

ASX Announcement | 20 February 2019
Rafaella Resources Limited (ASX:RFR)

Rafaella Receives VTEM Modelling Results from its McCleery Project, Yukon Territory, Canada

Investment highlights:

- Received modelled VTEM data from wholly-owned McCleery Project in Yukon Canada
- Two bedrock conductors MCV1 & MCV2 detected along with coincident induced polarisation and magnetic anomaly
- The VTEM data and established copper, gold and base metal occurrences have given the Rafaella team confidence to advance exploration within the project for VMS/skarn style mineralisation
- Ground mapping, rock chip sampling and soils geochemistry are currently being planned

Exploration company **Rafaella Resources Limited (ASX: RFR)** (“Rafaella”, or “the Company”) is pleased to announce that it has received the final plate data modelling from the Versatile Time Domain Electromagnetic (VTEM) survey of its wholly-owned McCleery West Project in the Yukon Territory, Canada.

As previously announced, the survey was flown from the nearby town of Teslin, Yukon. The project surveyed area consists of 454-line kilometres and the total area covered was 41 km² (ASX Announcement: 6 December 2018).

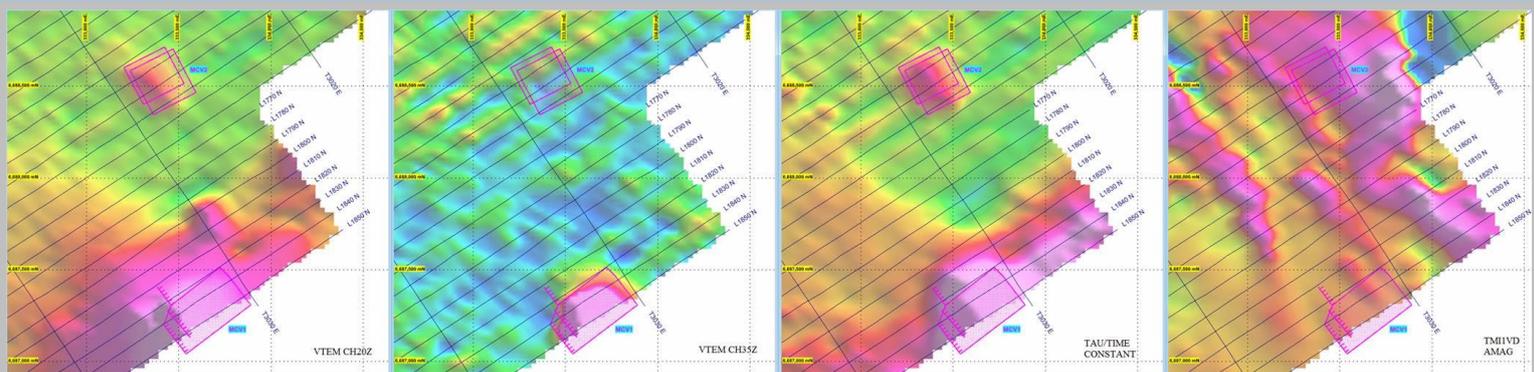


Figure 1. Mid Channel VTEM CH20Z > Late Channel VTEM CH35Z > Tau/Time Constant > TMI1VD AMAG

Modelling of the southern VTEM anomaly (MCV1) confirms it has been detected on several lines (1830/1840/1850) and defines a conductive source of approximately 200x450m areal size (but open toward the SE – RFR’s new 60 claims), with a shallow to moderate NE/E dip (~10-35deg), and a shallow depth of ~50-100m.



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As modelled on two main lines (1720/1730), the smaller bullseye northern weak-moderate VTEM anomaly (MCV2) defines a discrete conductive source of ~250x250m, near flat lying and with depth to top of ~150-200m.

The presence of the modelled VTEM anomalies coupled with the established copper, gold and base metal occurrences within the McCleery project (ASX Announcement: 28 November 2018) has given the Company and its technical team significant confidence to plan programmes to test the various targets within the project for VMS/skarn style mineralisation.

Ground mapping, rock chip sampling and soils geochemistry are currently being planned to determine the geology and prospectivity of these ground EM anomalies. A key focus of these filed surveys will be additional coverage/surveying SE of MCV1 where the anomaly is open. The Company expects this phase to commence when the Canadian field season allows in approximately mid-April/May.

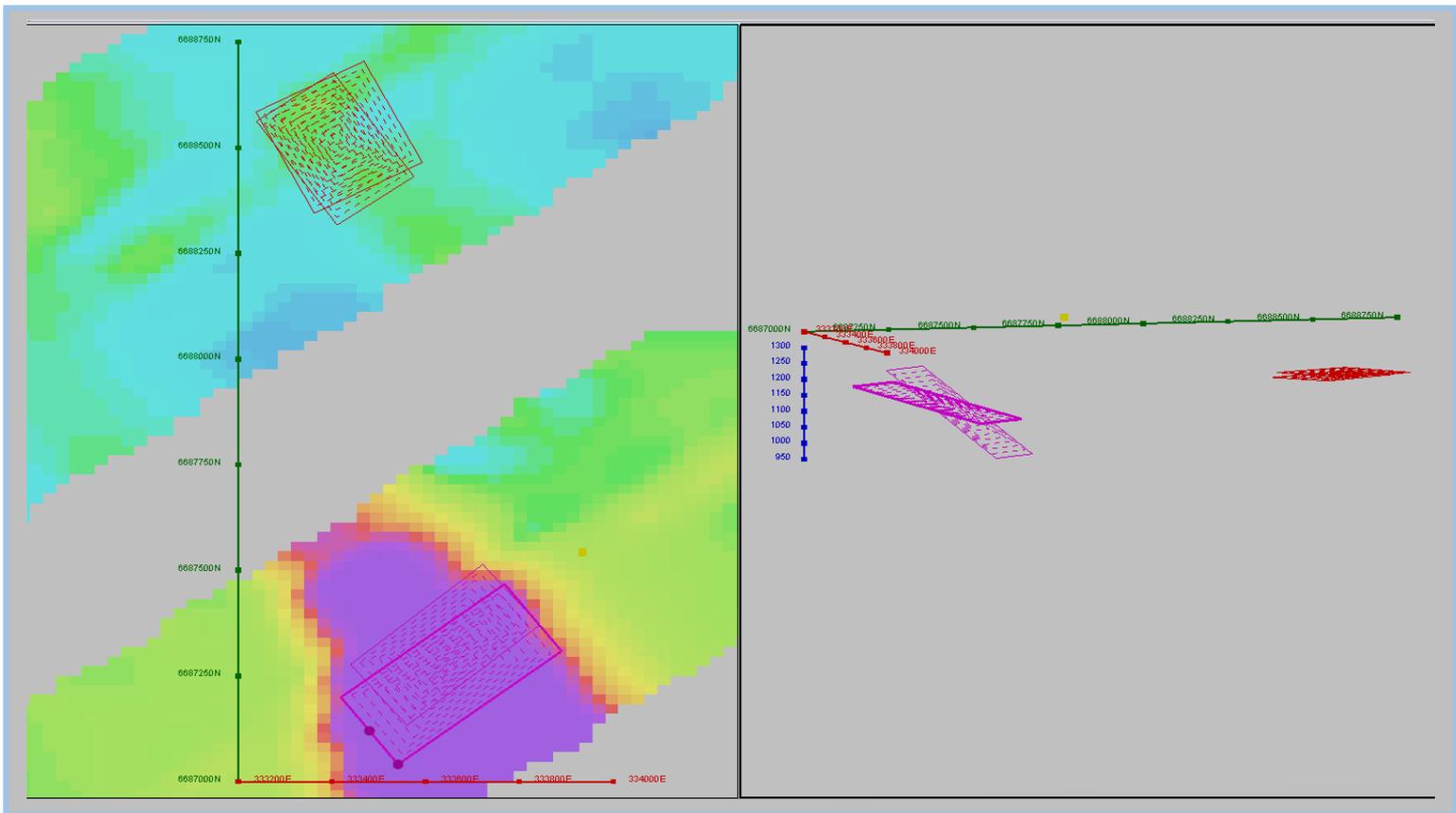


Figure 2. McCleery plot of the modelled VTEM conductors in plan view and 3D angled/inclined view.

Rafaella Executive Director Ashley Hood: “The final VTEM modelling results from our wholly-owned McCleery project are very encouraging with two key geophysics targets in EM and IP/magnetics. The project is continuing to increase in scope and potential. Our Canadian technical partners Aurora Geoscience have done a fantastic job in managing the survey and are assisting with the planned filed surveys. The additional staking process we undertook to secure the most promising anomaly has been a success and I look forward to further updating shareholders on upcoming developments.”



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For further information, please contact:

Rafaella Resources

Ashley Hood

Executive Technical Director

Ph: 0427 268 999

E: ashley.hood@rafaellaresources.com.au

Media & Investor Enquiries

Julia Maguire

The Capital Network

M: +61 419 815 386

E: julia@thecapitalnetwork.com.au

About Rafaella Resources

Rafaella Resources Limited (ASX:RFR) is a junior exploration company which owns the McCleery cobalt and copper project in the Yukon territory Canada, and the Sandstone gold project in Western Australia.

The Company was established with the purpose of exploring and developing gold, cobalt, copper and other mineral opportunities. Rafaella sees the McCleery and Sandstone projects as having excellent potential due to being under-explored, with limited drilling and exploration completed at the sites to date.

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

Competent Persons Statement

The information in this announcement that relates to Exploration Results has been compiled under the supervision of Mr Bill Oliver, a consultant to the Company. Mr Oliver is a Member of the Australasian Institute of Mining and Metallurgy and the Australasian Institute of Geoscientists. He 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 (JORC Code). Mr Oliver consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Hand specimen observations were provided to the Competent Person by Carl Schulze, Senior Project Manager (Geology) for Aurora Geosciences, Canadian consultants to the Company. Mr Schulze is a Professional Geoscientist in good standing with APEGBC, APGO and NAPEG, Recognised Professional Organisations under the JORC Code.

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 developments.

APPENDIX 1: JORC TABLE

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results.

Section 1: Sampling Techniques and Data (Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>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.</i>	Heliborne EM survey of 454 line km carried out at 100 metre line spacing using VTEMmax system by Geotech Airborne Ltd. Survey carried out at a flight height of 88 metres with sensor at 51 metres. VTEMmax configuration: 17.4 m transmitter loop diameter, 337,420 NIA peak dipole moment, 4.1 ms transmitter pulse width, VTEM receiver Z,X coils
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	VTEMmax system was calibrated prior to the survey at standard testing sites.
	<i>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.</i>	VTEM survey has detected targets prospective for mineralisation, the presence of mineralisation is yet to be determined. VTEM surveys are an industry standard practise in early stage exploration for base metals.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).</i>	No drilling activities are being reported.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No drilling activities are being reported.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No drilling activities are being reported.
	<i>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.</i>	No drilling activities are being reported.
Logging	<i>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.</i>	No drilling activities are being reported.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	No drilling activities are being reported.
	<i>The total length and percentage of the relevant intersections logged.</i>	No drilling activities are being reported.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling activities are being reported.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	No drilling activities are being reported.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	No drilling activities are being reported.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	No drilling activities are being reported.
	<i>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.</i>	No drilling activities are being reported.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	No drilling activities are being reported.
Quality of assay data and laboratory tests	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p> <p><i>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.</i></p>	<p>EM measurements taken using VTEMmax system.</p> <p>VTEMmax system calibrated prior to commencement of survey at standard testing sites.</p> <p>All digital data is inspected on a daily basis to ensure that bad data is not present and to identify missing data sections.</p> <p>A preliminary flight path map is plotted and checked against survey specifications.</p> <p>Following completion of the survey all digitally acquired survey data has been merged into a Geosoft Montaj database and checked on a line by line basis.</p>
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No assay data is being reported.
	<i>The use of twinned holes.</i>	No drilling activities are being reported.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Data is recorded using a Geotech proprietary data acquisition system. All digital data is inspected on a daily basis to ensure that bad data is not present and to identify missing data sections. A preliminary flight path map is plotted and checked against survey specifications..
	<i>Discuss any adjustment to assay data.</i>	No assay data being reported.
Location of data points	<i>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.</i>	<p>Real-time GPS navigation system utilizing the Novatel WAAS enable GPS receiver providing in-flight accuracy of 1.8 metres, and up to 1.0 metres depending on satellites available.</p> <p>A preliminary flight path map is plotted daily and checked against survey specifications.</p>
	<i>Specification of the grid system used.</i>	The grid system for the McCleery Project is NAD83 MTM Zone 8 (North American Datum of 1983).

Criteria	JORC Code explanation	Commentary
	<i>Quality and adequacy of topographic control.</i>	Altitude measured using Terra radar altimeter with accuracy of 1 metre.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Readings taken at 0.1 sec intervals along flight lines 100m apart. Line spacing is 100 metres and this is believed to be sufficient detail to identify anomalies for follow up work.
	<i>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.</i>	No assay data being reported.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied.
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Survey oriented perpendicular to major structural features, lithological trends and/or other features of interest to ensure maximum resolution
	<i>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.</i>	No assay data being reported.
Sample security	<i>The measures taken to ensure sample security.</i>	All data acquired by Geotech Airborne reported to the Company's representatives.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	No independent audits have been undertaken.

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	<i>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.</i>	The McCleery Project comprises 42 contiguous Mineral Claims, claims MM1-42, covering a land area of 9 km ² . Rafaella has entered into a conditional sale agreement with the current holder, Overland Resources Limited (ASX: OVR) and its wholly owned subsidiary, Overland Resources (BC) Limited (Overland BC), pursuant to which Rafaella will purchase 100% of issued capital in Overland BC and its interests in the McCleery Project..
	<i>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.</i>	The tenement is in good standing. Mineral claims in the Yukon can be maintained in good standing by performing approved exploration work to a value of \$100 per claim per year or by making a \$100 per claim per year cash payment to the Watson Lake Mining Recorder in lieu of work.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> Limited exploration has been undertaken on the McCleery Project. The Project was initially staked in 1974. Exploration to date includes soil sampling and rockchip sampling. The results detailed in this report were from geochemical sampling undertaken by Atlas Explorations Limited during 1970, United Keno Hill Mines Ltd during 1975 and JC Stephen



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Criteria	JORC Code explanation	Commentary
		<p>Explorations Ltd (on behalf of DC Syndicate) during 1982-1983.</p> <ul style="list-style-type: none"> All previous known exploration has been acknowledged and detailed in the IGRs accompanying the Company's prospectuses.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> The McCleery Project is located within the composite Yukon-Tanana Terrane. The Project is underlain by highly deformed limestone and clastics of the Mississippian Englishman's Group, intruded by Cretaceous granite and granodiorite. There are three main skarn zones and many additional small 1-2m pods documented within the McCleery Project. Skarn, with significant copper, silver and cobalt values occurs in association with the limestone horizon.
Drill hole Information	<p><i>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:</i></p> <ul style="list-style-type: none"> <i>easting and northing of the drill hole collar</i> <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> <i>dip and azimuth of the hole</i> <i>down hole length and interception depth</i> <i>hole length.</i> 	No drilling is being reported.
	<p><i>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.</i></p>	
Data aggregation methods	<p><i>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.</i></p>	Not applicable, geochemical sampling results presented are single point data.
	<p><i>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.</i></p>	No top cuts have been considered in reporting of grade results, nor was it deemed necessary for the reporting of significant intersections.
	<p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	No metal equivalent values are currently being used for reporting exploration results.
Relationship between mineralisation widths and intercept lengths	<p><i>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').</i></p>	No assays are being reported.
Diagrams	<p><i>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.</i></p>	Refer to Figures in body of text.



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Criteria	JORC Code explanation	Commentary
Balanced reporting	<i>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.</i>	No assays are being reported.
Other substantive exploration data	<i>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.</i>	All relevant exploration data is shown on figures, in text and in previous announcements by the Company.
Further work	<i>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.</i>	A follow up exploration work program is being designed and will be detailed following review of the results of the surveying and other available geological and geochemical information. All relevant diagrams and inferences have been illustrated in this report.