

RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH MPOSA HMS DEPOSIT

Assaying confirms widespread rare earth element mineralisation in clays beneath the Mposa heavy mineral sands deposit, with metallurgical test-work to assess the potential for ionic-adsorption (clay-hosted) rare earth deposits.

KEY POINTS

- **REE confirmed in basal clays** – assays from 200 Mineral Sands drilling samples have confirmed rare earth element (REE) mineralisation in clay intervals directly beneath the Mposa heavy mineral sands (HMS) deposit, returning total rare earth oxide (TREO) grades averaging 525 ppm.
- **Consistent, widespread grades** – 114 of 200 samples (57%) returned greater than 500 ppm TREO and 17 samples (8.5%) exceeded 750 ppm, with a peak grade of 987 ppm TREO in hole MPOSD509 — pointing to broadly consistent mineralisation across an approximately 8 km corridor.
- **Directly beneath HMS deposits** – the mineralised clays were sampled during regular HMS drilling and are derived from the HMS deposits’ Basal Clay interval.
- **Depth testing required** - Samples are collected from the top of a clay unit which is known to extend to depths of tens of metres, not yet systematically sampled.
- **Enriched in magnet rare earths** – the in-situ basket carries high-value magnet rare earths, with magnet rare earth oxides (Nd, Pr, Dy and Tb) averaging approximately 21% of TREO and **heavy rare earth** oxides approximately 19.6% of TREO. The average of neodymium-praseodymium (NdPr) oxide is 102 ppm for all samples.
- **Ionic-adsorption potential to be tested** – the rare earths are hosted in clay; whether they occur in a recoverable, ionic-adsorption clay (IAC) form — with low-cost leachability character — has not been established and will be assessed by metallurgical desorption test-work at ANSTO (Australian Nuclear Science and Technology Organisation) in Sydney.
- **A stacked critical-minerals opportunity** – the REE-bearing clay horizon sits immediately beneath the Mposa HMS deposit, co-located on the Company's contiguous licence and raising the potential for heavy mineral sands and rare earths to be drawn from a single mine site.



OVERVIEW

Chilwa Minerals Limited (ASX:CHW) (Chilwa or the Company) is pleased to report that assay results have confirmed rare earth element (REE) mineralisation hosted in clays directly beneath its Mposa heavy mineral sands (HMS) deposit in southern Malawi.

Normal HMS sonic drilling at Mposa required drilling 2m of a 'Basal Clay', which marks the limit of prospectivity for mineral sands development. The samples tested are taken from throughout the approximately 8 km corridor at the base of the Mposa HMS horizon. Total rare earth oxide (TREO) grades averaged **525 ppm** and ranged up to **987 ppm**, with **114 of the 200 samples (57%) returning more than 500 ppm TREO**.

The results define a near-surface, clay-hosted REE system. Whether the rare earths are present in a recoverable, ionic-adsorption clay (IAC) form — the low-cost, leachable deposit style that supplies much of the world's heavy and magnet rare earths — has not yet been established and will be assessed by metallurgical (ammonium-sulfate desorption) test-work. Critically, this REE-bearing horizon sits immediately beneath the Company's established Mposa heavy mineral sands deposit, raising the prospect of a dual-commodity system with its benefits in shared infrastructure, permitting, capital costs, etc.

Material from the intervals sampled is now being prepared for analysis to determine the recoverable, ionic-adsorbed proportion of the contained REE which will be assessed through metallurgical (ammonium-sulfate desorption) test-work.

Chilwa Minerals' Managing Director, Cadell Buss, commented:

"These are exciting results for Chilwa. We set out to test whether the clays beneath our Mposa mineral sands deposit carried rare earths, and the assays have come back confirming widespread REE mineralisation — averaging 525 ppm TREO and consistently above 500 ppm across an eight-kilometre corridor.

"Clearly there is a lot of work ahead of us, notably leachability testwork, however the results are especially compelling in terms of co-location with our mineral sands deposits. It would essentially be a dual-commodity mine — with heavy mineral sands at surface and rare earths in the clays beneath.

"The basket is encouraging too, with the valuable magnet rare earths — neodymium, praseodymium, dysprosium and terbium — making up around a fifth of the total. The real prize would be if these rare earths prove to be held in an ionic-adsorption clay form, the style behind some of the world's lowest-cost rare earth operations — economics in these deposits is an interplay of leachability and REE value, ie recoverable Heavy Rare Earth component. Measuring how much of the contained REE is recoverable by simple leaching is the key question our upcoming test-work is designed to answer.

"This is a reconnaissance result, not yet a Mineral Resource, but it opens yet another genuine new front for Chilwa. We will move quickly through desorption test-work to determine whether Mposa as well as the other HMS deposits on the license, notably the substantially larger Mpyupyu deposits, can host a clay-hosted rare earth opportunity alongside (ie underneath), its mineral sands endowment."

GEOLOGICAL CONTEXT

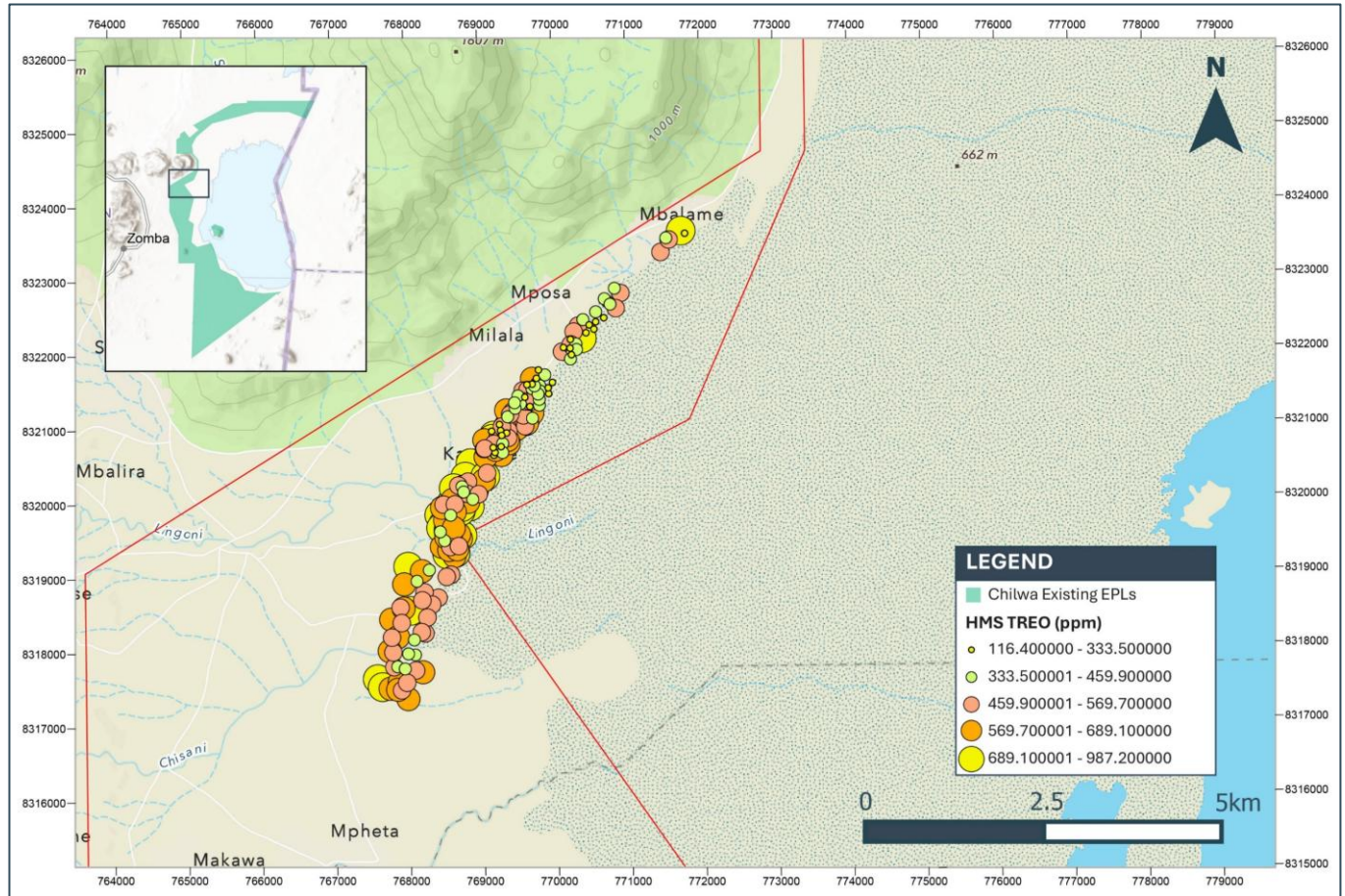


Figure 1: Distribution of TREO in clay samples at the base of the Mposa HMS deposit

Rare earth elements (REE) at Mposa are hosted within clay on top of which heavy mineral sands deposits are preserved, in the case of Mposa, as a strandline. The Company is exploring the potential for these clays to host an ionic-adsorption clay (IAC) style of mineralisation. IAC deposits form where prolonged, deep tropical weathering of REE-bearing rocks releases rare earth elements which are then adsorbed onto the surfaces of clay minerals, principally kaolinite and halloysite; such clay-hosted accumulations can be residual, developing in place above their parent rock, or transported and redeposited as IAC deposits. The spatial variability in TREO grade evident in Figure 1 is considered permissive of either in-situ (residual) deposit style or transported/redeposited clay deposits.

IAC deposits are the world's principal source of heavy and magnet rare earths and are valued because, where the REE are present in ionic-adsorbed form, a portion can be recovered by simple ambient-temperature leaching with a salt solution, avoiding the energy-intensive cracking and roasting required to process hard-rock or mineral-sand rare earth concentrates.

Assays returned total rare earth oxide (TREO) grades ranging from 116 ppm to 987 ppm, averaging 525 ppm (median 528 ppm). Mineralisation is widespread along the corridor, with 114 of the 200 samples (57%) exceeding 500 ppm TREO and 17 samples (8.5%) exceeding 750 ppm TREO. Selected significant sample results are presented in Table 1.

RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH MPOSA HMS DEPOSIT



Table 1: Selected significant rare earth results from clay interval beneath the Mposa HMS deposit. Results are discrete, one-sample-per-hole assays (a single sample of approximately one metre per hole) and do not represent continuous down-hole intervals.

Sample ID	Hole ID	Depth from (m)	Depth to (m)	TREO (ppm)	LREO (ppm)	HREO (ppm)	NdPr oxide (ppm)	HREO % of TREO
MPO104781	MPOSD509	9.2	10	987	865	122	163	12.4
MPO104722	MPOSD1038	8	9	862	728	134	185	15.6
MPO104906	MPOSD930	8	9	843	723	120	200	14.2
MPO104853	MPOSD774	9	10	825	659	166	181	20.1
MPO104863	MPOSD797	6	7	817	670	147	154	18
MPO104926	MPOSD969	12	13	805	703	101	211	12.6
MPO104799	MPOSD563	11	12	804	672	132	139	16.4
MPO104864	MPOSD805	8	9	794	640	154	148	19.4
MPO104871	MPOSD833	9	10	794	639	155	165	19.5
MPO104817	MPOSD600	7	8	779	674	104	166	13.4
MPO104801	MPOSD566	10.4	11	779	647	131	152	16.9
MPO104769	MPOSD398	4	5	773	614	159	147	20.6
MPO104739	MPOSD286	4	5	762	594	168	139	22
MPO104796	MPOSD557	9	10	760	642	118	140	15.5
MPO104851	MPOSD765	8.8	10	760	611	149	160	19.6

Reported element concentrations were converted to their oxide equivalents and summed to derive total rare earth oxide (TREO); light (LREO) and heavy (HREO) rare earth oxide sub-totals, and the magnet rare earth oxide content (neodymium, praseodymium, dysprosium and terbium), were calculated on the same basis.

Across the dataset, heavy rare earth oxides (HREO) average approximately 19.6% of TREO, and the high-value magnet rare earth oxides — neodymium, praseodymium, dysprosium and terbium — average approximately 21% of TREO, equating to an average of around 102 ppm neodymium-praseodymium (NdPr) oxide. A heavy and magnet rare earth proportion of this order is characteristic of clay-hosted systems and is significant because these elements carry the majority of rare earth basket value.

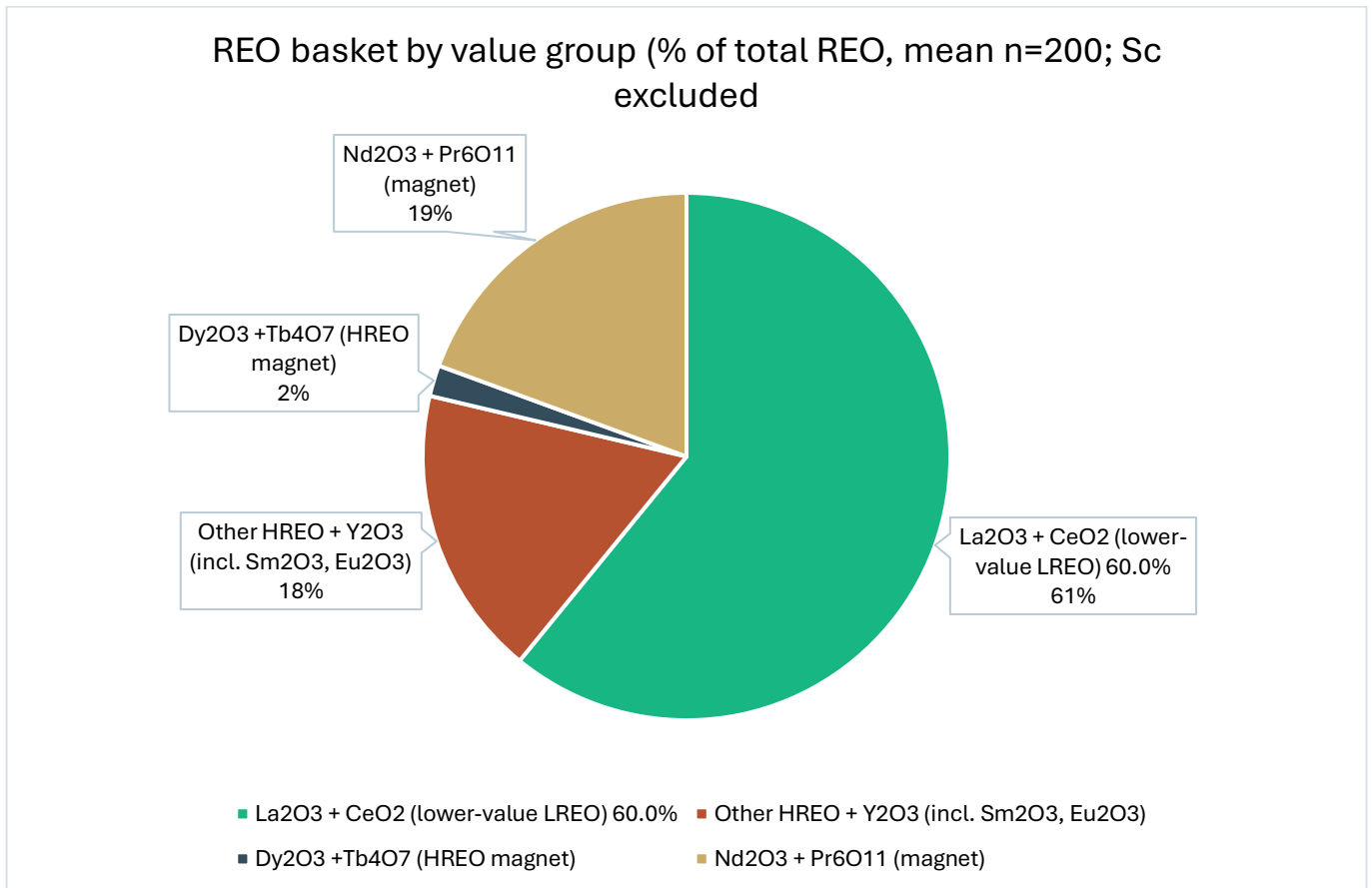


Figure 2 Rare earth basket at Mposa, shown as each value group's share of total REO (mean of 200 clay samples; scandium excluded). The magnet rare earths neodymium-praseodymium (NdPr) and dysprosium-terbium (Dy+Tb) together comprise approximately 21% of the basket.

No metallurgical test-work has yet been undertaken, so the proportion of the contained rare earths present in a recoverable, ionic-adsorbed form is unknown. The available geochemistry is not in itself diagnostic of an ionic-adsorption clay style: cerium anomalies are weak and variable, with Ce/Ce* clustering around unity (median approximately 1.0) and no pronounced or systematic anomaly across the dataset. Confirmation of an ionic-adsorption clay style, and of recoverability, will require ammonium-sulfate desorption (leach) test-work; until then, no metallurgical recovery or IAC classification is assumed or implied.

UPCOMING PROGRAMME

- Initial metallurgical test-work — ammonium-sulfate desorption (leach) testing on representative clay sample composites — will be undertaken at ANSTO Sydney to determine the proportion of the contained rare earths recoverable in ionic-adsorbed form, the key value driver for a clay-hosted system.
- Further confirmatory ICP-MS, before and after leach test work at ANSTO is also included in scope.
- Depth of deposit is a key unknown – historic drilling has determined the clay deposits in the area extend for tens of metres.

RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH MPOSA HMS DEPOSIT



- Drilling will also be planned to depth at other of the HMS deposits on the license notably Mpyupyu, also underlain by clays, and having an area of 15km² versus Mposa 5.5km².

ABOUT CHILWA MINERALS

Chilwa Minerals Limited (ASX: CHW) is a Southern Malawi-focused critical minerals explorer advancing four concurrent programmes within its Lake Chilwa licence: a **niobium-REE-tantalum-gallium discovery at the Nakombe alkaline intrusive target; carbonatite-hosted REE exploration across the broader licence package; a Heavy Mineral Sands project in development** along the northern and western shores of Lake Chilwa; and an emerging **ionic clay REE programme** targeting leachable rare earth elements within the weathering profile of the Chilwa Alkaline Complex. The Company is uniquely positioned with multiple critical mineral exposures within a single contiguous licence area in one of Africa's most prospective underexplored alkaline provinces.

Nakombe Niobium-REE Discovery — an alkaline syenite intrusion hosting significant niobium mineralisation with co-product tantalum and gallium, with an Exploration Target announced to the ASX on 15 June 2026. Pre-resource diamond drilling is ongoing with three rigs operational, targeting geometry and grade continuity ahead of a maiden Resource Estimate. QEMSCAN and metallurgical test work are planned following completion of drilling. The Nakombe Exploration Target (**34 to 51Mt @ 0.14 to 0.22% Nb₂O₅, 0.15 to 0.23% TREO, 75 to 120ppm Tantalum and 30 to 50ppm Gallium**) is conceptual in nature; there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain whether further exploration will result in the estimation of a Mineral Resource.

Carbonatite-hosted REE Exploration — systematic exploration across a package of 47 geophysics anomalies identified in 2024 within the Chilwa Alkaline Province, one of the largest alkaline igneous provinces in sub-Saharan Africa, targeting carbonatite and alkaline syenite-hosted rare earth element mineralisation across multiple ranked targets within the licence.

Chilwa Heavy Mineral Sands (HMS) — a JORC 2012-compliant Mineral Resource covering the Mposa, Mpyupyu Dune and Mpyupyu Flat deposits on the northern shore of Lake Chilwa was announced on 7 December 2025. A revised Mineral Resource Estimate for the Mpyupyu deposits was announced on the ASX on 19 June 2026 with total resources at a 1% THM cut-off more than doubled to 109.6 Mt.

Ionic Clay REE Programme — an early-stage programme targeting leachable rare earth elements adsorbed onto clay minerals within the weathering profile developed over REE-bearing alkaline and carbonatite source rocks of the Chilwa Alkaline Complex. The ionic clay REE style of mineralisation — characterised by low-cost extractability using mild ammonium sulfate leaching without the need for energy-intensive processing — represents a potentially significant additional value driver within the Company's existing licence footprint.

COMPLIANCE STATEMENT

The information in this announcement that relates to exploration results comprises new information reported for the first time and is based on, and fairly represents, information compiled by the Company's Competent Person (see Competent Person Statement below). Insofar as this announcement refers to the Mposa Heavy Mineral Sands Mineral Resource, that Mineral Resource was first reported by the Company in its ASX announcement dated 7 December 2025 and was prepared and disclosed under the JORC Code (2012 Edition). The Company confirms that it is not aware of any new information or data that materially affects that information, and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed.

COMPETENT PERSON STATEMENT

The information in this report that relates to the Exploration Results and Exploration Target ranges is based on, and fairly represents, information and supporting documentation prepared by Mr Geoff Chapman who is a Fellow of the AusIMM. Mr Chapman has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Chapman confirms there is no potential for a conflict of interest in acting as a Competent Person and has provided his prior written consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

FORWARD-LOOKING STATEMENTS

This announcement may contain some references to forecasts, estimates, assumptions and other forward-looking statements. Although Chilwa believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved where matters lay beyond the control of Chilwa and its Officers. Forward-looking statements may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein.

-ENDS-

This Announcement has been authorised by the Managing Director.

For further information contact:

Cadell Buss

Founder and Managing Director

cbuss@chilwaminerals.com.au

APPENDIX 1

Table 2: ICP-MS results for the 200 basal clay samples analysed for REE, Ta, Nb and Ga content.

Sample ID	TREO	CeO2	La2O3	Nd2O3	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	Lu2O3	Pr6O11	Sc2O3	Sm2O3	Tb4O7	ThO2	Tm2O3	U3O8	Y2O3	Yb2O3	Ga	Ga2O3	Nb	Nb2O5	Ta	Ta2O5
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MPO104701	389.1	172.7	76.6	56.6	5.3	3.1	3.3	7.6	1.1	0.4	17.5	10.0	9.1	0.9	9.5	0.4	2.1	31.9	2.6	24.8	33.3	89.6	128.2	6.0	7.3
MPO104704	207.6	73.0	54.0	31.1	3.4	2.1	2.1	4.0	0.7	0.3	10.2	9.7	4.8	0.5	10.5	0.3	2.1	19.2	2.0	24.2	32.5	88.7	126.9	5.7	7.0
MPO104707	416.4	235.9	62.1	44.4	5.1	3.2	2.7	7.0	1.0	0.6	13.9	8.0	7.3	0.8	15.4	0.5	3.3	28.9	3.1	23.7	31.8	91.6	131.1	6.1	7.5
MPO104708	594.8	424.4	61.8	41.0	4.4	2.8	2.5	7.6	0.9	0.5	13.1	9.4	6.6	0.7	13.4	0.4	2.7	25.3	2.6	25.0	33.7	113.8	162.8	11.0	13.4
MPO104709	360.3	135.0	79.8	57.1	5.9	3.5	2.9	7.3	1.2	0.5	18.0	11.0	8.7	0.9	12.8	0.5	2.8	36.1	3.1	25.0	33.6	101.3	145.0	6.6	8.1
MPO104711	362.6	197.3	57.5	39.7	4.5	3.0	2.3	5.9	0.9	0.5	12.6	8.0	6.2	0.7	12.7	0.4	3.4	27.9	3.0	21.8	29.3	102.7	147.0	6.6	8.0
MPO104712	116.4	41.0	29.1	16.2	1.9	1.4	1.5	2.2	0.4	0.3	5.5	6.0	2.6	0.3	9.7	0.2	2.0	12.5	1.4	19.6	26.3	86.0	123.0	5.8	7.1
MPO104713	389.1	155.3	86.8	56.1	6.1	3.7	2.8	7.7	1.2	0.6	17.9	11.8	8.4	1.0	14.9	0.6	3.1	37.7	3.2	29.4	39.5	115.2	164.7	7.4	9.0
MPO104714	551.7	236.4	105.3	86.7	8.5	4.6	4.3	11.4	1.6	0.6	26.6	11.7	13.5	1.3	13.5	0.7	2.4	46.5	3.9	28.9	38.8	102.3	146.4	6.5	7.9
MPO104716	272.5	107.1	54.6	39.6	4.7	3.2	1.8	5.5	1.0	0.5	12.2	8.2	6.3	0.7	14.9	0.5	2.8	31.8	3.0	20.6	27.7	79.8	114.1	5.5	6.7
MPO104718	439.6	161.8	95.4	75.9	7.0	4.0	3.8	9.4	1.3	0.6	23.3	9.5	11.6	1.1	12.4	0.6	2.6	40.1	3.5	25.5	34.3	90.9	130.0	6.1	7.5
MPO104719	391.6	168.0	77.3	60.7	5.5	3.2	3.4	7.7	1.1	0.5	18.7	10.4	9.3	0.9	12.0	0.5	2.7	31.8	2.9	25.9	34.8	92.6	132.5	6.4	7.8
MPO104721	420.5	158.8	83.6	60.9	8.4	5.6	2.4	9.3	1.8	0.8	17.6	17.1	10.9	1.2	17.5	0.9	3.5	53.2	5.0	27.4	36.9	98.5	140.8	6.2	7.6
MPO104722	862.0	340.2	172.7	143.9	14.0	7.8	6.1	19.2	2.8	1.0	40.8	16.5	24.0	2.3	16.5	1.1	3.4	79.7	6.3	31.3	42.1	117.0	167.4	7.1	8.7
MPO104723	658.9	247.1	130.2	94.2	11.8	7.9	4.6	14.6	2.7	1.1	26.3	13.7	15.5	1.7	15.0	1.1	3.5	93.8	6.4	25.9	34.8	110.5	158.0	7.0	8.5
MPO104724	366.9	139.3	90.9	54.3	5.2	3.4	2.7	6.9	1.1	0.5	16.6	11.6	8.4	0.8	12.5	0.5	2.6	33.2	3.1	28.7	38.6	101.7	145.5	6.0	7.4
MPO104725	599.6	268.6	101.6	85.6	9.8	6.6	2.7	12.3	2.1	1.0	24.3	16.9	15.0	1.5	22.2	1.0	4.1	61.2	6.1	24.4	32.8	105.5	150.9	6.8	8.3
MPO104732	548.1	235.6	103.1	77.9	9.2	5.6	3.2	11.4	1.9	0.8	22.3	23.0	13.5	1.4	14.0	0.8	3.2	56.7	4.7	27.7	37.2	89.0	127.3	5.5	6.7
MPO104734	579.3	228.5	111.9	88.7	10.4	6.4	3.3	13.0	2.2	0.9	24.8	23.1	15.5	1.6	17.8	0.9	3.6	65.9	5.3	27.1	36.4	89.8	128.5	5.4	6.6
MPO104736	613.6	240.3	126.1	97.8	10.5	6.3	3.8	13.1	2.2	0.8	27.6	28.9	16.4	1.6	19.8	0.9	3.9	60.9	5.2	30.9	41.5	108.5	155.3	6.4	7.8
MPO104738	637.7	246.7	118.3	96.9	12.4	7.8	3.3	14.7	2.7	1.0	26.8	28.8	17.6	1.9	19.3	1.1	3.9	80.1	6.5	30.5	41.0	88.2	126.1	5.6	6.9
MPO104739	762.4	293.8	138.3	108.4	15.1	9.8	4.4	17.9	3.3	1.3	30.2	24.3	19.3	2.3	15.6	1.4	3.6	108.7	8.0	29.5	39.7	91.8	131.3	5.8	7.1
MPO104741	584.2	237.6	110.4	90.6	10.1	6.3	3.4	13.0	2.1	0.8	25.1	23.1	15.4	1.6	18.0	0.9	3.5	61.8	5.1	27.3	36.7	92.9	132.9	6.0	7.3
MPO104742	480.8	199.3	94.4	70.4	8.1	5.3	2.8	10.0	1.8	0.8	20.3	24.1	12.3	1.3	18.4	0.8	3.5	48.8	4.6	27.8	37.4	110.5	158.0	6.9	8.4
MPO104743	521.8	213.1	97.6	80.3	9.2	5.7	3.1	11.4	2.0	0.8	22.6	20.5	14.0	1.4	18.7	0.8	3.5	55.0	4.8	23.8	32.0	88.7	126.8	5.7	7.0
MPO104744	450.9	197.4	77.6	62.6	7.9	5.1	2.5	9.4	1.7	0.7	17.7	18.6	11.2	1.2	12.3	0.7	2.9	50.9	4.3	21.3	28.7	65.1	93.1	4.1	5.1
MPO104745	391.3	142.5	73.5	59.3	8.1	5.5	2.1	9.2	1.8	0.9	16.8	16.0	10.7	1.2	14.3	0.8	3.0	53.9	5.0	23.3	31.3	71.7	102.6	4.6	5.6
MPO104746	518.3	189.2	105.6	85.3	9.7	6.0	3.1	12.2	2.0	0.8	23.7	21.1	14.5	1.5	15.4	0.9	3.6	58.8	5.0	25.1	33.7	85.7	122.6	7.2	8.8
MPO104747	619.7	249.9	114.2	98.6	11.2	6.7	4.2	14.2	2.3	0.9	27.9	22.3	17.7	1.8	16.1	0.9	3.3	63.8	5.5	26.7	35.9	86.8	124.2	5.6	6.9
MPO104748	589.8	228.0	121.1	93.7	10.3	6.2	3.5	13.0	2.1	0.8	26.6	24.1	16.0	1.6	18.9	0.9	3.7	60.8	5.3	29.6	39.7	104.1	148.9	6.6	8.0
MPO104749	487.7	191.4	94.2	75.9	8.9	5.5	3.0	11.2	1.9	0.8	21.2	20.8	13.6	1.4	17.2	0.8	3.8	53.2	4.7	26.4	35.4	85.3	122.1	5.4	6.6
MPO104751	347.4	125.6	65.7	53.2	7.1	4.9	2.0	7.9	1.6	0.7	14.8	18.0	9.7	1.1	15.4	0.8	3.3	48.0	4.4	20.9	28.1	77.9	111.4	4.9	6.0
MPO104753	463.6	227.7	60.3	54.8	8.4	6.6	1.9	9.0	2.0	1.1	15.1	14.2	10.4	1.2	22.0	1.1	4.9	57.1	6.8	16.6	22.4	82.8	118.4	5.2	6.4
MPO104754	590.6	226.8	114.9	94.3	10.9	6.7	3.8	13.3	2.3	0.9	26.6	24.3	16.4	1.7	14.1	1.0	3.1	65.3	5.7	28.2	37.9	85.0	121.5	5.3	6.5
MPO104756	429.2	169.5	91.0	64.5	7.3	4.7	2.5	8.8	1.6	0.7	19.0	25.7	11.0	1.1	14.5	0.7	3.0	42.6	4.2	28.1	37.7	85.9	122.8	5.4	6.6
MPO104758	516.7	227.6	90.8	74.2	8.4	5.4	2.7	11.0	1.8	0.8	20.9	17.1	12.9	1.3	21.0	0.8	3.7	53.5	4.8	21.8	29.4	93.4	133.6	5.9	7.2
MPO104759	487.5	196.4	97.1	77.8	7.9	4.8	3.1	10.5	1.6	0.7	22.2	23.1	13.6	1.3	16.2	0.7	3.4	45.8	4.0	27.6	37.1	82.1	117.4	5.2	6.3
MPO104761	552.2	215.7	106.5	87.0	10.3	6.3	3.5	12.9	2.1	0.9	24.2	24.4	15.5	1.6	15.3	0.9	3.7	59.5	5.3	27.7	37.3	87.7	125.4	5.6	6.8
MPO104762	553.7	213.2	114.4	89.1	9.6	5.8	3.0	12.5	2.0	0.8	25.6	23.3	16.2	1.5	31.6	0.8	4.1	54.1	5.0	29.5	39.7	97.7	139.7	6.2	7.6
MPO104763	599.2	216.8	118.7	100.5	11.2	6.9	3.8	14.0	2.4	1.0	27.9	23.0	17.4	1.7	20.5	1.0	4.0	70.1	5.7	27.9	37.5	106.7	152.7	7.2	8.8
MPO104764	710.4	270.7	134.7	112.0	13.7	8.4	4.7	16.7	2.9	1.1	31.2	29.4	20.1	2.1	17.1	1.2	3.6	83.8	6.9	35.5	47.8	88.8	127.0	5.9	7.2

RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH MPOSA HMS DEPOSIT



Sample ID	TREO	CeO2	La2O3	Nd2O3	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	Lu2O3	Pr6O11	Sc2O3	Sm2O3	Tb4O7	ThO2	Tm2O3	U3O8	Y2O3	Yb2O3	Ga	Ga2O3	Nb	Nb2O5	Ta	Ta2O5
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MPO104765	512.8	208.0	98.2	88.1	7.9	4.6	3.4	11.3	1.6	0.6	24.6	14.4	14.8	1.3	13.9	0.7	2.9	43.8	4.0	21.5	28.9	85.8	122.8	5.9	7.2
MPO104766	467.1	187.4	89.6	73.2	8.0	4.8	2.7	10.6	1.7	0.7	20.8	18.4	12.9	1.3	18.2	0.7	3.1	48.6	4.2	22.7	30.5	75.7	108.4	5.3	6.4
MPO104772	349.9	133.5	70.4	53.5	6.2	4.0	1.9	7.7	1.3	0.6	14.8	16.5	9.0	0.9	14.1	0.6	2.8	41.9	3.4	20.0	26.9	55.7	79.7	3.6	4.4
MPO104773	513.4	184.4	118.7	84.8	8.6	5.1	3.3	10.7	1.7	0.7	24.8	28.7	14.0	1.3	17.8	0.7	3.4	50.1	4.3	31.8	42.7	99.2	142.0	6.3	7.8
MPO104774	560.6	220.3	114.9	87.8	9.8	5.7	3.4	12.3	2.0	0.8	25.0	25.7	15.2	1.5	18.3	0.8	3.7	56.3	4.9	33.5	45.0	97.4	139.3	6.2	7.6
MPO104783	627.3	243.7	124.0	93.7	10.9	7.1	3.6	13.2	2.4	1.0	26.9	23.4	15.7	1.6	20.2	1.0	3.8	76.3	6.1	28.1	37.7	120.9	172.9	7.5	9.1
MPO104784	427.0	181.7	78.4	63.4	7.1	4.4	2.6	9.2	1.5	0.6	17.8	15.1	11.2	1.1	14.2	0.6	3.0	43.7	3.8	20.9	28.1	73.7	105.4	4.9	5.9
MPO104791	758.7	325.7	139.7	112.5	12.5	7.4	4.7	16.1	2.6	1.0	31.9	21.8	19.5	2.0	20.5	1.1	3.7	75.9	6.1	29.1	39.1	116.7	166.9	7.2	8.7
MPO104792	740.7	312.2	135.4	116.1	12.7	7.4	4.7	16.5	2.6	0.9	31.8	22.6	20.0	2.0	18.8	1.0	3.8	71.4	6.0	27.5	36.9	110.2	157.7	7.2	8.8
MPO104794	734.0	309.9	137.9	116.5	12.2	6.9	4.7	16.4	2.4	0.9	32.3	22.6	20.1	1.9	20.9	1.0	3.8	65.5	5.5	30.4	40.8	119.2	170.6	7.6	9.3
MPO104796	760.3	348.9	128.8	109.8	12.3	7.2	4.7	16.0	2.5	1.0	30.6	17.6	19.3	1.9	19.1	1.0	3.9	70.2	6.0	27.5	37.0	100.5	143.8	6.2	7.6
MPO104797	689.1	235.2	138.6	113.2	13.5	8.6	4.5	16.2	2.9	1.1	31.5	24.9	19.4	2.1	19.3	1.2	3.8	94.1	6.9	29.4	39.6	96.1	137.5	5.9	7.2
MPO104798	576.0	226.9	118.5	86.5	9.9	6.3	3.5	12.1	2.1	0.9	25.0	22.0	14.8	1.5	20.0	0.9	4.1	61.7	5.4	29.6	39.8	114.1	163.2	7.2	8.8
MPO104801	778.6	326.3	146.7	118.2	12.2	8.8	2.4	16.1	2.7	1.5	33.6	16.2	20.0	1.9	55.7	1.4	6.9	78.2	8.6	19.9	26.8	137.4	196.5	8.5	10.3
MPO104802	597.7	235.8	118.9	96.4	10.0	6.1	3.7	13.1	2.1	0.9	27.1	20.1	16.5	1.6	21.9	0.9	3.8	59.6	5.1	26.6	35.7	107.5	153.8	6.5	8.0
MPO104807	565.8	217.0	113.8	87.7	10.5	6.7	2.9	12.5	2.2	1.0	24.8	22.4	15.6	1.6	29.9	1.0	4.7	62.8	6.0	30.4	40.9	109.6	156.8	7.5	9.2
MPO104808	713.9	305.6	138.5	108.9	11.1	6.5	4.4	14.8	2.3	0.9	31.0	22.3	18.4	1.8	19.8	0.9	3.9	63.1	5.4	29.7	39.9	114.5	163.8	7.2	8.7
MPO104811	519.8	207.2	113.8	75.2	8.5	5.3	3.1	10.7	1.8	0.8	22.7	19.9	12.9	1.3	17.0	0.8	3.4	51.2	4.7	30.0	40.4	115.8	165.6	7.2	8.8
MPO104813	598.0	244.7	117.7	89.5	9.7	6.2	3.5	12.8	2.1	0.9	26.1	15.5	15.6	1.6	22.7	0.9	4.6	60.9	5.6	24.7	33.2	122.9	175.8	7.8	9.5
MPO104814	712.9	290.2	154.1	109.1	10.7	6.1	4.8	15.0	2.2	0.8	32.1	18.3	18.4	1.8	16.9	0.9	3.4	62.1	4.9	30.2	40.6	124.1	177.6	7.7	9.4
MPO104816	667.2	269.1	144.2	102.0	10.1	5.9	4.3	14.1	2.1	0.8	30.2	16.9	17.6	1.7	19.0	0.8	3.5	59.5	4.9	30.0	40.4	121.7	174.1	7.9	9.7
MPO104819	655.0	269.4	127.0	92.5	11.3	7.3	4.1	14.3	2.4	1.0	26.9	14.8	15.9	1.7	17.0	1.1	4.6	74.0	6.2	24.4	32.8	102.8	147.0	5.9	7.3
MPO104822	402.3	165.7	77.7	57.6	7.1	4.6	2.0	8.4	1.5	0.7	16.9	12.7	10.3	1.1	13.0	0.7	3.1	43.7	4.2	22.4	30.1	72.4	103.6	5.2	6.3
MPO104823	713.0	275.5	151.4	111.3	12.0	7.3	3.9	15.5	2.5	1.0	32.6	21.3	19.5	1.9	20.5	1.0	4.3	71.5	6.1	30.4	40.9	121.0	173.1	7.3	8.9
MPO104824	396.6	148.8	84.7	66.0	6.9	2.8	2.7	9.0	1.3	0.6	19.6	14.5	12.2	1.3	25.3	0.6	2.4	36.3	3.9	26.1	35.1	67.8	96.9	3.8	4.6
MPO104826	524.8	202.7	106.1	79.4	9.2	4.3	2.8	11.1	2.0	0.9	24.2	15.3	13.6	1.7	21.7	1.0	4.6	59.6	6.0	27.0	36.3	95.4	136.4	6.3	7.6
MPO104827	421.2	170.1	81.2	59.2	7.8	3.8	1.8	8.7	1.7	0.9	17.9	11.4	10.4	1.4	20.4	0.9	4.7	49.8	5.6	24.8	33.3	87.0	124.4	6.2	7.5
MPO104828	492.5	190.1	100.1	71.5	9.4	4.1	3.2	11.3	1.9	0.9	21.4	20.5	13.2	1.7	24.5	0.9	5.1	56.8	5.8	28.7	38.6	110.3	157.8	6.9	8.4
MPO104842	275.7	99.3	67.8	41.3	4.6	2.1	2.5	5.6	1.0	0.5	13.0	10.9	7.0	0.9	15.8	0.5	3.3	26.5	3.1	27.5	36.9	91.0	130.1	6.1	7.5
MPO104843	472.1	182.3	93.3	68.1	9.2	4.2	2.7	10.6	1.9	0.9	20.0	14.2	12.1	1.6	19.3	0.9	4.5	58.2	5.9	23.7	31.9	84.2	120.5	5.7	6.9
MPO104846	361.5	140.8	68.9	48.7	7.3	3.5	1.9	7.9	1.6	0.8	15.1	11.4	9.0	1.2	18.7	0.8	4.1	48.6	5.2	22.2	29.9	76.7	109.7	5.4	6.6
MPO104863	816.5	326.7	163.0	119.6	14.7	6.1	4.9	18.5	3.0	1.2	34.7	23.6	20.9	2.7	21.8	1.2	4.7	91.7	7.7	32.9	44.3	100.9	144.3	6.6	8.0
MPO104864	794.3	309.1	157.3	114.2	15.4	6.6	5.0	18.2	3.1	1.3	34.1	26.2	20.1	2.8	21.7	1.4	4.6	97.3	8.5	34.7	46.7	104.4	149.3	6.6	8.0
MPO104868	706.9	257.9	140.3	108.1	14.5	6.4	4.3	16.8	3.0	1.3	31.4	15.8	19.4	2.6	25.2	1.4	4.4	91.0	8.4	29.1	39.1	119.6	171.1	7.5	9.2
MPO104873	527.8	294.1	82.6	56.3	6.4	3.0	3.2	8.7	1.4	0.7	17.2	9.9	9.7	1.2	17.0	0.7	4.2	38.1	4.5	21.4	28.7	109.1	156.0	7.5	9.2
MPO104874	667.3	265.0	137.7	97.2	11.7	4.8	3.9	14.8	2.4	0.9	29.6	23.3	17.2	2.2	24.2	1.0	4.9	72.6	6.3	34.5	46.4	109.4	156.5	7.3	8.9
MPO104876	710.8	264.2	146.7	102.5	13.6	5.8	4.4	16.2	2.8	1.1	30.5	23.5	18.4	2.5	26.7	1.2	5.1	93.7	7.3	36.3	48.9	115.7	165.6	7.9	9.6
MPO104877	493.1	209.6	107.0	68.6	7.6	3.2	3.9	9.4	1.5	0.7	21.7	12.7	11.6	1.4	16.4	0.7	3.6	41.7	4.6	32.3	43.4	106.0	151.6	7.1	8.6
MPO104881	564.0	224.8	108.5	81.5	10.7	4.7	3.0	12.7	2.2	1.0	23.9	15.9	14.5	1.9	22.4	1.0	5.1	67.1	6.4	29.2	39.2	101.2	144.7	6.8	8.3
MPO104889	524.3	228.0	110.5	72.3	7.7	3.3	3.6	10.2	1.6	0.7	22.0	9.9	11.9	1.5	18.6	0.7	3.6	46.1	4.4	29.2	39.2	119.7	171.2	8.1	9.8
MPO104893	349.8	188.0	61.5	38.4	4.1	1.9	2.6	5.7	0.8	0.5	12.1	7.9	6.6	0.8	13.4	0.4	3.6	23.5	2.9	25.1	33.7	96.1	137.5	7.0	8.5
MPO104896	273.4	128.8	58.0	31.7	3.7	1.7	2.2	4.6	0.8	0.4	10.4	9.1	5.4	0.7	15.4	0.4	3.8	21.8	2.7	25.0	33.7	102.0	146.0	7.1	8.6
MPO104898	301.1	120.3	72.9	43.5	4.1	1.8	2.6	5.7	0.8	0.4	13.9	8.3	7.1	0.8	18.9	0.4	4.2	24.1	2.6	26.0	35.0	90.8	129.9	6.0	7.4
MPO104899	459.9	248.9	82.9	52.3	4.9	2.1	3.1	7.4	1.0	0.5	16.6	9.6	8.5	0.9	13.2	0.5	2.9	27.6	2.9	27.5	37.0	85.5	122.4	6.0	7.3

RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH MPOSA HMS DEPOSIT



Sample ID	TREO	CeO2	La2O3	Nd2O3	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	Lu2O3	Pr6O11	Sc2O3	Sm2O3	Tb4O7	ThO2	Tm2O3	U3O8	Y2O3	Yb2O3	Ga	Ga2O3	Nb	Nb2O5	Ta	Ta2O5
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MPO104902	446.8	188.0	86.7	67.8	7.0	2.9	4.1	9.5	1.4	0.6	20.1	7.4	11.5	1.4	12.8	0.6	2.8	41.5	3.8	26.6	35.7	84.7	121.1	5.9	7.2
MPO104903	500.9	219.5	96.8	76.9	7.1	2.9	4.2	10.2	1.4	0.6	22.6	9.5	12.8	1.4	20.3	0.6	3.9	39.9	4.0	27.0	36.3	99.2	141.9	7.1	8.6
MPO104905	222.0	81.0	53.7	33.6	3.5	1.6	2.3	4.3	0.7	0.4	10.6	8.9	5.4	0.6	13.1	0.4	2.7	21.1	2.6	26.3	35.3	88.9	127.2	6.3	7.7
MPO104908	305.7	115.3	71.6	44.2	4.9	2.2	2.8	5.9	1.0	0.6	13.9	9.5	7.3	0.9	12.5	0.5	2.6	31.2	3.4	30.5	41.0	103.9	148.7	6.9	8.5
MPO104909	332.4	122.9	83.4	52.7	4.6	1.9	3.2	6.2	0.9	0.4	17.0	8.6	8.5	0.9	12.0	0.4	2.7	26.5	2.7	30.4	40.9	105.5	150.9	7.1	8.7
MPO104913	409.5	172.1	88.2	62.1	5.7	2.4	3.7	7.8	1.1	0.5	18.7	9.1	10.1	1.1	12.5	0.5	3.2	32.3	3.3	29.6	39.9	98.6	141.1	6.6	8.1
MPO104916	420.9	165.7	94.2	63.7	6.5	2.6	4.2	8.6	1.3	0.5	19.8	10.0	10.8	1.3	11.7	0.5	2.5	37.8	3.5	31.4	42.3	97.3	139.2	6.5	7.9
MPO104917	451.7	186.8	91.0	69.5	7.0	2.7	4.6	9.4	1.4	0.6	20.5	8.7	11.6	1.3	10.4	0.6	2.7	41.3	3.5	30.9	41.6	91.0	130.1	6.1	7.4
MPO104918	448.4	190.9	90.2	68.5	6.7	2.6	4.7	9.2	1.3	0.5	20.3	8.2	12.0	1.3	11.5	0.5	2.9	36.1	3.4	30.5	40.9	98.4	140.8	6.6	8.1
MPO104919	555.3	225.5	116.8	87.1	8.3	3.3	5.4	11.5	1.6	0.7	25.8	10.8	14.3	1.6	14.6	0.7	2.8	48.6	4.3	31.1	41.8	90.3	129.2	5.9	7.2
MPO104921	346.7	143.0	69.9	53.1	5.3	2.2	3.9	7.1	1.0	0.4	15.1	7.2	8.4	1.0	6.7	0.5	1.8	33.1	2.8	25.3	34.0	80.0	114.4	5.4	6.6
MPO104925	133.0	45.5	36.1	19.4	2.2	1.0	0.8	2.7	0.4	0.2	5.9	9.5	3.1	0.4	10.3	0.2	1.0	13.7	1.4	14.0	18.8	27.0	38.6	1.5	1.9
MPO104926	804.6	283.0	176.6	165.2	12.5	4.1	4.9	19.6	2.0	0.6	46.0	15.2	27.6	2.7	13.6	0.7	1.7	55.2	4.0	24.4	32.8	29.8	42.6	1.5	1.8
MPO104927	290.1	105.4	72.7	45.1	4.4	1.9	2.8	5.7	0.8	0.4	13.7	9.0	6.9	0.8	9.6	0.4	2.0	26.4	2.5	26.8	36.0	92.7	132.6	5.9	7.3
MPO104929	536.8	352.3	63.3	47.3	5.2	2.3	1.8	7.9	1.0	0.5	13.6	12.7	8.1	1.0	24.7	0.5	2.6	28.7	3.4	21.5	28.9	77.8	111.2	4.0	4.9
MPO104702	474.7	207.7	90.6	74.3	6.8	3.4	4.4	8.7	1.3	0.5	20.9	8.2	11.7	1.3	9.9	0.6	2.2	39.1	3.4	24.8	33.3	85.6	122.5	5.5	6.7
MPO104703	315.8	120.7	77.3	49.3	4.5	2.4	2.9	5.4	0.9	0.4	14.9	8.7	7.3	0.8	11.4	0.4	2.2	26.0	2.6	26.4	35.4	97.0	138.7	6.9	8.4
MPO104705	322.2	165.5	62.1	36.4	3.8	2.2	2.2	4.6	0.8	0.4	11.5	8.8	5.5	0.7	14.0	0.4	2.6	23.3	2.6	24.2	32.6	109.7	157.0	7.4	9.1
MPO104706	370.6	151.0	81.0	56.5	5.5	2.9	3.0	6.4	1.1	0.5	16.9	9.3	8.4	1.0	13.4	0.5	2.7	32.7	3.3	28.5	38.4	106.3	152.1	6.8	8.3
MPO104717	487.4	209.0	101.1	71.4	7.1	3.7	4.0	8.6	1.4	0.6	21.3	10.3	11.3	1.3	12.1	0.6	2.1	42.5	3.7	29.3	39.4	100.8	144.2	6.6	8.1
MPO104726	699.2	262.4	133.4	102.5	13.8	7.7	3.7	14.4	2.8	1.2	29.0	19.3	17.4	2.5	22.4	1.3	4.4	99.6	7.6	30.3	40.8	114.2	163.3	7.9	9.6
MPO104727	646.5	269.9	133.2	102.3	9.6	4.7	4.0	11.7	1.8	0.7	30.0	21.5	16.2	1.9	18.9	0.8	3.7	55.1	4.6	34.7	46.7	111.2	159.1	7.4	9.0
MPO104728	554.7	227.1	119.3	86.6	8.1	4.1	4.6	9.9	1.5	0.7	26.0	11.5	13.3	1.5	14.0	0.7	2.6	47.1	4.3	31.8	42.8	111.4	159.3	7.5	9.2
MPO104729	576.3	231.0	109.8	87.2	10.5	5.5	3.6	11.6	2.1	0.9	24.8	19.0	14.4	1.9	19.0	0.9	3.3	66.2	5.6	27.4	36.8	85.2	121.9	5.7	7.0
MPO104731	538.6	216.3	105.5	80.4	9.5	5.1	3.4	10.6	1.9	0.8	23.1	22.8	13.5	1.7	16.7	0.9	2.9	60.4	5.4	27.4	36.8	84.9	121.4	6.0	7.3
MPO104733	546.5	213.7	102.0	81.7	10.8	5.7	3.0	11.6	2.2	0.9	22.7	21.7	13.8	1.9	15.9	1.0	3.3	69.7	5.8	29.4	39.5	95.2	136.2	7.5	9.1
MPO104737	729.3	283.1	137.2	109.7	14.1	7.7	3.5	15.1	2.8	1.2	30.7	22.4	18.5	2.6	18.3	1.3	3.6	93.9	7.8	32.0	43.0	95.1	136.1	6.6	8.1
MPO104752	458.0	174.8	86.3	68.7	9.0	5.3	2.6	9.2	1.9	0.9	19.5	17.3	11.8	1.6	22.8	0.9	3.9	59.8	5.7	24.9	33.4	105.7	151.1	7.3	8.9
MPO104757	620.7	249.1	117.8	92.7	11.6	6.1	3.9	13.0	2.3	0.9	26.0	18.2	15.4	2.1	14.5	1.0	3.4	72.7	6.1	25.7	34.6	87.8	125.6	6.0	7.3
MPO104767	532.8	218.7	103.6	80.1	9.0	4.8	3.3	10.5	1.8	0.8	22.9	19.9	13.2	1.7	22.7	0.8	3.9	56.4	5.0	27.1	36.5	112.9	161.5	7.5	9.2
MPO104776	709.5	294.7	144.1	106.3	11.9	5.8	4.6	13.5	2.4	0.8	30.6	25.2	18.0	2.2	19.7	1.0	3.4	67.9	5.7	31.1	41.8	112.3	160.6	6.4	7.9
MPO104777	684.7	288.7	136.8	98.8	11.5	5.8	4.3	12.8	2.3	0.8	28.5	24.2	16.7	2.1	20.3	1.0	3.5	68.9	5.5	31.4	42.2	119.6	171.0	7.1	8.6
MPO104778	672.6	272.9	136.4	97.6	11.7	6.1	4.6	12.7	2.5	0.9	28.6	22.5	16.3	2.1	18.9	1.0	3.7	72.9	6.2	32.8	44.1	119.7	171.2	7.1	8.7
MPO104779	670.1	268.1	141.1	99.3	11.6	5.9	4.3	12.8	2.3	0.8	29.0	22.8	16.7	2.1	20.8	1.0	3.3	69.3	5.6	30.9	41.5	117.7	168.3	6.9	8.5
MPO104781	987.2	524.6	149.7	126.7	13.7	6.6	5.3	16.9	2.7	1.0	36.4	20.0	22.2	2.6	20.6	1.1	4.3	71.3	6.4	25.5	34.3	95.1	136.0	5.8	7.1
MPO104782	547.5	223.3	106.5	83.0	9.7	4.9	3.9	10.8	2.0	0.7	23.4	16.3	14.1	1.8	16.9	0.8	3.4	57.6	4.9	26.0	35.0	109.5	156.6	6.6	8.1
MPO104785	536.3	208.8	123.9	80.6	8.9	4.4	3.4	9.6	1.8	0.7	24.2	20.8	13.2	1.6	20.3	0.7	3.6	50.0	4.5	29.7	40.0	122.7	175.6	7.2	8.8
MPO104786	665.5	265.3	141.1	102.5	11.2	5.7	4.5	12.7	2.3	0.8	29.6	17.4	17.1	2.1	26.3	1.0	3.7	64.3	5.5	28.2	38.0	126.5	180.9	7.4	9.0
MPO104787	415.9	167.8	74.4	56.3	8.5	5.1	1.9	8.0	1.9	0.9	16.1	12.8	9.9	1.4	19.8	0.9	3.7	57.1	5.6	22.3	30.0	78.3	112.1	4.9	6.0
MPO104788	579.9	237.4	116.7	82.4	10.4	5.4	3.9	11.2	2.2	0.8	23.9	20.2	14.4	1.9	20.8	0.9	3.9	63.1	5.4	29.2	39.2	106.5	152.4	6.6	8.0
MPO104789	659.1	265.5	129.4	97.4	11.6	6.1	4.3	12.9	2.4	0.9	27.5	17.5	16.4	2.1	20.6	1.1	4.2	75.4	6.1	27.7	37.3	121.3	173.6	7.7	9.4
MPO104793	599.3	241.1	130.8	90.3	9.9	4.9	3.8	11.1	1.9	0.7	26.7	18.6	15.1	1.8	22.8	0.8	3.8	55.6	4.8	30.8	41.5	130.9	187.3	8.0	9.7
MPO104799	803.7	359.1	152.0	107.3	12.3	7.0	4.0	13.9	2.7	1.1	31.5	19.1	18.0	2.3	33.4	1.2	4.7	84.1	7.2	28.2	37.9	137.8	197.2	8.1	9.9
MPO104803	702.1	292.2	139.8	99.3	12.0	6.5	4.4	13.0	2.5	1.0	28.9	23.1	16.7	2.2	25.0	1.1	4.3	75.8	6.7	32.2	43.2	124.7	178.4	7.5	9.2

RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH MPOSA HMS DEPOSIT



Sample ID	TREO	CeO2	La2O3	Nd2O3	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	Lu2O3	Pr6O11	Sc2O3	Sm2O3	Tb4O7	ThO2	Tm2O3	U3O8	Y2O3	Yb2O3	Ga	Ga2O3	Nb	Nb2O5	Ta	Ta2O5
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MPO104804	424.6	205.7	73.6	53.4	6.4	3.8	1.9	6.9	1.4	0.7	15.7	10.1	8.9	1.1	22.2	0.7	3.5	39.9	4.3	22.2	29.8	84.2	120.5	5.6	6.9
MPO104805	581.2	220.9	116.5	81.7	12.1	6.7	3.6	11.5	2.6	1.0	23.8	22.3	14.7	2.1	25.5	1.2	4.0	76.0	6.8	32.7	44.0	122.1	174.6	8.0	9.7
MPO104806	615.9	252.9	139.0	88.6	9.7	4.8	4.1	10.8	1.9	0.7	26.8	17.3	14.7	1.8	20.2	0.8	3.9	54.5	4.8	32.4	43.6	124.1	177.6	8.0	9.7
MPO104809	736.5	322.9	147.9	104.7	11.5	5.7	5.1	13.4	2.3	0.8	30.7	18.3	17.8	2.2	24.9	0.9	3.7	65.0	5.5	32.8	44.1	134.4	192.3	8.6	10.5
MPO104812	712.5	297.6	140.0	116.1	11.3	5.4	4.8	11.2	2.4	0.9	31.7	18.7	19.0	1.8	25.9	1.0	4.7	63.3	6.1	24.3	32.7	126.9	181.5	7.7	9.4
MPO104817	778.7	325.0	157.4	130.0	12.0	5.8	5.4	13.6	2.4	1.0	35.6	20.9	21.1	1.9	28.2	1.0	4.9	60.1	6.3	26.1	35.1	141.3	202.1	9.5	11.5
MPO104818	719.0	298.6	139.7	119.3	11.7	5.8	5.2	12.9	2.4	1.0	32.8	18.4	19.6	1.9	23.6	1.0	4.5	61.0	6.3	24.2	32.6	128.4	183.7	8.7	10.6
MPO104821	669.5	270.5	138.3	111.1	10.5	5.3	4.8	11.7	2.2	0.9	31.3	17.7	18.0	1.7	24.8	0.9	4.2	56.8	5.7	25.0	33.6	129.0	184.6	8.4	10.3
MPO104825	521.8	204.4	102.1	87.5	9.0	4.8	3.3	9.9	1.9	0.9	24.2	19.9	14.9	1.4	30.8	0.9	5.2	50.7	5.8	19.4	26.0	124.4	178.0	8.1	9.8
MPO104829	569.7	246.9	104.5	86.8	9.7	5.1	3.9	10.1	2.0	0.9	24.5	18.4	15.1	1.5	22.2	0.9	4.2	51.9	5.9	25.6	34.4	110.1	157.6	7.3	8.9
MPO104831	642.3	257.1	124.5	104.1	11.0	5.5	4.8	11.7	2.3	0.9	28.6	17.6	17.4	1.7	23.1	0.9	4.0	65.7	6.0	25.6	34.4	131.5	188.2	8.4	10.2
MPO104832	658.2	262.2	133.6	108.2	10.9	5.4	5.3	11.8	2.2	0.9	30.4	21.0	17.8	1.7	21.0	0.9	4.1	60.9	5.8	26.4	35.5	134.5	192.4	8.6	10.5
MPO104833	553.7	225.3	106.0	92.5	9.3	4.6	4.1	10.0	1.9	0.8	25.6	17.8	15.5	1.5	19.8	0.8	5.0	50.3	5.4	24.2	32.5	103.0	147.4	7.0	8.5
MPO104834	631.7	259.6	119.8	101.2	10.8	5.5	4.9	11.3	2.2	0.9	27.9	15.3	16.9	1.7	19.9	0.9	4.1	62.1	5.9	25.6	34.4	125.1	179.0	8.1	9.9
MPO104836	752.2	308.9	143.1	121.2	12.4	6.2	5.6	13.7	2.6	1.0	32.8	16.9	20.0	2.0	24.4	1.0	4.1	75.3	6.5	27.3	36.7	123.9	177.3	7.9	9.6
MPO104837	535.3	223.6	109.8	84.4	8.0	3.9	3.9	9.0	1.6	0.7	23.8	15.4	13.6	1.3	20.9	0.7	4.1	46.5	4.5	27.2	36.5	122.1	174.7	7.8	9.5
MPO104838	612.8	231.7	114.2	98.2	12.1	6.5	3.6	11.6	2.6	1.1	27.2	21.0	16.9	1.8	23.8	1.1	5.5	76.6	7.5	27.7	37.2	120.2	172.0	7.6	9.3
MPO104839	325.3	129.0	73.6	53.3	4.5	2.3	3.2	5.2	0.9	0.4	15.5	10.4	8.4	0.8	15.1	0.4	2.8	25.1	2.7	24.0	32.3	96.8	138.5	6.3	7.7
MPO104841	653.6	252.9	118.1	106.1	12.5	6.7	4.0	12.7	2.7	1.2	28.3	18.1	18.4	2.0	24.6	1.2	5.3	79.4	7.6	25.9	34.8	116.1	166.1	7.5	9.2
MPO104844	251.2	88.1	65.3	39.6	3.8	2.2	2.5	3.8	0.8	0.5	12.1	13.0	6.2	0.6	17.1	0.4	3.6	22.5	2.9	25.7	34.5	126.2	180.5	8.1	9.9
MPO104845	598.5	250.7	110.0	106.6	8.7	4.2	6.0	10.2	1.8	0.7	29.4	11.9	17.1	1.5	14.1	0.7	3.0	46.1	4.7	25.2	33.8	103.2	147.6	6.5	7.9
MPO104847	660.3	253.8	124.1	109.2	12.1	6.1	5.5	12.5	2.5	1.0	29.5	18.3	18.5	1.9	18.9	1.0	4.0	75.9	6.6	28.3	38.0	122.3	174.9	7.8	9.5
MPO104848	480.9	184.5	86.0	73.9	9.3	5.3	3.4	8.9	2.1	1.0	20.1	14.7	12.7	1.4	15.9	0.9	4.0	65.1	6.3	23.7	31.9	89.6	128.2	5.7	6.9
MPO104849	305.5	123.0	68.5	45.9	4.4	2.5	2.8	4.7	0.9	0.5	13.2	12.5	7.2	0.7	16.5	0.5	3.3	27.7	3.1	26.1	35.1	115.1	164.7	7.3	8.9
MPO104851	759.9	280.3	144.9	126.0	13.8	7.5	5.3	14.6	3.0	1.2	33.6	18.5	20.9	2.2	22.9	1.3	4.7	97.2	8.0	27.0	36.3	120.2	171.9	7.6	9.3
MPO104852	427.3	193.4	78.8	68.3	5.8	2.9	4.2	6.7	1.2	0.5	19.3	9.8	11.0	1.0	12.7	0.5	3.1	30.2	3.5	22.5	30.3	102.6	146.8	6.4	7.8
MPO104853	825.1	276.0	173.0	141.9	15.5	8.2	6.0	15.9	3.3	1.3	38.9	23.5	23.0	2.5	20.7	1.4	4.1	109.6	8.5	32.0	43.0	111.7	159.8	6.7	8.2
MPO104854	609.1	242.0	114.4	99.2	11.1	5.8	4.5	11.3	2.3	1.0	27.0	22.1	17.2	1.7	20.1	1.0	4.3	64.0	6.5	31.4	42.3	111.9	160.1	7.1	8.6
MPO104856	608.6	237.0	111.4	99.2	11.5	6.1	3.7	11.4	2.5	1.1	27.5	20.7	17.0	1.8	23.8	1.1	4.8	70.3	7.0	26.8	36.0	116.9	167.3	6.7	8.1
MPO104857	271.6	106.3	63.8	40.2	4.0	2.3	2.6	4.2	0.9	0.5	11.9	11.5	6.4	0.6	13.6	0.4	3.0	24.7	2.9	25.3	34.1	112.5	161.0	6.5	7.9
MPO104858	256.0	96.9	49.3	38.9	4.8	2.8	2.4	4.5	1.1	0.6	10.9	10.4	6.8	0.7	14.3	0.5	3.2	32.3	3.5	20.2	27.1	103.8	148.4	5.8	7.1
MPO104859	506.2	217.0	87.4	73.9	9.2	5.1	3.2	8.8	2.0	1.0	20.2	15.4	12.6	1.4	20.5	1.0	4.3	57.2	6.3	24.6	33.1	97.1	138.8	5.3	6.5
MPO104861	302.3	135.9	61.8	41.9	4.1	2.2	3.0	4.3	0.9	0.5	12.4	9.7	6.8	0.6	12.4	0.4	2.9	24.6	2.9	23.4	31.4	111.9	160.1	6.5	7.9
MPO104862	284.6	107.0	54.4	46.1	5.1	3.0	2.4	5.0	1.1	0.7	12.6	10.9	7.8	0.8	18.2	0.6	3.8	33.9	4.0	19.0	25.5	109.9	157.2	5.9	7.3
MPO104865	531.8	208.6	95.5	81.6	9.8	5.6	3.9	9.6	2.2	1.0	22.4	14.6	14.1	1.5	20.9	1.0	4.4	68.3	6.5	24.6	33.1	120.2	171.9	6.7	8.2
MPO104866	495.2	225.6	91.6	73.9	6.9	3.6	4.3	7.9	1.4	0.6	19.8	10.2	11.6	1.1	14.8	0.6	3.3	42.5	3.8	25.7	34.5	111.7	159.8	6.2	7.5
MPO104867	311.1	125.8	72.0	46.4	4.4	2.4	2.8	4.6	1.0	0.4	13.8	12.1	7.3	0.7	14.3	0.4	3.0	26.2	2.9	27.4	36.8	109.6	156.8	6.3	7.7
MPO104869	631.4	298.4	103.0	90.4	10.3	5.4	3.8	10.7	2.1	0.9	24.4	19.1	15.3	1.6	22.6	0.9	4.7	57.9	6.1	29.4	39.5	126.9	181.5	7.4	9.1
MPO104871	794.0	298.1	150.0	130.5	14.3	7.8	4.7	15.0	3.1	1.4	34.6	19.0	21.6	2.3	29.4	1.4	4.9	100.6	8.7	25.4	34.2	124.7	178.4	6.5	8.0
MPO104872	411.4	160.0	84.3	65.6	6.8	3.7	3.9	7.0	1.5	0.7	18.2	13.8	10.6	1.1	16.6	0.7	3.8	43.3	4.3	28.3	38.0	119.0	170.2	7.3	8.9
MPO104878	619.4	275.1	122.3	95.8	8.6	4.1	5.4	10.4	1.7	0.6	27.5	11.3	15.9	1.5	13.3	0.7	2.8	45.8	3.9	26.1	35.1	85.6	122.4	6.7	8.2
MPO104879	582.8	237.5	118.8	93.9	9.1	4.6	5.5	10.3	1.9	0.7	26.8	10.9	15.6	1.5	15.8	0.8	2.8	50.9	4.7	23.8	32.0	85.2	121.9	6.7	8.2
MPO104882	497.1	215.2	92.3	68.9	8.4	5.2	2.2	8.4	1.9	1.0	19.7	12.6	12.2	1.3	32.2	1.0	5.6	53.5	6.0	23.7	31.8	110.4	158.0	8.8	10.7
MPO104883	373.3	146.7	85.0	55.2	6.2	3.3	3.4	6.2	1.3	0.5	16.5	11.7	9.4	1.0	15.0	0.6	2.8	34.7	3.4	27.6	37.1	91.2	130.5	7.5	9.1

RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH MPOSA HMS DEPOSIT



Sample ID	TREO	CeO2	La2O3	Nd2O3	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	Lu2O3	Pr6O11	Sc2O3	Sm2O3	Tb4O7	ThO2	Tm2O3	U3O8	Y2O3	Yb2O3	Ga	Ga2O3	Nb	Nb2O5	Ta	Ta2O5
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MPO104884	646.2	250.8	126.2	99.4	12.5	6.8	4.0	12.8	2.7	1.1	27.8	16.7	18.0	2.1	23.3	1.2	4.9	73.9	6.9	25.5	34.3	86.9	124.3	7.5	9.1
MPO104885	392.8	154.2	89.3	60.7	6.5	3.3	3.6	6.7	1.3	0.6	18.0	10.2	10.4	1.1	13.5	0.6	2.9	32.8	3.6	24.3	32.7	75.7	108.3	6.5	7.9
MPO104886	477.7	226.2	85.4	60.9	7.7	4.3	3.6	7.9	1.7	0.7	17.1	9.3	10.6	1.2	14.9	0.7	3.5	45.1	4.6	22.7	30.5	89.6	128.2	7.5	9.2
MPO104887	333.5	133.1	76.0	47.0	5.7	3.1	2.9	5.6	1.2	0.6	14.0	10.4	8.1	0.9	15.4	0.6	3.1	31.0	3.5	25.7	34.5	87.1	124.5	7.3	8.9
MPO104888	373.9	148.2	81.6	55.9	6.3	3.5	3.3	6.4	1.4	0.6	16.3	12.0	9.5	1.0	15.7	0.6	3.5	35.3	3.9	24.6	33.0	96.7	138.3	8.3	10.1
MPO104891	522.1	237.0	105.0	80.6	6.8	3.3	3.9	8.0	1.3	0.5	23.4	8.8	13.0	1.2	15.8	0.6	2.9	33.9	3.5	24.1	32.4	94.7	135.4	7.7	9.5
MPO104892	362.3	158.5	72.0	53.3	5.6	2.8	3.4	6.0	1.1	0.5	15.4	8.3	9.3	0.9	14.5	0.5	3.0	29.6	3.2	21.7	29.2	91.7	131.2	7.9	9.6
MPO104894	292.3	123.4	59.8	43.5	4.7	2.4	3.3	5.0	1.0	0.4	12.2	6.5	7.8	0.8	12.5	0.4	2.8	24.8	2.6	21.8	29.3	69.1	98.8	6.1	7.5
MPO104897	308.1	128.3	68.4	45.6	4.6	2.5	2.8	4.8	1.0	0.5	13.3	8.6	7.3	0.8	13.9	0.4	3.0	25.3	2.8	22.0	29.5	86.7	124.0	6.7	8.1
MPO104901	312.0	129.1	66.8	44.1	5.2	2.8	2.8	5.2	1.1	0.5	13.1	9.5	7.5	0.8	12.9	0.5	2.6	29.4	3.2	22.4	30.0	84.2	120.4	6.5	8.0
MPO104904	451.3	200.4	83.3	70.2	6.7	3.2	4.2	7.8	1.4	0.5	19.5	7.7	11.8	1.2	10.2	0.5	2.2	37.6	3.2	23.0	30.9	77.3	110.5	5.9	7.2
MPO104906	843.3	313.1	175.3	155.4	13.9	6.1	8.3	16.3	2.7	0.8	44.5	13.8	26.7	2.5	12.4	1.0	2.4	71.0	5.5	29.7	39.9	88.0	125.8	6.6	8.1
MPO104907	528.1	211.4	123.9	87.4	6.9	3.9	3.7	9.9	1.2	0.5	25.5	10.9	13.5	1.3	11.9	0.5	2.2	35.5	3.0	27.3	36.7	117.4	168.0	6.9	8.4
MPO104911	423.2	237.6	67.5	45.4	5.0	3.3	2.5	6.7	1.0	0.5	12.8	8.2	7.4	0.9	10.0	0.5	2.1	29.3	2.9	24.0	32.3	102.0	146.0	6.1	7.4
MPO104912	235.2	87.6	57.1	36.1	3.6	2.4	2.2	4.4	0.7	0.4	10.8	8.3	6.0	0.6	10.1	0.4	2.2	20.5	2.4	21.4	28.8	104.8	150.0	5.7	6.9
MPO104914	483.1	177.9	101.6	87.0	8.0	4.6	4.4	10.7	1.4	0.6	23.9	10.4	14.4	1.5	10.0	0.6	2.0	42.9	3.6	24.0	32.3	99.3	142.0	5.8	7.1
MPO104922	538.1	215.0	113.7	85.0	8.6	5.2	4.2	11.2	1.6	0.7	24.1	11.8	14.5	1.5	17.0	0.7	3.3	48.1	4.1	27.7	37.3	128.0	183.1	7.2	8.8
MPO104923	501.9	332.6	55.8	43.0	5.1	3.4	1.5	7.3	1.0	0.6	12.0	13.2	8.0	0.9	27.1	0.5	2.7	26.7	3.5	19.2	25.8	86.1	123.1	3.9	4.7
MPO104924	406.8	152.7	84.9	70.8	7.1	4.2	2.4	9.3	1.3	0.6	19.9	14.2	13.0	1.3	26.0	0.6	2.1	35.2	3.7	22.9	30.7	82.4	117.9	4.1	5.0
MPO104928	330.0	136.6	74.2	48.9	4.6	2.9	2.3	6.0	0.9	0.4	14.3	9.6	7.9	0.8	11.1	0.4	2.1	27.3	2.5	26.6	35.8	110.4	158.0	6.5	7.9
MPO104931	407.6	154.1	93.8	68.3	6.1	3.7	3.2	8.2	1.1	0.5	19.9	9.8	11.0	1.1	10.9	0.5	1.9	33.0	3.0	25.4	34.2	106.4	152.3	6.5	7.9
MPO104932	296.1	111.8	68.5	46.0	4.6	3.1	2.5	5.8	0.9	0.6	13.4	11.7	7.6	0.8	14.8	0.5	3.3	26.9	3.2	24.1	32.4	118.2	169.1	7.1	8.7
MPO104933	622.2	232.0	124.7	94.0	12.0	8.2	2.9	14.0	2.4	1.1	25.6	19.8	16.3	2.0	24.8	1.1	4.5	79.1	6.8	25.8	34.7	127.0	181.7	7.4	9.0
MPO104934	472.3	188.7	84.5	69.0	9.3	6.6	2.1	10.5	1.9	1.0	19.0	14.4	12.6	1.5	23.3	1.0	3.9	59.0	5.8	22.2	29.8	111.2	159.0	6.9	8.4
MPO104768	420.7	162.3	79.6	63.9	7.8	4.5	2.5	8.6	1.6	0.8	18.1	16.7	10.9	1.4	20.5	0.8	3.2	53.0	4.8	22.8	30.6	79.0	113.0	5.5	6.7
MPO104769	772.9	300.6	142.8	114.5	15.5	8.2	3.6	16.4	3.1	1.3	32.3	27.9	19.7	2.8	23.9	1.4	4.5	102.6	8.1	34.0	45.7	90.0	128.7	6.8	8.3
MPO104771	583.2	246.0	110.6	83.7	10.1	5.3	3.6	11.3	2.1	0.8	23.9	19.8	14.3	1.9	19.3	0.9	3.4	63.7	5.0	25.2	33.9	86.0	123.0	6.1	7.4

**RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH
MPOSA HMS DEPOSIT**



Table 3: Drilling details for the drill holes from which samples were acquired for ICP-MS assay

Hole ID	Depth (m)	Azimuth (°)	Easting (X)	Northing (Y)	From (m)	To (m)
MPOSD1000	9	0	770,309.107	8,322,029.375	8	9
MPOSD1005	8	0	770,132.389	8,322,058.200	7	8
MPOSD1010	9	0	769,765.214	8,321,580.612	8	9
MPOSD1012	9	0	769,702.304	8,321,641.901	8	9
MPOSD1015	10	0	769,782.230	8,321,435.905	9	10
MPOSD1017	9	0	769,701.779	8,321,509.013	8	9
MPOSD1019	10	0	769,633.007	8,321,563.128	9	10
MPOSD1020	7	0	769,798.423	8,321,285.279	6	7
MPOSD1026	7	0	769,574.674	8,321,485.228	6	7
MPOSD1029	11	0	769,670.150	8,321,268.326	10	11
MPOSD1033	9	0	769,531.261	8,321,392.648	8	9
MPOSD1034	7	0	769,509.470	8,321,414.141	6	7
MPOSD1035	5	0	769,703.282	8,321,111.733	4	5
MPOSD1038	9	0	769,587.553	8,321,217.288	8	9
MPOSD1039	10	0	769,546.676	8,321,249.294	9	10
MPOSD1041	7	0	769,461.541	8,321,321.273	6	7
MPOSD1042	6	0	769,627.946	8,321,044.189	5	6
MPOSD255	5	0	768,404.142	8,318,710.521	4	5
MPOSD261	5	0	767,842.389	8,317,477.593	4	5
MPOSD263	5	0	767,740.370	8,317,491.715	4	5
MPOSD284	5	0	767,981.619	8,317,349.561	4	5
MPOSD286	5	0	767,569.419	8,317,623.454	4	5
MPOSD289	5	0	767,864.757	8,317,579.136	4	5
MPOSD291	6	0	767,966.913	8,317,570.265	5	6
MPOSD297	5	0	767,794.230	8,317,781.012	4	5
MPOSD298	5	0	767,841.326	8,317,786.883	4	5
MPOSD300	5	0	767,942.288	8,317,756.694	4.2	5
MPOSD303	5	0	768,089.767	8,317,734.476	4	5
MPOSD304	5	0	768,183.877	8,317,708.932	4	5
MPOSD306	9	0	767,734.846	8,317,998.540	8	9
MPOSD307	5	0	767,783.930	8,317,980.005	4	5
MPOSD309	5	0	767,989.045	8,317,958.427	4	5
MPOSD312	8	0	767,767.809	8,318,180.325	7	8
MPOSD314	5	0	767,850.623	8,318,185.886	4	5
MPOSD318	6	0	768,071.235	8,318,145.945	5	6
MPOSD325	9	0	767,902.018	8,318,374.529	8	9
MPOSD331	7	0	768,171.813	8,318,248.857	6	7
MPOSD332	5	0	768,221.525	8,318,232.039	4	5
MPOSD334	6	0	767,888.661	8,318,581.932	5	6
MPOSD335	7	0	767,930.398	8,318,571.293	6	7
MPOSD337	6	0	768,024.914	8,318,537.011	5	6
MPOSD343	7	0	768,250.521	8,318,445.205	6.25	7
MPOSD350	6	0	768,184.902	8,318,677.128	5	6
MPOSD418	6	0	768,283.155	8,319,082.966	5	6
MPOSD423	7	0	768,517.481	8,318,989.370	6	7
MPOSD437	6	0	768,578.535	8,319,016.725	5	6
MPOSD519	6	0	768,665.466	8,319,358.068	5	6

**RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH
MPOSA HMS DEPOSIT**



Hole ID	Depth (m)	Azimuth (°)	Easting (X)	Northing (Y)	From (m)	To (m)
MPOSD524	9	0	768,495.433	8,319,476.367	8	9
MPOSD549	10	0	768,449.153	8,319,647.536	9	10
MPOSD551	10	0	768,548.520	8,319,612.016	9	10
MPOSD555	9	0	768,737.833	8,319,544.267	7.9	9
MPOSD557	10	0	768,478.201	8,319,697.919	9	10
MPOSD559	11	0	768,518.193	8,319,676.208	10	11
MPOSD562	9	0	768,620.966	8,319,644.958	8	9
MPOSD566	11	0	768,521.782	8,319,788.771	10.4	11
MPOSD570	11	0	768,503.887	8,319,751.544	10	11
MPOSD583	6	0	768,485.319	8,319,961.626	5	6
MPOSD588	11	0	768,717.747	8,319,870.418	10	11
MPOSD590	8	0	768,639.067	8,319,963.751	7	8
MPOSD595	11	0	768,607.430	8,320,023.524	10	11
MPOSD596	9	0	768,660.334	8,320,000.771	8	9
MPOSD597	9	0	768,709.693	8,319,993.088	8	9
MPOSD606	10	0	768,820.057	8,319,994.173	9.65	10
MPOSD614	10	0	768,881.916	8,320,028.537	9	10
MPOSD616	6	0	768,625.796	8,320,182.108	5	6
MPOSD619	8	0	768,760.225	8,320,128.834	7	8
MPOSD625	8	0	768,688.082	8,320,217.360	7	8
MPOSD626	10	0	768,739.072	8,320,201.306	9	10
MPOSD631	6	0	768,963.297	8,320,098.167	5	6
MPOSD738	15	0	769,190.198	8,320,655.761	14	15
MPOSD741	10	0	769,051.024	8,320,710.750	9	10
MPOSD751	11	0	769,293.996	8,320,653.138	9	11
MPOSD797	7	0	768,857.333	8,320,516.172	6	7
MPOSD805	9	0	768,784.410	8,320,335.384	8	9
MPOSD820	10	0	769,369.916	8,320,994.820	9	10
MPOSD838	10	0	769,602.716	8,321,005.196	9	10
MPOSD843	11	0	769,502.646	8,321,091.919	10	11
MPOSD844	11	0	769,480.755	8,321,106.313	9.9	11
MPOSD848	10	0	769,400.912	8,321,166.067	8.9	10
MPOSD853	7	0	769,617.578	8,321,115.161	6	7
MPOSD877	9	0	769,678.475	8,321,460.262	8	9
MPOSD884	10	0	769,734.198	8,321,546.608	9	10
MPOSD888	8	0	769,919.790	8,321,518.192	7	8
MPOSD894	8	0	769,977.767	8,321,590.908	7	8
MPOSD897	9	0	769,875.452	8,321,693.080	8	9
MPOSD917	8	0	770,226.527	8,321,902.658	7	8
MPOSD920	9	0	770,112.105	8,322,002.709	8	9
MPOSD926A	10	0	770,222.983	8,322,048.553	9	10
MPOSD934	8	0	770,548.085	8,322,301.271	7	8
MPOSD936	8	0	770,484.780	8,322,359.448	7	8
MPOSD944	9	0	770,574.026	8,322,533.579	8	9
MPOSD948	10	0	770,769.183	8,322,634.074	9	10
MPOSD949	10	0	770,734.084	8,322,669.668	9	10
MPOSD950	9	0	770,692.080	8,322,708.211	8	9
MPOSD954	11	0	770,911.670	8,322,783.531	10	11
MPOSD957	13	0	770,830.383	8,322,848.183	12	13

**RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH
MPOSA HMS DEPOSIT**



Hole ID	Depth (m)	Azimuth (°)	Easting (X)	Northing (Y)	From (m)	To (m)
MPOSD968	11	0	771,790.476	8,323,577.580	10	11
MPOSD969	13	0	771,738.381	8,323,613.050	12	13
MPOSD987	9	0	770,572.732	8,322,400.065	8	9
MPOSD994	7	0	770,333.944	8,322,350.672	6	7
MPOSD1002	8	0	770,232.089	8,322,098.525	7	8
MPOSD1004	8	0	770,240.750	8,321,959.703	7	8
MPOSD1006	7	0	769,925.664	8,321,439.558	6	7
MPOSD1009	9	0	769,805.097	8,321,548.336	8	9
MPOSD1031	9	0	769,609.490	8,321,337.762	8	9
MPOSD1043	7	0	769,594.815	8,321,067.336	6	7
MPOSD1046	11	0	769,480.716	8,321,165.878	10	11
MPOSD1047	8	0	769,431.353	8,321,203.857	7	8
MPOSD245	9	0	767,940.611	8,318,894.897	8	9
MPOSD251	6	0	768,215.069	8,318,785.525	5	6
MPOSD260	5	0	767,895.769	8,317,469.236	4	5
MPOSD265	5	0	767,635.076	8,317,515.240	4	5
MPOSD310	7	0	768,083.737	8,317,942.927	6	7
MPOSD322	5	0	767,759.161	8,318,421.952	4	5
MPOSD353	11	0	768,315.222	8,318,618.841	10	11
MPOSD497	9	0	768,528.911	8,319,291.385	8	9
MPOSD499	10	0	768,627.865	8,319,265.986	9	10
MPOSD505	9	0	768,454.907	8,319,394.899	8	9
MPOSD507	10	0	768,555.159	8,319,351.038	9	10
MPOSD509	10	0	768,642.018	8,319,309.274	9.2	10
MPOSD517	8	0	768,571.573	8,319,390.428	7	8
MPOSD528	6	0	768,686.419	8,319,402.083	5	6
MPOSD533	8	0	768,517.912	8,319,521.327	7	8
MPOSD540	9	0	768,437.658	8,319,596.443	8.7	9
MPOSD543	10	0	768,583.011	8,319,553.390	9	10
MPOSD546	9	0	768,717.114	8,319,500.299	8	9
MPOSD554	8	0	768,692.998	8,319,557.515	7	8
MPOSD563	12	0	768,426.796	8,319,822.782	11	12
MPOSD575	11	0	768,544.302	8,319,838.560	10	11
MPOSD576	8	0	768,580.406	8,319,817.603	7	8
MPOSD578	6	0	768,464.376	8,319,918.969	5	6
MPOSD582	11	0	768,637.274	8,319,860.719	10	11
MPOSD589	9	0	768,598.164	8,319,993.925	8	9
MPOSD592	8	0	768,733.380	8,319,925.062	7	8
MPOSD600	8	0	768,839.684	8,319,931.142	7	8
MPOSD604	9	0	768,725.648	8,320,040.070	8	9
MPOSD613	10	0	768,832.686	8,320,048.328	9	10
MPOSD620	8	0	768,804.934	8,320,105.351	7	8
MPOSD633	8	0	768,750.342	8,320,237.577	7	8
MPOSD636	10	0	768,886.143	8,320,187.487	9	10
MPOSD637	12	0	768,941.264	8,320,154.859	11	12
MPOSD641	10	0	768,819.848	8,320,267.910	7.6	10
MPOSD662	10	0	769,034.470	8,320,282.319	9	10
MPOSD671	10	0	769,054.916	8,320,334.973	9	10
MPOSD680	10	0	769,080.291	8,320,380.736	9	10

**RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH
MPOSA HMS DEPOSIT**



Hole ID	Depth (m)	Azimuth (°)	Easting (X)	Northing (Y)	From (m)	To (m)
MPOSD719	12	0	769,063.268	8,320,598.529	11	12
MPOSD729	15	0	769,176.040	8,320,617.345	14	15
MPOSD736	8	0	769,277.955	8,320,620.205	7	8
MPOSD748	15	0	769,166.188	8,320,721.900	14	15
MPOSD749	15	0	769,198.980	8,320,692.839	14	15
MPOSD755	7	0	769,048.426	8,320,823.183	6	7
MPOSD758	10	0	769,177.476	8,320,772.669	9	10
MPOSD760	15	0	769,274.187	8,320,733.624	14	15
MPOSD765	10	0	769,153.996	8,320,839.824	8.8	10
MPOSD769	15	0	769,294.672	8,320,775.424	14	15
MPOSD774	10	0	769,175.837	8,320,884.786	9	10
MPOSD776	10	0	769,263.175	8,320,843.028	9	10
MPOSD778	8	0	769,362.574	8,320,822.008	7	8
MPOSD781	7	0	769,147.264	8,320,942.314	6	7
MPOSD784	8	0	769,283.312	8,320,884.630	7	8
MPOSD786	9	0	769,370.639	8,320,850.232	8	9
MPOSD791	10	0	769,269.202	8,320,950.694	9	10
MPOSD793	10	0	769,349.946	8,320,916.505	9	10
MPOSD812	10	0	769,376.865	8,320,946.366	9	10
MPOSD814	9	0	769,287.213	8,321,004.050	8	9
MPOSD815	7	0	769,254.230	8,321,031.805	6	7
MPOSD825	7	0	769,479.743	8,320,963.953	6	7
MPOSD833	10	0	769,469.771	8,321,047.593	9	10
MPOSD836	9	0	769,366.747	8,321,134.068	8	9
MPOSD850	8	0	769,364.735	8,321,211.122	7	8
MPOSD851	7	0	769,347.609	8,321,220.863	6	7
MPOSD854	10	0	769,580.228	8,321,151.669	9	10
MPOSD857	9	0	769,469.716	8,321,247.081	8	9
MPOSD860	6	0	769,699.143	8,321,176.725	5	6
MPOSD864	10	0	769,541.924	8,321,307.310	9	10
MPOSD869	12	0	769,679.234	8,321,332.744	11	12
MPOSD871	11	0	769,602.809	8,321,395.237	10	11
MPOSD874	7	0	769,797.260	8,321,364.100	6	7
MPOSD878	7	0	769,640.479	8,321,492.501	6	7
MPOSD882	10	0	769,806.816	8,321,477.335	9	10
MPOSD885	8	0	769,703.246	8,321,569.318	7	8
MPOSD892	8	0	769,761.741	8,321,647.972	7	8
MPOSD899	8	0	769,790.385	8,321,759.771	7	8
MPOSD925	9	0	770,253.128	8,322,008.571	8	9
MPOSD930	9	0	770,381.500	8,322,178.314	8	9
MPOSD933	8	0	770,273.275	8,322,271.162	7	8
MPOSD938	7	0	770,400.048	8,322,430.734	6	7
MPOSD940	9	0	770,682.674	8,322,452.945	8	9
MPOSD946	10	0	770,846.476	8,322,579.737	9	10
MPOSD962	12	0	771,460.400	8,323,328.844	11	12
MPOSD966	10	0	771,572.518	8,323,496.193	9	10
MPOSD967	10	0	771,534.926	8,323,519.169	9.2	10
MPOSD991	9	0	770,440.305	8,322,253.581	8	9
MPOSD996	8	0	770,303.218	8,322,104.587	7	8

**RARE EARTH ELEMENTS CONFIRMED IN CLAYS BENEATH
MPOSA HMS DEPOSIT**

Hole ID	Depth (m)	Azimuth (°)	Easting (X)	Northing (Y)	From (m)	To (m)
MPOSD998	10	0	770,228.000	8,322,167.209	9.4	10
MPOSDTW003	7	0	769,380.300	8,320,775.899	6	7
MPOSDTW004	10	0	769,042.043	8,320,703.207	9	10
MPOSD360	8	0	768,115.970	8,318,934.358	7	8
MPOSD398	5	0	767,997.986	8,319,132.885	4	5
MPOSD402	7	0	768,183.387	8,319,069.204	5.65	7

APPENDIX 2 – JORC TABLE 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>The samples were derived from the sample reject of intervals tested for Heavy Mineral Sands resource drilling.</p> <p>Prior to the commencement of drilling, logging, and sampling, the geological team developed a standardized set of protocols and procedures.</p> <p>Sonic core drilling, using two Eijkelkamp CRS-V CompactRotoSonic rigs, was undertaken.</p> <p>The core was logged, as a first pass, at the rig, then relogged and sampled at the Chilwa base camp, located in Zalewa, Malawi.</p> <p>Drilling progressed for 2m into what was considered by on-site geologists to be a Basal Clay unit occurring beneath the HMS deposits.</p> <p>Sampling was based on lithological changes observed in the core, with sample lengths ranging from 0.3 to 2.4 m (typically around 1 m).</p> <p>Samples were derived from the reject material from heavy mineral sands testwork which had remained in storage at ALS before being transported to LightDeepEarth in RSA. Sample preparation was undertaken including crushing to 100% passing 1mm, rotary splitting to derive a 200g sub-sample and pulverisation to 90% passing 75 micron. A 200g split was then taken</p>

Criteria	JORC Code explanation	Commentary
		<p>for ICP-MS at UIS labs in South Africa.</p> <p>The Competent Person is of the opinion that the sampling techniques were to industry accepted standards.</p>
Drilling techniques	<p><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).</i></p>	<p>Drilling physicals are the same for both sonic rigs used.</p> <p>Drilling was undertaken using a single barrel (CB3 SW CoreBarrel 2m), which produced core of Inner Diameter (ID) = 76mm and Outer Diameter (OD) = 102mm). Where waterlogged sediment or loose sediment was encountered, an Aqualock (AL70) Sampler 2m barrel was used, which produced core of Inner Diameter (ID) = 70mm and Outer Diameter (OD) = 92mm.</p> <p>Drill rods were 1m in length.</p> <p>Drilling was conducted on a regular grid of 75 x 75m and 50 x 50m at the Mposa deposit.</p>
Drill sample recovery	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximize sample recovery and ensure representative nature of the samples.</i></p> <p><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	<p>Linear core recovery was determined on a run-by-run basis and averaged about 95%.</p> <p>All core samples were immediately bagged in polyethene sausage bags to reduce slimes loss.</p> <p>Where a lot of water, or loose material was encountered, an Aqualock (AL70) Sampler 2m barrel was used.</p>
Logging	<p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p>	<p>Each sample was logged in the field as well as at Chilwa's base camps in Zomba and Zalewa for: dominant sediment type, colour (using a Munsell colour chart), hardness,</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>coarseness, sorting and particle roundness, as well as for indicative Slimes % and Oversize %.</p> <p>Logging was qualitative (descriptive) and quantitative in nature.</p> <p>All intervals were logged according to the established protocols.</p> <p>All core was photographed using a Canon, model LC-E10E. The resolution is 6000 x 4000 (high) (average size 8.1MB, 74 dpi, 24 bit). All photographs have a colour calibration card and scale bar in the photograph.</p> <p>Core photographs are stored and managed using IMAGO™ software.</p> <p>It is the Competent Persons' opinion that core logging was done to a level of detail that will support appropriate Mineral Resource estimation and classification, mining studies and metallurgical studies.</p>
<p>Sub-sampling techniques and sample preparation</p>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i></p>	<p>Core was split using a trowel, with half core exported for HMS assay and half core retained at the Company's premises in Malawi. A 500g split was taken for HMS assay with remaining mass subject to further sample prep as described above, to extract a further 200g for ICP-MS.</p> <p>In addition to the 200 primary field samples, the submitted batch included 12 field duplicates, 12 high- and low-grade REE certified reference material standards (OREAS 471 and OREAS 474) and 11 blanks (OREAS 48), giving 235 records submitted in total.</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>The sample size is considered representative. Total mass available averaged approximately 2.3 kg, with the 200g for ICP analysis derived from a rotary splitter.</p> <p>Sample Preparation:</p> <p>Samples were derived from the reject from the Company's heavy mineral sands assay program. Rejects had remained in storage at ALS and were subsequently transported to Lightdeearth in RSA where further sample prep was undertaken including crushing to 100% passing 1mm, sub-sampling on a rotary splitter to derive a 200g split for pulverisation to 90% passing 75 micron. The 200g split was then taken for ICP-MS at UIS labs in South Africa.</p>
<p>Quality of assay data and laboratory tests</p>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <p><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></p>	<p>Testwork Methodology:</p> <p>Multi-element analysis was conducted at an accredited external laboratory by inductively coupled plasma mass spectrometry (ICP-MS) following an appropriate multi-acid (near-total) digestion.</p> <p>The method reports the individual rare earth elements (including yttrium), scandium, niobium, tantalum, gallium, thorium and uranium. ICP-MS is considered a total to near-total technique appropriate for the elements of interest at the grades encountered.</p> <p>Grades are reported directly from the laboratory ICP-MS determinations; no instrument-calibration factor or correction has been applied by the</p>



Criteria	JORC Code explanation	Commentary
		<p>Company to the reported assay values.</p> <p>The external laboratory operates its own internal QAQC and calibration regime appropriate to ICP MS analysis, including instrument calibration against certified standards. Sample submission, chain of custody and results were managed in accordance with the Company’s standard procedures.</p> <p>The Company’s QAQC programme for the ICP-MS assay batch included the insertion of certified reference materials (CRMs), blanks and field/coarse duplicates into the sample stream submitted to the laboratory, in addition to the laboratory’s own internal QC.</p> <p>CRM recoveries, blank results and duplicate precision were reviewed and indicated acceptable accuracy and precision for the reported results.</p> <ul style="list-style-type: none"> • Duplicate precision for the ICP-MS batch (field and coarse duplicates) was reviewed and found acceptable, supporting the precision of the reported assays. • Blanks submitted with the ICP-MS batch returned values below detection for the elements of interest, indicating no significant contamination through preparation and analysis. • Certified reference materials inserted into the ICP-MS batch returned values within acceptable tolerance of their certified values, confirming analytical accuracy for the reported elements.

Criteria	JORC Code explanation	Commentary															
<p>Verification of sampling and assaying</p>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>Two or more Chilwa geologists have inspected the core. All core has been photographed. Significant intersections were checked by the Senior Project Geologist.</p> <p>Primary data was collected using an excel spreadsheet in the field.</p> <p>Assay data are imported directly from digital assay files and are merged in the database with sample information. Data is backed up regularly in off-site secure servers.</p> <p>The database is stored at Chilwa’s head office in Perth and is regularly backed up. Logging entries are reviewed by the Project geologist for accuracy.</p> <p>The remaining half core is stored at Chilwa’s base camp in Malawi.</p> <p>No adjustment to the assay values have been made.</p> <p>Logging entries are reviewed by the Project geologist for accuracy.</p> <p>Conversion of elemental analysis for Nb and REE to stoichiometric oxide (Nb₂O₅ and REO) was undertaken by spreadsheet using defined conversion factors. (Source: https://www.jcu.edu.au/advanced-analytical-centre/resources/element-to-stoichiometric-oxide-conversion-factors)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #cccccc;">Element ppm</th> <th style="background-color: #cccccc;">Conversion Factor</th> <th style="background-color: #cccccc;">Oxide Form</th> </tr> </thead> <tbody> <tr> <td>Ce</td> <td>1.2284</td> <td>CeO₂</td> </tr> <tr> <td>Dy</td> <td>1.1477</td> <td>Dy₂O₃</td> </tr> <tr> <td>Er</td> <td>1.1435</td> <td>Er₂O₃</td> </tr> <tr> <td>Eu</td> <td>1.1579</td> <td>Eu₂O₃</td> </tr> </tbody> </table>	Element ppm	Conversion Factor	Oxide Form	Ce	1.2284	CeO ₂	Dy	1.1477	Dy ₂ O ₃	Er	1.1435	Er ₂ O ₃	Eu	1.1579	Eu ₂ O ₃
Element ppm	Conversion Factor	Oxide Form															
Ce	1.2284	CeO ₂															
Dy	1.1477	Dy ₂ O ₃															
Er	1.1435	Er ₂ O ₃															
Eu	1.1579	Eu ₂ O ₃															

Criteria	JORC Code explanation	Commentary		
		Gd	1.1526	Gd ₂ O ₃
		Ho	1.1455	Ho ₂ O ₃
		La	1.1728	La ₂ O ₃
		Lu	1.1371	Lu ₂ O ₃
		Nd	1.1664	Nd ₂ O ₃
		Pr	1.2082	Pr ₆ O ₁₁
		Sm	1.1596	Sm ₂ O ₃
		Tb	1.1762	Tb ₄ O ₇
		Tm	1.1421	Tm ₂ O ₃
		Y	1.2699	Y ₂ O ₃
		Yb	1.1387	Yb ₂ O ₃
		Nb	1.4305	Nb ₂ O ₅
		Sc	1.5338	Sc ₂ O ₃
Location of data points	<p><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>All drilling has been surveyed by qualified surveyors, using a GNSS Leica GS16 GNSS with base station and rover.</p> <p>All survey work references UTM zone 36S, using the WGS 84 datum.</p> <p>No downhole surveys were required, as all holes were vertical and relatively shallow.</p> <p>A LIDAR, drone survey has been completed for the entire license area.</p> <p>Seven ground control points were used to calibrate the LIDAR survey. The vertical horizontal variances were all within acceptable tolerance levels.</p> <p>The Competent Person is of the opinion that the quality and adequacy of the survey work undertaken to locate drill hole collars is acceptable. The quality and adequacy of topographic control is also considered to be acceptable and can be used for Mineral</p>		

Criteria	JORC Code explanation	Commentary
		Resource estimation and mine planning purposes.
Data spacing and distribution	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>The drill spacing for the results reported is on a nominal 75m x 75m grid tightening to 50m x 50m in the central part of the Mposa deposit.</p> <p>Data spacing is considered reasonable for the current level of work.</p> <p>No mineral resource is planned based on this dataset.</p>
Orientation of data in relation to geological structure	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></p>	<p>All holes were drilled vertically, which is near normal to the low angle bedding and is therefore considered to be unbiased.</p> <p>The sonic drill grid orientation covers the known deposit along and across strike mineralisation extent.</p> <p>The Competent Person considers there is no sample bias of the mineralisation due to hole orientation.</p>
Sample security	<p><i>The measures taken to ensure sample security.</i></p>	<p>The remaining core is stored at Chilwa's secured base camp facility in Zalewa.</p> <p>Following sampling, the total number of samples was cross checked to confirm that all of the samples were taken.</p> <p>A hand over sheet was signed off prior to the samples being dispatched to Sample preparation at the Company's sample prep facility in Zalewa.</p> <p>All hard-copy documents relating to sample transport are filed in hard copy. This includes inventory</p>

Criteria	JORC Code explanation	Commentary
		<p>verifications at the different collection and dispatch points, export permits, and inspection certificates.</p> <p>Sample preparation was completed at Lightdeearth in RSA using the laboratories standard chain of custody procedure.</p> <p>The database is stored in the cloud and backed up on Company servers.</p>
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p>Sampling techniques and data were reviewed by Mr Bertus Cilliers, the Competent Person for Heavy Mineral Sands exploration during a site visit completed in August 2025.</p> <p>The Competent Person's review did not reveal any fatal flaws. The sampling and data collection techniques are considered to be industry standard.</p> <p>No independent, external, audits have been undertaken to date.</p>

Section 2 Reporting Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<p><i>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.</i></p> <p><i>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.</i></p>	<p>Work is undertaken under exploration license EL0670/22/R1 100% owned by Chilwa Minerals Africa.</p> <p>Chilwa Minerals Limited also controls (100%) of license EL0835/25 directly to the south of EL0670/22/R1 through its 100% subsidiary Phalombe Minerals.</p> <p>EL0670/22/R1 and EL0835/25 have been issued in September 2025 for 3 and 5 year exploration terms. The licences currently extend to HMS and REE, and the Company has</p>

Criteria	JORC Code explanation	Commentary
		applied to extend the licences to niobium and related minerals. This is the usual practice in Malawi and the application is considered to be administrative.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>Lake Chilwa is a closed, saline lake, which formed as a result of tectonic activities along the East African Rift.</p> <p>The lake previously drained to the north, but the mouth eventually silted up and the lake was subsequently completely closed off. A 25 km long sand bar formed along the north shore of the lake, closing off the drainage to the north.</p> <p>The Lake Chilwa (Project) HMS targets consist of beach and dune deposits located on palaeostrandline deposits that were deposited and preserved through several cycles of lake level fluctuations and stable periods.</p> <p>The main HM deposits are located on a very distinct strandline where the conditions of sediment supply, lake level, and hydrological were favourable for the formation and preservation of the sand deposits.</p>
<i>Drill hole Information</i>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <i>– easting and northing of the drill hole collar</i> <i>– elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> <i>– dip and azimuth of the hole</i> <i>– downhole length and interception depth</i> <i>– hole length.</i> <p><i>If the exclusion of this information is justified on the basis that the information is</i></p>	A full table of results and material drilling information is provided in Appendix 1 .

Criteria	JORC Code explanation	Commentary
	<p><i>not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	
<p><i>Data aggregation methods</i></p>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p>No weighted interval calculations are reported.</p> <p>No metal equivalent values are reported.</p> <p>Accumulation of data for reporting accumulated Total Rare Earth Elements (TREE) $TREE = La + Ce + Pr + Nd + Sm + Eu + Gd + Tb + Dy + Ho + Er + Tm + Yb + Y + Lu$</p> <p>Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations are used for compiling Total Rare Earth Oxides (TREO) into their reporting and evaluation groups:</p> <p>$TREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Y_2O_3 + Lu_2O_3.$</p> <p>$LREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3$</p> <p>$HREO = Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Y_2O_3 + Lu_2O_3$</p> <p>$Magnet\ REO = Pr_6O_{11} + Nd_2O_3 + Tb_4O_7 + Dy_2O_3$</p> <p>Scandium (Sc/Sc₂O₃) is assayed and reported separately and is excluded from the TREE and TREO totals.</p>
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a</i></p>	<p>The drillholes are vertical and the mineralisation is generally horizontal to sub-horizontal; all intercepts represent true widths.</p>

Criteria	JORC Code explanation	Commentary
	<i>clear statement to this effect (eg ‘down hole length, true width not known’).</i>	
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Maps are provided in the accompanying press release.
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	All relevant information has been included in this press release and is considered to represent a balanced report.
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	Work in developing mineral sands deposits on the license through feasibility is ongoing. No further data relevant to the results reported here is considered relevant at this stage.
<i>Further work</i>	<i>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.</i>	Planned further work recommendations include: Leachability testwork to determine leachable inventory of REE in these samples is now being progressed at ANSTO laboratories in Sydney, Australia. Drilling to depth in clay deposits within the sedimentary basin and occurring beneath the Mposa HMS deposit and other HMS deposits on the license is being planned.