

# 11.55m AT 1.45% Li<sub>2</sub>O INCLUDING 3m AT 3.11% Li<sub>2</sub>O FROM SURFACE CHANNEL AT ORRVIK, SWEDEN

Ragnar Metals Limited ("Ragnar" or "the Company", ASX: RAG) is pleased to announce assay results of a channel sampling program at its Orrvik lithium project (the "Project") in Sweden.

### **HIGHLIGHTS**

- Recent field work at Orrvik has exposed an outcropping spodumene-bearing pegmatite of at least 11.55m with potential to widen as the southern contact is concealed undercover
- Assays from the channel sample returned 11.55m at 1.45% Li<sub>2</sub>O, 74 ppm Ta<sub>2</sub>O<sub>5</sub> and 0.03% SnO<sub>2</sub> from surface and open to the south
- Interval also includes a high-grade zone of 3m at 3.11% Li₂O, 48 ppm Ta₂O₅ and 0.04% SnO₂
- Previous resistivity imaging coupled with these results <u>confirms Orrvik as a high-priority drill</u> <u>prospect</u> targeting a swarm of multiple-stacked pegmatite dykes





Figure 1: (left) Photograph of diamond cut channel at Orrvik facing south-southeast across strike; and (right) close up of one channel sample interval showing visible spodumene (sp) from channel sample OCSJF06 assaying 2.4% Li₂O

#### **Executive Director Eddie King commented:**

"We are pleased to demonstrate the significant widths of high grade spodumene-bearing pegmatites at Orrvik and we now look to confirm the potential scale of the Project as we hunt for further pegmatite swarms throughout the regional land package. The results paint an obvious drill target and we look forward to updating shareholders in due course of our plans to mobilise for Ragnar's maiden drill program at Orrvik."



#### Channel Sampling at the Orrvik Lithium Prospect

Recently, the Company conducted channel sampling at the Orrvik prospect, utilising a diamond saw to sample known exposed outcrops with significant visible coarse (lithium) spodumene minerals identified in previous rock sampling programs (refer to ASX:RAG announcement 9 November 2023). The purpose of this program was to utilise the permits to clear and better expose the spodumene pegmatite outcrop then effectively sample across strike to determine the true width and grade at surface to assist in later drill targeting of further pegmatite swarms that have been previously interpreted (Figure 2; Refer to ASX:RAG announcement 14 August 2024).

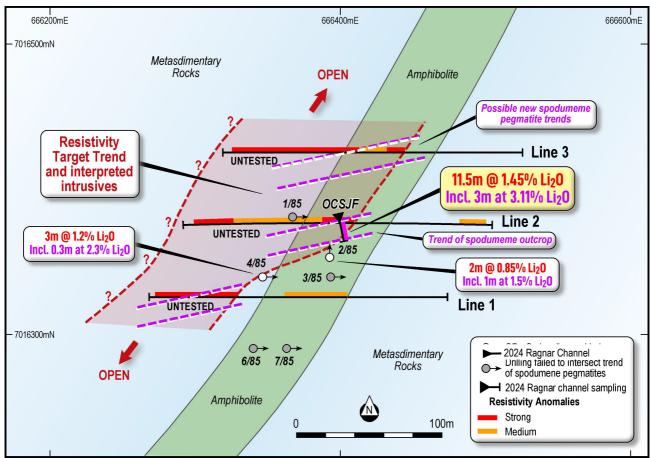


Figure 2: Geology plan map highlighting rock chip sampling, resistivity anomalies, historical drilling and newly interpreted trends of spodumene pegmatites (Refer to ASX:RAG announcement dated 14 August 2024).

The channel sampling work was conducted across the strike of an outcrop exposure of east-northeast trending spodumene pegmatite which produced highly encouraging assay results, see Table 1 for composite results:

Channel	From	То	Interval m	Li₂O %	Ta₂O₅ ppm	SnO <sub>2</sub> ppm	Cutoff Li <sub>2</sub> O
OCSJF-01	0	11.55*	11.55	1.45%	74	290	0.2%
including	1	10.55	10.55	1.57%	52	247	0.5%
including	3	6	3	3.11%	48	355	2.0%

Table 1: Composite assay results from channel OCSJF-01 located at 666393E, 7016377N with an azimuth of 160 degrees.

\*It is important to note that all channel samples are taken on exposed rock outcrops only since earthworks were not available to expose further outcrops undercover (Figure 1). As a result, the channel sampling composite assay interval is open to the south of the channel where mineralisation extends under cover (Figure 1). This indicates width could be wider than 11.55m.



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

This channel sampling work is highly encouraging and supports Ragnar's view that previous drilling was not at the optimum orientation to intersect the newly observed east-northeast trend of outcropping spodumene pegmatites, rendering the drilling ineffective. This channel sampling work demonstrates that the spodumene pegmatites are at least 11-12m wide and possibly wider since they are not fully exposed to the south. Furthermore, IP resistivity interpretation may indicate that the prospect represents a swarm of multiple-stacked, 'en-echelon style' east-northeast-trending pegmatite dykes along the trend (Figure 2; Refer to ASX RAG Announcements dated 21 February 2024 and 14 August 2024).

Orrvik remains a high-priority target for drilling. Ragnar plans to test the new interpretation with holes drilled to the south-southeast perpendicular to the east-northeast interpreted strike of the spodumene pegmatite swarms and also sufficiently test the resistivity anomalies to test the hypothesis for concealed multiple stacked pegmatite bodies (Figure 2).

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

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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.

The Company confirms that it is not aware of any new information or data that materially affects the information in the original reports, and that the forma and context in which the Competent Person's findings are presented have not been materially modified from the original reports.

#### **Cautionary Statement**

This announcement and information, opinions or conclusions expressed in the course of this announcement contains forecasts and forward-looking information. Such forecasts, projections and information are not a guarantee of future performance, involve unknown risks and uncertainties. Actual results and developments will almost certainly differ materially from those expressed or implied. There are a number of risks, both specific to Ragnar, and of a general nature which may affect the future operating and financial performance of Ragnar, and the value of an investment in Ragnar including and not limited to title risk, renewal risk, economic conditions, stock market fluctuations, commodity demand and price movements, timing of access to infrastructure, timing of environmental approvals, regulatory risks, operational risks, reliance on key personnel, reserve estimations, native title risks, cultural heritage risks, foreign currency fluctuations, and mining development, construction and commissioning risk.



# 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	<ul> <li>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.</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 (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</li> </ul>	<ul> <li>Channel sampling by Ragnar Metals is taken on outcrop rock samples.</li> <li>All sample types and descriptions were carefully recorded by the geologist.</li> <li>Channel samples are taken by a diamond saw where 2 parallel cuts are taken approx. 4-5cm apart and samples are chiseled out at 1m lengths since the spodumene percentage is fairly consistent. The last sample is 0.55m length because the pegmatite dives under deeper cover and is not currently exposed to complete sampling.</li> <li>Channel samples produced 0.56 to 2.8 kg weight samples representative of the mineralisation in that interval.</li> <li>Channel samples were taken 0.55 to 1m lengths where outcrop exposures were available for sampling so some of the lines were offset by 1-2m to avoid obstacles (e.g. trees) and ensure consistent sampling of outcrop exposures.</li> <li>The sample procedure is considered adequate for this style of lithium mineralisation and for the reporting of Exploration Results.</li> </ul>
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).	only surface channel sampling.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <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>	only channel sampling where 100% recovery was achieved.



Criteria	JORC Code explanation	Commentary
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	Geological descriptions were logged and recorded by Ragnar Metals for each rock and channel sample when collected by geologist.
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>	Field duplicates not taken for this program however laboratory duplicates were taken
Quality of assay data and laboratory tests	<ul> <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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	where samples were assayed for multi- elements by Na <sub>2</sub> O <sub>2</sub> Fusion and super trace analysis by ICP-MS (ME-MS89L).  • Standards, blanks and duplicates were conducted internally by ALS and assessed by Ragnar and are deemed to all occur within reasonable tolerance.  • The quality control procedure is
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.      The use of twinned holes.	
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All channel sampling data is stored in an



Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	Oxide conversions calculated for Li, Ta and Sn (see <i>Data Aggregation Methods</i> section).
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Location of channel and rock samples by Ragnar Metals were recorded using a handheld GPS which is considered appropriate for reconnaissance sampling.
	<ul><li>Specification of the grid system used.</li><li>Quality and adequacy of topographic</li></ul>	<ul><li>SWEREF99TM.</li><li>Elevation data collected from handheld</li></ul>
D. C.	control.	GPS.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	<ul> <li>Channel samples were taken 0.55 to 1m lengths where outcrop exposures were available for sampling so some of the lines were offset by 1-2m to avoid obstacles (e.g. trees) and ensure consistent sampling of outcrop exposures.</li> <li>Only one channel sample reported in this</li> </ul>
		announcement.
	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.	The channel sample result is adequate to establish the degree of continuity as a first pass reporting of Exploration Results and to give confidence to conduct future drilling.
	Whether sample compositing has been applied	Channel sample compositing not applied on individual sample intervals. However, significant intercepts calculated and described in Data Aggregation Methods.
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>	<ul> <li>Reconnaissance channel sampling by Ragnar Metals was taken where outcrops are available.</li> <li>The trend of pegmatite observed in the field at Orrvik are east-northeast-trending and variably steeply dipping to the north at Orrvik so the channel sampling was conducted at 160 degree azimuth in order to consistently sample across the strike of the pegmatite to determine geochemistry as close to true width as possible.</li> </ul>
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.)

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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 Orrvik nr 110 (2020:93), Orrvik 210 (2021:23), Orrvik 300 (2020:83), and Orrvik 400 (2022:77) are 100%owned by Ragnar Metals.         Exploration Permits Hälleberget nr 1 (2023:36), Hälleberget nr 2 (2023: 58)     </li> <li>Bergom nr 2 (2023:35) and Bergom nr 3 (2023:116) are owned 100% by Ragnar Metals.         All tenures are located in the Västernorrland 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	Acknowledgment and appraisal of exploration by other parties.	Previous drilling results reported in a previous Ragnar announcement were conducted by LKAB Prospektering in 2019 that are relevant to this announcement.		
Geology	Deposit type, geological setting and style of mineralisation.	Pegmatites on both projects are interpreted to be Proterozoic-aged Lithium-Caesium- Tantalum (LCT) pegmatites in the Southern Finland Province similar to the Kaustinen Province Lithium Pegmatite Deposits.		
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</li> </ul>	<ul> <li>Significant intercepts were calculated using a weighted average.</li> <li>Intersections are calculated at 0.2%, 0.5%, 2% Li<sub>2</sub>O with a maximum of 3m dilution.         Channel and rock assay results are converted to stoichiometric oxide for Li, Ta and Sn using element-to-stoichiometric oxide conversion factors which are the industry accepted form for reporting assay results in lithium pegmatites         These stoichiometric conversion factors are stated in the table below     </li> </ul>		
	aggregations should be shown in	Conversion Oxide		
	detail.	Element Factor Form  Lithium 2.1527 Li <sub>2</sub> O		
		Tantalum 1.2211 Ta <sub>2</sub> O <sub>5</sub>		
		Tin 1.2696 SnO <sub>2</sub>		
	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.</li> </ul>	The trend of pegmatite observed in the field at Orrvik are east-northeast-trending and variably steeply dipping to the north at Orrvik so the channel sampling was conducted at 160 degree azimuth in order to consistently sample across the strike of the pegmatite to determine geochemistry as close to true width as possible. So the intersection reported is likely to be >90%		



Criteria	JORC Code explanation	Commentary
	'down hole length, true width not known').	true width.
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.	<ul> <li>All available data and information has been reported in tables and figures.</li> <li>The accompanying document is a balanced report of recent channel sample assays by Ragnar Metals.</li> </ul>
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.	<ul> <li>All meaningful and material exploration data currently available to the Company is disclosed in the body of this announcement.</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	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Further work is described in the body of this announcement.