RAGNAR

METALS LTD.

2 September 2020

AMENDED ASX ANNOUNCEMENT

EM SURVEY DATA MODELLING COMPLETED AT GADDEBO NICKEL PROJECT

This announcement repeats the information released on 21 August 2020 and has been amended to include the JORC Code Table 1 Sections 1 and 2 information in respect of the Exploration Results.

HIGHLIGHTS

- **EM modelling has defined two distinct anomalous bodies requiring follow-up detailed ground EM surveying**
- **Both anomalies occur adjacent to the historic Gaddebo nickel mine**
- **IP gradient array survey completed with data currently being processed**

Ragnar Metals Limited ("Ragnar" or "the Company", ASX: RAG) is pleased to provide an update on recent work completed by 2617818 Ontario Inc ("Ontario Inc") at its Gaddebo nr3 tenement (Gaddebo), located within the Bergslagen District of Sweden, 110km NW of the capital Stockholm (Figure 1). Electromagnetic data modelling has been completed following an airborne electromagnetic helicopter survey conducted earlier in the year[1]. In addition, ground Induced Polarization (IP) surveys have been completed over Gaddebo.

The SkyTEM geophysical helicopter survey was undertaken by Ontario Inc, as part of a larger regional airborne survey covering a total of 150-line kilometers over their local tenement interests. Approximately 10% of the survey (15-line kilometers) was flown over Gaddebo which is in the western central portion of the survey area (Figure 2).

Ragnar's Chairman Steve Formica comments *"The goal of the survey work and modelling was to identify potential areas of nickel sulphide mineralization in and around the historic Gaddebo nickel mine, which was also mined for copper, cobalt, platinum, and palladium. We are pleased that Ontario Inc have completed the first pass geophysical surveys and modelling, which has generated targets that warrant further modeling and testing. Ultimately, we are optimistic that the follow up work will form the basis of Ontario Inc's exploration and drilling program at Gaddebo for the next 4 years as part of the expenditure obligations of their option."*

[1] ASX:RAG 20/01/2020-Airbourne EM Survey Completed at Swedish Gaddebo Nickel Project.

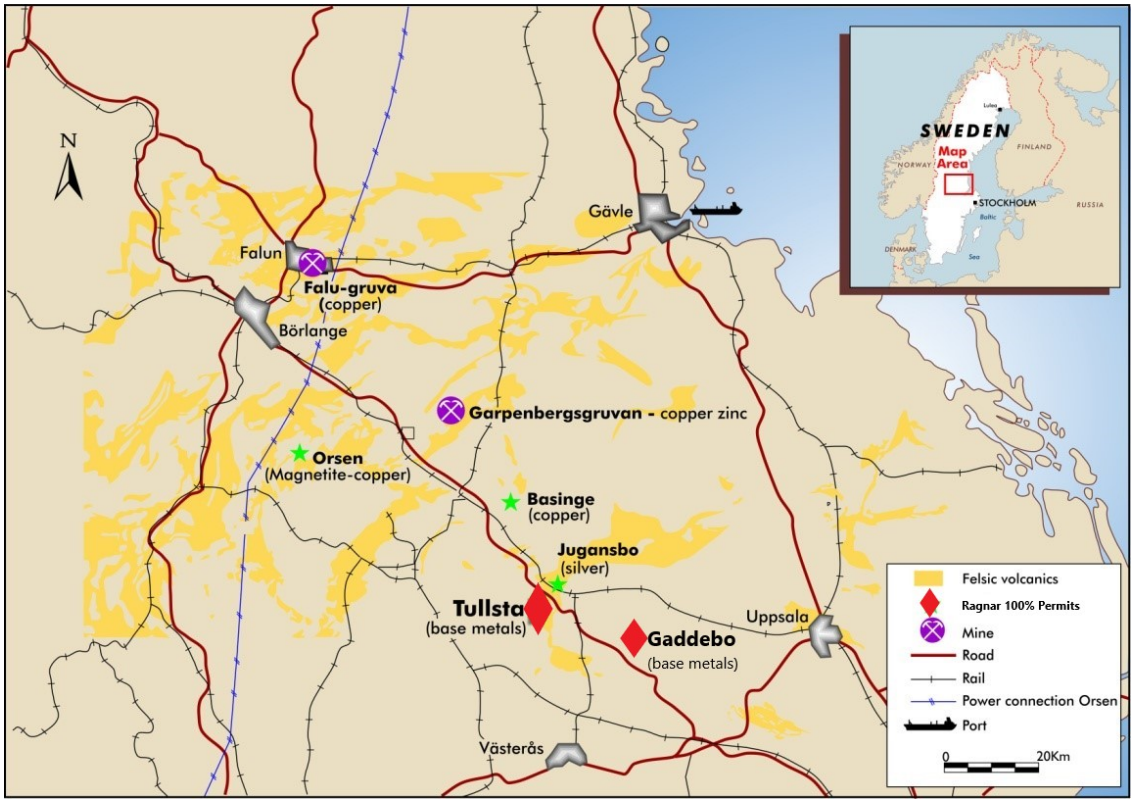

Figure 1: Gaddebo is located in the Bergslagen District NW of Stockholm. The region is well supported by infrastructure and mining operations.

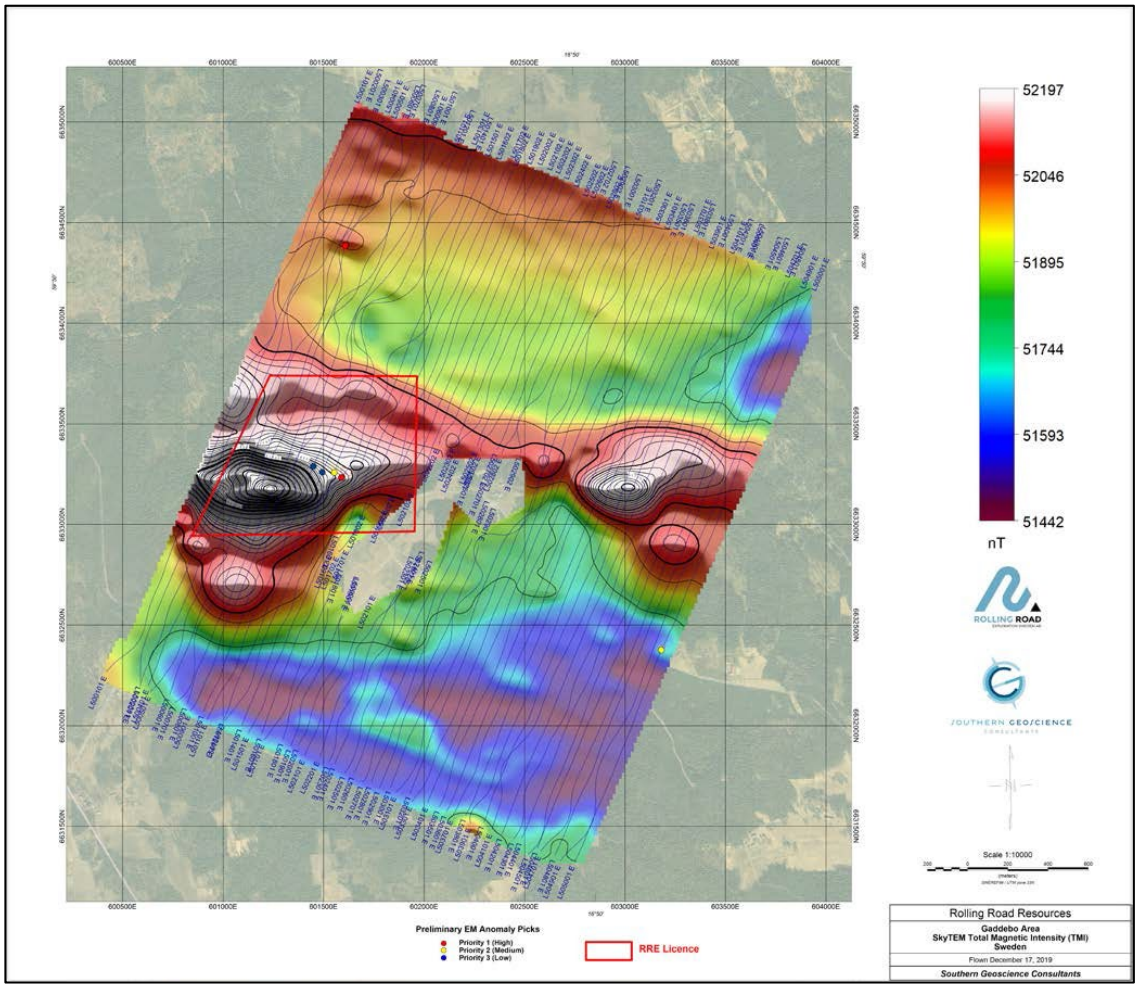

Figure 2: Gaddebo project area. SkyTEM helicopter EM anomaly locations presented on RTP TMI and Bing imagery.

The magnetic data as shown at Figure 2 is marked by a strong east-west fault that crosscuts the survey block. The south side of the fault appears to have been intruded by igneous, magnetite rich rocks in the form of a dyke subparallel to the fault, and a larger intrusive event to the south and west of the fault. The aim of the survey was to gain a better understanding of the bedrock geology and identify potential for addition Ni-sulphide mineralisation in and around the historic Gaddebo nickel mine.

Following the completion of the survey, Southern Geoscience Consultants Pty Ltd conducted a data review and commenced modelling of the flight data which comprised 50 flight lines through the tenement. The EM data (dB/dt) has been modelled with the objective of defining a common anomalous source for the multi-line linear anomaly using the MAXWELL software package.

A group of airborne EM anomalies were identified, forming an east-west linear cluster in the central part of the license were identified during the SkyTEM survey, coincident with the historic Gaddebo Ni-sulphide workings. The EM modelling defined two distinct bodies that are offset to the northeast of the Gaddebo nickel occurrences (Figure 3). The Gaddebo 1 & 2 anomalous bodies are of moderate conductivity-thickness (Table 1), both bodies are dipping to the southwest and are offset to the north of an east-west trending road cutting through the area. Inspection of the Low Moment (LM) SkyTEM data does not suggest a cultural source for the anomalies. Both anomalies appear to be in a forested area, which has been confirmed on the ground by Ontario Inc geologists.

Table 1. Gaddebo MAXWELL models

Model	Flight Line	X (SWEREF99)	Y (SWEREF99)	Depth (m,bgs)	Depth Extent (m)	Length (m)	Dip (deg)	Dip Az.	Plunge (deg)	Cond-Th (S)
Gaddebo 1	501301	601619	6633278	39	35	35	49	205	0	250
Gaddebo 2	501401	601564	6633297	43	40	50	47	204	0	250

Follow up ground EM is now recommended to further test the modelled conductive plates identified in the SkyTEM survey. The ground EM survey is currently in the planning phase, and once finalised, work plans will be submitted to the Swedish Mining Inspector. It is anticipated the survey will be conducted in 3Q.

Induced Polarization survey

A gradient array Induced Polarization survey, as planned by Ragnar in 2019, was conducted over Gaddebo between the 23rd and 27th of July 2020. The survey was conducted by the Swedish geophysical contractor Geovista and the data is currently being processed and reviewed by Ontario Inc.

Licence standing

The Gaddebo licence is in good standing and paperwork is being prepared for the upcoming renewal. which is its second (6th year) renewal. This renewal typically needs a significant amount of work indicating the holder is moving towards defining a resource (ie drilling) in order to be granted.

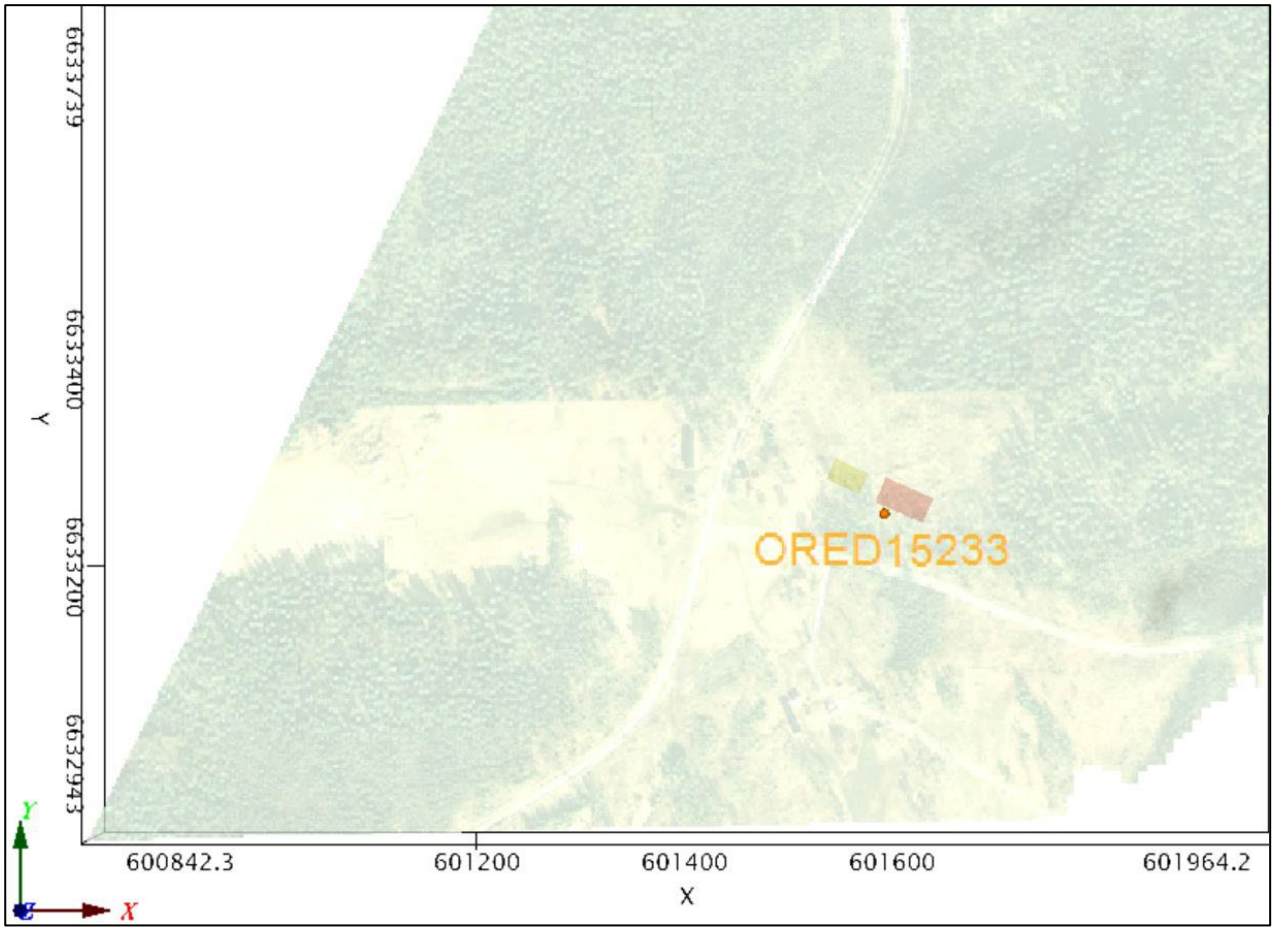

Figure 3. Maxwell EM modelling causative bodies, plan view. The Gaddebo 1 causative body is to the left (yellow), the Gaddebo 2 causative body is to the right (red). Gaddebo historic Ni workings (ORED15233) is shown as a sphere (orange).

About the Project

Historical mining was undertaken at Gaddebo for nickel, copper, cobalt, platinum, and palladium. The Gaddebo nickel mine is located on the border of the Enkoping and Sala Municipalities. Approximately 1,432 tonnes of nickel ore was produced from the workings between 1870 and 1871. An average grade of 0.8% copper and 0.3% nickel was reported (with grades of up to 4.9% nickel) based on subsequent trial mining in 1918 (BERGSKRAFT BERGSALGEN AB, 2014). Exploration works by Ragnar in 2018 identified abundant nickel sulphide mineralisation within the host medium-coarse grained olivine rich gabbroic rocks which host the historic mining operations.

Ragnar holds a 100% interest in exploration permit 2014:91, Gaddebo nr 3, located in Bergslagen District, Sweden. Ragnar entered into a binding head of agreement ("**HOA**") on 21 November 2019 with 2617818 Ontario Inc, a company incorporated in Ontario, Canada. The binding HOA sets out the term upon which the Vendor agrees to grant an option to Ontario Inc to acquire the Tenement.

Competent Person Statement

The information in this announcement relating to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Neil Hutchison of Geolithic Geological Services, who is a consultant to Ragnar Metals, and a member of The Australasian Institute of Geoscientists. Mr Hutchison 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 Resource and Ore Reserves".

Mr Hutchison consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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

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APPENDIX 1 – JORC TABLE 1

Section 1 Sampling Techniques and Data

Criteria	***JORC Code Explanation***	**Commentary**
Sampling techniques	*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* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *Aspects of the determination of mineralisation that are Material to the Public Report. 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.*	SkyTEM312HP survey collects time domain electromagnetic and magnetic data along with supporting navigation measurements over the Gaddebo Project. Resistivity and Induced Polarization (IP) measurements were completed during a geophysical survey was also completed at the Gaddebo Project. The airborne instrumentation comprising a SkyTEM312HP system includes a time domain electromagnetic system, a magnetic data acquisition system and an auxiliary data acquisition system containing two inclinometers, two altimeters and three DGPS'. All instruments are mounted on the frame suspended ~40 m below the helicopter, the generator used to power the transmitter is suspended between the frame and the helicopter, ~20 m below the helicopter. IP Measurements were carried out with a pole-dipole configuration, using one fixed receiver line and two transmitter lines on the surface. Electrodes were also placed in two boreholes. The data were inverted to 3D models with the program DCIP3d (UBC GIF). NA
Drilling Techniques	*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).*	The SkyTEM312HP system setup is a single moment configuration containing a High Moment (HM) with a peak moment of ~950,000 NIA. Data from two DGPS receivers are recorded by the EM data acquisition system while a third DGPS is recorded by the magnetic data acquisition system. The DGPS systems are used for time stamping, positioning, and correlation of the EM and magnetic datasets. All recorded data are marked with a time stamp used to link the different data types. The IP geophysical survey was carried out with a GDD 3.6 kW/2400 V transmitter and an Iris Instruments Elrec Pro receiver. The receiver can measure the signal from up to ten simultaneous dipoles.
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.*	The SkyTEM312HP system has been calibrated at the Danish National Reference site. Calibration includes measurements of the transmitter survey data repeated at a range of altitudes at the reference site. The waveforms for HM and LM are measured using a Rogowski coil. An approximation to the measured waveform is applied in modelling of the EM data. The complete dataset of the SkyTEM survey is delivered as a Geosoft database (GDB), which can be used as input for further processing and gridding and as input to inversion and interpretation software.

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		The IP transmitter current varied between different current electrode positions. The weakest current was 0.095 A and the strongest current was 3.69 A with an average of 0.93 A. The time base was selected to two seconds and the duty cycle was 50% resulting in a base frequency of 0.125 Hz. The number of stacks for individual readings varied between 4 and 8.
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.*	The SkyTEM312HP system setup is a single moment configuration containing a High Moment (HM) with a peak moment of ~950,000 NIA. Data from two DGPS receivers are recorded by the EM data acquisition system while a third DGPS is recorded by the magnetic data acquisition system. The DGPS systems are used for time stamping, positioning, and correlation of the EM and magnetic datasets. All recorded data are marked with a time stamp used to link the different data types. The time stamp is in UTC/GMT and the formats are either, • Date and Time defined as; yyyy/mm/dd hh:mm:ss.sss or • Datetime values defined as the number of days since 1900-01-01 and seconds of the day; The IP survey was carried out with a GDD 3.6 kW/2400 V transmitter and an Iris Instruments Elrec Pro receiver. The receiver can measure the signal from up to ten simultaneous dipoles.
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.*	N/A
	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.*	NA
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Prior to applying temporal averaging to the recorded SkyTEM data, the raw data are subjected to a few data processing steps: - Outlier rejection filtering of the raw data, which reduces the influence from spherics and transient cultural noise. - Removal of constant system self-response (bias) if present. - Estimation of noise standard-deviation throughout the survey area on a gateby-gate basis

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	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.	Repeated readings were taken at most IP stations to check repeatability of the results. The repeatability was very good and standard deviations for stacked signals was in general low (except for readings with very low signal strength with borehole electrodes). The decaying IP signal was measured at 20 time gates. The first time gate starts at 40 ms. The SkyTEM312HP system setup is a single moment configuration containing a High Moment (HM) with a peak moment of ~950,000 NIA. The airborne instrumentation comprising a SkyTEM312HP system includes a time domain electromagnetic system, a magnetic data acquisition system and an auxiliary data acquisition system containing two inclinometers, two altimeters and three DGPS'. All instruments are mounted on the frame suspended ~40 m below the helicopter, the generator used to power the transmitter is suspended between the frame and the helicopter, ~20 m below the helicopter. The survey was carried out with a GDD 3.6 kW/2400 V transmitter and an Iris Instruments Elrec Pro receiver. The receiver can measure the signal from up to ten simultaneous dipoles.
	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.	NA
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	NA
	The use of twinned holes	NA
	Discuss any adjustment to assay data	Processing of the data included the following steps: • Removal of obviously erroneous or disturbed data (hardly any) • Removal of duplicates (readings with low standard deviation were kept) • Normalization of measured on-time potential difference by output current magnitude • Correction of polarity of recorded signal • Calculation of pole-pole data • Assignment of coordinates • Calculation of off-time potential difference • Formatting of data in UBC format for inverse modelling.
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.*	DGPS base stations were placed at a location of maximum possible view to satellites and away from metallic objects that could influence the GPS antenna. Data from two DGPS receivers are recorded by the EM data acquisition system while a third DGPS is recorded by the magnetic data acquisition system. The DGPS systems are used for time stamping, positioning, and correlation of the EM and magnetic datasets. All recorded data are marked with a time stamp used to link the different data types.
	Specification of the grid system used	The SkyTEM312HP system has been calibrated at the Danish National Reference site and uses UTM Zone 33N (WGS84)
	Quality and adequacy of topographic control	A digital elevation model (DEM) has been calculated by subtracting the filtered laser altimeter data from the DGPS elevation. All steps related to the DEM are carried out Geosoft.
Data spacing and distribution	*Data spacing for reporting of Exploration Results*	The helicopter which flew along parallel lines spaced at average separation of ~50 meters. The nominal terrain clearance of the transmitter is 30 - 40 m, with an increase over forests, power lines, or any other

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		obstacles or hazards. The safe flying height during the survey is always based on the pilot's assessment of risk and deviations from nominal values are at the discretion of the pilot. The nominal production airspeed was 70 - 110 kph for a flat topography with no wind. Measurements for IP were made with a south-north oriented, fixed receiver line consisting of 16 dipoles, each being 50 m long.Transmitter electrode positions were along two lines parallel to the receiver line and offset 100 m towards east and west respectively. The return current electrode was included in subsequent numerical modelling.
	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. *Whether sample compositing has been applied*	NA
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.*	Lines were flown perpendicular to the target magnetic structures
Sample security	*The measures taken to ensure sample security*	Planning, setup, data collection, data processing and final reporting where all completed by contracted survey consultants. Geophysical data security has been ensured by using a professional European consulting companies.

Section 2 Reporting of Exploration Results

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.*	Ragnar holds a 100% interest in exploration permit 2014:91, Gaddebo nr 3, located in Bergslagen District, Sweden. Ragnar entered into a binding head of agreement ("**HOA**") on the 21st November 2019 with 2617818 Ontario Inc, a company incorporated in Ontario, Canada. The binding HOA sets out the term upon which the Vendor agrees to grant an option to Ontario Inc to acquire the Tenement. All regulatory and heritage approvals have been met and there are no known impediments to operate in the area.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Historical mining was undertaken at Gaddebo for nickel, copper, cobalt, platinum, and palladium. The Gaddebo nickel mine is located on the boarder of the Enkoping and Sala Municipalities. Approximately 1,432 tonnes of nickel ore was produced from the workings between 1870 and 1871. An average grade of 0.8% copper and 0.3% nickel was reported (with grades of up to 4.9% nickel) based on subsequent trial mining in 1918 (BERGSKRAFT BERGSALGEN AB, 2014). Exploration works by Ragnar in 2018 identified abundant nickel sulphide mineralisation within the host medium-coarse

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		grained olivine rich gabbroic rocks which host the historic mining operations.
Geology	*Deposit type, geological setting and style of mineralisation.*	Scandinavia and the adjoining Karelia Province in north-west Russia is one of the major nickel-copper provinces of the world. It includes the giant Pechenga deposit in Karelia, as well as recent discoveries at the Sakatti and Kevitsa Projects, both in Finland. Granmuren is an extension of the Svecofennian province which has played a long significant part of Finland's smelting and refining success. Scandinavian operations are both open pit and underground with typical grades of 0.25% to 1.0% nickel. Cobalt is locally present and has only been mined as an economic by-product from nickel-copper-rich sulphide deposits in the Bergslagen region. Nickel-copper sulphides hosted have been mined historically in the Bergslagen region from gabbroic rocks since the middle of the 18th Century. The small but significant Slättberg and Kuså deposits in the northern part of the Bergslagen region were important producers in the context of their time. Other deposits of this type are the Frustuna deposit in southern Bergslagen as well as the Ekedal and Gaddbo deposits in the central part of the region. Initially exploited for Cu alone, their Ni component was obtained as a smelter product in the 1850-1880 period, before a drop in the Ni price caused by production from New Caledonia (where export of Ni began in 1875) effectively made them uneconomic. World production of Ni metal at this time was on the order of 1000 tpa. The Bergslagen Ni-Cu deposits received renewed interest during the two World Wars, owing to the strategic value of Ni and Cu in arms and ammunition production. Total production is estimated to be approximately 700-800 tonnes of Ni metal, which to put into context, amounts to approximately one week's production at BHPs Mount Keith Ni mine in Western Australia. In contrast to other base-metal deposit styles, sulphidic Ni-Cu had not been a focus for modern exploration companies in the region, possibly because the known deposits have been small in comparison with other Ni camps around the World. The blind, greenfields discovery of sulphidic Ni-Cu sulphides at Granmuren by Drake in 2012 stands a modern milestone in Bergslagen exploration history. The discovery validates the modern strategy of applying 21st century technologies such as electrical geophysics to historic mining belts and warrants further evaluation and exploration.
Drill hole information	*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:* *easting and northing of the drill hole collar* *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* *dip and azimuth of the hole* *down hole length and interception depth* *hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the*	NA All drilling has been previously reported.

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	understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	*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.* *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.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	NA
Relationship between mineralisation widths and intercept lengths	*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 effect (eg 'down hole length, true width not known').*	The anomalies have been qualitatively assessed as Priority 1 (High), Priority 2 (Medium) and Priority 3 (Low) and are illustrated in Figure 22. In the Gaddebo Project area a total of 6 anomalous EM responses have been identified (2 Priority 1, 2 Priority 2 and 2 priority 3). There is an east-west linear cluster of EM anomalies in the central part of the RRE License comprised of 2 priority 3, 1 priority 2 and 1 priority 1 response
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 diagrams are included in 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.*	All results are reported and displayed in the diagrams
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.*	Everything meaningful and material is disclosed in the body of the report. Geological observations have been factored into the report.
Further work	*The nature and scale of planned further work (eg tests for lateral 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.*	From the Gaddebo EM and magnetic modelling results there are two distinct targets worthy of follow-up with additional mapping and potentially drill testing. The mineralisation comprising nickel occurrence ORED15233 is potentially more extensive and may extend to depth. The EM models appear to be along a possible fault structure cutting across the strong magnetic anomaly central to the RRE license area. There is no apparent correlation to any cultural or anthropomorphic activity associated with the Gaddebo 1

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		& 2 modelled anomalies in the RRE license area. The Gaddebo 1 & 2 anomalies are potentially drill ready targets; the Gaddebo 3 & 4 targets require additional ground follow-up and are of less interest as they could be influenced by the local cultural features visible on the satellite images.