

# WIDESPREAD CONDUCTORS IDENTIFIED AT VIKEN ENERGY METALS PROJECT IN SWEDEN

Ragnar Metals Limited ("Ragnar" or "the Company", ASX: RAG) is pleased to announce the results of reprocessed VLF geophysics data on the recently granted Viken Project in Sweden.

## HIGHLIGHTS

- Reprocessing of VLF geophysics data identified several anomalies coincident with polymetallic mineralisation intersected in previous drilling:
  - o At Viken South, a large conductive trend approximately 5 km long is coincident with MYR78002 that intersected 95.6m at 185 ppm U₃O<sub>8</sub> and 0.26% V₂O<sub>5</sub> from 16.0m.
  - At Viken South, a second large conductive trend approximately 5km long is coincident with MYR78007 that intersected 44.2m at 167 ppm U308 and 0.16% V205 from 2.5m.
  - At Viken East, a third large conductive trend approximately 6km long is coincident with NAK78004 that intersected 32.9m at 230 ppm U<sub>3</sub>O<sub>8</sub> and 0.24% V<sub>2</sub>O<sub>5</sub> from 26.4m in including 25.4m at 252 ppm U<sub>3</sub>O<sub>8</sub> and 0.27% V<sub>2</sub>O<sub>5</sub>.
- These three large anomalies that are strongly supported by historical drilling are accompanied by a further 3 conductive anomalies that indicate extensive potential on Ragnar's large 62 sq km package.

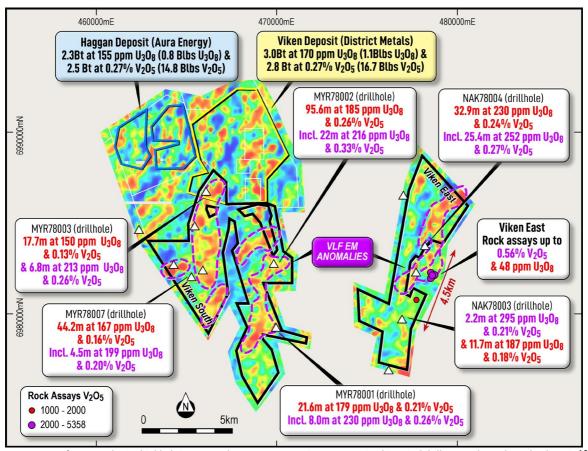


Figure 1: Image of VLF geophysics highlighting anomalies on Ragnar projects concerning historical drilling results and nearby deposits<sup>1,2,3,4</sup>.

Black Dash at Viken East is a new application (See ASX RAG announcement 19 November 2024)



#### Clarification re uranium

On the 19<sup>th</sup> of November 2024, RAG announced preliminary exploration results indicating potential mineralisation, including uranium, at its recently granted Viken South, Viken East, and Flugen Projects. The announcement referenced "Sweden's changing sentiment toward uranium mining". The Company wishes to clarify that the exploration licenses granted for Viken South, Viken East and Flugen were granted specifically for energy metals including vanadium, copper, nickel as well as molybdenum, and zinc. Under current Swedish environmental legislation, exploration licenses or production concessions related to uranium cannot be granted for applications made after 31 July 2018. However, in February 2024, the Company notes that the Swedish Ministry of Climate and Enterprise initiated an inquiry into the existing uranium mining ban. Since uranium is also an energy metals Ragnar choses to state previous uranium assay results together with other associated metals.

### VLF Reprocessing at Viken East and Viken South

Historical VLF (Very Low Frequency) geophysical data was obtained by GeoVista Consultants, who performed extensive reprocessing and filtering to generate a series of images across Ragnar's Viken South and Viken East projects. This work aimed to identify anomalies associated with the Viken and Haggan deposits to the north, which are hosted within conductive alum shales. These deposits serve as analogs for locating similar anomalies to the south and east within Ragnar's licenses.

The final imaging results are highly compelling. The known deposits at Viken, held by District Metals, and Haggan, held by Aura Energy, exhibit multiple conductive trends interpreted as representing the conductive alum shale host rocks occurring near the surface (Figure 1). Similar conductive trends have been identified within Ragnar's licenses:

At Viken South, a large conductive trend 5 km long is coincident with previous drilling intersections that intersected 95.6 m at 185 ppm  $U_3O_8$ , 0.26%  $V_2O_5$  and 318 ppm Mo from 16.0m in MYR78002 (eastern area), including 22.0m at 216 ppm  $U_3O_8$ , 0.33%  $V_2O_5$  and 388 ppm Mo from 88.0m; and further supported by 21.6 m at 179 ppm  $U_3O_8$ , 0.21%  $V_2O_5$  and 332 ppm Mo from 20.2m in MYR78001 (southern area) including 8.0m at 230 ppm  $U_3O_8$ , 0.26%  $V_2O_5$  and 428 ppm Mo (Figure 1).

Also, at Viken South, a second large 5km long conductive trend identified coincident with previous drilling that intersected 44.15 m at 167 ppm  $U_3O_8$ , 0.16%  $V_2O_5$  and 229 ppm Mo from 2.5m in MYR78007 (western area), including 4.5m at 199 ppm  $U_3O_8$ , 0.20%  $V_2O_5$  and 275 ppm Mo, and further supported by 6.8 m at 213 ppm  $U_3O_8$ , 0.26%  $V_2O_5$  and 345 ppm Mo from 37.1m in MYR78003 (northern area) and 17.7m at 150 ppm  $U_3O_8$ , 0.13%  $V_2O_5$  and 196 ppm Mo from 60.5m (Figure 1).

At Viken East, a third large 6km long conductive trend identified coincident with previous drilling that intersected 32.9 m at 230 ppm  $U_3O_8$ , 0.24%  $V_2O_5$  and 347 ppm Mo from 26.35m in NAK78004, including 25.35m at 252 ppm  $U_3O_8$ , 0.27%  $V_2O_5$  and 389 ppm Mo (Figure 1).

These three large anomalies that have been supported by historical drilling are accompanied by a further three conductive anomalies that indicate extensive potential on Ragnar's large 62 sq km package (Figure 1).

## **Discussion Of Results & Next Steps**

The extensive conductive anomalies span a combined length of at least 16 kilometers, are highly encouraging, and have delineated the highest-priority areas for potential uranium-vanadium-molybdenum-bearing alum shales. These priority areas will form the focus of Ragnar's follow-up exploration efforts, as the anomalies are supported by historical drilling intersections.

Ragnar plans to advance its 3D modeling work and evaluate the application of additional electromagnetic (EM) techniques to further refine exploration over the identified high-priority zones.



For more background information on the Viken South and Viken East projects, refer to the ASX announcement on November 19, 2024.



Figure 2: Map of Scandinavia showing the distribution of alum shales (black), which are the primary host rock for uranium mineralisation in Sweden, and the location of Ragnar's new energy projects (green) in relation to nearby uranium-vanadium deposits<sup>1</sup>

For the purpose of ASX Listing Rule 15.5, the Board has authorised the release of this announcement.

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## **Competent Person Statement**

The information in this announcement relating to exploration results is based on information compiled by Leo Horn of All Terrain Geology, consultant to Ragnar Metals and member of The Australian 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.



#### References

Table 1: Table of licenses in Sweden held by Ragnar Metals

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
Olserum North Nr 2	2023 118	100%	3014.02	17/08/2026
Bergom nr 2	2023 35	100%	2767.31	20/03/2026
Bergom nr 3	2023 116	100%	4773.73	17/08/2026
Hälleberget nr 1	2023 36	100%	2110.45	20/03/2026
Hälleberget nr 2	2023 58	100%	2985.79	25/10/2026
Orrvik Nr 110	2020 93	100%	600	3/12/2026
Orrvik Nr 210	2021 23	100%	922.52	16/03/2027
Orrvik Nr 300	2020 83	100%	450.07	5/11/2026
Orrvik Nr 400	2022 77	100%	1636.18	14/11/2025
Flugen nr 1	2024 89	100%	3885.98	14/05/2027
Ingelsbo nr 1	2024 92	100%	719.66	23/05/2027
Viken East	2024 93	100%	2275.11	23/05/2027
Viken East nr 2	2025 5	100%	308.28	16/01/2028
Viken South	2024 88	100%	3963.56	14/05/2027
Total Area			34107.81	

<sup>&</sup>lt;sup>1</sup>Updated Technical Report, Resource Estimate and Preliminary Economic Assessment on the Viken MMS Project, Sweden for Continental Precious Minerals Inc. 2014. P&E Mining Consultants Inc.

<sup>&</sup>lt;sup>2</sup> Preliminary Economic Assessment on the Viken MMS Project, Sweden for Continental Precious Minerals Inc. dated October 19, 2010 with an effective date of September 10, 2010. P&E Mining Consultants Inc., EHA Engineering Ltd., and G.A. Harron & Associates Inc. https://secure.kaiserresearch.com/i/jk/tr16/TRCZQ20101019.pdf

<sup>&</sup>lt;sup>3</sup>Aura Energy ASX Release: Häggån Battery Metal Project Resource Upgrade Estimate Successfully Completed, 10 October 2019

<sup>&</sup>lt;sup>4</sup>Aura Energy ASX Release: 22 Aug 2012 - Outstanding Häggån Uranium Resource expands to 800 million pounds



## APPENDIX TWO – JORC CODE, 2012 EDITION – TABLE 1

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Not applicable to VLF data. Further details regarding VLF survey are set out below.</li> <li>In relation to other historical data referred to in this announcement, see RAG announcement 19 November 2024.</li> </ul>
Drilling techniques  Drill sample recovery	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> <li>Method of recording and assessing</li> </ul>	<ul> <li>Not applicable to VLF data. Further details regarding VLF survey are set out below.</li> <li>In relation to other historical data referred to in this announcement, see RAG announcement 19 November 2024.</li> <li>Not applicable to VLF data. Further details</li> </ul>
2.m cample receivery	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	regarding VLF survey are set out below.  In relation to other historical data referred to in this announcement, see RAG announcement 19 November 2024.
Logging	Whether core and chip samples have been geologically and	<ul> <li>Not applicable to VLF data. Further details regarding VLF survey are set out below.</li> </ul>



	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.	In relation to other historical data referred to in this announcement, see RAG announcement 19 November 2024.
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Not applicable to VLF data. Further details regarding VLF survey are set out below.</li> <li>In relation to other historical data referred to in this announcement, see RAG announcement 19 November 2024.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	See RAG announcement 19 November 2024.  The VLF detector during the time of the survey, the measured information was registered coming from one transmitter only. The transmitter was located in England and the information was registered using a 3-component antenna (a so-called induction coil). The antenna records the three components of the magnetic field vector.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Not applicable to VLF data. Further details regarding VLF survey are set out below.</li> <li>In relation to other historical data referred to in this announcement, see RAG announcement 19 November 2024.</li> </ul>



Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	VLF surveys here were flown east-west (azimuth 90 deg) in the historical RT90 grid and were later converted to the current Sweref99TM by Swedish Geological Survey (SGU).
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The VLF surveys here were flown east-west (azimuth 90 deg) with distance between the flight lines of 200 metres.</li> <li>The flight line direction and spacing is considered to be adequate for the reporting of exploration results.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	East-west lines are considered to be adequate for mapping the shales since the geology is interpreted by the SGU in 1980 to have synclinal and anticlinal hinges along a north-south axis.
Sample security	The measures taken to ensure sample security.	Not relevant for historical VLF data.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been completed.

Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Exploration Permits Viken South (2024:88), Viken East (2024:93) and Viken East nr 2 (2025:5) are currently 100% held by Ragnar Metals.</li> <li>All tenures are located in the Jämtland County.</li> <li>There are no known impediments to operate in the license areas for early-stage exploration work.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	See RAG announcement 19 November 2024.
Geology	Deposit type, geological setting and	Uranium-vanadium-molybdenum mineralisation at Viken South and Viken East is hosted in



	style of mineralisation.	aluminous ("alum") shales similar to the Viken and Häggån deposits to the north.
Data aggregation methods	<ul> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> </ul>	See RAG announcement 19 November 2024.
Sub-sampling techniques and sample preparation	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>Not applicable to VLF data. Further details regarding VLF survey are set out below.</li> <li>In relation to other historical data referred to in this announcement, see RAG announcement 19 November 2024.</li> </ul>
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, sections and tables are included in this ASX announcement.
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.	All available data has been reported in tables and figures.
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	The VLF surveys were flown by Swedish Geological Survey (SGU) in 1977 and 1978. The surveys here were flown E-W (azimuth 90 deg) in the old RT90 grid and later translated to Sweref99TM by SGU. Distance between flight lines were 200 m. During the years 1973 – 1990, the measured information was registered coming from one transmitter only. The transmitter was located in England and the information was registered using a 3-component.



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	characteristics; potential deleterious or contaminating substances.	<ul> <li>antenna (induction coil). The antenna records the three components of the magnetic field vector. The drawback of data from one transmitter, is the fact that conductive structures pointing towards the transmitter location will dominate the data, meaning that any conductive structure parallel with the transmitter will be missed (in theory). In practice, however, the thickness will play a role as well, meaning that a thick conductive formation (regardless of orientation) tends not to be missed. It is, however, important to be aware of that there is a directional bias on the data collected earlier than 1990.</li> <li>Everything meaningful and material is disclosed in the body of the report.</li> <li>No bulk samples, metallurgical, bulk density, groundwater, geotechnical and/or comprehensive rock characteristic tests were carried out by previous explorers.</li> <li>There are no known potentially deleterious or contaminating substances.</li> <li>Exploration data for the project continues to be reviewed and assessed and new information will be reported if material.</li> </ul>
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).	Further work is detailed in the body of the announcement.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	