ASX Announcement | 11 March 2021
Rafaella Resources Limited (ASX:RFR)

RAFAELLA IDENTIFIES NEW HIGH PRIORITY ANOMALIES FOLLOWING HELIBORNE VTEM AND GROUNDFLOOR EM SURVEY

Investment Highlights

- Rafaella Resources is pleased to announce that the heliborne low frequency EM survey across the Midrim and Laforce nickel-copper-PGE mineralised projects has been completed.
- 821.8 line kilometers were flown (100% of planned flight path).
- **Midrim VTEM™ Max surveying has identified 1 strong, discrete new anomaly and 3 clusters of previously unknown moderate strength anomalies.**
- **This new first order anomaly is the exact occurrence that the Company had hoped to locate and is an extremely positive result.**
- Rafaella Resources will now plan a drilling campaign to follow up on these key anomalies in an effort to locate the source of the high-grade Ni-Cu-PGE mineralisation already observed at shallower levels close by within the Midrim orebody.

Rafaella Resources Limited (ASX:RFR) ("Rafaella" or "the Company") is pleased to announce that Geotech Limited ("**Geotech**") has completed 100% of the planned 821.8 line kilometers over the combined Midrim and Laforce claims in the Belleterre-Angliers Greenstone Belt in Quebec, Canada. The survey took 12 days to complete, excluding mobilisation and demobilisation, in line with what was previously announced to the market.[1]

Of key interest is the newly identified discrete, late time bed-rock conductor within a recognised Ni/Cu/PGE region, as this is the exact style of anomaly the Company was targeting.

Interestingly the known Midrim resource was only observed in the mid level channels, giving this newest anomaly a greater level of priority for future exploration.

[1] See ASX announcement 13 January 2021 "Rafaella Commissions Geotech for a VTEM Max and Groundfloor EM Survey over the Midrim-LaForce Ni-Cu-PGE Project Areas"

Midrim and Laforce

The Belleterre-Angliers Greenstone Belt in Quebec, Canada is host to numerous deposits of Ni-Cu-PGE metals. (Figure 1).

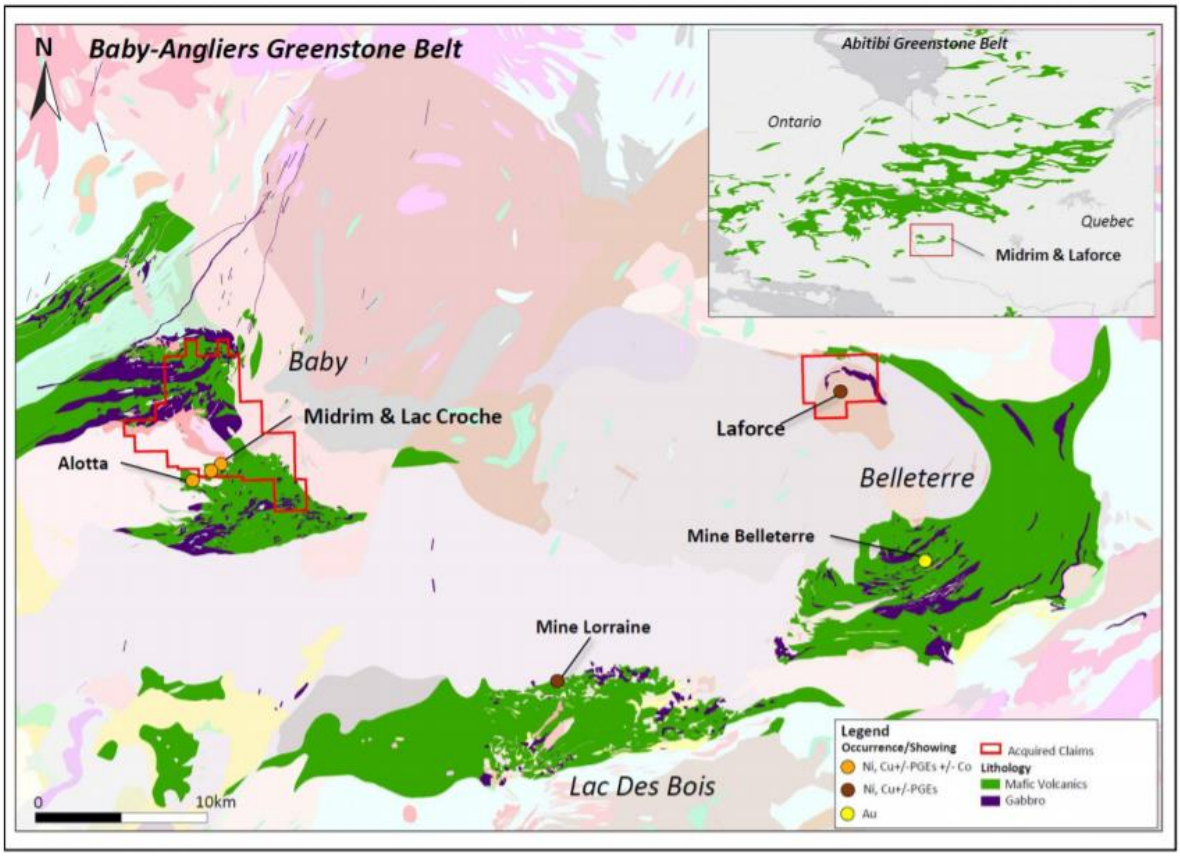

Figure 1: Regional geological setting of the Midrim and Laforce Ni-Cu-PGE deposits in the Belleterre-Angliers Greenstone Belt.

As previously disclosed[2], the Projects benefit from exceptionally high-grade drilling assay results, including the following intersections at the Midrim Deposit:

- 4.3m @ 6.57% Ni, 5.15% Cu & 7.15g/t PGEs from 57.15m depth in hole MR00-05;
- 4.6m @ 5.97% Ni, 4.91% Cu & 3.38g/t PGEs from 48.00m depth in hole MR00-37; and
- 9.4m @ 3.52% Ni, 4.25% Cu & 4.59g/t PGEs from 56.00m depth in hole MR17-01.

Between 1968-1972, the Lorraine Mine produced 594,000 tonnes at 1.07% Cu and 0.45% Ni.

[2] See ASX announcement dated 21 August 2020 "Agreement to Acquire High-Grade Nickel-Copper Sulphide Deposits in Canada and ~$1.2M Private Placement Completed."

VTEM™ Max and Groundfloor EM

The Versatile Time-Domain Electromagnetic (VTEM™ Max) combined with Groundfloor EM is an excellent system for locating discrete conductive anomalies as well as mapping lateral and vertical variations in resistivity. Groundfloor Electromagnetics (GFEM) is a methodology that utilizes an airborne EM transmitter with a set of surface-based receivers. The larger transmitter-receiver separation in Groundfloor EM over standard airborne techniques yields the ability to compute the step-response with sufficient accuracy to study extremely high conductivity targets that are commonly encountered in nickel-copper sulphide exploration.

The primary objective of the VTEM™ Max survey at both project areas was to detect/delineate potentially blind/deep level bedrock conductors associated with Ni-Cu-PGE mineralisation.

The VTEM™ Max survey flew 821.8 line km covering both the Midrim and the Laforce properties and indicated in Figures 2 and 3 below. GFEM was then conducted over identified anomalies to then assess/rank the targets further. GFEM data has been acquired over all of the primary anomalies and are pending processing and then analysis by Southern Geoscience Consultants (SGC).

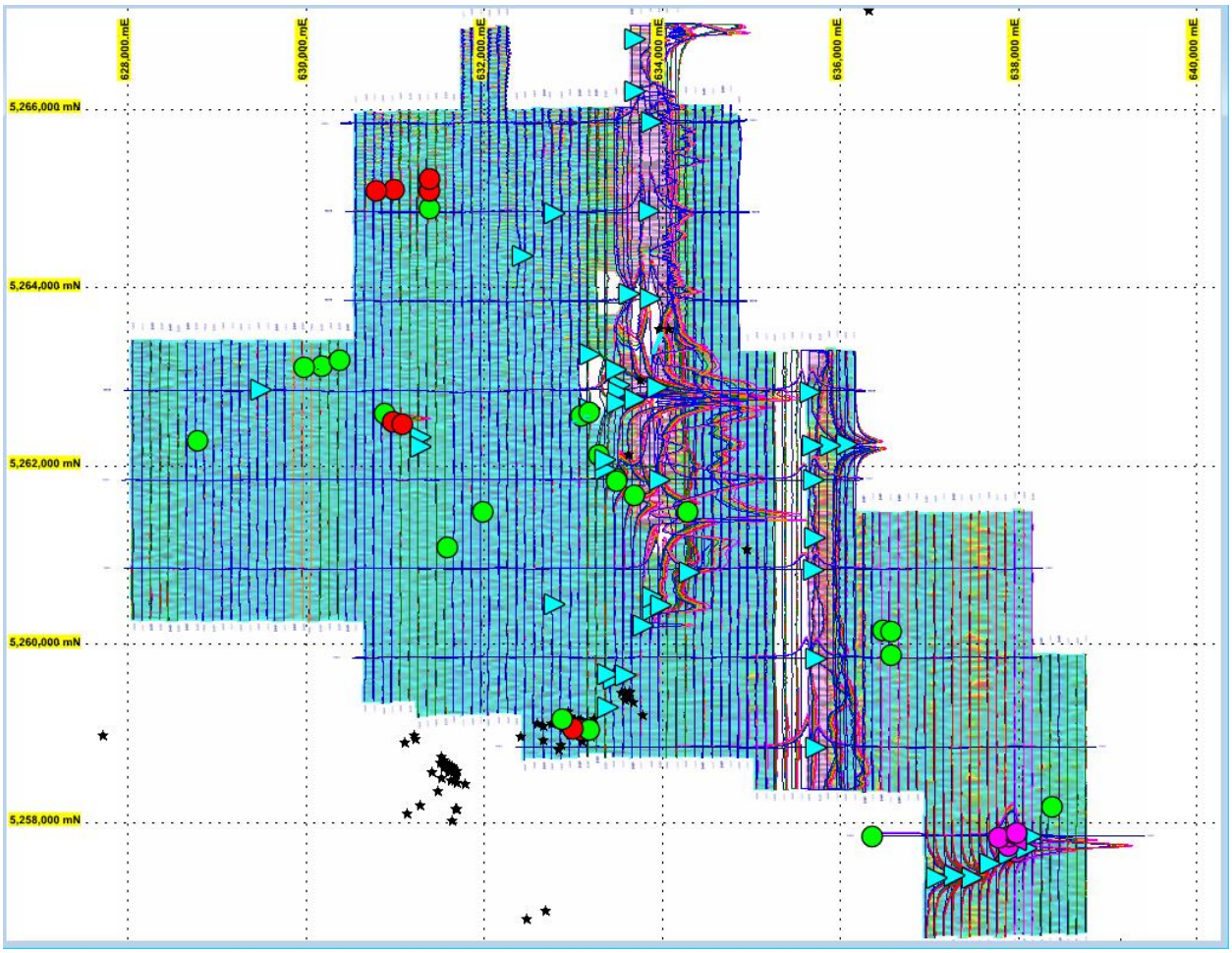

Figure 2: Midrim property showing 1 strong discrete new anomaly

(Legend: purple circles - 1st order strong bedrock conductors, red circles - 2nd order moderate strength bedrock conductors, green circles - 3rd order possible bedrock conductors, light blue triangles – cultural features, black stars historic drilling.)

Figure 3: Laforce property showing 3rd order anomalies.

Managing Director Steven Turner said: "The identification of several new deeper anomalies of significance, including one of first order is extremely exciting for the prospectivity of the Canadian nickel-copper-PGE assets. Rafaella continues to deliver excellent results across its portfolio of critical metals and will now plan a drilling campaign to unlock the significant upside that these Canadian assets hold for the Company and its shareholders. We look forward to further updating the market once SGC completes their detailed analysis of the survey data."

This announcement has been authorised by the Board of Directors of the Company.

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About Rafaella Resources

Rafaella Resources Limited (ASX:RFR) is an explorer and developer of world-class mineral deposits. Rafaella owns the Santa Comba tungsten and tin development project in Spain, as well as the McCleery cobalt-copper project and the Midrim and Laforce high-grade nickel-copper-PGE sulphide projects in Canada. Santa Comba is located in a productive tungsten and tin province adjacent to critical infrastructure. The McCleery project was previously under-explored and holds significant potential. The Midrim and Laforce projects have had extensive drilling with some exciting intersections and offer significant upside for the Company.

To learn more please visit: www.rafaellaresources.com.au

Forward Looking Statements Disclaimer

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future development.

Competent Person Statement

The information in this announcement that relates to Geophysical Exploration is based on information compiled by Mr Russell Mortimer, who is employed as a Consultant to the Company through geophysical consultancy Southern Geoscience Consultants Pty Ltd. Mr Mortimer is a member of the Australian Institute of Geoscientists (AIG) and a member of the Australian Society of Exploration Geophysicists (ASEG) and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Mortimer consents to the inclusion in the report of matters based on information in the form and context in which it appears.

Appendix 1.
JORC Code, 2012 Edition – Table 1 report
Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary

Sampling techniques	• *Nature and quality of sampling (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.*
		• VTEM™ Max airborne EM survey totalling 821.8 line kms at Laforce and Midrim, completed at primarily a 100m line spacing, with some limited infill to 50m, lines orientated E-W over the prospective sequence - contractor - UTS Geophysics/Geotech
		  • VTEM™ Max configuration:
		  • Flying height: 83m
		  • EM sensor height: 35m Magnetic sensor height: 73m Transmitter loop diameter: 35m Transmitter plus width: 7ms Peak dipole moment: 700,000 NIA Base frequency: 25Hz
		  • Receiver: Z, X coils
		• VTEM surveys are an industry standard practise in testing for bed rock conductors representing potential mineralised massive sulphide bodies
		• Groundfloor EM methodology applied by Platform Geoscience to offer an integrated approach to airborne a ground methodology - enhances the ability to rank conductors by utilizing low noise ground sensors strategically positioned during the airborne survey to all for the collection of very low frequency EM data.

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).*	• Not relevant for VTEM™ Max survey

Criteria	JORC Code explanation	Commentary
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.*	• Not relevant for VTEM™ Max survey
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.*	• Not relevant for VTEM™ Max survey
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.*	• Not relevant for VTEM™ Max survey

Criteria	JORC Code explanation	Commentary
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.*	• VTEM™ Max system calibrated prior to commencement of the survey • All digital data is inspected daily by the Geotech site crew and the Company's consultant geophysicist • The Company receives a daily report on production and of any equipment issues • The data is reviewed by the Company's consultant geophysicist and any lines are re-flown if necessary • The data presented here is preliminary data and has not undergone processing/levelling by Geotech. The Company's consultant geophysicist has completed QA/QC of the data and advised that it is suitable for public release • Final data will be available in 4 to 6 weeks
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.*	• Daily data independently checked by Company's consultant geophysicist

Criteria	JORC Code explanation	Commentary
	• *Discuss any adjustment to assay data.*	
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.*	• Real-time GPS navigation system utilising Novatel WAAS enabled GPS receiver providing in-flight accuracy of 3 metres, and up to 1.5m depending on satellites available. A preliminary flight path map is plotted daily and checked against survey specifications • Coordinates presented are in WGS84 / UTM Zone 17N
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.*	• Spacing between flight lines was approximately 100m, with readings taken approximately 2 to 4m along line. Infill flight lines to 50m spacing were also completed.
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.*	• The flight path is approximately perpendicular to any known strike direction of geological formations and is sufficient to locate discrete conductive anomalies
Sample security	• *The measures taken to ensure sample security.*	• All data acquired by Geotech reported to the Company's consultant geophysicist
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The data was independently verified by the Company's consultant geophysicist Russell Mortimer of Southern Geoscience Consultants

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary

Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*
		• Midrim claims CD2412147 to CD2412207 and CDC2499890/991/995/996/900-918/921/922/926-929/933 for a total of 89 claims
		• Laforce claims CDC113335/336/337/339/340/341/354/370-386 for a total of 24 claims
		• All claims are 100% owned and are in good standing.
		• Royalties are payable to:
		  • Aurora Platinum Corp, a royalty of 2% of the net smelter return of any minerals recovered from the Mining Claims;
		  • Hinterland Metals Inc., a royalty of 2% of the net smelter return of any minerals recovered from those portions of the Laforce Claims that were covered by former lots 5243412 and 5256066; and
		  • two prospectors, a royalty of 2% of the net smelter return of any minerals recovered from those portions of the Laforce Claims that were covered by former claims 1377105, 1377104 and 1377101.
		• The claims do not overlap any native title interests.

Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Midrim Main Zone was discovered in 1967-1968 during a programme of ground geophysics, trenching, bulk sampling and drilling 93 diamond holes. • 2000 9034-9473 Quebec Inc trenching programme discovered extensions at western end of the Main Zone. • 2001 Aurora Platinum Corp report on the geological mapping of the Alotta, Midrim, Delphi, Angliers and Zulu projects. Report on completion of 27.78km of magnetometer and VLF surveys, geological mapping, 2500m of diamond drilling in 16 holes. Ground magnetics conducted by Meeguish Consultants on Laforce. • 2001 JVX Ltd (on behalf of Aurora Platinum Corp) report on total of 9.5km of IP survey and 21.5km of magnetometer survey of Midrim project. • 2002-2006 Aurora Platinum Corp and Fieldex Exploration report on 90 drill holes in Midrim. • 2004 JVX Ltd (on behalf of Aurora Platinum Corp) airborne magnetic survey on Laforce. • 2005 Aurora Platinum Corp – VTEM survey over Laforce conducted by Geotech. • 2007-08 Fieldex Exploration ground IP survey and ground EM survey conducted on Laforce by Lambert Geophysics and Terrax Management respectively

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Midrim and Laforce Projects are located within in the Belleterre-Angliers Greenstone Belt (BAGB) at the extreme southern portion of the Abitibi Greenstone Subprovince within the Superior Province of the Canadian Shield • The BAGB consists of three separate greenstone belt arc segments: Baby, Belleterre, and Lac des Bois Greenstone Belts. The Midrim Project is located within the Baby Segment of the BAGB, which is host to numerous Ni-Cu-PGM deposits within gabbroic intrusive rocks • The Midrim Project lies in the southern part of the Baby Segment, which is an allochthonous detached volcanic arc fragment structurally overlying younger sedimentary rocks of the Pontiac Subprovince in the Canadian Shield. • Within the belt are many Ni-Cu-PGE sulphide occurrences associated with gabbroic intrusive rocks. These include the Midrim, Lac Croche, Alotta, Delphi, Patry, Lac Kelly, Laforce, and Lorraine deposits. The Lorraine and Lac Kelly deposits are located approximately 30 km southeast of the Midrim Project in the Lac de Bois Segment of the BAGB. The Lorraine deposit historically produced 594,000 t of Cu (1.07%) and Ni (0.45%) ore between 1965 and 1968 • The geology of the Midrim and Laforce Projects area is composed of a dominantly mafic volcanic package intruded by mafic sills. Volcanic stratigraphy on the property includes a lower, thick (>1 km) succession of pillowed and subordinate massive basalt flows that are conformably overlain by an undetermined thickness (up to 100 m?) of volcaniclastic sediments (Mazur, 2002). • Locally at Midrim, the Main Zone mineralization is hosted within an elongate, WNW-ESE trending gabbroic intrusion approximately 330 m long and 85 m wide. The gabbro is hosted in a thick package of volcanic intrusives, tuffaceous sediments, and basaltic rocks that are cut by several NNE-SSW trending faults. The entire package, including the mineralization, is cut by a younger suite of QFP dykes.

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.*
		• Not relevant for VTEM™ Max survey

Criteria	JORC Code explanation	Commentary
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.*	• Not relevant for VTEM™ Max survey
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').*	• Not relevant for VTEM™ Max survey
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.*	• Not relevant for VTEM™ Max survey
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.*	• Not relevant for VTEM™ Max survey
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.*	• Not relevant for VTEM™ Max survey

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.*	• Targets generated from the VTEM™ Max survey, will be potentially be followed up with ground geophysical surveys such as EM/IP if required to refine targeting, and eventually followed by drill testing. • Exploration is at an early stage and future work programmes will depend on results