0.4	23.1	184	Clay	8.11	478
RRMDD775	13.37	14.34	0.97	31.5	73.1	8.4	31.1	5.7	1.3	4.5	0.5	4.1	0.8	2.4	0.5	2.5	0.4	23.1	190	Clay		
RRMDD775	14.34	15.31	0.97	105.2	164.6	16.6	56.6	9.7	2.2	7.6	1.2	5.8	1.0	2.5	0.5	2.8	0.3	27.0	404	Clay		
RRMDD775	15.31	16.28	0.97	41.5	67.2	9.3	35.0	7.0	1.6	4.9	0.7	4.6	0.9	2.4	0.5	2.0	0.4	22.4	200	Clay		
RRMDD775	16.28	17.27	0.99	43.0	95.8	12.4	50.0	9.1	2.2	7.0	1.2	6.1	1.3	3.3	0.5	3.1	0.5	32.6	268	Clay		
RRMDD775	17.27	17.93	0.66	49.1	92.0	12.1	47.1	9.8	2.3	8.1	1.2	7.7	1.7	4.7	0.5	4.0	0.6	47.1	288	Upper Saprolite		
RRMDD775	17.93	18.59	0.66	42.2	66.3	10.0	40.8	8.1	1.8	6.7	1.1	6.6	1.4	3.4	0.5	3.5	0.5	40.4	233	Upper Saprolite		
RRMDD775	18.59	19.39	0.80	31.8	53.4	7.5	30.1	5.5	1.5	5.5	0.9	5.5	1.2	3.3	0.4	3.2	0.5	37.6	188	Lower Saprolite		
RRMDD775	19.39	20.83	1.44	28.1	58.3	7.1	27.4	5.5	1.2	4.5	0.7	4.1	0.9	2.7	0.5	2.7	0.4	27.6	172	Saprock		
RRMDD775	20.83	22.27	1.44	34.8	106.3	9.7	37.7	7.4	1.8	6.4	1.1	6.9	1.3	3.5	0.4	3.3	0.5	38.9	260	Saprock		
RRMDD775	22.27	23.70	1.43	27.9	59.9	7.4	29.3	5.9	1.3	4.8	0.7	4.0	0.9	2.2	0.4	2.2	0.4	25.9	173	Saprock		
RRMDD776	0.00	1.39	1.39	88.8	329.2	17.9	59.4	11.2	1.9	7.6	1.2	7.4	1.4	3.9	0.5	4.3	0.6	36.1	571	Hardcap		
RRMDD776	1.39	2.77	1.38	116.0	799.7	22.1	67.5	11.8	1.9	8.1	1.2	7.2	1.4	3.9	0.5	4.4	0.6	34.3	1081	Hardcap		
RRMDD776	2.77	3.34	0.57	323.7	461.9	67.1	227.4	35.7	5.3	21.0	2.9	17.1	2.9	8.3	0.8	7.7	1.3	77.0	1260	Transition		
RRMDD776	3.34	4.15	0.81	184.7	254.3	41.8	149.9	25.2	4.4	19.2	2.7	16.1	2.9	7.8	0.9	7.6	1.1	80.6	799	Mottled		
RRMDD776	4.15	5.10	0.95	62.5	112.2	15.8	63.0	11.1	2.0	10.6	1.9	11.3	2.5	7.1	0.8	7.0	1.0	74.8	384	Mottled		
RRMDD776	5.10	6.05	0.95	124.9	206.4	28.5	96.7	19.0	3.6	16.9	2.8	14.6	2.8	7.4	0.8	6.8	1.1	77.2	609	Mottled		
RRMDD776	6.05	7.00	0.95	97.0	203.9	24.8	89.1	17.2	3.3	15.5	2.6	13.7	2.8	7.4	0.9	7.1	1.0	82.7	569	Mottled		
RRMDD776	7.00	7.95	0.95	60.8	89.9	16.3	61.4	10.5	2.1	10.6	1.7	11.1	2.3	6.6	0.8	6.5	0.9	75.2	357	Mottled		
RRMDD776	7.95	8.89	0.94	256.8	418.9	44.9	131.2	21.3	3.9	17.6	2.8	16.1	3.1	8.7	0.8	8.7	1.3	96.9	1033	Mottled		
RRMDD776	8.89	9.79	0.90	52.2	194.1	13.8	54.4	10.7	2.0	10.4	1.8	11.9	2.5	7.5	0.7	7.3	1.0	77.0	447	Clay		
RRMDD776	9.79	10.70	0.91	55.5	180.6	14.3	54.9	11.2	2.1	10.2	1.9	11.8	2.5	7.4	0.7	7.2	1.1	75.4	437	Clay		
RRMDD776	10.70	11.20	0.50	69.2	123.5	19.6	80.9	15.0	3.0	14.7	2.4	15.5	3.1	9.4	0.8	7.9	1.3	107.2	473	Clay		
RRMDD776	11.20	11.90	0.70	206.4	344.0	48.9	186.6	32.9	6.2	28.7	4.1	24.4	4.5	12.2	0.7	8.6	1.4	139.1	1049	Clay		
RRMDD776	11.90	12.60	0.70	101.0	183.6	26.1	105.9	20.4	4.0	19.8	2.9	19.6	4.1	10.6	0.7	8.7	1.4	128.9	638	Clay		
RRMDD776	12.60	13.30	0.70	64.5	154.8	19.6	77.7	14.9	3.1	14.8	2.3	15.7	3.6	9.4	0.7	8.9	1.2	112.4	503	Clay		
RRMDD776	13.30	14.02	0.72	111.8	355.0	29.5	101.9	19.7	4.2	19.4	3.4	18.9	3.9	11.3	0.7	9.6	1.4	134.0	825	Clay		
RRMDD776	14.02	14.74	0.72	64.7	171.4	18.9	67.8	13.5	2.8	14.2	2.4	14.5	3.1	9.1	0.7	7.9	1.3	101.3	494	Clay		
RRMDD776	14.74	15.45	0.71	65.1	120.0	19.5	74.6	14.2	2.9	14.6	2.0	13.5	3.0	8.7	0.7	7.8	1.1	98.0	446	Clay		
RRMDD776	15.45	15.85	0.40	127.2	185.5	29.0	94.5	17.5	3.3	15.5	2.4	15.3	3.2	9.6	0.5	7.7	1.1	105.1	618	Upper Saprolite		
RRMDD776	15.85	16.89	1.04	65.4	116.9	19.4	75.6	15.4	3.3	16.0	2.5	16.4	3.4	9.8	0.5	7.3	1.1	112.3	465	Lower Saprolite	13.55	591
RRMDD776	16.89	18.45	1.56	62.5	118.4	17.9	71.9	13.6	2.9	15.5	2.2	13.7	3.1	9.6	0.5	6.9	1.1	122.7	462	Saprock		
RRMDD776	18.45	20.00	1.55	64.5	123.5	14.9	50.4	8.6	1.6	6.8	0.9	4.9	1.0	2.7	0.6	2.1	0.4	39.5	322	Saprock		
RRMDD777	0.00	1.23	1.23	74.9	182.4	15.9	54.7	10.7	1.7	8.0	1.3	7.6	1.6	4.6	0.6	5.0	0.6	43.6	413	Soil		
RRMDD777	1.23	2.46	1.23	73.9	297.3	15.9	55.5	10.8	1.7	7.8	1.2	7.6	1.5	4.5	0.5	5.0	0.7	39.1	523	Hardcap		

Hole ID	From m	To m	Int. m	La_2O_3 ppm	CeO_2 ppm	Pr_2O_3 ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_2O_3 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm	TREO ppm	Regolith Zone	>200ppm TREO-CeO_2 Interval Length (m)	>200ppm TREO-CeO_2 Interval TREO ppm
RRMDD777	2.46	3.72	1.26	158.3	207.6	28.9	89.1	14.3	2.4	11.3	1.7	10.0	2.0	5.8	0.8	5.4	0.9	58.8	597	Transition		
RRMDD777	3.72	4.70	0.98	93.1	121.4	18.4	62.3	10.5	2.2	9.6	1.4	8.8	1.8	5.7	0.9	5.1	0.9	57.5	400	Clay		
RRMDD777	4.70	5.68	0.98	78.2	103.1	15.6	52.5	9.2	1.6	7.1	1.1	6.9	1.5	4.8	0.8	4.3	0.7	46.1	334	Clay		
RRMDD777	5.68	6.66	0.98	81.4	96.9	16.6	55.1	9.4	1.6	7.3	1.2	7.4	1.5	4.8	0.9	4.3	0.6	48.1	337	Clay		
RRMDD777	6.66	7.64	0.98	69.4	71.7	13.3	44.3	7.7	1.4	6.3	1.0	6.0	1.3	4.0	0.7	3.8	0.6	42.3	274	Clay		
RRMDD777	7.64	8.62	0.98	68.7	69.5	13.8	46.0	7.6	1.5	6.7	1.0	6.4	1.4	4.1	0.7	3.8	0.6	42.2	274	Clay		
RRMDD777	8.62	9.57	0.95	69.7	70.9	13.7	43.2	7.4	1.4	6.5	0.9	6.0	1.3	3.9	0.7	3.8	0.6	41.3	271	Clay		
RRMDD777	9.57	10.41	0.84	83.4	86.4	16.5	52.1	8.2	1.4	5.9	0.9	5.4	1.1	3.7	0.6	3.7	0.6	34.2	304	Clay		
RRMDD777	10.41	11.25	0.84	86.1	93.8	17.7	56.5	8.6	1.4	6.0	1.0	5.9	1.2	3.6	0.6	3.5	0.6	34.5	321	Clay		
RRMDD777	11.25	12.10	0.85	71.2	76.2	15.5	52.6	8.0	1.5	6.6	1.0	6.0	1.2	3.6	0.6	3.6	0.6	35.3	283	Clay		
RRMDD777	12.10	13.03	0.93	66.0	76.9	15.2	53.7	8.9	1.7	6.5	1.1	6.3	1.4	4.1	0.5	4.3	0.6	42.2	289	Clay		
RRMDD777	13.03	13.96	0.93	55.1	74.9	15.8	59.4	10.7	2.1	7.8	1.2	7.1	1.6	4.4	0.5	4.2	0.7	45.6	291	Clay		
RRMDD777	13.96	14.88	0.92	42.0	62.5	11.8	47.8	9.2	1.8	7.3	1.2	6.8	1.4	4.3	0.5	4.3	0.6	46.6	248	Clay		
RRMDD777	14.88	15.85	0.97	44.0	55.6	11.7	46.1	8.5	1.7	7.7	1.1	6.9	1.4	4.3	0.6	4.1	0.5	43.2	238	Clay	**12.13**	**297**
RRMDD777	15.85	16.82	0.97	47.1	67.8	13.1	52.0	10.0	2.1	8.0	1.2	6.8	1.3	3.6	0.5	3.6	0.6	38.4	256	Clay		
RRMDD777	16.82	17.79	0.97	49.8	63.9	12.1	45.4	8.7	1.8	7.5	1.1	6.7	1.4	3.9	0.6	3.9	0.6	41.7	249	Clay		
RRMDD777	17.79	18.76	0.97	32.4	48.6	8.5	30.6	6.2	1.3	4.9	0.8	4.4	0.9	2.8	0.5	2.5	0.4	26.5	171	Clay		
RRMDD777	18.76	19.73	0.97	35.3	61.2	9.5	35.7	6.6	1.6	5.6	0.9	4.4	1.0	3.0	0.5	2.9	0.5	29.7	198	Clay		
RRMDD777	19.73	20.68	0.95	37.4	57.6	9.7	37.6	6.9	1.3	5.0	0.8	4.8	1.0	3.1	0.5	2.8	0.4	31.1	200	Clay		
RRMDD777	20.68	21.71	1.03	38.0	58.8	10.1	37.4	7.2	1.5	5.0	0.8	5.0	1.1	2.9	0.4	3.1	0.5	32.3	204	Clay		
RRMDD777	21.71	22.74	1.03	38.6	66.2	10.3	39.3	7.7	1.7	6.1	0.9	5.7	1.2	3.1	0.5	3.1	0.5	33.0	218	Clay		
RRMDD777	22.74	23.77	1.03	35.4	52.1	8.7	32.4	6.3	1.2	4.8	0.8	4.5	0.9	2.6	0.5	2.7	0.4	28.2	182	Clay		
RRMDD777	23.77	24.41	0.64	35.9	68.9	9.1	35.9	7.3	1.5	6.7	1.0	5.9	1.1	3.4	0.4	3.2	0.5	39.9	221	Clay		
RRMDD777	24.41	25.05	0.64	70.8	136.4	19.6	80.8	17.3	4.0	16.0	2.6	14.5	2.9	7.7	0.5	6.1	0.9	91.7	472	Clay		
RRMDD777	25.05	25.63	0.58	31.0	50.0	7.6	29.3	5.4	1.2	4.9	0.8	4.8	1.0	2.9	0.4	2.8	0.4	31.4	174	Upper Saprolite	**1.86**	**293**
RRMDD777	25.63	26.20	0.57	37.8	64.9	9.2	35.2	6.3	1.4	6.1	0.8	5.3	1.1	3.0	0.4	2.7	0.4	35.7	210	Upper Saprolite		
RRMDD777	26.20	27.20	1.00	26.9	51.8	6.8	26.4	5.0	1.1	5.0	0.7	4.7	0.9	2.7	0.4	2.5	0.3	27.7	163	Lower Saprolite		
RRMDD777	27.20	28.20	1.00	34.1	66.9	8.4	31.4	6.3	1.4	5.2	0.8	5.3	1.1	3.1	0.4	2.8	0.4	33.8	201	Lower Saprolite		
RRMDD777	28.20	29.20	1.00	31.5	57.2	7.0	25.5	5.0	1.2	4.3	0.7	4.1	0.9	2.5	0.4	2.3	0.3	25.5	169	Lower Saprolite		
RRMDD777	29.20	30.70	1.50	32.3	56.6	8.2	30.7	6.3	1.4	5.2	0.9	5.4	1.2	3.2	0.4	3.0	0.5	33.7	189	Saprock		
RRMDD777	30.70	32.20	1.50	31.7	65.4	7.5	28.3	5.6	1.2	4.6	0.7	3.9	0.8	2.4	0.4	2.3	0.4	24.5	180	Saprock		
RRMDD778	0.00	1.45	1.45	77.2	212.5	16.9	57.2	10.7	1.6	7.8	1.3	7.5	1.5	4.4	0.7	4.5	0.7	44.3	449	Hardcap		
RRMDD778	1.45	2.90	1.45	102.9	627.7	19.8	63.5	11.3	1.8	7.5	1.3	7.3	1.4	4.1	0.5	4.2	0.6	35.7	889	Hardcap		
RRMDD778	2.90	4.36	1.46	214.0	1072.4	37.9	131.2	23.0	3.7	14.8	2.0	10.3	1.9	4.8	0.5	5.0	0.7	43.9	1566	Hardcap		
RRMDD778	4.36	4.78	0.42	129.0	240.2	23.3	79.8	14.0	2.3	8.9	1.3	6.8	1.3	3.6	0.5	3.9	0.6	32.8	548	Transition		
RRMDD778	4.78	5.73	0.95	76.3	125.9	16.1	57.2	9.4	1.7	7.4	1.1	6.6	1.3	3.7	1.0	3.6	0.6	39.5	351	Clay		
RRMDD778	5.73	6.68	0.95	260.4	272.7	49.8	159.8	24.5	4.1	17.1	2.4	12.3	2.3	6.0	0.9	4.9	0.7	68.6	886	Clay		
RRMDD778	6.68	7.62	0.94	84.9	125.9	19.8	74.2	11.8	2.0	10.1	1.5	9.2	1.9	5.9	0.9	5.6	0.8	65.7	420	Clay		
RRMDD778	7.62	8.65	1.03	91.4	142.5	24.0	87.2	15.0	2.4	11.8	1.8	11.0	2.5	7.0	0.8	6.4	1.0	81.5	486	Clay		
RRMDD778	8.65	9.68	1.03	97.7	141.3	26.9	104.3	18.7	3.2	14.5	2.4	14.5	2.9	9.6	0.7	8.3	1.3	108.2	554	Clay		
RRMDD778	9.68	10.72	1.04	87.7	135.1	22.8	84.3	14.1	2.8	11.3	1.9	11.4	2.4	7.8	0.7	6.2	0.9	83.6	473	Clay		
RRMDD778	10.72	11.68	0.96	122.6	170.1	37.0	136.5	25.5	4.3	19.0	3.1	18.4	3.7	10.7	0.8	9.4	1.4	126.9	689	Upper Saprolite		
RRMDD778	11.68	12.64	0.96	105.0	179.3	33.7	129.5	24.2	4.4	20.8	3.4	21.0	4.6	13.8	0.9	12.5	1.9	155.6	711	Upper Saprolite		
RRMDD778	12.64	13.61	0.97	266.2	400.5	68.0	267.1	48.0	8.8	38.7	5.8	33.5	6.2	16.9	0.7	13.6	2.0	194.9	1371	Upper Saprolite		
RRMDD778	13.61	14.51	0.90	88.7	173.8	27.2	113.7	21.3	4.1	19.8	3.3	19.2	4.3	13.1	0.9	12.8	1.7	147.3	651	Upper Saprolite		
RRMDD778	14.51	15.41	0.90	131.4	206.4	36.7	149.3	26.8	5.1	23.6	4.0	24.8	5.4	16.2	0.9	14.4	2.1	180.3	827	Upper Saprolite		
RRMDD778	15.41	15.92	0.51	85.4	199.0	32.3	142.3	29.8	5.9	29.3	4.8	29.5	6.5	20.1	0.7	17.6	2.6	226.0	832	Upper Saprolite		
RRMDD778	15.92	16.80	0.88	76.7	170.7	26.7	123.6	27.5	5.7	27.3	4.3	25.9	5.1	15.1	0.8	12.1	1.9	174.6	698	Upper Saprolite		
RRMDD778	16.80	17.68	0.88	89.8	172.6	29.2	132.4	28.1	6.5	38.2	6.7	44.6	11.1	35.6	0.9	29.6	4.7	482.6	1112	Upper Saprolite		
RRMDD778	17.68	18.56	0.88	86.4	168.9	30.2	154.0	40.6	10.5	71.6	12.3	84.2	20.1	62.3	0.8	45.8	7.3	882.6	1678	Upper Saprolite		
RRMDD778	18.56	19.44	0.88	88.7	156.0	27.9	138.2	36.9	9.6	79.3	13.1	93.4	21.6	66.9	0.9	56.1	8.4	872.4	1670	Upper Saprolite		
RRMDD778	19.44	20.30	0.86	118.5	215.6	45.1	267.1	81.9	23.9	199.4	32.8	241.0	61.5	196.1	0.7	142.3	25.2	3124.0	4775	Upper Saprolite		
RRMDD778	20.30	21.91	1.61	72.6	140.0	17.5	76.6	15.6	3.4	23.1	3.0	19.3	4.5	13.4	0.9	10.4	1.6	206.4	608	Lower Saprolite	**17.13**	**1003**
RRMDD778	21.91	23.64	1.73	59.3	128.4	13.7	53.7	10.6	2.3	9.3	1.3	7.2	1.4	3.6	0.7	2.7	0.4	52.8	347	Saprock		

Hole ID	From m	To m	Int. m	La_2O_3 ppm	CeO_2 ppm	Pr_2O_3 ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_2O_3 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm	TREO ppm	Regolith Zone	>200ppm TREO-CeO_2 Interval Length (m)	TREO ppm
RRMDD778	23.64	24.70	1.06	43.2	87.2	10.4	37.3	7.2	1.4	5.6	0.8	4.6	1.0	2.6	0.6	2.6	0.4	29.0	234	Saprock		
RRMDD779	0.00	1.71	1.71	245.1	1082.2	43.9	150.5	20.4	3.2	15.5	2.0	10.7	1.9	5.2	0.6	5.3	0.8	48.5	1635	Hardcap		
RRMDD779	1.71	3.41	1.70	234.6	1510.9	52.3	161.5	25.3	3.9	16.4	2.4	11.8	2.2	5.6	0.5	5.4	0.8	50.9	2084	Hardcap		
RRMDD779	3.41	3.87	0.46	166.5	240.2	35.0	110.3	17.3	2.8	11.1	1.6	8.7	1.6	5.0	0.8	4.4	0.7	45.7	652	Transition		
RRMDD779	3.87	4.62	0.75	97.7	103.3	20.7	73.0	11.6	2.3	9.3	1.4	7.7	1.5	4.7	1.0	4.3	0.6	44.2	383	Mottled		
RRMDD779	4.62	5.36	0.74	59.8	106.1	12.3	41.1	6.8	1.3	6.6	1.1	6.8	1.4	4.2	0.9	4.4	0.6	44.3	298	Mottled		
RRMDD779	5.36	6.22	0.86	67.1	111.8	13.5	44.1	6.8	1.0	5.3	0.9	5.4	1.2	3.7	1.0	3.8	0.6	38.5	305	Mottled		
RRMDD779	6.22	7.08	0.86	93.1	149.3	18.2	60.8	8.8	1.6	7.1	1.2	6.9	1.5	4.5	0.9	4.3	0.6	49.5	408	Mottled		
RRMDD779	7.08	7.95	0.87	102.6	153.6	21.6	77.8	12.1	2.0	9.7	1.5	8.7	1.8	5.8	0.9	5.3	0.8	62.9	467	Mottled		
RRMDD779	7.95	8.56	0.61	104.0	168.9	29.5	111.9	21.1	3.7	14.5	2.2	12.7	2.6	7.7	0.9	6.4	1.0	83.7	571	Clay		
RRMDD779	8.56	9.17	0.61	130.2	234.0	44.6	179.6	35.0	6.5	26.4	3.8	20.7	3.8	10.3	0.7	8.8	1.2	112.1	818	Upper Saprolite		
RRMDD779	9.17	9.78	0.61	96.4	183.6	33.6	138.2	26.3	4.7	19.8	2.9	15.2	2.8	7.4	0.7	6.4	0.8	72.1	611	Upper Saprolite		
RRMDD779	9.78	10.72	0.94	126.7	303.4	44.6	190.7	41.6	8.6	45.5	7.5	44.0	9.4	26.9	0.7	21.4	3.2	322.6	1197	Lower Saprolite	**6.85**	**565**
RRMDD779	10.72	11.68	0.96	99.3	132.1	26.6	114.5	21.6	4.6	27.7	4.1	26.2	5.7	16.8	0.7	14.7	2.1	197.5	694	Saprock		
RRMDD779	11.68	12.25	0.57	54.3	81.1	10.7	42.2	8.1	1.7	9.7	1.8	13.4	3.1	11.3	0.7	11.0	1.6	118.9	370	Saprock		
RRMDD779	12.25	13.46	1.21	57.5	105.2	12.6	48.1	7.5	1.4	7.1	0.8	4.6	0.9	2.8	0.6	2.8	0.4	35.9	288	Saprock		
RRMDD779	13.46	15.00	1.54	57.2	114.4	12.2	44.9	6.9	1.2	5.2	0.6	3.2	0.6	1.8	0.7	1.6	0.2	18.9	270	Saprock		
RRMDD780	0.00	1.77	1.77	103.3	545.4	20.8	64.2	12.0	1.8	7.9	1.4	7.8	1.5	4.1	0.6	4.7	0.7	40.8	817	Hardcap		
RRMDD780	1.77	3.53	1.76	108.8	963.1	22.7	76.9	13.3	2.2	10.0	1.7	8.8	1.7	4.9	0.5	5.2	0.8	44.4	1265	Hardcap		
RRMDD780	3.53	4.28	0.75	99.5	99.3	19.2	61.2	10.1	1.7	7.6	1.1	6.6	1.4	4.1	1.0	4.1	0.6	40.5	358	Mottled		
RRMDD780	4.28	5.03	0.75	126.7	118.3	24.2	80.5	12.4	2.2	9.5	1.5	8.2	1.7	4.6	1.0	4.8	0.7	48.4	445	Mottled		
RRMDD780	5.03	5.79	0.76	64.6	83.3	14.5	47.9	7.4	1.4	6.4	1.0	6.8	1.5	4.8	0.8	4.9	0.7	50.4	297	Mottled		
RRMDD780	5.79	6.65	0.86	89.6	138.8	19.7	64.4	9.4	1.7	8.0	1.3	8.0	1.8	5.4	0.7	5.4	0.8	55.6	411	Mottled		
RRMDD780	6.65	7.50	0.85	135.5	168.3	31.7	109.3	17.4	3.2	13.8	1.9	10.9	2.5	6.3	0.6	5.9	0.9	74.9	583	Mottled		
RRMDD780	7.50	8.53	1.03	93.1	160.3	27.2	98.8	18.7	3.4	14.5	2.3	12.5	2.5	7.0	0.6	6.5	1.0	74.2	522	Clay		
RRMDD780	8.53	9.56	1.03	91.8	144.3	30.8	118.4	19.7	3.6	14.8	2.2	13.0	2.5	6.7	0.6	6.7	1.0	75.6	532	Clay		
RRMDD780	9.56	10.14	0.58	158.9	434.9	64.2	256.6	50.9	9.9	43.3	6.5	33.9	6.3	15.9	0.5	14.1	1.9	165.7	1263	Upper Saprolite		
RRMDD780	10.14	10.71	0.57	83.4	130.8	31.5	124.2	22.7	4.2	15.7	2.4	13.3	2.5	6.7	0.6	6.0	0.9	74.2	519	Upper Saprolite		
RRMDD780	10.71	11.56	0.85	174.7	168.9	41.3	148.7	26.3	5.1	22.5	3.3	17.3	3.4	9.1	0.7	7.8	1.1	90.3	721	Upper Saprolite		
RRMDD780	11.56	12.41	0.85	95.8	143.7	29.4	119.0	23.4	4.9	25.6	4.0	25.7	6.2	17.5	0.6	14.5	2.3	241.3	754	Upper Saprolite		
RRMDD780	12.41	13.18	0.77	69.0	119.2	18.7	69.5	12.2	2.4	12.4	1.9	10.7	2.5	7.0	0.6	6.1	1.0	92.1	425	Lower Saprolite		
RRMDD780	13.18	13.94	0.76	57.7	108.8	13.7	53.7	8.1	1.7	6.5	0.9	4.3	1.1	3.4	0.6	2.9	0.4	53.6	317	Lower Saprolite		
RRMDD780	13.94	14.97	1.03	55.7	116.9	13.5	48.6	8.3	1.6	6.9	0.9	4.4	0.9	2.3	0.6	1.9	0.3	28.4	291	Lower Saprolite	**11.44**	**517**
RRMDD780	14.97	16.00	1.03	59.7	120.0	14.2	48.9	9.1	1.7	7.4	0.9	4.8	0.9	2.3	0.6	1.9	0.3	25.8	299	Lower Saprolite		
RRMDD780	16.00	17.10	1.10	51.7	113.4	13.4	45.6	7.3	1.4	5.6	0.8	4.0	0.8	1.9	0.6	1.7	0.2	23.6	272	Saprock		
RRMDD781	0.00	1.47	1.47	99.0	195.9	18.2	57.2	10.0	1.7	8.0	1.3	7.4	1.6	4.5	0.6	4.4	0.6	45.7	456	Soil		
RRMDD781	1.47	2.93	1.46	114.3	297.3	18.7	55.5	9.0	1.6	6.6	1.1	6.8	1.3	3.9	0.6	4.1	0.6	34.5	556	Hardcap		
RRMDD781	2.93	3.81	0.88	61.5	133.9	14.7	50.9	8.9	1.5	7.2	1.1	6.9	1.6	4.5	0.7	4.6	0.7	47.7	346	Transition		
RRMDD781	3.81	4.58	0.77	58.8	88.1	13.5	46.3	7.6	1.6	6.8	1.1	6.8	1.6	4.2	0.8	4.5	0.7	46.9	289	Mottled		
RRMDD781	4.58	5.35	0.77	47.6	74.3	11.9	40.8	6.7	1.3	6.2	1.0	6.2	1.3	3.8	0.5	3.8	0.6	43.9	250	Mottled		
RRMDD781	5.35	6.11	0.76	56.8	87.2	13.4	47.4	7.6	1.5	7.4	1.1	7.2	1.6	4.7	0.5	4.4	0.6	55.1	296	Mottled		
RRMDD781	6.11	6.93	0.82	113.4	157.2	38.2	133.6	21.2	3.9	15.8	2.3	13.5	3.0	7.8	0.5	7.1	1.1	104.0	623	Clay		
RRMDD781	6.93	7.75	0.82	124.3	141.9	38.9	133.0	22.0	4.1	15.4	2.2	13.2	2.7	6.8	0.5	6.4	0.9	83.2	595	Clay		
RRMDD781	7.75	8.57	0.82	62.2	218.7	15.8	54.2	9.9	2.0	9.5	1.4	8.8	2.1	5.7	0.5	5.2	0.8	74.8	472	Clay		
RRMDD781	8.57	9.39	0.82	67.2	150.5	17.5	60.8	10.5	2.2	9.7	1.5	8.3	1.9	5.0	0.5	4.5	0.7	59.6	400	Clay		
RRMDD781	9.39	10.28	0.89	357.7	245.7	106.4	404.7	67.6	14.1	60.7	8.2	48.1	9.7	25.5	0.4	21.4	2.9	337.8	1711	Upper Saprolite		
RRMDD781	10.28	11.16	0.88	255.7	163.4	82.0	307.9	54.2	10.9	46.0	6.6	37.5	7.5	19.8	0.4	16.0	2.3	242.6	1253	Upper Saprolite		
RRMDD781	11.16	12.20	1.04	91.5	87.5	27.7	104.5	17.0	3.4	13.8	2.0	11.4	2.5	6.8	0.4	5.9	0.9	83.1	458	Lower Saprolite		
RRMDD781	12.20	13.24	1.04	141.9	95.8	40.7	152.8	28.8	5.6	25.0	3.8	21.1	4.1	10.0	0.4	8.8	1.2	122.0	662	Lower Saprolite		
RRMDD781	13.24	14.28	1.04	91.6	63.1	24.1	93.2	16.9	3.7	16.1	2.3	13.8	2.7	7.3	0.4	5.8	0.8	84.2	426	Lower Saprolite		
RRMDD781	14.28	15.32	1.04	43.7	42.1	8.7	36.6	6.4	1.4	6.2	0.9	5.4	1.2	3.8	0.5	3.3	0.4	43.4	204	Lower Saprolite	**11.51**	**591**
RRMDD781	15.32	16.36	1.04	32.7	45.3	7.2	27.9	4.4	1.1	4.8	0.7	4.3	0.9	2.8	0.4	2.4	0.4	33.9	169	Lower Saprolite		
RRMDD781	16.36	17.40	1.04	30.1	47.7	6.5	24.7	4.2	1.0	4.8	0.7	3.7	0.8	2.3	0.4	2.4	0.4	28.3	158	Lower Saprolite		
RRMDD781	17.40	18.44	1.04	32.8	67.3	8.4	30.7	6.2	1.4	5.5	0.7	4.4	0.9	2.6	0.4	2.3	0.3	32.3	196	Lower Saprolite		

Hole ID	From m	To m	Int. m	La_2O_3 ppm	CeO_2 ppm	Pr_2O_3 ppm	Nd_2O_3 ppm	Sm_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Tb_2O_3 ppm	Dy_2O_3 ppm	Ho_2O_3 ppm	Er_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Lu_2O_3 ppm	Y_2O_3 ppm	TREO ppm	Regolith Zone	>200ppm TREO-CeO_2 Interval Length (m)	>200ppm TREO-CeO_2 Interval TREO ppm
RRMDD781	18.44	19.48	1.04	22.5	36.7	5.6	21.0	4.0	0.8	3.6	0.5	2.9	0.6	1.7	0.4	1.8	0.3	20.1	123	Lower Saprolite		
RRMDD781	19.48	20.52	1.04	28.4	59.6	7.2	26.8	4.9	1.2	4.3	0.7	4.0	0.8	2.4	0.4	2.1	0.3	26.3	169	Lower Saprolite		
RRMDD781	20.52	21.56	1.04	27.1	53.4	6.9	26.4	5.3	1.1	4.1	0.6	3.8	0.7	2.4	0.4	2.0	0.3	22.9	157	Lower Saprolite		
RRMDD781	21.56	22.60	1.04	22.6	58.0	5.9	21.5	4.4	0.9	3.3	0.5	3.1	0.7	1.9	0.4	1.7	0.3	18.0	143	Lower Saprolite		
RRMDD781	22.60	23.68	1.08	28.1	62.3	7.3	27.4	5.0	1.0	4.3	0.6	3.6	0.7	2.1	0.4	2.1	0.3	23.1	168	Lower Saprolite		
RRMDD781	23.68	25.33	1.65	25.0	61.9	6.5	23.7	4.7	1.1	3.8	0.6	3.5	0.6	2.1	0.4	2.1	0.3	19.7	156	Saprock		
RRMDD781	25.33	27.00	1.67	22.3	50.2	6.1	24.6	4.6	1.1	3.7	0.5	3.5	0.7	1.9	0.3	1.8	0.3	20.7	142	Saprock		
RRMDD782	0.00	1.31	1.31	54.2	358.7	11.6	41.6	8.1	1.3	6.7	1.0	6.5	1.3	4.5	0.6	4.3	0.8	38.6	540	Hardcap		
RRMDD782	1.31	2.57	1.26	45.5	134.5	10.0	36.0	6.7	1.2	5.5	0.8	6.1	1.2	4.2	0.7	4.6	0.6	40.8	298	Transition		
RRMDD782	2.57	3.26	0.69	48.6	138.2	10.4	37.9	7.0	1.2	5.9	0.9	6.2	1.3	3.7	0.7	4.3	0.6	41.4	308	Clay		
RRMDD782	3.26	3.95	0.69	50.9	200.2	11.5	41.8	7.1	1.2	7.0	1.1	6.9	1.5	4.6	0.7	4.8	0.7	47.7	388	Clay		
RRMDD782	3.95	4.90	0.95	36.6	90.3	8.3	29.3	5.7	1.1	5.4	0.8	5.5	1.1	3.4	0.6	3.4	0.5	38.9	231	Clay		
RRMDD782	4.90	5.85	0.95	32.7	99.7	7.7	28.7	5.2	1.1	4.9	0.8	4.8	1.1	3.1	0.5	3.2	0.5	35.7	230	Clay		
RRMDD782	5.85	6.80	0.95	38.7	130.8	9.7	34.5	6.5	1.4	5.9	1.0	6.1	1.2	4.0	0.5	3.8	0.5	42.5	287	Clay		
RRMDD782	6.80	7.75	0.95	46.1	92.4	11.0	40.1	7.0	1.4	6.8	1.0	6.9	1.4	4.0	0.5	3.5	0.6	46.6	269	Clay		
RRMDD782	7.75	8.64	0.89	30.0	43.7	7.6	27.8	5.7	1.1	5.2	0.8	5.1	1.1	3.1	0.6	3.2	0.4	38.1	174	Clay		
RRMDD782	8.64	9.53	0.89	40.1	121.5	10.1	37.8	6.4	1.6	6.4	0.9	6.3	1.3	4.1	0.4	3.9	0.5	45.3	287	Clay		
RRMDD782	9.53	10.42	0.89	18.5	24.8	5.0	19.1	4.3	0.8	3.7	0.6	4.1	0.8	2.7	0.5	2.8	0.4	27.3	115	Clay		
RRMDD782	10.42	11.31	0.89	19.5	258.0	5.3	20.9	4.3	0.9	4.3	0.7	4.4	0.9	2.7	0.5	2.6	0.4	26.9	352	Clay		
RRMDD782	11.31	12.26	0.95	27.6	89.1	6.3	23.8	4.6	1.0	4.3	0.7	4.4	0.9	3.0	0.4	2.5	0.3	33.1	202	Clay		
RRMDD782	12.26	13.21	0.95	31.3	81.3	7.7	28.3	5.9	1.2	4.8	0.7	4.6	0.9	2.7	0.5	2.6	0.4	32.1	205	Clay		
RRMDD782	13.21	14.15	0.94	30.3	99.6	7.6	28.2	6.1	1.2	5.3	0.8	4.9	1.0	2.8	0.4	2.6	0.3	33.5	225	Clay		
RRMDD782	14.15	14.75	0.60	28.5	79.0	7.2	26.9	5.1	1.1	4.9	0.8	4.8	1.0	3.0	0.5	2.5	0.4	34.4	200	Upper Saprolite		
RRMDD782	14.75	15.34	0.59	43.9	115.0	11.3	43.5	8.4	1.7	7.6	1.0	5.9	1.1	3.2	0.5	2.8	0.4	35.0	281	Upper Saprolite		
RRMDD782	15.34	16.23	0.89	51.8	64.0	13.2	49.3	9.4	1.8	8.1	1.2	6.9	1.4	3.8	0.7	3.5	0.4	48.4	264	Lower Saprolite		
RRMDD782	16.23	17.11	0.88	46.6	191.0	12.1	43.9	9.3	1.8	7.1	1.1	5.2	1.0	2.8	0.3	2.3	0.4	29.6	355	Lower Saprolite		
RRMDD782	17.11	18.03	0.92	31.0	56.3	7.1	25.9	4.9	1.0	4.1	0.5	3.5	0.7	2.0	0.4	2.0	0.3	24.6	164	Lower Saprolite		
RRMDD782	18.03	18.95	0.92	23.6	52.7	5.2	19.1	4.3	0.9	4.3	0.6	3.8	0.8	2.2	0.3	2.3	0.4	29.8	150	Lower Saprolite		
RRMDD782	18.95	19.87	0.92	93.9	66.7	22.5	89.3	17.8	4.5	21.0	2.9	16.1	3.2	8.2	0.4	6.7	0.9	108.4	463	Lower Saprolite	**2.76**	**259**
RRMDD782	19.87	20.79	0.92	25.9	39.3	6.2	21.7	4.3	0.9	3.8	0.5	3.1	0.6	1.9	0.4	1.8	0.3	21.6	132	Lower Saprolite		
RRMDD782	20.79	21.70	0.91	20.1	43.1	4.1	16.2	2.7	0.7	3.1	0.4	2.9	0.6	1.9	0.5	1.8	0.3	19.9	118	Lower Saprolite		
RRMDD783	0.00	1.45	1.45	70.0	208.2	12.7	39.9	7.2	1.3	5.9	0.9	5.8	1.2	3.4	0.5	3.4	0.5	31.1	392	Hardcap		
RRMDD783	1.45	2.36	0.91	59.5	170.7	11.7	39.1	6.9	1.3	5.2	0.9	5.2	1.2	3.2	0.6	3.7	0.5	31.1	341	Transition		
RRMDD783	2.36	3.36	1.00	54.8	145.6	11.7	41.6	7.4	1.2	7.1	1.1	5.9	1.3	3.6	0.7	3.8	0.6	41.8	328	Clay		
RRMDD783	3.36	4.35	0.99	49.0	108.0	11.3	42.6	7.9	1.4	6.9	1.1	6.7	1.4	4.6	0.7	4.2	0.8	44.2	291	Clay		
RRMDD783	4.35	5.23	0.88	52.3	104.9	12.6	45.5	8.3	1.6	7.4	1.2	8.0	1.5	5.1	0.7	4.5	0.7	48.6	303	Clay		
RRMDD783	5.23	6.10	0.87	64.2	90.3	15.8	59.4	10.5	2.0	9.7	1.6	9.9	2.1	6.1	0.5	5.0	0.8	61.2	339	Clay		
RRMDD783	6.10	7.06	0.96	74.8	89.1	19.6	73.5	12.2	2.5	11.2	1.8	10.5	2.2	6.6	0.5	5.0	0.8	67.1	377	Clay		
RRMDD783	7.06	8.02	0.96	222.8	141.3	66.2	232.1	37.8	7.2	30.1	4.3	23.8	4.6	13.0	0.5	9.3	1.5	144.8	939	Clay		
RRMDD783	8.02	8.73	0.71	446.8	201.5	111.8	412.9	75.4	14.3	67.5	10.0	56.0	11.6	32.1	0.5	24.3	3.2	359.4	1827	Upper Saprolite		
RRMDD783	8.73	9.63	0.90	195.3	140.7	45.9	170.3	29.7	6.4	27.0	4.0	21.7	4.0	10.9	0.5	8.5	1.3	117.5	783	Lower Saprolite		
RRMDD783	9.63	10.53	0.90	192.9	149.3	48.1	208.8	40.8	8.7	49.8	7.6	51.0	10.6	31.9	0.4	24.6	4.1	405.1	1234	Lower Saprolite		
RRMDD783	10.53	11.43	0.90	49.3	64.7	10.6	40.2	8.2	1.7	8.2	1.4	8.1	1.8	5.8	0.5	4.7	0.6	70.7	276	Lower Saprolite	**8.07**	**678**
RRMDD783	11.43	12.33	0.90	31.0	59.8	7.8	28.9	5.8	1.1	4.8	0.7	4.1	0.7	2.2	0.4	1.8	0.3	24.4	174	Lower Saprolite		
RRMDD783	12.33	14.22	1.89	28.1	57.6	7.3	26.7	5.0	1.0	3.7	0.6	3.7	0.7	2.1	0.5	1.8	0.3	21.8	161	Saprock		
RRMDD783	14.22	16.11	1.89	31.4	62.4	8.0	29.3	5.8	1.5	4.4	0.7	4.0	0.7	2.1	0.5	2.2	0.3	25.9	179	Saprock		
RRMDD783	16.11	18.00	1.89	30.7	68.1	8.6	34.6	7.1	1.9	6.6	1.0	5.4	0.9	3.0	0.4	2.3	0.3	30.2	201	Saprock		
RRMDD784	0.00	1.35	1.35	75.6	167.7	14.0	43.5	7.8	1.3	5.7	0.9	5.5	1.1	3.1	0.5	3.6	0.4	31.5	362	Hardcap		
RRMDD784	1.35	2.70	1.35	73.4	837.8	16.9	55.6	9.4	1.7	6.8	1.0	6.3	1.2	3.7	0.5	3.7	0.5	33.0	1052	Hardcap		
RRMDD784	2.70	3.80	1.10	171.2	592.1	35.3	125.4	19.1	3.6	14.3	2.2	11.9	2.3	6.6	0.4	5.4	0.8	73.9	1065	Clay		
RRMDD784	3.80	4.66	0.86	120.2	385.7	25.6	92.5	14.9	2.7	12.0	1.7	9.6	1.9	5.2	0.4	4.3	0.6	60.7	738	Upper Saprolite		
RRMDD784	4.66	5.52	0.86	202.9	145.0	67.7	249.6	43.1	7.7	30.8	4.2	23.1	3.7	10.0	0.5	7.0	1.0	96.5	893	Upper Saprolite		
RRMDD784	5.52	6.38	0.86	134.9	122.1	42.5	160.4	29.7	4.8	20.5	2.8	15.5	2.6	7.5	0.5	5.5	0.7	79.4	629	Upper Saprolite		
RRMDD784	6.38	7.17	0.79	383.5	400.5	119.5	464.2	84.5	17.1	82.6	11.9	71.3	13.8	40.3	0.4	30.6	4.8	500.3	2225	Lower Saprolite		

																					>200ppm $TREO-CeO_2$ Interval	
Hole ID	**From m**	**To m**	**Int. m**	**La_2O_3 ppm**	**CeO_2 ppm**	**Pr_2O_3 ppm**	**Nd_2O_3 ppm**	**Sm_2O_3 ppm**	**Eu_2O_3 ppm**	**Gd_2O_3 ppm**	**Tb_2O_3 ppm**	**Dy_2O_3 ppm**	**Ho_2O_3 ppm**	**Er_2O_3 ppm**	**Tm_2O_3 ppm**	**Yb_2O_3 ppm**	**Lu_2O_3 ppm**	**Y_2O_3 ppm**	**TREO ppm**	**Regolith Zone**	**Length (m)**	**TREO ppm**
RRMDD784	7.17	7.95	0.78	134.9	94.0	30.7	126.0	22.7	5.2	28.8	4.4	26.6	6.1	20.0	0.4	14.1	2.3	262.9	779	Lower Saprolite	**5.25**	**1044**
RRMDD784	7.95	9.33	1.38	32.5	57.2	8.2	30.0	5.4	1.3	5.0	0.8	5.0	1.1	3.0	0.4	2.6	0.4	32.9	186	Saprock		
RRMDD784	9.33	10.70	1.37	26.9	64.4	6.7	25.1	5.1	1.1	4.6	0.8	5.5	1.1	3.5	0.4	2.9	0.5	36.3	185	Saprock		
RRMDD785	0.00	0.70	0.70	27.0	59.2	5.5	18.0	3.7	0.7	3.3	0.5	3.4	0.7	2.4	0.5	2.6	0.4	22.9	151	Soil		
RRMDD785	0.70	1.38	0.68	44.3	82.5	10.5	34.3	6.6	1.2	5.0	0.9	5.2	1.1	3.3	0.6	2.9	0.5	32.3	231	Clay		
RRMDD785	1.38	2.22	0.84	69.2	156.6	17.8	61.9	10.2	1.9	8.6	1.2	7.5	1.4	4.4	0.6	4.0	0.6	47.1	393	Upper Saprolite		
RRMDD785	2.22	3.06	0.84	129.0	292.4	33.3	120.1	19.1	3.8	15.6	2.2	11.5	2.2	6.1	0.5	4.5	0.7	64.0	705	Upper Saprolite		
RRMDD785	3.06	3.90	0.84	80.1	153.6	17.6	65.8	11.5	2.5	10.2	1.4	8.7	1.8	5.4	0.4	4.1	0.6	64.4	428	Upper Saprolite		
RRMDD785	3.90	4.56	0.66	47.3	79.7	9.3	37.9	6.4	1.4	6.4	0.9	5.8	1.2	3.9	0.4	2.8	0.5	45.8	250	Lower Saprolite	**3.86**	**416**
RRMDD785	4.56	6.30	1.74	33.9	67.2	8.2	31.1	5.9	1.3	5.2	0.8	4.4	0.9	2.7	0.5	2.1	0.3	29.7	194	Saprock		
RRMDD786	0.00	1.25	1.25	67.3	119.4	12.6	40.0	7.6	1.4	6.1	0.9	5.9	1.2	3.3	0.5	3.7	0.6	32.8	303	Hardcap		
RRMDD786	1.25	2.49	1.24	57.0	708.8	12.3	40.6	8.1	1.5	5.7	1.0	6.5	1.2	3.9	0.6	4.2	0.6	32.6	885	Hardcap		
RRMDD786	2.49	3.52	1.03	65.2	155.4	14.3	48.8	9.0	1.6	7.2	1.2	6.8	1.4	4.4	0.8	4.5	0.6	41.4	362	Transition		
RRMDD786	3.52	4.31	0.79	62.9	147.4	14.0	46.4	8.7	1.5	7.1	1.2	6.9	1.5	4.3	0.8	4.5	0.6	45.6	353	Mottled		
RRMDD786	4.31	5.10	0.79	50.8	95.3	11.1	37.3	6.7	1.3	6.0	0.9	5.6	1.3	4.2	0.8	3.9	0.7	40.3	266	Mottled		
RRMDD786	5.10	5.90	0.80	43.0	55.3	9.3	33.7	5.3	1.1	5.3	0.9	6.2	1.2	3.8	0.7	3.7	0.5	35.0	205	Mottled		
RRMDD786	5.90	6.81	0.91	43.7	45.8	10.1	36.0	6.3	1.2	5.9	1.0	6.2	1.4	4.2	0.6	3.9	0.6	41.7	209	Mottled		
RRMDD786	6.81	7.51	0.70	51.3	46.3	12.1	42.7	7.3	1.6	7.3	1.2	7.7	1.6	5.2	0.5	3.8	0.6	52.3	241	Clay		
RRMDD786	7.51	8.20	0.69	85.6	64.5	21.9	82.8	13.6	2.5	11.8	1.5	9.8	1.8	5.5	0.4	4.9	0.7	66.5	374	Clay		
RRMDD786	8.20	8.84	0.64	111.2	192.9	31.5	116.5	19.1	3.5	15.4	2.0	12.5	2.3	6.7	0.4	5.9	0.8	78.5	599	Upper Saprolite		
RRMDD786	8.84	9.48	0.64	129.6	240.2	38.2	144.1	23.5	4.1	16.4	2.1	12.8	2.3	6.5	0.5	5.5	0.7	73.3	700	Upper Saprolite		
RRMDD786	9.48	10.48	1.00	110.7	93.1	29.7	112.3	18.4	3.7	15.1	2.0	11.9	2.1	6.1	0.4	5.0	0.7	71.2	483	Lower Saprolite		
RRMDD786	10.48	11.48	1.00	82.9	82.8	22.9	88.3	15.0	2.9	11.6	1.6	9.7	1.8	4.8	0.3	4.3	0.5	58.9	388	Lower Saprolite	**5.58**	**416**
RRMDD786	11.48	13.14	1.66	62.7	54.7	16.4	62.4	11.0	2.5	10.2	1.4	9.4	1.9	5.4	0.4	5.1	0.7	64.5	309	Saprock		
RRMDD786	13.14	14.80	1.66	43.0	52.0	10.2	39.5	7.5	1.5	6.0	0.9	5.4	1.0	2.6	0.4	2.4	0.3	31.2	204	Saprock		
RRMDD786	14.80	16.46	1.66	35.7	65.8	8.4	33.0	5.8	1.3	5.5	0.8	5.2	1.0	3.0	0.4	2.4	0.3	34.3	203	Saprock		
RRMDD786	16.46	18.12	1.66	27.2	51.5	6.6	23.8	4.6	1.1	4.1	0.6	3.6	0.7	2.0	0.4	1.8	0.3	22.2	150	Saprock		
RRMDD786	18.12	19.80	1.68	28.0	59.7	7.0	28.5	5.4	1.1	4.5	0.6	3.9	0.8	2.2	0.4	2.3	0.2	24.1	169	Saprock		
RRMDD787	0.00	1.57	1.57	58.8	256.7	12.2	39.7	8.0	1.4	6.4	1.0	6.6	1.3	4.0	0.6	4.1	0.6	35.9	437	Hardcap		
RRMDD787	1.57	2.28	0.71	56.3	100.4	12.3	42.5	7.8	1.5	6.4	1.0	6.5	1.4	3.9	0.7	4.2	0.7	39.4	285	Clay		
RRMDD787	2.28	3.09	0.81	62.4	78.6	15.0	57.2	10.0	1.7	9.0	1.3	8.7	1.8	5.5	0.6	5.5	0.8	57.1	315	Clay		
RRMDD787	3.09	3.90	0.81	57.7	68.7	14.7	56.7	8.9	1.9	9.0	1.4	8.4	1.8	5.3	0.6	5.2	0.7	56.8	298	Clay		
RRMDD787	3.90	4.70	0.80	59.7	88.9	15.2	60.2	10.6	1.9	9.0	1.3	8.4	1.7	5.3	0.5	5.4	0.8	57.7	327	Clay		
RRMDD787	4.70	5.63	0.93	106.0	230.3	33.7	130.1	20.1	3.7	16.1	2.3	13.4	2.4	7.1	0.4	6.7	0.8	84.3	658	Upper Saprolite		
RRMDD787	5.63	6.56	0.93	174.2	179.3	55.1	216.4	36.8	6.7	29.4	3.9	22.3	4.2	11.7	0.5	10.3	1.3	127.6	880	Upper Saprolite		
RRMDD787	6.56	7.50	0.94	108.6	105.5	29.8	116.4	19.5	3.8	16.5	2.2	13.0	2.6	7.7	0.4	6.6	0.9	93.2	527	Upper Saprolite		
RRMDD787	7.50	8.43	0.93	218.1	253.1	56.1	235.6	40.1	8.4	39.6	5.2	32.6	6.4	17.4	0.4	15.1	2.0	231.8	1162	Lower Saprolite		
RRMDD787	8.43	9.36	0.93	104.1	68.7	20.5	86.2	14.6	3.5	19.2	2.6	16.4	3.5	10.4	0.4	9.0	1.3	150.5	511	Lower Saprolite		
RRMDD787	9.36	10.29	0.93	31.2	52.5	6.8	26.4	4.9	1.1	4.8	0.7	4.4	0.9	2.6	0.5	2.5	0.4	34.8	174	Lower Saprolite		
RRMDD787	10.29	11.22	0.93	33.1	57.6	8.3	32.0	6.1	1.3	5.4	0.6	4.5	0.9	2.7	0.4	2.7	0.4	33.7	190	Lower Saprolite	**9.65**	**495**
RRMDD787	11.22	12.16	0.94	31.2	56.6	7.6	30.8	5.7	1.3	5.1	0.7	4.1	0.8	2.4	0.5	2.3	0.3	26.9	176	Lower Saprolite		
RRMDD787	12.16	13.58	1.42	21.2	39.3	5.0	19.4	3.7	0.6	2.8	0.4	2.4	0.5	1.6	0.5	1.5	0.2	16.5	116	Saprock		
RRMDD787	13.58	15.00	1.42	20.1	38.8	4.6	18.9	3.2	0.7	2.8	0.4	2.7	0.5	1.6	0.4	1.8	0.3	16.5	113	Saprock		

JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	Drill core was collected from a core barrel and placed in appropriately marked core trays. Down hole core run depths were measured and marked with core blocks. Core was measured for core loss and core photography and geological logging completed. Sample lengths were determined by geological boundaries with a maximum sample length of 1 metre applied in clay zones and up to 2 metres in laterite zones where core recovery was occasionally low. Where the core contained continuous lengths of soft clay a carving knife was used to cut the core. When the core was too hard to knife cut, it was cut using an electric core saw. Using either method core was initial cut in half then one half was further cut in half to give quarter core. Quarter core was submitted to ALS for chemical analysis using industry standard sample preparation and analytical techniques.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Core size was HQ triple tube. The core was not oriented (vertical)
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery*	Core recovery was calculated by measuring actual core length versus drillers core run lengths. Core recovery ranged from 25% to 100% and averaged 95.6%. Core loss I most common in the hardcap and transition regolith types which are not reported as resource or in exploration results. No relationship exists between core recovery and grade.

Criteria	JORC Code explanation	Commentary
	and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	All (100%) drill core has been geologically logged and core photographs taken. Logging is qualitative with description of colour, weathering status, alteration, major and minor rock types, texture, grain size, regolith zone, presence of kaolinite, hematite, veins and alteration and comments added where further observation is made. Additional non-geological qualitative logging includes comments for sample recovery, humidity, and hardness for each logged interval.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Where the core contained continuous lengths of soft clay a carving knife was used to cut the core. When the core was too hard to knife cut it was cut using an electric core saw. Sample lengths were determined by geological boundaries with a maximum sample length of 1 metre applied in clay zones and up to 2 metres in laterite zones where core recovery was occasionally low. Samples were collected from core trays by hand and placed in individually numbered bags. These bags were dispatched to ALS for analysis with no further field preparation. Sample weights were recorded prior to sample dispatch. Sample mass is considered appropriate for the grain size of the material being sampled that is generally very fine grained and uniform. Field duplicate sampling was conducted at a ratio of 1:25 samples. Duplicates were created by lengthways halving the ¼ core primary sample into 2 identical portions. Duplicate samples were allocated separate sample numbers and submitted with the same analytical batch as the primary sample.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *Nature of quality control procedures adopted (eg*	**Assay and Laboratory Procedures – All Samples** Samples were dispatched by air freight direct to ALS laboratory Perth Australia. The preparation and analysis protocol used is as follows: **ALS Code** — **Description** WEI-21 — Received sample weight LOG-22 — Sample Login w/o Barcode

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</td><td>
<table>
<tr><td>DRY-21</td><td>High temperature drying</td></tr>
<tr><td>CRU-21</td><td>Crush entire sample</td></tr>
<tr><td>CRU-31</td><td>Fine crushing – 70% <2mm</td></tr>
<tr><td>SPL-22Y</td><td>Split sample – Boyd Rotary Splitter</td></tr>
<tr><td>PUL-31h</td><td>Pulverise 750g to 85% passing 75 micron</td></tr>
<tr><td>CRU-QC</td><td>Crushing QC Test</td></tr>
<tr><td>PUL-QC</td><td>Pulverising QC test</td></tr>
</table>
The assay technique used for REE was Lithium Borate Fusion ICP-MS (ALS code ME-MS81). This is a recognised industry standard analysis technique for REE suite and associated elements. Elements analysed at ppm levels:
<table>
<tr><td>Ba</td><td>Ce</td><td>Cr</td><td>Cs</td><td>Dy</td><td>Er</td><td>Eu</td><td>Ga</td></tr>
<tr><td>Gd</td><td>Hf</td><td>Ho</td><td>La</td><td>Lu</td><td>Nb</td><td>Nd</td><td>Pr</td></tr>
<tr><td>Rb</td><td>Sm</td><td>Sn</td><td>Sr</td><td>Ta</td><td>Tb</td><td>Th</td><td>Tm</td></tr>
<tr><td>U</td><td>V</td><td>W</td><td>Y</td><td>Yb</td><td>Zr</td><td></td><td></td></tr>
</table>
Analysis for scandium (Sc) was by Lithium Borate Fusion ICP-AES (ALS code Sc-ICP06).
The sample preparation and assay techniques used are industry standard and provide a total analysis.
All laboratories used are ISO 17025 accredited.
QAQC
<u>Diamond Drill Core Samples</u>
Analytical Standards
CRM AMIS0275 and AMIS0276 and a specific Makuutu CRM MUIACREI01 were included in sample batches at a ratio of 1:25 to drill samples submitted. This is an acceptable ratio.
The assay results for the standards were consistent with the certified levels of accuracy and precision and no bias is evident.
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		• Blanks CRM blanks AMIS0681 and OREAS22e were included in sample batches at a ratio of 1:25 to drill samples submitted for analysis. This is an acceptable ratio. Both CRM blanks contain some REE, with elements critical elements Ce, Nd, Dy and Y present in small quantities. The analysis results were consistent with the certified values for the blanks. No laboratory contamination or bias is evident from these results. • Duplicates Field duplicate sampling was conducted at a ratio of 1:25 samples. Duplicates were created by lengthways halving the ¼ core primary sample into 2 identical portions. Duplicate samples were allocated separate sample numbers and submitted with the same analytical batch as the primary sample. Variability between duplicate results is considered acceptable and no sampling bias is evident. Laboratory inserted standards, blanks and duplicates were analysed as per industry standard practice. There is no evidence of bias from these results. Laboratory inserted standards, blanks and duplicates were analysed as per industry standard practice. There is no evidence of bias from these results.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	No independent verification of significant intersection undertaken. No twinning of diamond core drill holes was undertaken. Sampling protocols for diamond core sampling and QAQC were documented and held on site by the responsible geologist. No procedures for data storage and management have been compiled as yet. Data were collected in the field by hand and entered into Excel spreadsheet. Data are then compiled with assay results compiled and stored in Access database. Data verification is conducted on data entry including hole depths, sample intervals and sample numbers. Sample numbers from assay data are verified by algorithm in spreadsheet prior to entry int the database. Assay data was received in digital format from the laboratory and merged with the sampling data into an Excel spreadsheet format for QAQC analysis and review against field data. Once finalised and validated data is stored in a protected Access database. Data validation of assay data and sampling data have been conducted to ensure data entry is correct. All assay data is received from the laboratory in element form is unadjusted for data entry.

Criteria	JORC Code explanation	Commentary
		Conversion of elemental analysis (REE) to stoichiometric oxide (REO) was undertaken by spreadsheet using defined conversion factors.(Source:https://www.jcu.edu.au/advanced-analytical-centre/services-and-resources/resources-and-extras/element-to-stoichiometric-oxide-conversion-factors)

Element ppm	Conversion Factor	Oxide Form
Ce	1.2284	CeO_2
Dy	1.1477	Dy_2O_3
Er	1.1435	Er_2O_3
Eu	1.1579	Eu_2O_3
Gd	1.1526	Gd_2O_3
Ho	1.1455	Ho_2O_3
La	1.1728	La_2O_3
Lu	1.1371	Lu_2O_3
Nd	1.1664	Nd_2O_3
Pr	1.2082	Pr_6O_{11}
Sm	1.1596	Sm_2O_3
Tb	1.1762	Tb_4O_7
Tm	1.1421	Tm_2O_3
Y	1.2699	Y_2O_3
Yb	1.1387	Yb_2O_3
Sc	1.5338	Sc_2O_3

Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations are used for compiling REO into their reporting and evaluation groups:

Note that Y_2O_3 is included in the TREO, HREO and CREO calculation.

TREO (Total Rare Earth Oxide) = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Y_2O_3 + Lu_2O_3.

HREO (Heavy Rare Earth Oxide) = Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3, + Y_2O_3 + Lu_2O_3

Criteria	JORC Code explanation	Commentary
		CREO (Critical Rare Earth Oxide) = $Nd_2O_3 + Eu_2O_3 + Tb_4O_7 + Dy_2O_3 + Y_2O_3$ (From U.S. Department of Energy, Critical Materials Strategy, December 2011) LREO (Light Rare Earth Oxide) = La_2O_3 + CeO2 + Pr_6O_{11} + Nd_2O_3 NdPr = Nd_2O_3 + Pr_6O_{11} HREO% of TREO= HREO/TREO x 100 In elemental form the classifications are: Note that Y is included in the TREE, HREE and CREE calculation. TREE: La+Ce+Pr+Nd+Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Yb+Lu+Y HREE: Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Yb+Y+Lu CREE: Nd+Eu+Tb+Dy+Y LREE: La+Ce+Pr+Nd
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Drill hole collar locations were surveyed using handheld GPS. For this type of instrument, the general accuracy in x and y coordinates is + 5m. The elevation component of coordinates is variable and may be low accuracy using this type of device. Datum WGS84 Zone 36 North was used for location data collection and storage. This is the appropriate datum for the project area. No grid transformations were applied to the data.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	RAB reconnaissance drill holes have been drilled on a broad spacing, generally >1km, based on testing radiometric anomalies over a large area
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	Orientation of potential mineralisation unknown in this area but assumed to be horizontal as seen in the Makuutu deposit

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	After collection, the samples were transported by Company representatives to Entebbe airport and dispatched via airfreight to Perth Australia. Samples were received by Australian customs authorities in Perth within 48 hours of dispatch and were still contained in the sealed shipment bags. Samples were subsequently transported from Australian customs to ALS Perth via road freight and inspected on arrival by a Company representative
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	No audits or reviews have been undertaken

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Makuutu Project is located in the Republic of Uganda. The mineral tenements comprise one mining licence (LML00334), two (2) granted Retention Licences (RL00007 and RL00234), three (3) Exploration Licences (EL00147, EL00148 and EL00257). All granted licences are in good standing with no known impediments. TN03573 is pending grant with all application requirements met. The Makuutu Rare Earths Project is 100% owned by Rwenzori Rare Metals Limited (“RRM”), a Ugandan registered company. IonicRE currently has earned a 60% shareholding in RRM and has agreed terms to move to 94% ownership in 2024. IonicRE also continues discussions on the remaining 6% ownership. 1. IonicRE to fund to completion of a Bankable Feasibility Study (BFS) to earn an additional 9% interest for a cumulative 60% interest in RRM (Completed) 2. Milestone payments, payable in cash or IonicRE shares at the election of the Vendor, as follows: a. US$375,000 on production of 10 kg of mixed rare-earth product from pilot or demonstration plant activities (Completed); and b. US$375,000 on conversion of existing licences to mining licences (Pending). At any time should IonicRE not continue to invest in the project and project development ceases for at least two months RRM has the right to return the capital sunk by IonicRE and reclaim all interest earnt by IonicRE.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Previous exploration includes:

Criteria	JORC Code explanation	Commentary
		1980: Country wide airborne geophysical survey identifying uranium anomalies in the Project area. 1990s: French BRGM and Ugandan DGSM undertook geochemical and geological survey over South-Eastern Uganda including the Project area. Anomalous Au, Zn, Cu, Sn, Nb and V identified. 2006-2009: Country wide high resolution airborne magnetic and radiometric survey identified U anomalism in the Project area. 2009: Finland GTK reprocessed radiometric data and refined the Project anomalies. 2010: Kweri Ltd undertook field verification of radiometric anomalies including scout sampling of existing community pits. Samples showed an enrichment of REE and Sc. 2011: Kweri Ltd conducted ground radiometric survey and evaluated historic groundwater borehole logs. 2012: Kweri Ltd and partner Berkley Reef Ltd conducted prospect wide pit excavation and sampling of 48 pits and a ground gravity traverse. Pit samples showed enrichment of REE weathered profile. Five (5) samples sent to Toronto Aqueous Research Laboratory for REE leach testwork. 2016 – 2017: Rwenzori Rare Metals conduct excavation of 11 pits, ground gravity survey, RAB drilling (109 drill holes) and one (1) diamond drill hole. The historic exploration has been conducted to a professional standard and is appropriate for the exploration stage of the prospect. 2019-2022: Ionic Rare Earths under agreement with RRM completed 711 core drill holes and processing testwork leading to compilation of a DFS and statement of an ore reserve.
Geology	• *Deposit type, geological setting and style of mineralisation.*	The Makuutu deposit is interpreted to be an ionic adsorption REE clay-type deposits similar to those in South China, Chile, Madagascar and Brazil. The mineralisation is contained within the tropical lateritic weathering profile of a basin filled with sedimentary rocks including shales, mudstones and sandstones potentially derived from the surrounding granitic and mafic rocks. These rocks are considered the original source of the REE which were then accumulated in the sediments (via ionic bonds with the clays) of the basin as the surrounding rocks have degraded. These sediments then form the protolith that was subjected to prolonged tropical weathering. The weathering developed a lateritic regolith with a surface indurated hardcap, followed downward by clay rich zones that grade down through saprolite and saprock to unweathered sediments. The thickness of the regolith is between 10 and 20 metres from surface.

Criteria	JORC Code explanation	Commentary
		The REE mineralisation is concentrated in the weathered profile where it has dissolved from its primary mineral form, such as monazite and xenotime, then ionically bonded (adsorbed) or colloidally bonded on to fine particles of aluminosilicate clays (e.g. kaolinite, illite, smectite). The adsorbed and colloidal REE is the target for extraction and production of REO at Makuutu.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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.*	The material information for drill holes relating to this announcement are contained in Appendix 1.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	A lower cut-off of 200 ppm TREO-Ce_2O_3 was used for data aggregation of significant intervals with a maximum of 2 metres of internal dilution and no top-cuts applied. This lower cut-off is consistent with the marginal cut-off grade estimated and applied in the resource statements on the Makuutu Project Significant intervals were tabulated downhole for reporting. All individual samples were included in length weighted averaging over the entire tabulated range. No metal equivalents values are used.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	Down hole lengths, true widths are not known.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Refer to diagrams in body of text.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	This report contains all drilling results that are consistent with the JORC guidelines. Where data may have been excluded, it is considered not material.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Metallurgical leach testing was previously conducted on samples derived from exploration pits, RAB drilling, and one 8.5 tonne bulk pit sample. In 2012, 5 pit samples were sent to the Toronto Aqueous Research Laboratory at the University of Toronto for leachability tests. In 2017, 2 pit samples were sent to SGS Laboratory Toronto for leachability tests. 2017/18, 29 samples were collected from 7 RAB drill holes. 20 of these were consigned to SGS Canada and 4 to Aqueous Process Research (APR) in Ontario Canada. The remaining 5 samples were consigned to Bio Lantanidos in Chile. 2018/19, 8.5 tonne bulk sample was consigned to Mintek, South Africa, to evaluate using Resin-in-leach (RIL) technology for the recovery of REE. 2019: 118 samples from 31 holes from the 2019 diamond drilling program had preliminary variation testwork conducted TREE-Ce extraction ranged from 3% to 75%. 2020: Testing of composite samples with lower extractions from the 2019 variation testing using increasing rates of acid addition and leach time. Significant increases in extractions were achieved. 2020: Testing of composited samples from two exploration holes east of the Makuutu Central Zone provided an average extraction of TREE-Ce recovery of 41% @ pH1 2021-2023 extensive metallurgical testwork.

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Future work programs include demonstration plant testwork