13 July 2023

POTENTIAL 1.1KM STRIKE OF HEAVY RARE EARTH MINERALISATION IDENTIFIED AT SURFACE

Highlights from a field trip to the recently staked Olserum Heavy Rare Earth Element (HREE) Project in Sweden. Assay results from rock chip samples have been received at two prospects:

- Flaken Prospect: assays up to **11,991 ppm (1.2%) TREO** and **4,967 ppm (0.5%) TREO** with abnormally high **HREO** of up to **93%.** This is a new REE discovery from old workings
- Hylleled Prospect: assays up to **9,012 ppm (0.9%) TREO** and **8,286 ppm (0.8%) TREO** with abnormally high **HREO** of up to **86%**
- Assays indicate that HREE comprise the majority of the total REE content in most samples
- Both prospects are located **1.1 km apart** with the airborne magnetic data suggesting the two prospects are connected and open to the northwest and southeast

Figure 1A (left): Photograph of rock sample OLSGS003 with massive magnetite veins (mt-v) that returned 8,286 ppm TREO (86% HREO) as well as disseminated magnetite-altered (mt-d) augen gneiss (A). Figure 1B (right): Photograph of rock sample OLSGS001 of biotite-altered augen gneiss with magnetite (mt) veins that returned 9,012 ppm TREO

Executive Director Eddie King commented**:**

"*We are thrilled with our first heavy rare earth rock assay results, particularly for dysprosium and terbium. These results strongly support Ragnar's view that a wealth of critical minerals is yet to be uncovered in Sweden. We look forward to the next phase of exciting exploration work at Olserum North this summer".*

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Ragnar Metals Limited ("**Ragnar**" or "the **Company**", **ASX: RAG**) is pleased to announce assay results for the first field program to its newly acquired Olserum North Heavy Rare Earth Project in Southern Sweden (See RAG announcement titled "*Acquisition of Two Heavy Rare Earth and NdPr Projects in Sweden*" released 26 June 2023).

Rock Sampling at Olserum North HREE Project

Ragnar geologists have recently completed fieldwork at Olserum North and collected 11 samples in the area. During the field program, the *Hylleled* heavy rare earth oxide (HREO) prospect was relocated, and rock samples of massive magnetite- and biotite-altered rock with magnetite veins in places returned:

- **8,286 ppm (0.82%) TREO** with very high percentage of high value **HREO up to 86%,** including HREO metals **735 ppm Dy_2O_3** and **109 ppm Tb_4O_7** as well as 72.8% Fe_2O_3 in OLSGS003 (Figure 1A); and
- **9,012 ppm (0.90%) TREO** with **24% NdPr** and **16% HREE** in OLSGS001 (Figure 1B).

Significantly, a new rare earth prospect was discovered from sampling historical iron ore workings called the *Flaken* prospect, where additional rock samples of massive magnetic and biotite altered rock with magnetite veins returned:

- **4,967 ppm TREO** with very high percentage **HREO up to 93%** including HREO metals **402 ppm Dy_2O_3** and **52 ppm Tb_4O_7** as well as 63.1% Fe2O3 in OLSGS008; and
- **11,991 ppm (1.2%) TREO** with **22% NdPr** and **26% HREO** in OLSGS0011.

These results are highly significant as the *Hylleled* and *Flaken* prospects are located 1.1 km apart with the airborne magnetic data suggesting that the magnetite-HREO mineralisation is connected (Figure 2). Field measurements of the veins confirm a northwest-southeast orientation (310-320 degrees strike) with steep dip (78 degrees) to the northeast, which supports the magnetic interpretation. In addition, several magnetic anomalies extend for approximately 5 km which suggests further potential warranting further work across the tenure.

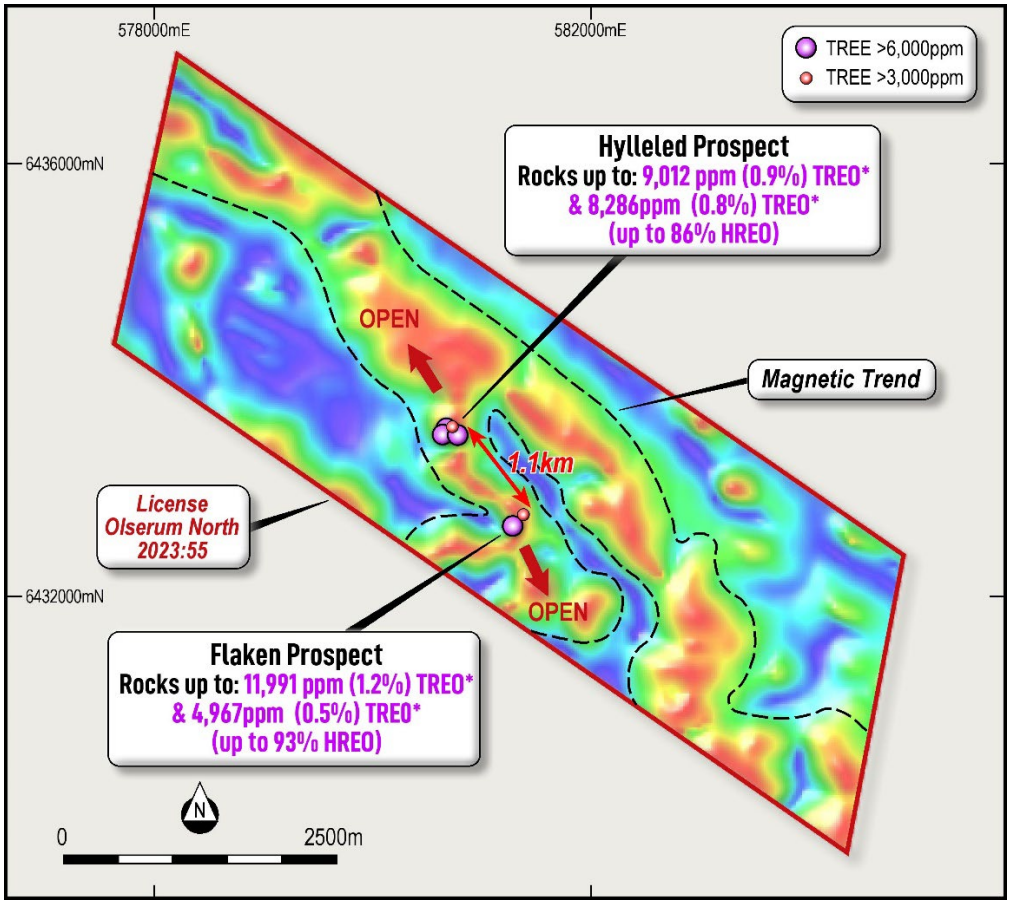

Figure 2: Airborne Magnetic Map (tilt derivative) showing the location of recent rock sample results (*TREO includes all rare earth elements plus Y and Sc)

About the Olserum North HREE Project and nearby Olserum HREE Deposit

Project tenure at Olserum North comprises an area of 20.8km^2, strategically located 8.5km north of the Olserum HREE deposit, which is in an identical geological setting characterised by the same host Palaeoproterozoic Svekokarelian metasedimentary rocks (1.9Ga) and Palaeoproterozoic alkalic granite and syenite rocks (1.8Ga), which has been mapped by the Geological Survey of Sweden (Figure 3).

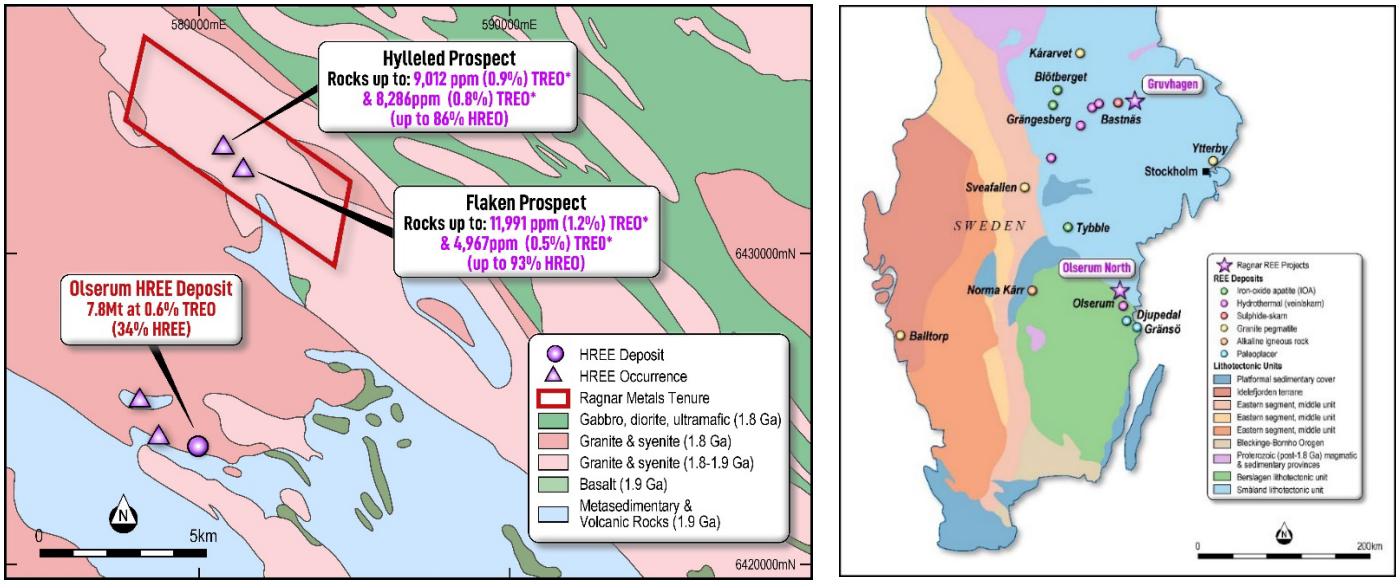

Figure 3 (left): Interpreted bedrock geology map showing Ragnar's newly acquired Olserum North project in relation to the Olserum HREE deposit. (Right): Simplified geological map of Southwest Fennoscandian Shield showing the location of Ragnar's new REE Projects in relation to the Olserum REE deposit.

The Olserum HREE deposit is hosted in hydrothermally altered metasedimentary and alkalic granites. Sweden has recently defined the Olserum REE deposit and the surrounding area as a resource of national importance for critical minerals[1]. The Olserum deposit and resource[2] is characterised by variably magnetite-biotite-altered rock, often with spectacular coarse crystals of REE-bearing xenotime minerals[3] (Figure 4). The mineralisation style identified on Ragnar's 100%-owned Olserum North (Figures 1A & 1B) displays striking similarities to the Olserum deposit itself.

Figure 4: Photograph of biotite-magnetite veins (black) with local concentrations of coarse xenotime (red-brown) and apatite (dull white)[3].

What is most attractive about these deposits is the high percentage of heavy rare earth elements (HREE), in particular, **Tb** (Terbium) and **Dy** (Dysprosium), as well as **Nd** (Neodymium). Notably, amongst various other important uses, these metals are critical components in manufacturing performance technology solutions for clean energy.

In addition, Ragnar remains committed to exploration in Sweden since the country is consistently ranked in the top 10 of the Fraser Institute's Annual Survey of Mining Investment Attractiveness.

Conclusions and Ongoing Work Programs

Recent rock sampling work by Ragnar and the review of the airborne magnetic data indicate the Olserum North project is highly prospective for discovering a heavy rare earth element deposit. Further rock sampling and magnetic and radiometric geophysics are planned for the project. Rock sampling was also recently completed at Ragnar's 100% owned Gruvhagen REE project, and results are expected in the coming weeks.

***Table 1: Rock sampling by** Ragnar Metals at the Oslerum North Project*

SAMPLE	OLSGS001	OLSGS002	OLSGS003	OLSGS004	OLSGS-05a	OLSGS-05b	OLSGS006	OLSGS007	OLSGS008	OLSGS009	OLSGS011
Prospect	Hylleled	Hylleled	Hylleled	Hylleled	Hylleled	Hylleled	Flaken	Flaken	Flaken	Flaken	Flaken
Easting	580704	580702	580698	580698	580699	580699	581359	581312	581354	581344	581258
Northing	6433560	6433556	6433565	6433567	6433569	6433569	6432770	6432813	6432770	6432783	6432660
TREO_Y_Sc	9012	3086	8286	1206	7237	8318	483	1193	4967	2808	11991
HREO	1468	2326	7002	817	5207	6502	99	720	4552	1812	3069
HREO%	16%	79%	86%	69%	74%	80%	21%	65%	93%	67%	26%
NdPr	2064	212	371	106	575	505	75	146	112	329	2573
NdPr%	23%	7%	5%	9%	8%	6%	16%	13%	2%	12%	22%
CeO2	3550	238	396	158	744	658	192	146	131	345	4054
Dy2O3	158	232	735	73	530	655	9	69	402	170	367
Er2O3	70	126	431	48	305	390	5	37	286	95	162
Eu2O3	11	5	13	2	11	13	1	1	4	3	13
Gd2O3	231	178	492	52	390	464	8	63	207	152	426
Ho2O3	27	45	148	16	107	133	2	13	93	34	64
La2O3	1548	95	160	68	342	286	102	47	52	114	1794
Lu2O3	10	16	65	7	47	58	1	4	43	11	18
Nd2O3	1610	176	310	85	468	413	56	121	93	273	2024
Pr6O11	454	36	61	21	107	92	19	25	19	56	550
Sc2O3	66	128	162	27	174	161	5	90	62	108	51
Sm2O3	317	88	196	30	194	206	10	45	59	100	449
Tb4O7	31	36	109	11	82	98	2	11	52	27	67
Tm2O3	10	18	66	8	47	59	1	5	44	13	22
Y2O3	853	1556	4508	552	3378	4241	65	485	3137	1231	1797
Yb2O3	66	114	435	47	311	391	5	30	285	76	133
Fe2O3_pct	22.5	76.8	72.8	12.45	75.1	73.3	2.31	13	63.1	24.3	18
Cu_ppm	61	205	<1	1	338	333	2	<1	<1	<1	1

***Table 2:** Ragnar Metals Sweden HREE and Lithium Project Tenement Details*

Name	License ID	RAG Ownership	Area Ha	Expiry Date
Gruvhagen nr 1	2023 38	100%	1612.54	23/03/2026
Olserum North	2023 55	100%	2082.61	25/04/2026
Bergom nr 2	2023 35	100%	2767.31	20/03/2026
Hälleberget nr 1	2023 36	100%	2110.45	20/03/2026
Total Area			**8,572.91**	

(NB: Table 2 does not include the tenements subject to disposal as announced on 26 June 2023).

For the purpose of ASX Listing Rule 15.5, the Board has authorised this announcement to be released.

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References

[1] *https://www.sgu.se/om-sgu/nyheter/2023/maj/olserum-blir-riksintresse-for-sallsynta-jordartsmetaller/*

[2] *Olserum indicated resource of 4.5Mt at 6000 ppm TREO (33.9% HREE) and an additional inferred resource of 3.3Mt at 6300 ppm TREO (33.7% HREE) reported in 2013 Amended and Restated Technical Report for Olserum REE Deposit Southern Sweden: https://www.sec.gov/Archives/edgar/data/1474547/000094935313000119/exh99-1_olserum.htm*

[3] *Sadeghi, Arvanitidis, Ripa, 2019. Rare Earth Elements Distribution, mineralisation and exploration potential in Sweden. Geological Survey of Sweden*

Competent Person Statement

The information in this announcement relating to exploration results, geology and planning is based on information compiled by Leo Horn of All Terrain Geology, a consultant to Ragnar Metals and a member of The Australasian Institute of Geoscientists. Mr Horn has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Horn consents to the inclusion in the report of the matters based on his information and documents in the form and context in which it appears.

END

APPENDIX 1 JORC TABLE 1 - JORC CODE, 2012 EDITION – TABLE 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. 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.	• Rock sampling by Ragnar Metals is mainly outcrop rock samples, however in the absence of outcrop some float samples have been taken near historical workings that are interpreted to be sourced close to outcrop. All sample types and descriptions were carefully recorded by the geologist
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• No drilling reported in this announcement.
	• Aspects of the determination of mineralisation that are material to the Public Report.	• No drilling reported in this announcement.
	• In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g 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 (e.g. submarine nodules) may warrant disclosure of detailed information	• No drilling reported in this announcement.
Drilling techniques	• 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).	• No drilling reported in this announcement.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• No drilling reported in this announcement.

Criteria	JORC Code explanation	Commentary
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Geological descriptions were recorded by Ragnar Metals for each rock sample when collected by geologist.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• No drilling reported in this announcement. • No sub-sampling completed for rock chip samples.
Quality of assay data and laboratory tests	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Rock assays were conducted by ALS laboratories in Pitea Sweden where samples were subject to lithium borate fusion followed by ICP-MS for full suite REE and other rare metals, four-acid digest for base metals ICP-AES and whole rock package by ICP-AES
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	• These assays verify and potentially upgrade previously reported historical rock sampling at the Hylleled prospect
	• The use of twinned holes.	• No drilling reported in this announcement.
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• No drilling reported in this announcement.
	• Discuss any adjustment to assay data.	• Oxide conversions calculated for REE (see *Data Aggregation Methods* section)
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-	• Location of rock samples by Ragnar Metals were recorded using a

Criteria	JORC Code explanation	Commentary
	hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	handheld GPS which is considered appropriate for reconnaissance sampling.
	• Specification of the grid system used.	• SWEREF99TM
	• Quality and adequacy of topographic control.	• Elevation data not collected from handheld GPS.
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	• Rock samples were taken at selected outcrops and historic iron occurrences and workings.
	• 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.	• Further sampling work is required to establish continuity of mineralisation.
	• Whether sample compositing has been applied	• No drilling or channel composite samples reported in this announcement.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Reconnaissance rock sampling by Ragnar Metals was taken where outcrops are available. The orientation of magnetite-REE mineralisation is established to be oriented northwest-southeast (Strike 310-320 degrees) with steep dip to the northeast.
Sample security	• The measures taken to ensure sample security.	• Ragnar Metals ensured that sample security was maintained to ensure the integrity of sample quality.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audits or reviews have been conducted for this release given the early stage of the project.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• Exploration Permits Olserum North (2023:55) and Gruvhagen nr 1 (2023:38) are owned 100% by Ragnar Metals. The tenures are located in Bergslagen District within the Municipality of Sala on Map page 11G. The Permits are valid until 25/04/2026 & 23/03/2026 respectively. • There are no known impediments to operate in the licenses areas for early stage exploration work.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Exploration done by other parties</td><td>• Acknowledgment and appraisal of exploration by other parties.</td><td>No other assays are reported in this announcement.</td></tr>
<tr><td>Geology</td><td>• Deposit type, geological setting and style of mineralisation.</td><td>REE mineralisation style at each prospect are not well understood. However, the Geological Survey of Sweden describes mineralisation at Olserum as a hydrothermal-style iron oxide-REE mineralisation style possibly sourced from intrusive magmas.</td></tr>
<tr><td rowspan="2">Data aggregation methods</td><td>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.
• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</td><td>• No drilling reported in this announcement however rock assay results are converted to stoichiometric oxide (REO) using element-to-stoichiometric oxide conversion factors.
• These stoichiometric conversion factors are stated in the table below
• Rare earth oxide is the industry accepted form for reporting rare earth metal assay results.
• Heavy Rare Earth Oxide (HREO) % refers to total of all HREO species divided by the total rare earth oxide (TREO) expressed as a percent.
• NdPr ratio refers to the % calculation of Nd2O3+Pr6O11 / REO expressed as a percent.

<table>
<tr><th>Element</th><th>Conversion Factor</th><th>Oxide Form</th><th>Type</th></tr>
<tr><td>Ce</td><td>1.2284</td><td>CeO2</td><td>Light</td></tr>
<tr><td>Dy</td><td>1.1477</td><td>Dy2O3</td><td>Heavy</td></tr>
<tr><td>Er</td><td>1.1435</td><td>Er2O3</td><td>Heavy</td></tr>
<tr><td>Eu</td><td>1.1579</td><td>Eu2O3</td><td>Heavy</td></tr>
<tr><td>Gd</td><td>1.1526</td><td>Gd2O3</td><td>Heavy</td></tr>
<tr><td>Ho</td><td>1.1455</td><td>Ho2O3</td><td>Heavy</td></tr>
<tr><td>La</td><td>1.1728</td><td>La2O3</td><td>Light</td></tr>
<tr><td>Lu</td><td>1.1372</td><td>Lu2O3</td><td>Heavy</td></tr>
<tr><td>Nd</td><td>1.1664</td><td>Nd2O3</td><td>Light</td></tr>
<tr><td>Pr</td><td>1.2082</td><td>Pr6O11</td><td>Light</td></tr>
<tr><td>Sc</td><td>1.5338</td><td>Sc2O3</td><td></td></tr>
<tr><td>Sm</td><td>1.1596</td><td>Sm2O3</td><td>Light</td></tr>
<tr><td>Tb</td><td>1.1762</td><td>Tb4O7</td><td>Heavy</td></tr>
<tr><td>Tm</td><td>1.1421</td><td>Tm2O3</td><td>Heavy</td></tr>
<tr><td>Y</td><td>1.2699</td><td>Y2O3</td><td>Heavy</td></tr>
<tr><td>Yb</td><td>1.1387</td><td>Yb2O3</td><td>Heavy</td></tr>
</table>
</td></tr>
<tr><td>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</td><td>• No metal equivalents reported in this announcement</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>• These relationships are particularly important in the reporting of Exploration Results.
• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.
• If it is not known and only the down hole lengths are reported, there should be a clear statement to this</td><td>• Rock samples are mainly important examples of disseminated, vein and massive-style magnetite-REE mineralisation identified in the field</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	effect (e.g. 'down hole length, true width not known').	
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Appropriate maps and tables are included in the body of the Report.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• No drilling reported in this announcement. • The accompanying document is a balanced report of recent rock samples assays by Ragnar Metals.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• All meaningful and material exploration data available to the Company is disclosed in the body of this announcement. • Airborne magnetic data (200m spaced) was purchased from the Sweden Geological Survey and data compilation and image processing was contracted to GeoVista Geophysical consultants based in Lulea, Sweden who provided Ragnar Metals with a small suite of industry-standard images including 1Vd, RTP, UC200m and Tilt_DER.
Further work	• The nature and scale of planned further work (e.g. 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.	• Further work is described in the body of this announcement.