ASX Code: "THR"

20 September 2022

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AIM & ASX Listings:
Shares: THR
OTCQB Listing
Shares: THORF

Directors:
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Alastair Clayton
Mark McGeough

Key Projects:

- **Gold/Lithium/Nickel**
  Ragged Range Pilbara WA
- **Copper**
  Alford East SA
- **Uranium / Vanadium**
  Colorado / Utah USA
- **Tungsten**
  Molyhil NT

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Company Announcements Office
ASX Securities Limited,
20, Bridge Street,
Sydney, N.S.W. 2000

Ragged Range Project, WA
Off-hole Electromagnetic Conductor identified beneath Nickel Gossan

The directors of Thor Mining Plc ("Thor") (AIM, ASX: THR, OTCQB: THORF) are pleased to announce that anomalous nickel assays results from RC drilling have been returned and that an off-hole conductive anomaly has been identified from a subsequent down-hole electromagnetic geophysics survey at the Krona Prospect, within the Company's 100% owned Ragged Range Project, located in the Eastern Pilbara, Western Australia.

Project highlights:

- The shallow conductor, identified from the recent high-powered Fixed Loop Electromagnetics (FLEM) ground geophysics survey beneath the nickel gossan at the Krona Prospect, was drill tested with one RC drill hole, returning:
  - 22RRRC045: **66m @ 0.19% nickel** from 81m
- The drill hole intersected the edge of the modelled FLEM conductor.
- A down-hole electromagnetic (DHEM) geophysics survey was completed and revealed an off-hole conductor consistent with sulphides and warrants drill testing to validate.
- The nickel gossan is located at the basal contact of the Dalton Suite ultramafic unit (altered Archean Komatiite) in the classic location for nickel-copper sulphide mineralisation.

Nicole Galloway Warland, Managing Director of Thor Mining, commented:

"I am encouraged that the down-hole geophysics survey at the Krona Prospect, Ragged Range has identified an off-hole electromagnetic conductor, and that the target is genuinely anomalous for nickel with assay values above background lithological values. This result warrants further drill testing to confirm this understanding."

"We are currently designing a drilling program at the Kelly's Prospect following up the high-grade gold in rock chips."

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Next Steps

- Samples have been submitted for assay of Platinum Group Elements (PGEs).
- Design follow-up drill holes to target the DHEM conductor.
- Awaiting drill assay from the recent Sterling Prospect RC drilling program.
- Commence the RC drilling program at the Kelly's Prospect, following up on high-grade gold in rock chips (up to 15.5g/t Au) (ASX: THR announcement 25 July 2022).

The Ragged Range Project, located in the prospective Eastern Pilbara Craton, Western Australia, is 100% owned by Thor Mining (covering E46/1190, E46/1262, E46/1355, E46/1340 and recently granted E46/1393 (Figure 1)).

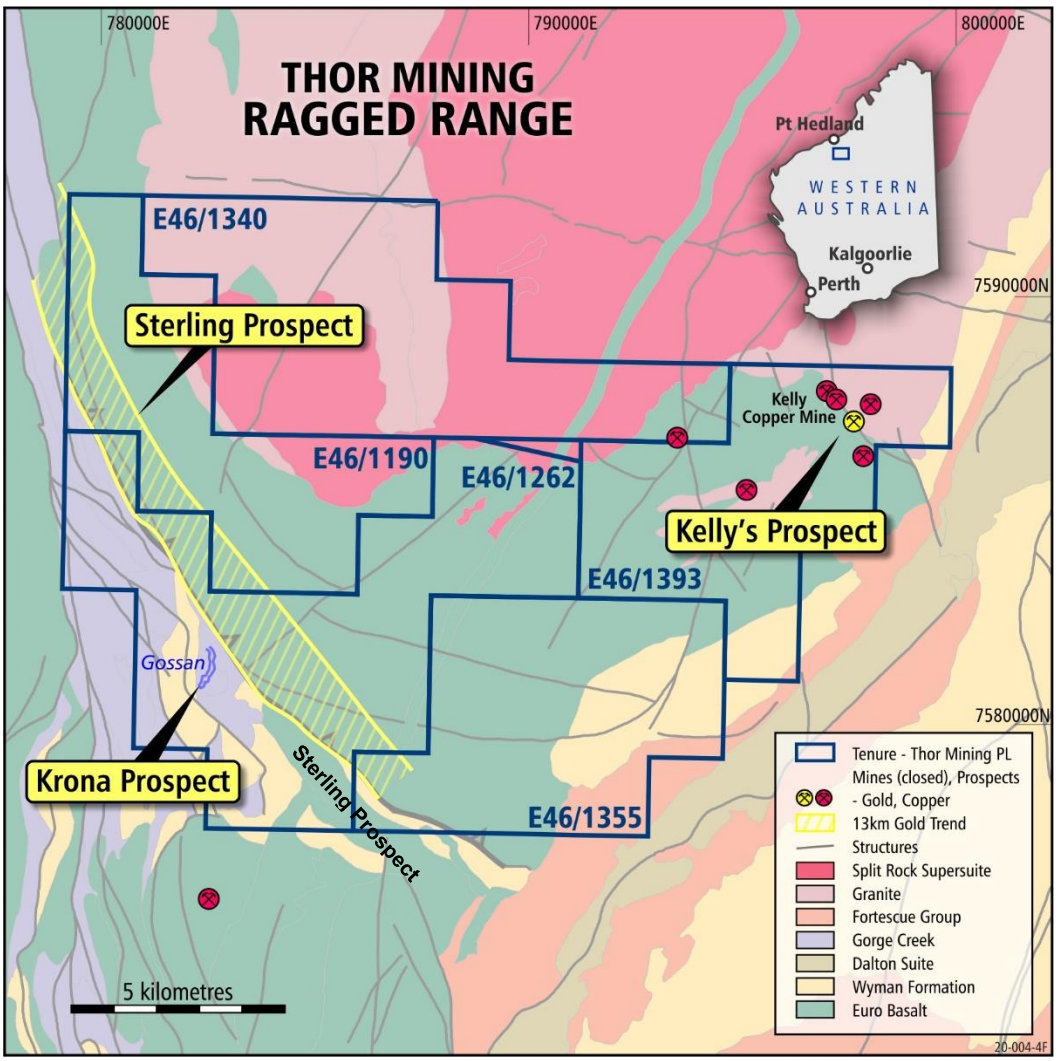

Figure 1: *Tenement location map showing the gossan position, Krona Prospect adjacent to Sterling Prospects 13km gold trend*

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Krona Prospect - Nickel Gossan

One RC drill hole of 174m was drilled to test the shallow (100m) conductor identified by the high-powered Fixed Loop Electromagnetics (FLEM) ground geophysics survey completed in June 2022 at the Krona Prospect. Due to the steep slopes around the gossan, the closest achievable collar position was around 50m from the SE corner of the plate and 130m from the plate's centre.

An intersection of **66m @ 0.19% Nickel** from 81m was returned in 22RRRC045. Whilst the hole intersected the modelled EM plate, it did not intersect massive or disseminated sulphides. It did however intersect a graphitic shale from 60-72m down hole, but this did not explain the source of the conductor as it was too shallow (~50m above the modelled plate).

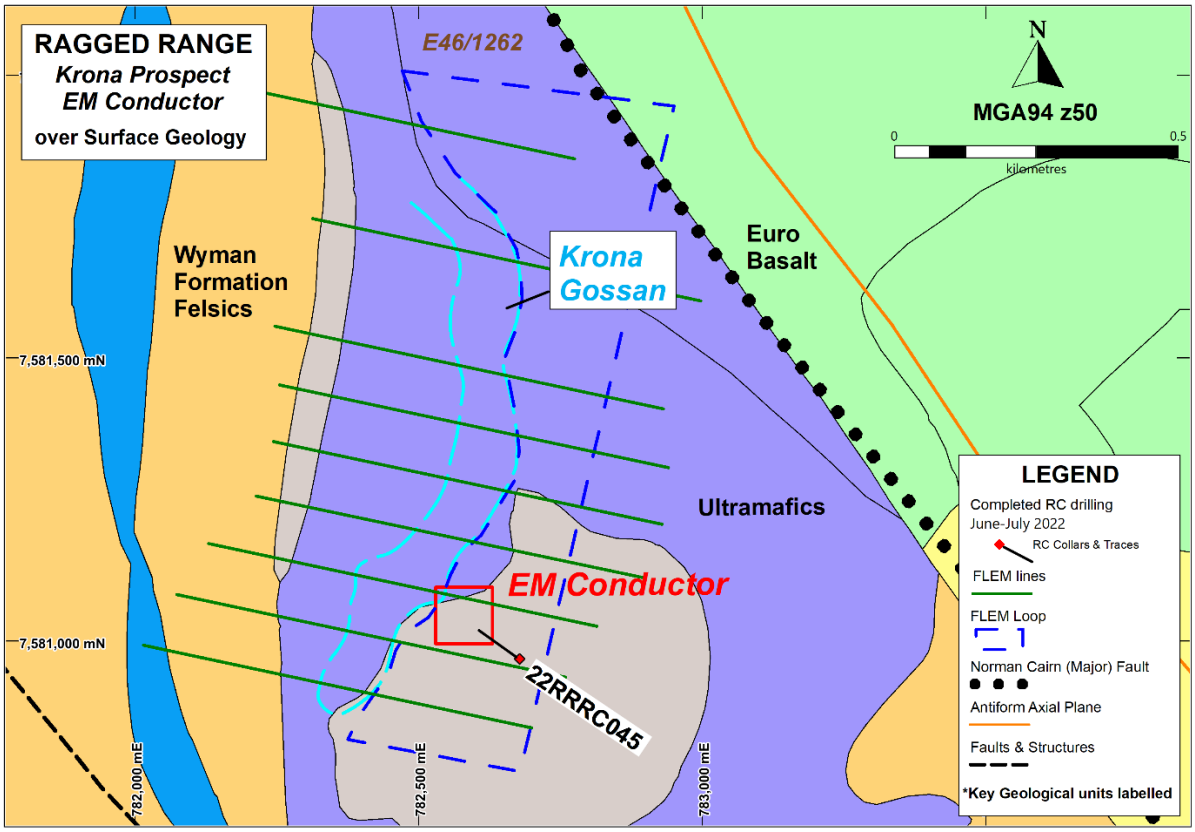

Figure 2: *FLEM survey showing EM conductor and location of RC drill hole overlain on the 100K GSWA Geology.*

To resolve the source of the conductor, the hole was cased and a down-hole electromagnetic (DHEM) survey was completed by Vortex Geophysics. This used a small 100m x 150m loop, oriented to couple both with flat lying conductors, below the loop, and steeply dipping conductors in the vicinity of the graphitic zone at ~70m down hole. The layout is shown in Figure 3.

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Figure 3: *EM conductor identified by FLEM survey and location of RC drill hole trace overlain on the airphoto.*

The DHEM identified a clear off-hole conductor at around 85m down hole, with a modelled response of -42° dip towards 312° azimuth and has a plunge of 14° to the NE but appears to flatten in places. The plunge is not well constrained and could be traded off against a small shift in the modelled plate along strike.

The modelled plate and the down hole response for channel 11 (1.8695 m Sec) are shown in Figure 4. If the modelled plate is extrapolated up dip it intersects the hole at a depth of around 30m, not at the graphitic intersection at ~70m as one might expect if that was the source of the conductor. The tenor of the EM response does not suggest a massive nickel sulphide source or even a strong conductor, but it may be networked sulphides which warrants a drill hole to test it. The local geological regime is interpreted to be a broad NE trending fault zone (Figure 5) with the Krona gossan sitting above its hanging wall and the modelled plate and graphite zone sitting closer to its footwall.

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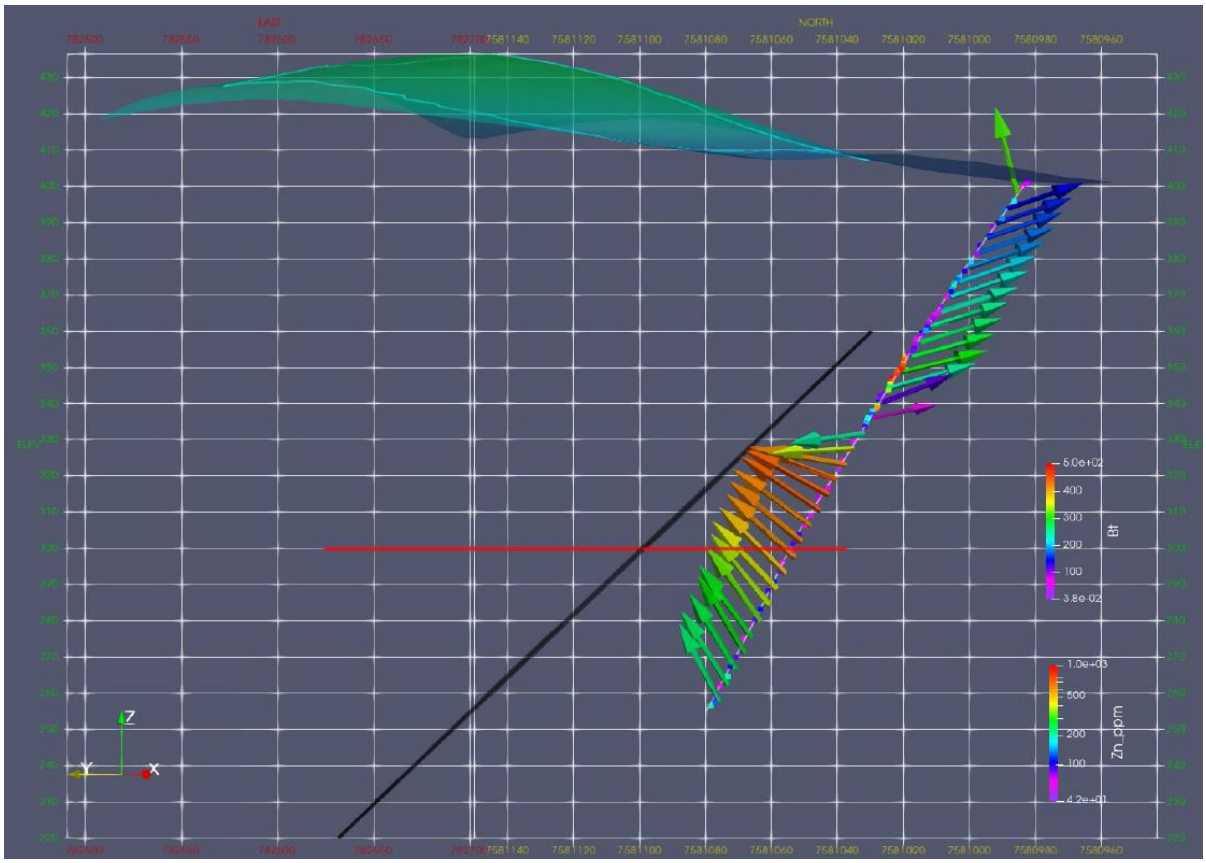

Figure 4: *View from WNW showing the measured DHEM Ch11 response, FLEM modelled plate (red) and DHEM modelled plate (black).*

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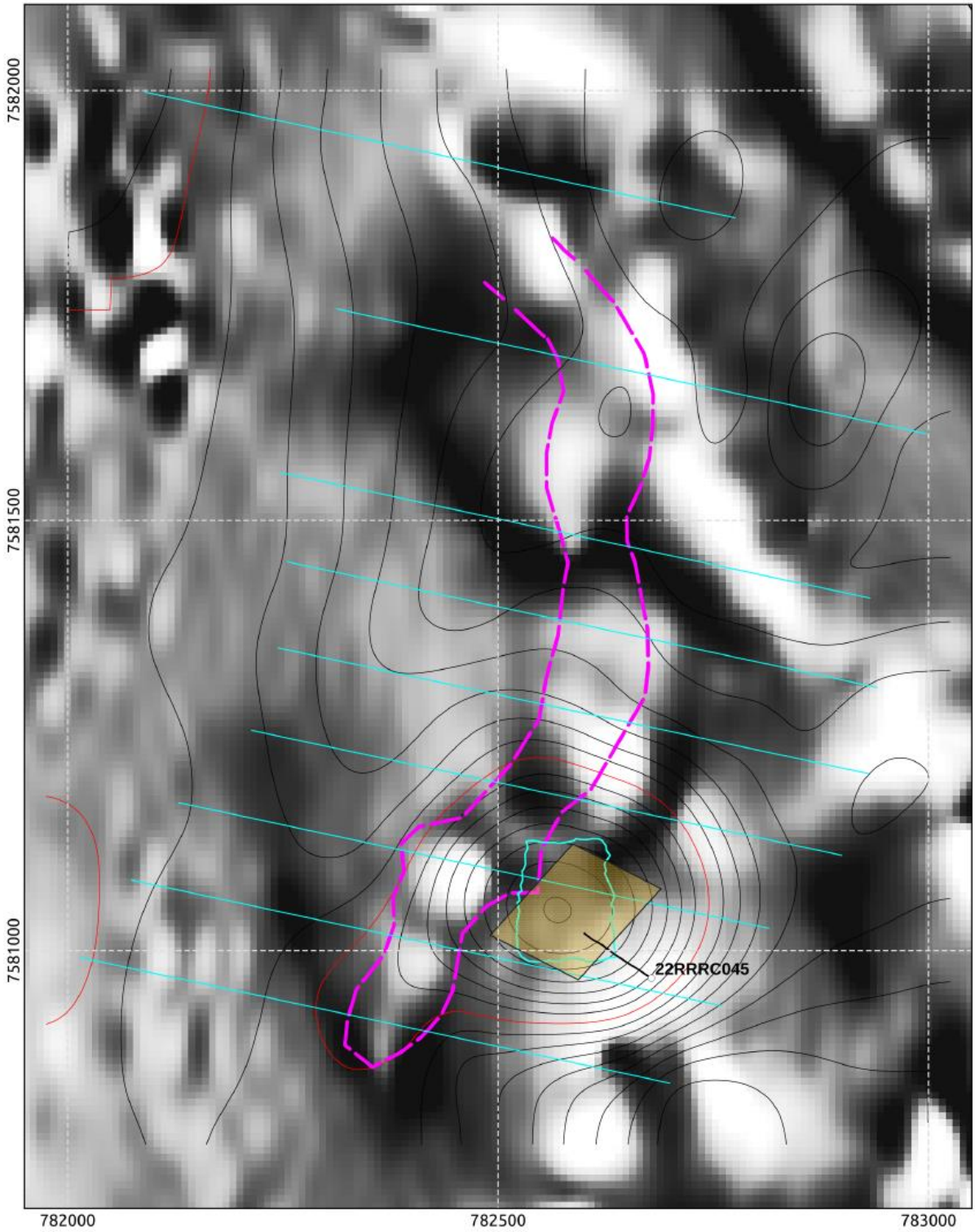

Figure 5: *Plan view of the interpreted DHEM plate (yellow), gossan outline (purple), DHEM loop and FLEM lines (blue), drill hole and contours of Ch21 total field magnitude from the FLEM overlain on a greyscale image of the AGC of the TMI.*

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Downhole Geochemistry

Lab assay data from sampling of 22RRRC045 was analysed in ioGAS software. This verified that there were anomalous nickel assays above the background range naturally expected in an ultramafic lithology. In addition, the Fe vs Ni graph showed that iron was not preferentially scavenging nickel (thus not producing false anomalies), and there were zones of sequential negative correlation downhole as shown in Figure 6.

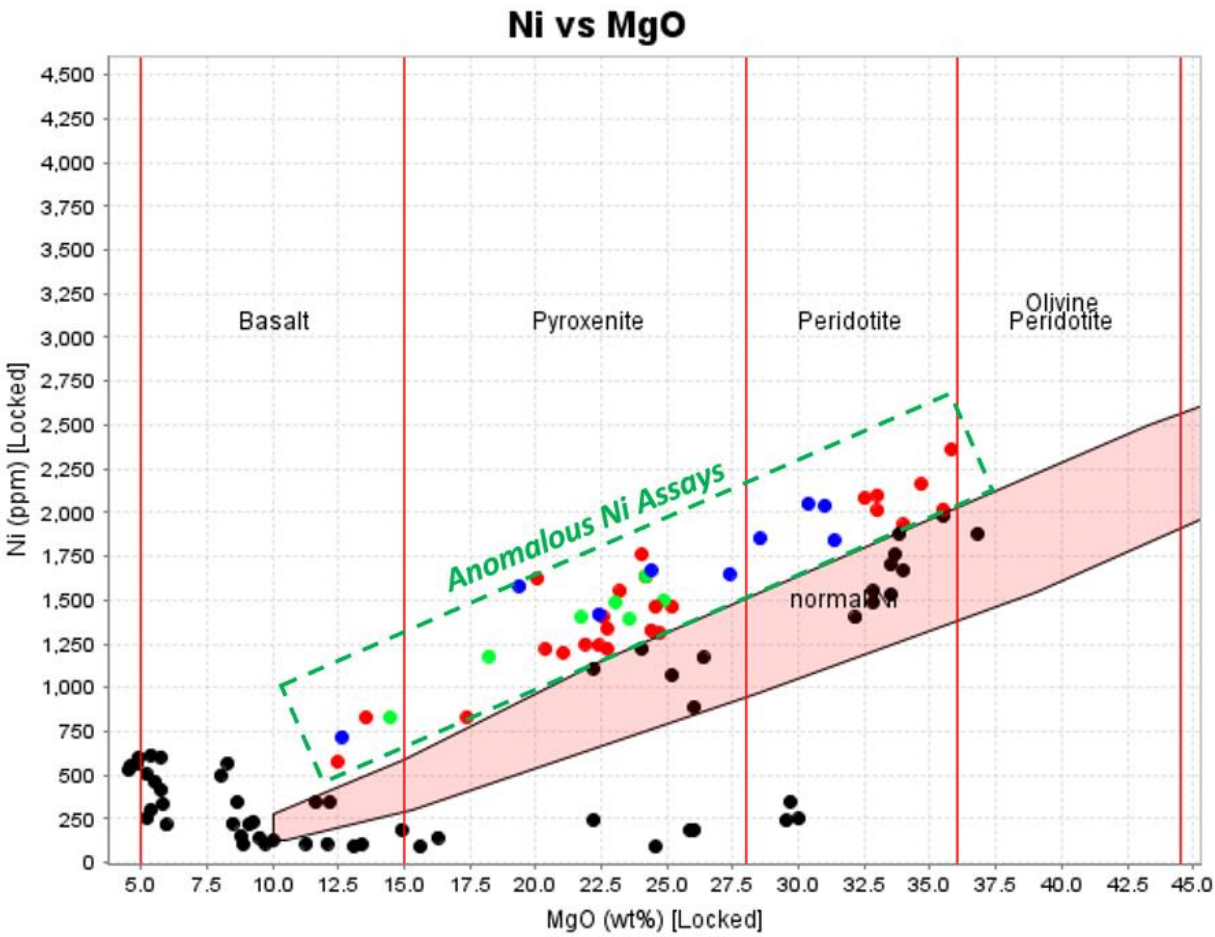

Figure 6: *All assay data from 22RRRC045, showing the anomalous Ni assays above the normal range expected in ultramafic rocks. The sequential negative correlation of Fe and Ni from 51-57m down hole (green dots) and 80-99m down hole (blue dots) are shown, and the red dots are the remainder of the anomalous Ni assays.*

By using the 'real' nickel anomalies in Figure 6, significant nickel intersections in 22RRRC045 are more accurately reported in Table 1 and Figure 7.

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Table 1: *Significant intersections from the anomalous nickel zone in Figure 6*

Hole ID	Intersection	From depth (m)	To Depth (M)	Interval (m)	Nickel (Ni) %
22RRRC045	A	12	21	9	0.16
22RRRC045	B	38	59	21	0.13
22RRRC045	C	81	99	18	0.18
22RRRC045	D	108	129	21	0.21

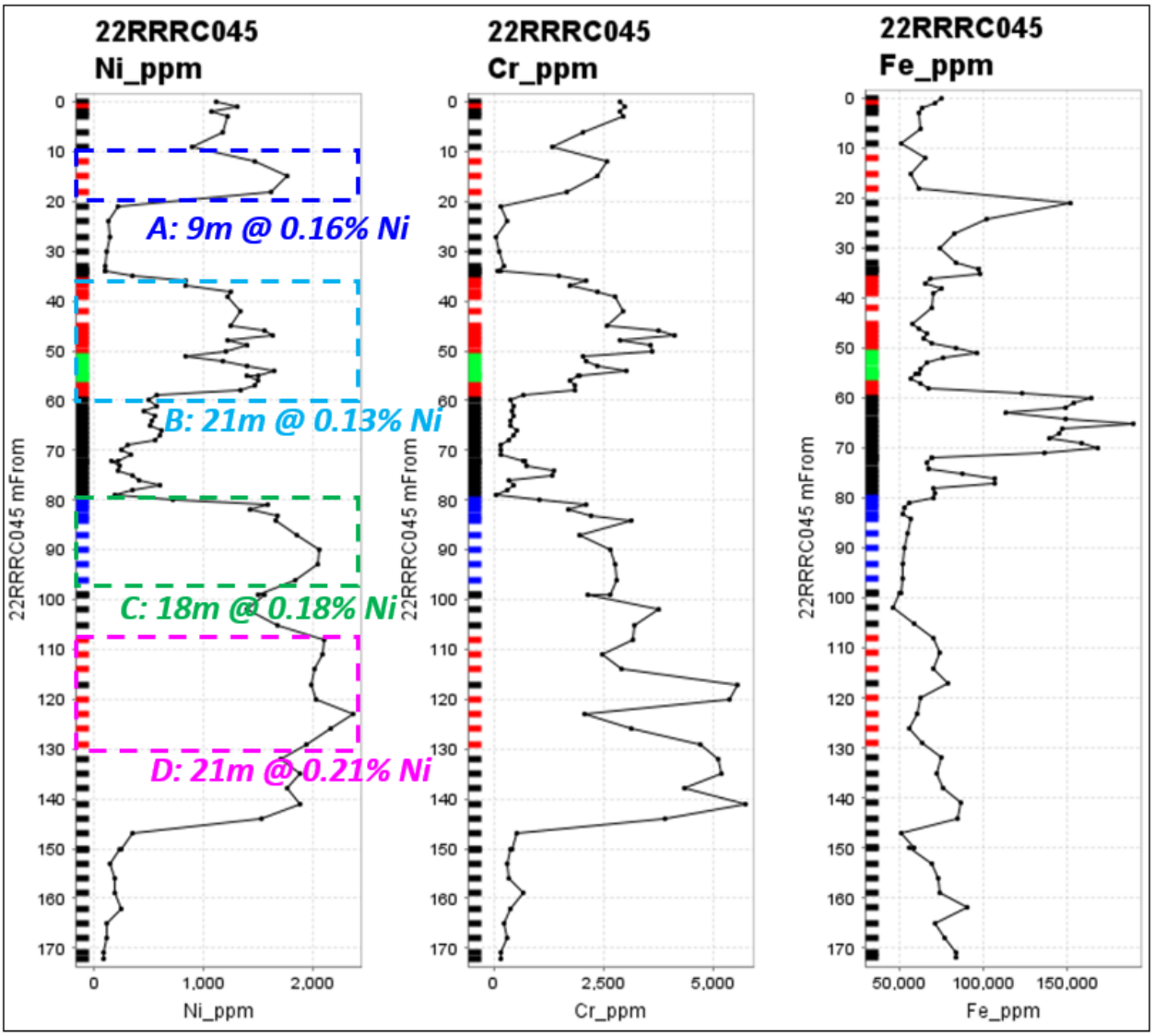

Figure 7: *Down-hole assay data from 22RRRC045, showing the anomalous Ni assays in relation to the same red, green, blue and black dots from Figure 6.*

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Table B *– RC Drill hole collar details*

Hole ID	MGA94 E	MGA94 N	M ASL	Dip	Azi (True N)	Depth (m)
22RRRC045	782678	7580968	397	-53	303	174

References:

- Bagas *et al*., 2004. Geology of the Spilt Roc 1:100,000 Sheet. 1:00,000 Geological Series. Geological Survey of Western Australia

This announcement is authorised for release to the market by the Board of Directors.

For further information, please contact:
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Competent Persons Report

The information in this report that relates to ***Geophysical Exploration Results*** *is based on information compiled by Kim Frankcombe, a Competent Person who is a Member of The Australian Institute of Geoscientists. Mr Frankcombe is employed as a Consultant to the Company through geophysical consultancy. Mr Frankcombe has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Frankcombe consents to the inclusion in the report of the matters based on his information and the form and context in which it appears.*

The information in this report that relates to ***Geological interpretation and Exploration Results*** *is based on information compiled by Nicole Galloway Warland, who holds a BSc Applied geology (HONS) and who is a Member of The Australian Institute of Geoscientists. Ms Galloway Warland is an employee of Thor Mining PLC. She has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Nicole Galloway Warland consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.*

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Updates on the Company's activities are regularly posted on Thor's website www.thormining.com, which includes a facility to register to receive these updates by email, and on the Company's Twitter page @ThorMining.

About Thor Mining PLC

Thor Mining PLC (AIM, ASX: THR; OTCQB: THORF) is a diversified resource company quoted on the AIM Market of the London Stock Exchange, ASX in Australia and OTCQB Market in the United States.

The Company is advancing its diversified portfolio of precious, base, energy and strategic metal projects across the USA and Australia. Its focus is on progressing its copper, gold, uranium and vanadium projects, while seeking investment/JV opportunities to develop its tungsten/molybdenum assets.

Thor owns 100% of the Ragged Range Project, comprising 92 km^2 of exploration licences with highly encouraging early-stage gold and nickel results in the Pilbara region of Western Australia, with follow up drilling planned for 2022.

At Alford East in South Australia, Thor is earning an 80% interest in copper deposits considered amenable to extraction via In Situ Recovery techniques (ISR). In January 2021, Thor announced an Inferred Mineral Resource Estimate of 177,000 tonnes contained copper & 71,000 oz gold[1].

Thor also holds a 30% interest in Australian copper development company EnviroCopper Limited, which in turn holds rights to earn up to a 75% interest in the mineral rights and claims over the resource on the portion of the historic Kapunda copper mine and the Alford West copper project, both situated in South Australia, and both considered amenable to recovery by way of ISR.[2] [3]

Thor holds 100% interest in two private companies with mineral claims in the US states of Colorado and Utah with historical high-grade uranium and vanadium drilling and production results.

Thor holds 100% of the advanced Molyhil tungsten project, including measured, indicated and inferred resources[4], in the Northern Territory of Australia, which was awarded Major Project Status by the Northern Territory government in July 2020. Drilling in December 2021 intersected strike extensions to the main ore zone.

Adjacent to Molyhil, at Bonya, Thor holds a 40% interest in deposits of tungsten, copper, and vanadium, including Inferred resource estimates for the Bonya copper deposit, and the White Violet and Samarkand tungsten deposits.

Notes

[1] *www.thormining.com/sites/thormining/media/pdf/asx-announcements/20210127-maiden-copper.gold-estimate-alford-east-sa.pdf*

[2] *www.thormining.com/sites/thormining/media/pdf/asx-announcements/20172018/20180222-clarification-kapunda-copper-resource-estimate.pdf*

[3] *www.thormining.com/sites/thormining/media/aim-report/20190815-initial-copper-resource-estimate---moonta-project---rns---london-stock-exchange.pdf*

[4] *www.thormining.com/sites/thormining/media/pdf/asx-announcements/20210408-molyhil-mineral-resource-estimate-updated.pdf*

[5] *www.thormining.com/sites/thormining/media/pdf/asx-announcements/20200129-mineral-resource-estimates---bonya-tungsten--copper.pdf*

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1 JORC Code, 2012 Edition – 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.*	Reverse circulation drill samples were collected utilising a PVC sampling spear on the drill cutting piles to collect a 3m composite sample weighing approximately 3kg. Equal portions were taken from each pile to ensure representative samples and every metre was sampled. In addition, 1m samples were collected directly off the cyclone (1/8 split), which can be assayed as required to replace the 3m composite sample results. In zones of visual interest during drilling, these 1m splits were submitted for analysis instead of the 3m composites. The downhole electromagnetic survey was conducted by Vortex Geophysics Pty Ltd in August 2022. The electromagnetic data was acquired using a Smartem24 receiver, Vortex VTX-100 Transmitter and Emit Atlantis fluxgate probe sensor.
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).*	Reverse circulation drilling (5 ¼ inch diameter)
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.*	Sample recovery was good. Each drill cutting pile size is logged and any deviation from expected is raised with the driller, and if undersize, to check for blockages. No sample biases are expected, and no relationship is known to exist between sample recovery and grade.

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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.*	All chip samples are qualitatively geologically logged (lithology, structure, alteration, veining, mineralisation, weathering, colour and other features). No mineral resource estimation, mining studies or metallurgical studies have been conducted at this stage, but samples have been logged in sufficient detail to use for this function.
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.*	Drill samples were taken dry with a PVC spear as described in "Sampling Techniques" above. The sample sizes are as per industry standard for RC drilling. Sampling is carried out using standard protocols and QAQC procedures as per industry practice. Field QAQC procedures for drilling involved the use of a certified standard, blank and field duplicate sample submitted every 20 samples (i.e., 17 samples and 3 QAQC samples). These are routinely checked against originals. All samples were sent to Bureau Veritas Laboratories in Adelaide, which is an ISO 9001 accredited laboratory. Sample preparation includes sorting and drying, followed by LM5 pulverising (PR303).
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.* • *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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	The assay method is considered 'industry standard' and appropriate for exploration. Drill samples were assayed at Bureau Veritas Laboratories in Adelaide by lead collection fire assay with a 40g charge and AAS finish for gold with a detection limit of 0.01ppm (FA001) and multi-element analysis by mixed acid digest and ICP-MS (MA102) and ICP-AES (MA101).

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		Internal certified laboratory QAQC was undertaken including check samples, duplicates, blanks and internal standards Handheld pXRF readings readings are taken on -2mm sieved samples on every drill metre, using an Olympus Vanta Series C with a 40 second reading time. Instrument is calibrated at start of each day, along with QAQC of 1 standard and 1 blank. External instrument calibration completed annually. All drill samples are measured for magnetic susceptibility at 1m intervals using a hand-held magnetic susceptibility meter. The downhole electromagnetic survey was conducted by Vortex Geophysics Pty Ltd in August 2022. The electromagnetic data was acquired using a Smartem24 receiver, Vortex VTX-100 Transmitter and Emit Atlantis fluxgate probe sensor. Survey parameters were: Tx loop area of 14500m2, frequency 0.5 Hz, Station spacing 5m, transmitter current turns: 90 A turns, 1 turn. Components read were B field, X, Y & Z.
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) proto-cols.* • *Discuss any adjustment to assay data.*	All significant intersections have been verified by a company geologist and alternative company geologist. There are no twinned drillholes. All drilling data is collected in a series of templates in excel including geological logging, sample information, collar and survey information. All data is digitally recorded in the company's electronic database, managed by external

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		database company utilising Datashed5 software. No adjustments have been made to the assay data. DHEM - Data received has been reviewed by Kim Frankcombe ExploreGeo Pty Ltd geophysical consultant.
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Drill collars were surveyed using a handheld Garmin 62s GPS with an accuracy of +/-3m. Grid system is MGA94 zone 50 (GDA). Drill rig alignment at the collar was conducted using a north seeking gyro. Topographic control using the GPS is suitable for early- stage exploration.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.*	Data spacing for preliminary exploration is deemed sufficient to test geophysical anomalies. No sample compositing of data was conducted. Sufficiently anomalous assays and any other zones of interest were be assayed in more detail using the 1m samples collected off the cyclone. Data spacing for down hole EM is sufficient to test off hole conductors.
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.*	Orientational bias is not applicable to RC drilling at this stage as the orientation is unknown.
Sample security	• *The measures taken to ensure sample security.*	All samples were trucked back from Bonney Downs Station to Bureau Veritas Adelaide, SA (Via Perth Lab) via registered freight company. Sample Security levels are considered appropriate for RC Drilling.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	None undertaken. Thor's sampling procedure conforms to industry standard practice and each assay program is reviewed internally for any discrepancies.

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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.*	Exploration results are reported on E46/1262 in Western Australia held 100% by Pilbara Goldfields Pty Ltd (wholly owned subsidiary of Thor Mining PLC). No known material issues exist with third parties at this time, nor any impediments to operate.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Not applicable
Geology	• *Deposit type, geological setting and style of mineralisation.*	Yet to be determined
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 understanding of the report, the Competent Person should clearly explain why this is the case.*	Tables, plans and sections summarising significant drill results are included in the report.
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.*	Cut-off grade for reporting of drill results was 0.1% Ni All aggregate drill intercepts are length weighted and there was no internal dilution incorporated. No metal equivalents have been reported.

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').*	All results are assumed to be true width but is not definitively known at this stage.
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 sections 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 significant results >0.1% Ni have been reported. Results range from 0.009% Ni to 0.236% Ni.
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.*	No meaningful or material information has been omitted from this release.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Further drilling may be completed at the Krona Prospect and an RC program is planned at Kelly's Prospect.

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