

ASX Announcement | 16 December 2020 Rafaella Resources Limited (ASX:RFR)

McCleery Project Delivers Significant Copper, Gold & Silver Mineralisation Targets

Announcement Highlights

- Massive magnetite pyrrhotite pyrite talus float identified (Cu Ag Co Au)
- O Confirmation of several polymetallic (Cu Ag ± Co ± Au) skarn occurrences
- Newly identified quartz vein float returned a value of 3.222 g/t Au
- Multiple high-grade base and precious metal values returned
- O Further surveys being planned for 2021 field season

Rafaella Resources Limited (ASX:RFR) ('Rafaella' or 'the Company') is pleased to update shareholders on results from its recently completed field sampling surveys at the McCleery Project.

The Company commissioned its geological consulting team, Aurora Geosciences Ltd (Aurora), based in Whitehorse, Yukon, Canada, to conduct an exploration program on the McCleery property during September 2020. The property covers Mt McCleery within the Englishman's Range and comprises 244 full Yukon quartz mining claims covering 5,097 Ha. It is located in south-eastern Yukon, about 43 km ENE of the town of Teslin, and 173 km ESE of the City of Whitehorse.

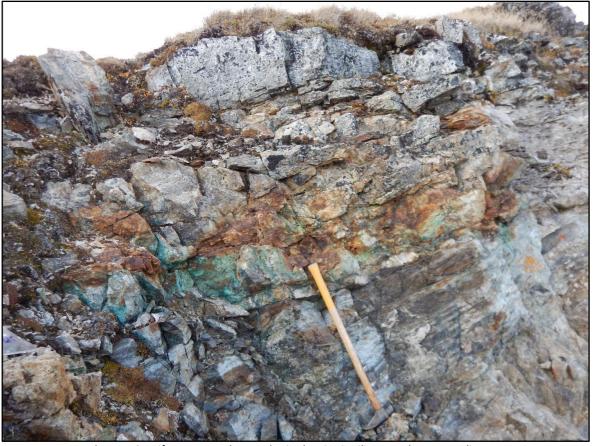


Figure 1: Stratiform copper skarn and vein showing in siliceous calcareous sediments



The 2020 program confirmed the presence of polymetallic (Cu - Ag \pm Co \pm Au) skarn occurrences along the prominent ridgelines within the MM 1-42 block (Figure 4). The variability of precious, base and pathfinder element values indicate mineral zonation and/or multiple emplacement episodes. At least one of these mineralisation occurrences comprises metre-scale stratabound mineralisation, along a limestone - siliciclastic boundary, with rock chip samples (Figure 3) returning values up to 1.44% Cu. Another occurrence comprises two distinct mineral associations:

- A) Dominantly Cu Ag mineralisation, returning values up to 11.31% Cu and 210 g/t Ag with only minor enrichment in other metals;
- B) A fracture-controlled Cu Ag As Bi Sb \pm Au association, returning values up to 2,230 ppm Mo, 5.167% Cu, 528 g/t Ag, 1.16% As, 11.102% Sb and 4,100 ppm Bi.

The former is typical of copper-silver (Cu-Ag) skarn mineralization, whereas the latter is more indicative of hydrothermal vein mineralization.

Additional to the confirmation of skarn mineralization, new areas of massive magnetite - pyrrhotite - pyrite talus float (Figure 2) have been discovered along the north flank of the central ridge with a lateral dispersion of $^{\sim}140$ metres, indicating potential for a laterally extensive prospect. The talus float returned favourable early values up to 0.66% Cu, 4.5 g/t Ag, 544 ppm Co and 160 ppb Au.



Figure 2: Fracture-controlled and replacement-style arsenopyrite - bornite - chalcopyrite showing

A grab sample of proximal quartz vein float southwest of the MM 1-42 block returned a value of 3.22 g/t Au. This may be indicative of more widespread auriferous vein mineralization in this area, approximately 2.7 km southwest of the skarn mineralisation areas.



As this area has not previously been identified, planning of further activities at the MM 1-42 claims, comprising detailed structural mapping, geochemistry and petrological surveys, is well advanced with implementation planned for early next field season (June 2021).

Grant Numbers	Claim Names	No. of Claims	New Expiry Date
YD81304 - YD81345	MM 1 - MM 42	42	2026-03-20
YD81351 - YD81400	MM 43 - MM 92	50	2025-07-30
YD81449 - YD81458	MM 93 - MM 102	10	2025-07-30
YD81459 - YD81462	MM 103 - MM 106	4	2026-07-30
YD81463 - YD81464	MM 107 - MM 108	2	2025-07-30
YD81465 - YD81476	MM 109 - MM 120	12	2026-07-30
YD81477 - YD81478	MM 121- MM 122	2	2025-07-30
YD81479 - YD81480	MM 123 - MM 124	2	2026-07-30
YD81481 - YD81490	MM 125 - MM 134	10	2025-07-30
YD81491	MM 135	1	2026-07-30
YD81492 - YD81502	MM 136 - MM 146	11	2025-07-30
YD81259 - YD81296	MM 147 - MM 184	38	2025-07-30
YD21019 - YD21078	MM 185 - MM 244	60	2025-12-04

Table 1: Claim Status, MM Block, as of Oct 28, 2020



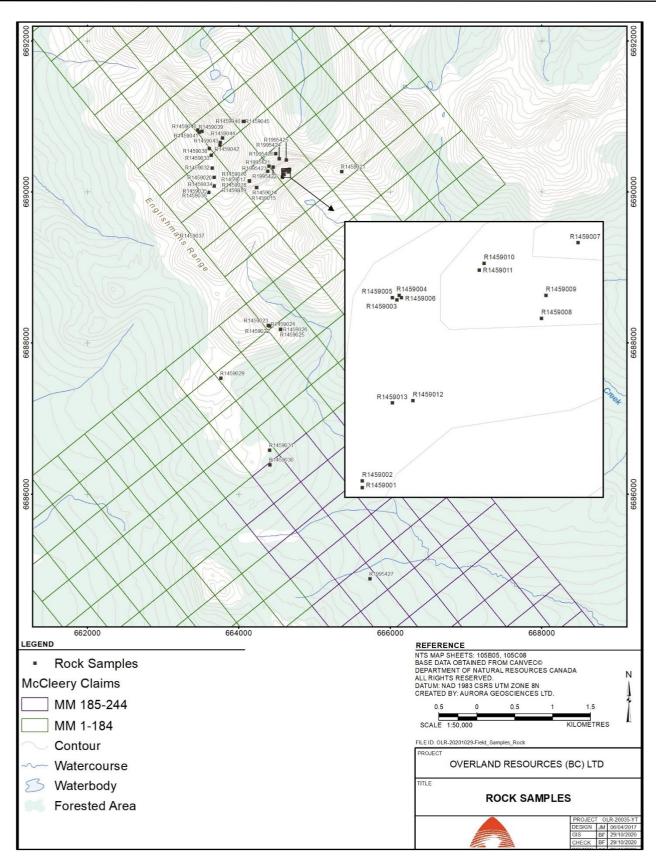


Figure 3: Rock Sample Location Map



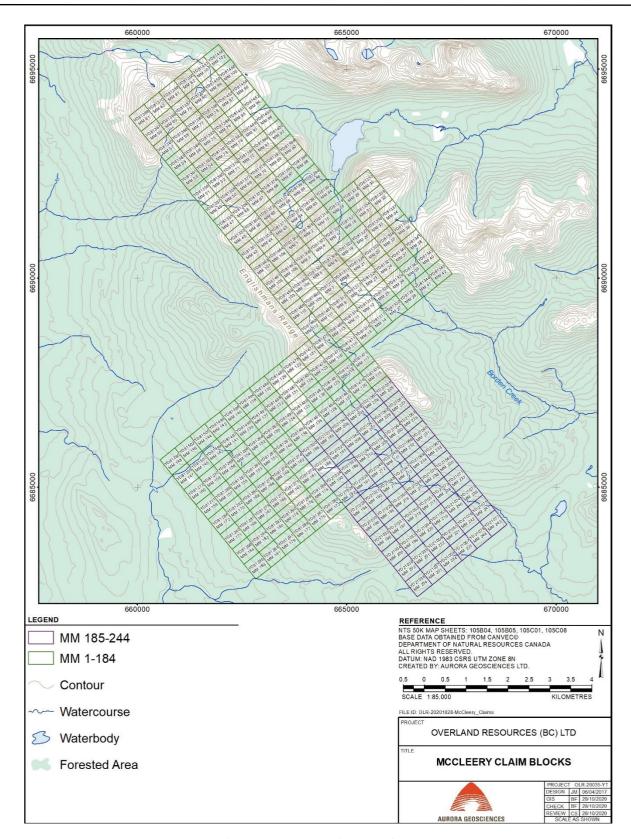


Figure 4: Claim Map, MM 1-244 claims, McCleery property

Rafaella's Managing Director Steven Turner said: "The results of this four-day survey are highly encouraging, the new massive magnetite, pyrrhotite, pyrite talus float and the gold mineralised quartz vein float are clearly worthy of detailed follow up as soon as the field season opens up this coming Spring. McCleery is shaping up to be another exciting project for Rafaella Resources. To tie these surveys in with the Companies filed programs at Midrim and Laforce projects bodes well for our Canadian exploration development second quarter 2021.



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

Ends

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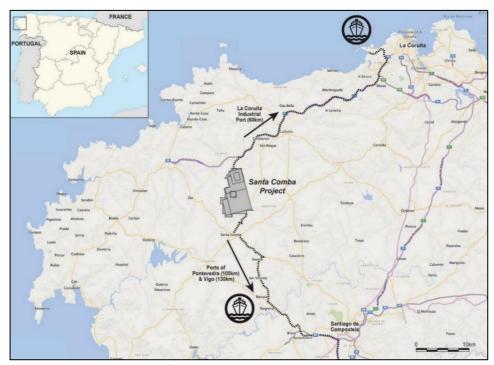
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About Rafaella Resources Limited

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 and copper project and the Midrim and Laforce high-grade nickel-copper-PGE sulphide projects in Canada. The Santa Comba project 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 yielded historic high grade drill intersections and offer significant upside for the Company.



Location of the Santa Comba Project, Galicia, Spain.

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 developments.



Competent Persons Statement The information in this announcement that relates to Exploration Results is based on and fairly represents information that 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.

"Carl Schulze, P. Geo., Senior Project Manager (Geology) with Aurora Geosciences Ltd, is a qualified person as defined by National Instrument 43-101, for Overland Resources (BC) Ltd's Yukon exploration projects, and has reviewed and approved the technical information in this release. Mr Schulze is a Professional Geoscientist in good standing with EGBC, APGO and NAPEG, Recognised Professional Organisations under the JORC Code."

Table 2. Sample Data

Sample	Easting	Northing	Cu (ppm)	Ag (ppm)	Au (ppb)	As (ppm)	Mo (ppm)	Bi (ppm)
1459001	663710	6689740	50	<0.3	3	67	<1	<3
1459002	664573	6690197	8	<0.3	3	9	<1	<3
1459003	664588	6690276	2822	12.1	51	160	6	649
1459004	664589	6690278	35	<0.3	3	17	1	<3
1459005	664586	6690277	311	0.4	14	36	<1	17
1459006	664590	6690277	26	<0.3	3	5	2	<3
1459007	664667	690301	263	0.6	4	12	<1	<3
1459008	664651	6690268	32	<0.3	14	14	<1	<3
1459009	664653	6690278	52	<0.3	4	24	<1	<3
1459010	664626	6690292	2	<0.3	3	3	<1	<3
1459011	664624	6690289	1229	0.4	19	316	<1	<3
1459012	664595	6690232	28	<0.3	18	47	<1	<3
1459013	664586	6690231	3	<0.3	3	3	<1	<3
1459014	664235	6690058	1.44%	9.7	165	231	7	5
1459015	664231	6690058	5309	7.6	108	163	6	<3
1459016	664138	6690145	1.44%	528	104	1.66%	0.223%	0.41%
1459017	664136	6690146	5.167%	158	58	4058	8	913
1459018	664136	6690147	3.499%	210	17	88	4	1530
1459019	664136	6690149	11.31%	25.6	19	73	<1	47
1459020	663673	6690193	4081	1.5	19	39	2	4
1459021	665357	6690271	224	0.4	7	404	<1	4
1459022	664406	6688227	99	<0.3	6	36	<1	<3
1459023	664388	6688232	55	<0.3	13	<2	<1	<3
1459024	664388	6688232	88	0.6	31	120	2	<3
1459025	664550	6688178	82	<0.3	8	148	<1	<3
1459026	664550	6688182	396	<0.3	7	7	<1	<3
1459029	663761	6687534	1376	10.9	3222	<2	<1	<3
1459030	664407	6686389	17	<0.3	5	<2	<1	<3
1459031	664406	6686581	100	<0.3	5	<2	<1	<3
1459032	663648	6690316	11	<0.3	2	7	<1	<3
1459033	663634	6690488	5	<0.3	6	5	<1	<3
1459034	663671	6690079	118	<0.3	3	45	<1	<3
1459035	663599	6689996	<1	<0.3	4	11	<1	<3



1459036	663599	6689996	6	<0.3	2	5	<1	<3
1459037	663211	6689422	440	1.5	20	301	<1	<3
1459038	663608	6690576	<1	<0.3	3	9	<1	<3
1459039	663476	6690793	6	<0.3	14	59	<1	<3
1459040	663454	6690822	4673	9.1	490	26	<1	192
1459041	663510	6690802	12	<0.3	4	4	<1	<3
1459042	663747	6690623	27	<0.3	5	10	<1	<3
1459043	663751	6690656	2	<0.3	4	8	<1	<3
1459044	663782	6690717	84	<0.3	20	9	<1	3
1459045	664065	6690935	11	<0.3	2	5	<1	<3
1459046	664059	6690935	2	<0.3	10	5	4	<3
1995421	664395	6690341	65	<0.3	<2	17	<1	<3
1995422	664452	6690328	14	0.6	10	9	<1	5
1995423	664377	6690275	149	0.3	13	18	<1	<3
1995424	664533	6690441	2072	1.4	160	19	<1	28
1995425	664624	6690423	3441	2	15	61	<1	9
1995426	664484	6690506	6612	4.5	11	30	<1	5
1995427	665730	6684879	104	<0.3	3	9	<1	<3

- Coordinates in NAD83 Zone 8
- Results should be read in conjunction with the information in Appendix 1



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.

Section1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
technique	 Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or 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 (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	Rock chip samples collected were grab samples from subcrop and float.



Criteria	JORC Code explanation	Commentary
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method etc.).	No drilling results are being presented.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed Measurements taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and wether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	No drilling results are being presented.
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 	Samples were geologically described and a summary is presented in the body of this announcement.



Criteria	JORC Code explanation	Commentary
Criteria Sub- sampling techniques and sample preparation	 If core, whether cut or sawn and wether quarter, half or all core taken. If non-core, whether riffles, tube sampled, rotary split, etc. and whether sampled wet dry. For all sample types, 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 	The rock chip samples collected weighed between 0.21kg and 1.59kg. The samples iarerockchip samples and given the nature of rockchip sampling it is likely that the samples may not be representative and instead are indicative of specific geological features or points.



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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	 Samples were sent to Bureau Veritas (BV) in Vancouver, Canada for analysis. Sample prep and analysis included the following: Crush, split and pulverise 250g of rock to 200 mesh Analysis for Au, Pt, Pd using method FA350 – 50g FA analysis by ICP Analysis for Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, S, Hg, Tl, Ga, Sc using method AG300 – aqua regia digest with ICP-ES analysis No standards, blanks, duplicates, or external laboratory checks were submitted. Internal laboratory QAQC procedures were followed by BV.
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 (physically and electronic) protocols. Discuss any adjustment to assay data. 	 No drilling results are being presented. No significant intersections are being reported. Assay results were sent by the lab in excel spreadsheet. No adjustment to assay data has been made.



Criteria	JORC Code explanation	Commentary
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 Resources estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 The grid system for the McCleery Project is NAD83 MTM Zone 8 (North American Datum of 1983). The accuracy of sample location is considered adequate for this stage of work.
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 Reserve and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	Samples were not taken on regular spacing. No Mineral Resources or Ore Reserves are being declared. No sample compositing has been applied.
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. 	Rockchip samples are selective and therefore biased sampling. No drilling has taken place.



Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	Samples were submitted directly to the laboratory by consultants to the Company.
Audits or reviews	The results of and audits or reviews of sampling techniques and data.	No audits or reviews have taken place



Section2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenements 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 interest, 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. 	 The McCleery Project comprises 244 contiguous Mineral Claims, claims MM1-244, covering a land area of 5,097 Ha. The tenements are 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	Acknowledgement and appraisal of exploration by other parties.	 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. Previous results were from geochemical sampling undertaken by Atlas Explorations Limited during 1970, United Keno Hill Mines Ltd during 1975 and JC Stephen Explorations Ltd (on behalf of DC Syndicate) during 1982-1983. All previous known exploration has been acknowledged and detailed in previous ASX Announcements relating to the project.
Geology	Deposit type, geological settings and style of mineralisation.	 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	 A summary of all information material for 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) and the drill hole collar Dip and azimuth of the hole Down hole length and interception depth Hole length 	No drilling results are being presented.



Criteria	JORC Code explanation	Commentary
	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.	No drilling results are being presented.
Data aggregation methods	 In reporting Exploration results, weighing averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated. 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 applicable, geochemical sampling results presented are single point data. No top cuts have been considered in reporting of grade results, nor was it deemed necessary for the reporting of significant intersections. No metal equivalent values are currently being used for reporting exploration results.
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 (e.g. 'down hole length, true width not known') 	Rockchip sample results represent point values only (i.e. no widths are being reported or assumed).



Criteria	JORC Code explanation	Commentary
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts would be included for any significant discovery being reported. These should include, but not be limited too plan view of drill hole collar locations and appropriate sectional views. 	See diagrams and tables in announcement.
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 rock chip assay results have been reported.
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 containing substances.	All known exploration activities have been summarised in previous announcements.
Further work	 The nature and scale of planned further work (e.g. 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, providing this information is not commercially sensitive. 	Further work is detailed in the body of the announcement.