



30 October 2020

QUARTERLY REPORT FOR THE PERIOD ENDING 30 SEPTEMBER 2020

HIGHLIGHTS

- **IonicRE increased ownership to 51% of the Makuutu Rare Earths Project**
 - **Phase 2 drill program testing area three (3) times current Mineral Resource Estimate completed after quarter end**
 - **Positive results from metallurgical testwork received**
 - **Ugandan ministerial delegation demonstrates strong support for Makuutu**
 - **Closed an over-subscribed \$2.5 million share placement and a \$1.0 million share purchase plan during quarter**
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Ionic Rare Earths Limited (ASX: IXR) ("**IonicRE**" or "the Company") is pleased to provide its Quarterly Report for the period ending **30 September 2020**.

Activities during the quarter were resumed on site at the Makuutu Rare Earths Project ("**Makuutu**") in Uganda post the restrictions lifted in June as a result of the COVID-19 pandemic.

Makuutu comprises three licences covering approximately 132 km² located some 40 km east of the regional centre of Jinja and 120 km east of the capital city of Kampala (Figure 1 and Figure 2). The area has excellent infrastructure and cell-phone coverage. Tarred (sealed) roads, rail, power and water are all nearby; The area is also readily accessible throughout the year irrespective of weather conditions.

Project geology at Makuutu is similar to the ionic clay-type deposits of southern China. These are the world's cheapest and most readily accessible sources of Heavy Rare Earth Oxides (**HREO**), which are near surface shallow deposits and extracted by simple mining and processing methods.

Ionic clay-hosted Rare Earth deposits are significantly different from hard rock-hosted Rare Earth deposits. Typically, rare earths can be recovered from ionic clay mineralisation using mild salt washing / leaching conditions to produce a high-grade Rare Earth Oxide (**REO**) chemical precipitate concentrate and generally present practical processing advantages.

The Phase 2 drill program was completed after a COVID-19 delay with 3,700 metres of diamond core completed. The aim of the program was to enable IonicRE to progressively work towards increasing the size of the existing Mineral Resource Estimate coupled with improving the geological confidence. This drilling

program was the largest undertaken at Makuutu significantly exceeding the previous 990 metres of core drilling which has delivered a Mineral Resource Estimate announced to the ASX on 23rd June 2020 and set out in Table 1 of:

78.6 Million tonnes @ 840 ppm TREO, at a cut-off grade of 300 ppm TREO-Ce₂O₃

This drill program will potentially realise the significant exploration potential at Makuutu as evidenced by the Exploration Target of **270 – 530 million tonnes grading 0.04 – 0.1% (400 – 1,000 ppm) TREO** as announced to the ASX on 4th September 2019.

*This Exploration Target is conceptual in nature but is based on reasonable grounds and assumptions. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

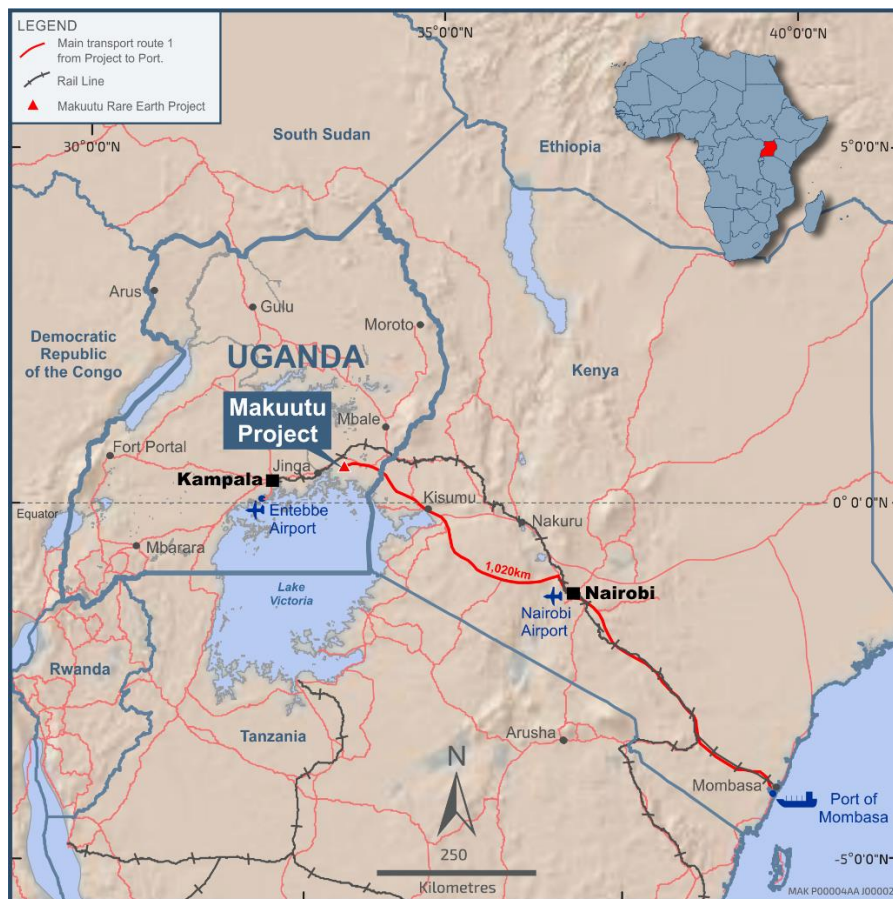


Figure 1. Makuutu Rare Earths Project Location.

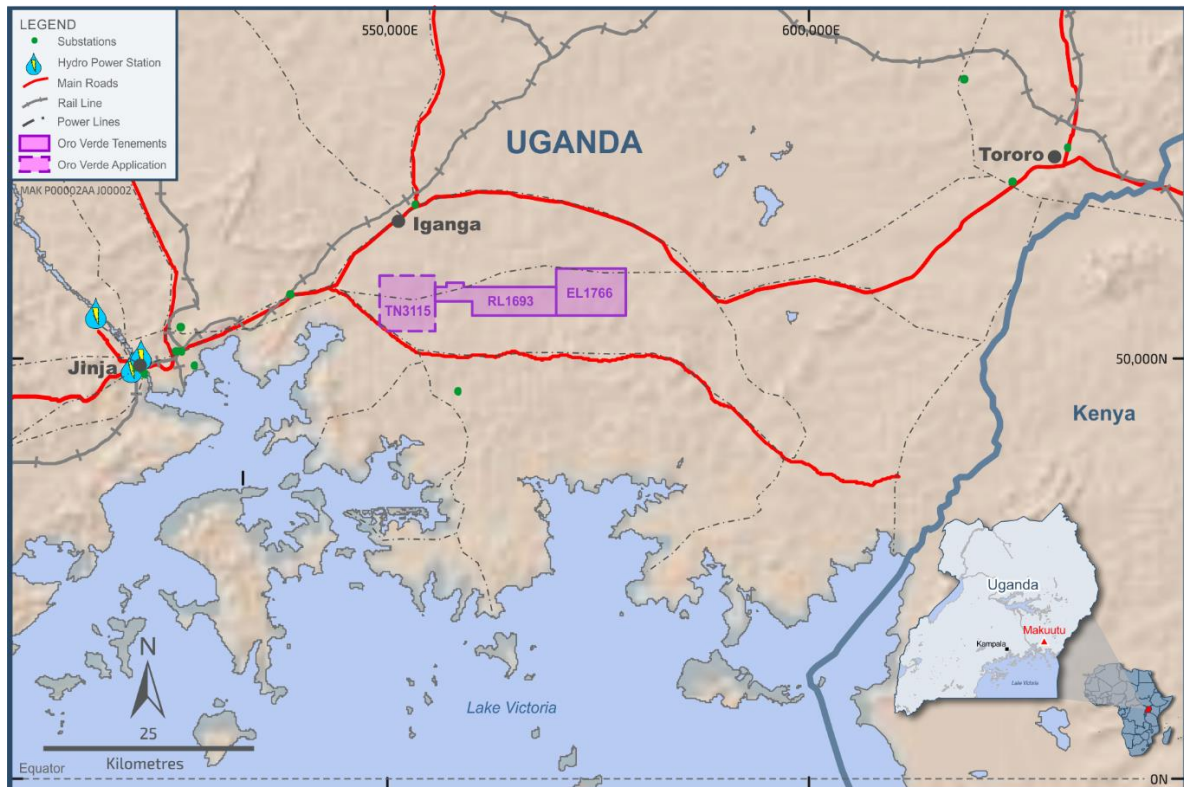


Figure 2: Makuutu Rare Earths Project Tenements and Major Infrastructure.

DRILLING PROGRAM

On 15th July 2020, the Company advised that the Phase 2 drill program had resumed after suspension in March 2020 due to COVID-19 after only 240 metres (11 drill holes) had been completed. The resumed Phase 2 diamond core drilling program included an additional 3,700 metres of core drilling planned to validate the Company's Exploration Target and quantify the potential of the 26-kilometre-long Makuutu mineralisation corridor by testing an area greater than three (3) times the area covered by the existing Mineral Resource Estimate. In addition, infill drilling of the existing reported resource was undertaken.

The Phase 2 drill program comprised of:

- 1) In-fill drilling on a 100-metre spacing within the area of the current Mineral Resource (on tenement RL 1693) to assess short range REE grade variability for application to resource grade estimation confidence – *11 drill holes*.
- 2) Resource extensional drilling on a 400-metre spacing to expand the current Mineral Resource area further to the east (on tenement RL 1693) – *37 drill holes*.
- 3) Exploration drilling on a 400-metre spacing on adjacent tenement EL 1766, or Makuutu Eastern Zone (**MEZ**) – *68 drill holes*.
- 4) Exploration drilling on a 400-metre spacing on adjacent tenement RL 00007, or Makuutu Western Zone (**MWZ**) – *25 drill holes*.
- 5) Exploration drilling on a 400-metre spacing on the western side of the current Mineral Resource area further to the west (on tenement RL 1693) – *24 drill holes*.

- 6) In-fill drilling within the area of the current Mineral Resource (on tenement RL 1693) on a 200-metre spacing to enhance resource grade estimation confidence – *57 drill holes*.

At the end of the quarter, items 1 to 5 above were completed consisting of 2,749 drill metres across 165 drill holes. Post end of the quarter, the Phase 2 drill program was completed in full with 3,745 metres of core drilled across the three (3) tenements at Makuutu, with an average drill hole depth of 16.9 metres. Drilling was completed safely and on time.

Five (5) tranches of samples have been dispatched from Uganda so far, and the remaining sample processing and packaging is now being finalised in Uganda with expected final two (2) tranches dispatched over the next fortnight.

DRILLING RESULTS

The initial 11-hole 100 metre spaced infill program was completed in July 2020 and was designed to provide data for geostatistical evaluation of grade distribution applied to optimisation of drill spacing, and grade estimation confidence.

The Company reported results on 10th September 2020 further reinforcing the continuity of Total Rare Earth Oxide (**TREO**) grade and the presence of the geological features observed within the Project to date. Evaluation of this new data, with the existing resource drilling, indicates that a 200 metre x 200 metre drill hole spacing will provide adequate data density to potentially classify an Indicated Resource, which will be included in future resource updates. The 100 metre spaced drill program is illustrated in Figure 3.

Results reported above a cut-off grade of 300 ppm TREO-Ce₂O₃ were:

- RRMDD058 15.1 metres at 703 ppm TREO from 5.5 metres
- RRMDD059 9.6 metres at 1,026 ppm TREO from 7.9 metres
- RRMDD060 17.9 metres at 670ppm TREO from 7.5 metres
- RRMDD061 10.1 metres at 1,057ppm TREO from 6.6 metres
- RRMDD062 0.9 metres at 564 ppm TREO from 4.9 metres, and 12.0 metres at 929 ppm TREO from 10.5 metres
- RRMDD063 0.9 metres at 640 ppm TREO from 5.6 metres, and 1.8 metres at 1,239 ppm TREO from 10.9 metres, and 7.6 metres at 883 ppm TREO from 16.5 metres
- RRMDD064 6.0 metres at 867 ppm TREO from 4.5 metres, and 2.6 metres at 855 ppm TREO from 13.5 metres
- RRMDD065 9.9 metres at 1,188 ppm TREO from 3.5 metres
- RRMDD066 9.3 metres at 1,113 ppm TREO from 3.3 metres
- RRMDD067 11.7 metres at 1,017 ppm TREO from 4.5 metres
- RRMDD068 11.6 metres at 906 ppm TREO from 3.4 metres

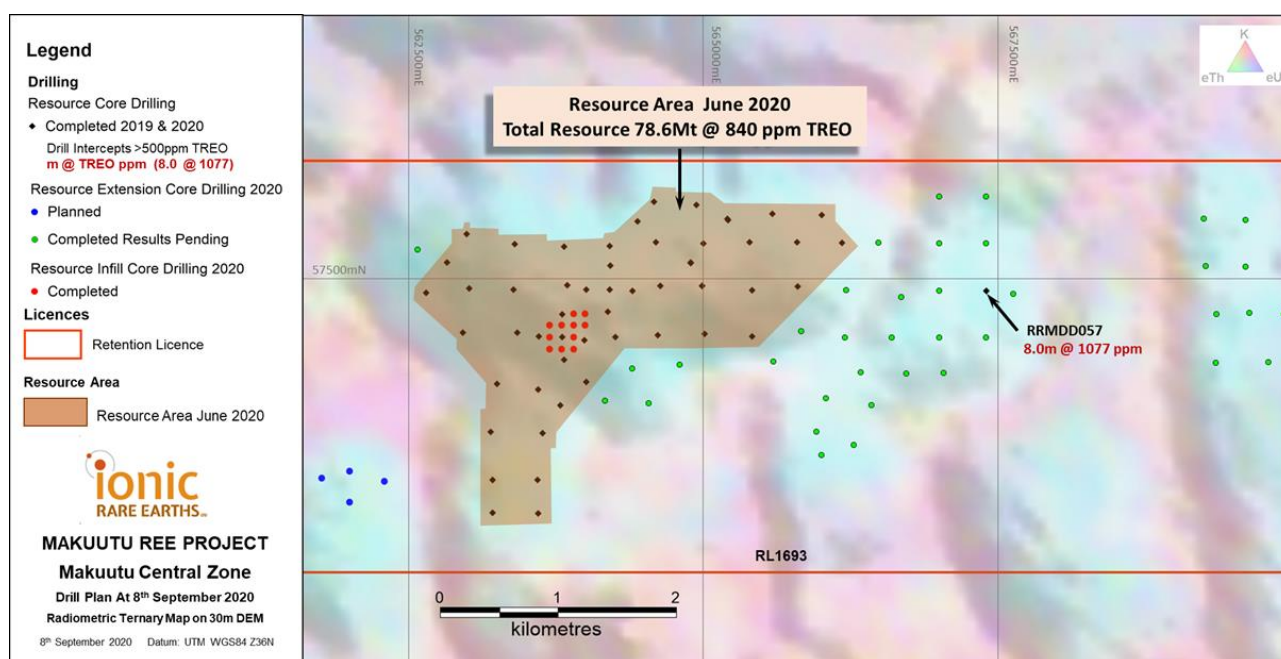


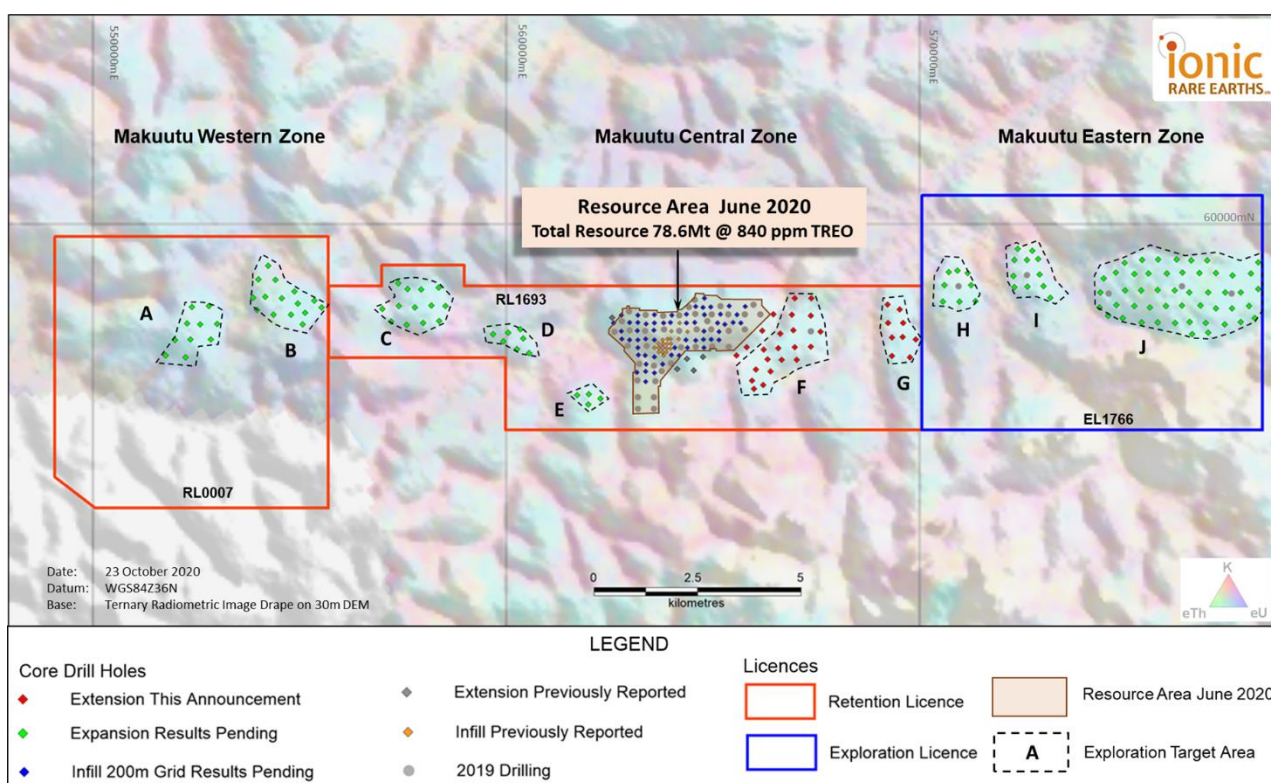
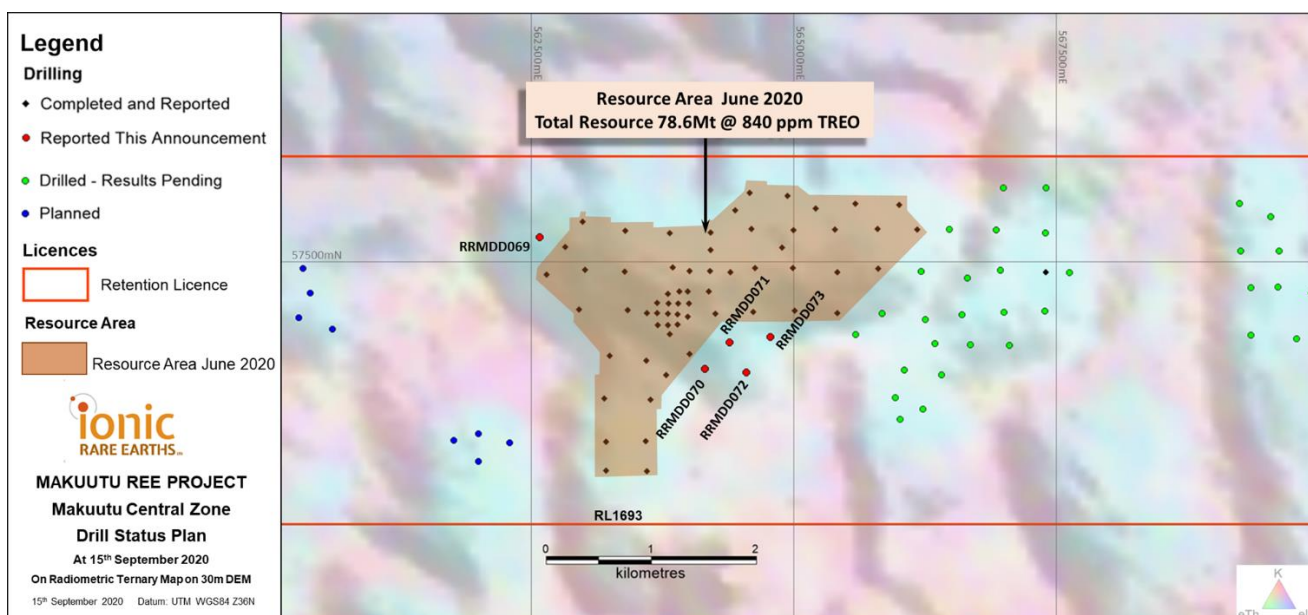
Figure 3: Completed Phase 2 drill program showing 100 metre spaced infill holes (red within the existing June 2020 Mineral Resource Estimate. Note all drilling is now completed.

The Company reported results on 18th September 2020 of the first 5 holes of the resource expansion program with all holes achieving clay intersections above the resource cut-off grade of 300 ppm TREO-Ce₂O₃. The drill holes were all located several hundred metres beyond the current resource boundary and will provide additional resource tonnes to the next update of the mineral resource estimate. The resource extension holes reported are illustrated in Figure 4.

Results above a cut-off grade of 300 ppm TREO-Ce₂O₃ are:

- RRMDD069 9.8 metres at 689 ppm TREO from 4.4 metres
- RRMDD070 5.3 metres at 971 ppm TREO from 3.9 metres
- RRMDD071 1.0 metres at 695 ppm TREO from 3.8 metres, and
0.9 metres at 523 ppm TREO from 11.1 metres, and
1.0 metres at 461 ppm TREO from 13.1 metres, and
7.9 metres at 704 ppm TREO from 15.9 metres
- RRMDD072 12.6 metres at 779 ppm TREO from 2.6 metres
- RRMDD073 10.0 metres 747 ppm TREO from 4.0 metres

Post the end of the quarter, the tranche two resource extension drill assay results including 32 drill holes was reported on 26th October 2020. These hole locations are also illustrated in Figure 4. The Phase 2 drill program in its entirety is illustrated in Figure 5, showing the drill hole locations relative to the Exploration Target (set out previously) across the 26 kilometre long mineralisation corridor. Tranches three (3), four (4) and five (5) have been received in Australia with Tranche three (3) results due. Further drill hole assay results are expected from now up to the end of December 2020 and are expected to support a Mineral Resource Estimate update planned in early Q1 2021.



METALLURGICAL TESTWORK

On 4th August 2020, the Company reported initial testwork results from the Makuutu Eastern Zone. The initial assessment on metallurgy of the Makuutu Eastern Zone (MEZ) was initiated on four samples to provide an early indication of metallurgical extraction potential. Test results were encouraging demonstrating showing a step change in extractions relative to the methods adopted for the 2019 variability testwork, again suggesting a potential material change in overall metallurgical extraction at Makuutu.

The key outcomes from these results are as follows:

- The average TREE-Ce recovery of the samples tested is 20% @ pH3.5, and 41% @ pH1, representing an average increase in 21%. The corresponding average recovery of the HREOs is 22% @ pH3.5 and 52% @ pH 1.
 - This demonstrated the majority of valuable HREOs are present in the ionic or colloidal form, which are readily recoverable using mild desorption/leaching conditions.
- The REO recoveries obtained here are consistent with;
 - Other globally significant ionic clay projects where Chinese government whitepapers have reported average REO extractions of 50%¹.
 - The results of metallurgical work undertaken on sample from the MCZ (previously reported to ASX on 26th May 2020).
- Larger-scale tests are anticipated to be undertaken in an ensuing field trials program in the next phase of the Project, where larger-scale testing is more practicable.
- Scandium extraction is favourable and has increased up to ~ 30% with the pH 1.0 conditions.
- Analysis of final liquors indicated an average acid consumption of 14 kg per tonne of dry ore tested.

Additionally, metallurgical optimisation testwork continues along with activities supporting the Makuutu Rare Earths Scoping Study which the company intends to complete in the December 2020 quarter.

MINISTERIAL VISIT TO MAKUUTU PROJECT AREA

On Friday 21st August 2020, Rwenzori Rare Metals Limited (“**Rwenzori**”), 100% owner of the Makuutu Rare Earths Project, and of which IonicRE owns 51% at present with option to increase to 60%, hosted a visit from the Hon. Sarah Opendi Achieng, Minister of State for Mineral Development and a technical team from the Ministry of Energy and Mineral Development (**MEMD**) and the Directorate of Geological Survey and Mines (**DGSM**). The visit was extremely well received, and consisted of additional delegations from, from the local Bugiri and Bugweri Districts, Natural Resources and Environmental Officers, Subcounty Leaders and key local stakeholders.

The Minister and delegation visited a drill site on EL 1766 (MEZ) where drilling work was taking place, followed by a visit to the sample processing station at Makuutu Subcounty. The visit provided a chance for wider Q&A, plus a presentation on the current project activities, discussions on project development, future

¹ Information Office of the State Council The People's Republic of China, Situation and Policies of China's Rare Earth Industry, June 2012.

work program requirements and overall project timelines. Feedback from the visit was unanimously supportive, and the company will now look to prepare to expedite in country activities once the completion of the scoping study and current drill program are completed.



Figure 6: Hon. Sarah Opendi Achieng, Minister of State for Mineral Development (centre) inspecting the drill core sample cutting station at Makuutu.

Further to this visit, a number of other local government and DGSM representatives have visited the Project area and feedback remains positive.

MAKUUTU RARE EARTHS PROJECT UPDATE

The Company has submitted a scoping report outlining the Terms of Reference on the Environmental and Social Impact Assessment (ESIA) Report the company is completing at Makuutu. The scoping report was lodged with the Ugandan National Environmental Management Authority (NEMA) and the Company is presently awaiting acceptance to advance to the next stage.

The Company has lodged its submission to the DGSM to support the renewal of the Retention Licence No 1693, which is pending renewal by 1st November 2020. The submission was prepared using the current Inferred and Indicated Mineral Resource Estimate outlined in Table 1.

Furthermore, the Company continues to advance discussions with global parties regarding the Makuutu Rare Earths Project, given its strategic importance as a potential low-cost source of critical and heavy rare earths.

INCREASING OWNERSHIP IN MAKUUTU

On 22nd September 2020, the Company reported that IonicRE had moved to a 46% ownership in Rwenzori Rare Metals Limited (“**Rwenzori**”), 100% owner of the Makuutu Rare Earths Project, by nature of an earn-in agreement. Subsequent to the end of the quarter, on 27th October 2020, the Company has reported that investment has met the 51% investment contribution milestone, and as such IonicRE has moved to 51% ownership and control of the Makuutu Rare Earths Project.

The Company has advised shareholders of Rwenzori that it intends to proceed to complete a bankable feasibility study and increase its ownership level to 60%.

CORPORATE

During the quarter, on 3 July 2020, the Company issued 312,500,000 shares at \$0.008 each to raise \$2,500,000. The shares were issued to professional and sophisticated investors with Canaccord Genuity (Australia) Limited and Sixty Two Capital Pty Ltd acting as joint lead managers.

The Company also closed a Share Purchase Plan (**SPP**) enabling shareholders to purchase shares in the Company at the same price as the shares that had been placed with sophisticated and professional investors. The SPP which sought to raise \$0.5 million closed over-subscribed on 22 July 2020 with valid applications for \$1.28 million received. The Company accepted applications totaling **\$1.0 million** with SPP applicants being scaled back to this level. As a result, the Company issued 125,000,036 new shares at \$0.008 each.

During the quarter the company expensed some \$994,000 on the exploration activities reported above.

Payments to related parties of the entity and their associates totaled \$75,000 and consisted of \$22,000 Director fees, \$11,000 in superannuation related to Director fees and \$42,000 Executive Service fees.

Table 1: Makuutu Resource above 300ppm TREO-Ce₂O₃ Cut-off Grade

Resource Classification	Tonnes (millions)	TREO (ppm)	TREO-Ce ₂ O ₃ (ppm)	LREO (ppm)	HREO (ppm)	CREO (ppm)
Indicated Resource	9.5	750	520	550	200	280
Inferred Resource	69.1	860	620	640	210	320
Total Resource	78.6	840	610	630	210	310

Rounding has been applied to 0.1Mt and 10ppm which may influence grade average calculations.

***** ENDS *****

Authorised for release by Brett Dickson, Company Secretary.

For enquiries, contact: Tim Harrison
Chief Executive Officer
+61 8 9481 2555

Competent Person Statements

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 23 June 2020 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.

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

IONIC RARE EARTHS LIMITED

ABN

84 083 646 477

Quarter ended ("current quarter")

30 SEPTEMBER 2020

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(994)	(994)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(65)	(65)
	(e) administration and corporate costs	(194)	(194)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	-	-
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(1,253)	(1,253)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	-	-

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	3,290	3,290
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	355	355
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(187)	(187)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other	-	-
3.10	Net cash from / (used in) financing activities	3,458	3,458

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	830	830
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,253)	(1,253)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	3,458	3,458
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	3,035	3,035

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	3,002	797
5.2	Call deposits	33	33
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	3,035	830

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	75
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at quarter end		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(1,253)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(1,253)
8.4 Cash and cash equivalents at quarter end (item 4.6)	3,035
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	3,035
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	2.42
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: N/A	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: N/A	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: N/A	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 30 October 2020

Authorised by: Brett Dickson – Company Secretary
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.