

ASX ANNOUNCEMENT

27 November 2019

COPPER LEACHES INTO SOLUTION FROM COLUMN TEST-WORK

Cyprium Metals Limited (“**CYM**” or “**the Company**”) is pleased to advise that metallurgical column test-work has commenced on the massive sulphide mineralisation from the diamond drilling programme, that targeted the known copper mineralisation at the Hollandaire Prospect (refer to CYM ASX announcement dated 14 October 2019).

This metallurgical test-work is being conducted to determine the optimal copper extraction method and has leached copper into solution at room temperature conditions, as illustrated in Images 1 to 4.

Further updates will be provided as the metallurgical test-work progresses.



Image 1 / Metallurgical column test-work

Executive Director Barry Cahill commented “*We are delighted and are very encouraged to see the leaching of copper into solution within one hour from the commencement of the column test-work. We are looking forward to providing further updates on the metallurgical test-work as they become available.*”



Images 2 - 4 / Metallurgical column test-work

The metallurgical diamond drilling programme (refer to CYM ASX announcement dated 14 October 2019) consisted of three holes for 320m into the mineralised envelope of the Hollandaire Prospect at the Cue Copper Project to provide representative samples for test-work to be undertaken as illustrated in Figure 1.

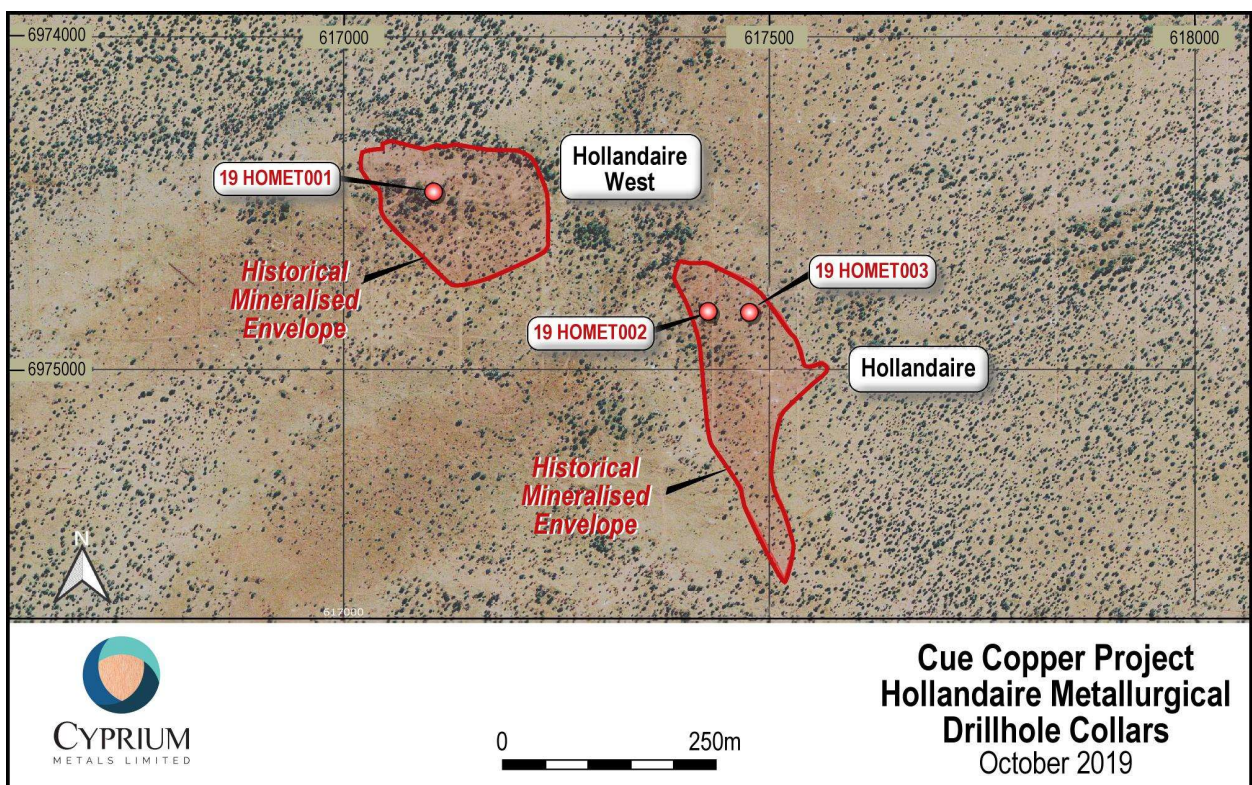


Figure 1 | Hollandaire Metallurgical Diamond Drill Hole Locations



The first hole in the metallurgical diamond drilling programme, 19HOMET001, was drilled into the Hollandaire west lode and returned disseminated copper sulphide mineralisation, dominated by chalcocite. The second and third diamond drill holes in the programme, 19HOMET002 and 19HOMET003, targeted representative sections of the Hollandaire east lode and returned massive sulphide mineralisation, containing pyrite and copper sulphides, predominantly chalcocite with minor chalcopyrite and bornite. The results from the metallurgical diamond drill holes included:

- 10.4m @ 14.9% Cu in drill hole 19HOMET003 from 84.5m downhole including:
 - 4.5m @ 21.9% Cu with 1.2 g/t Au and 46.4 g/t Ag from 90.4m;
- 19.1m @ 1.3% Cu in drill hole 19HOMET002 from 85.9m downhole including:
 - 6.4m @ 2.1% Cu with 0.5 g/t Au and 10.5 g/t Ag from 98.6m;
- 27.9m @ 1.1% Cu in drill hole 19HOMET001 from 45.7m downhole including:
 - 9.0m @ 1.6% Cu with 0.1 g/t Au and 2.3 g/t Ag from 63.2m.

Earn-in and Joint Venture

Pursuant to an agreement between a wholly owned subsidiary of CYM and Musgrave Minerals Limited (ASX: MGV), an option has been granted by Musgrave Minerals Limited to earn-in and joint venture for an 80% interest in the non-gold rights over the tenements (refer to Figure 2) at the Cue Copper Project (CYM ASX Release 25 March 2019).

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Competent Persons

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources and/or Mineral Reserves is an accurate representation of the available data and is based on information compiled by Mr. Peter van Luyt who is a member of the Australian Institute of Geoscientists. Mr. Peter van Luyt is the Chief Geologist of Cyprium Australia Pty Ltd, in which he is also a shareholder. Mr. van Luyt has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person (CP). Mr. van Luyt consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



Appendix 1: Hollandaire Prospect metallurgical drillholes collar table

Hole ID	Hole Type	MGA 94 Zone 50					Depth	Comments
		East	North	RL m	Dip °	Azimuth °		
19HOMET001	DD	617480	6973587	476	-90	-	100	Hollandaire west lode
19HOMET002	DD	617430	6973587	476	-90	-	122	Hollandaire east lode
19HOMET003	DD	617480	6973587	476	-90	-	100.7	

Appendix 2: Hollandaire Prospect September 2019 Metallurgical Diamond Drilling Programme significant intersections table

Hole_ID	m From	m To	Intercept Cu
19HOMET001	45.7	78.2	32.5m @ 1.00%
19HOMET001	79.7	88.4	8.7m @ 0.46%
19HOMET002	85.9	89.0	3.1m @ 1.16%
19HOMET002	91.0	105.0	14.0m @ 1.47%
19HOMET003	75.8	97.2	21.4m @ 8.15%

Minimum interval 3m,
minimum interval grade 0.1%
Cu, No internal waste - break
interval if result <0.1% Cu.

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	<i>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 handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Mineralised diamond core has been logged, photographed and submitted whole to the ALS metallurgical laboratory in Balcatta WA for metallurgical analysis. Unmineralised material has been retained and stored by Cyprium Metals at their field facility at Nallan Station, via Cue.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Sample representivity has been ensured by following company quality control (QC) sampling procedures. Quality Assurance has been addressed by inserting certified standards and blanks (CRMs) into the submitted assay batches. Excessive variance or inaccuracy of the CRMs will be investigated by Cyprium Metals staff for causes and corrective actions if required.
	<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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Whole core diamond drilling samples have been submitted to ALS Balcatta WA for metallurgical analysis. Mineralised intervals were selected by Cyprium geological and metallurgical staff, crushed to passing 19mm mesh then 1 kg samples split from the crushed intervals for assay analysis.
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 or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Diamond drilling for metallurgical samples was completed by Westralian Diamond Drillers Pty Ltd using a KL900 drill rig. HQ drill rods and bits were used to obtain 63.5mm diameter core for use in the first phase of Hollandaire metallurgical testing. Drillholes were vertical and not oriented. Downhole surveys were completed at with a north seeking

Criteria	JORC Code explanation	Commentary
		gyroscopic tool, not subject to downhole magnetic interference.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Core recoveries detailed in the geotechnical logging of the drillholes in the mineralised zones of each diamond metallurgical sample hole were as follows; <ul style="list-style-type: none"> • 19HOMET001, 98.2% • 19HOMET002, 97.1% • 19HOMET003, 95.2%. The geotechnical logs include measuring recovered core against the drillers core block measurements to calculate the core recovered percentages.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Diamond core was checked for recovery and depth, noted inconsistencies were reconciled against the core blocks and/or driller's run sheets if required.
	<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>	Hollandaire Prospect Cyprium Metals Diamond Drilling Not relevant to diamond core samples in competent ground.
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>	Hollandaire Prospect Cyprium Metals Diamond Drilling Logging to industry standards for resource, mining and metallurgical studies has been completed for lithology, mineralisation, alteration, veining and weathering. Geotechnical logging has also been completed for the Diamond drilled metallurgical sample holes.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Qualitative lithology, mineralisation, alteration, veining and weathering logging has been completed. Quantitative/qualitative geotechnical logging of metallurgical sample diamond core has been completed. All drillhole core has been photographed, non-mineralised zones have been retained at the Cyprium field facility for future reference.

Criteria	JORC Code explanation	Commentary
	<i>The total length and percentage of the relevant intersections logged.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling All diamond core has been logged in detail by Cyprium geologists at the Nallan Station field facility into excel spreadsheets or Ocris logging software.
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Whole core of mineralised sections despatched to ALS Balcatta for metallurgical test-work.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Hollandaire Prospect Not applicable
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Hollandaire Prospect Not applicable
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Certified Reference Materials and blanks are submitted with the samples to the laboratory and analysed for their performance. Cyprium undertakes remedial action including re-assaying samples if required.
	<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>	Hollandaire Prospect Not applicable
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling The sample sizes are industry standard and considered by Cyprium to be appropriate to sample the Hollandaire mineralisation.
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling The core samples were crushed and pulverised at ALS Balcatta. A 0.4g charge is split from the pulp which is fused with 9g of lithium metaborate and lithium tetraborate flux then analysed for copper and base metals by a Panalytical Axios X-ray Fluorescence machine which is an industry standard total analytical technique. Gold was analysed by 50g fire assay with ICP-MS finish which is an industry standard total analytical technique.

Criteria	JORC Code explanation	Commentary
	<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>	Not applicable
	<i>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.</i>	<p>Hollandaire Prospect</p> <p>Cyprium Metals Diamond Drilling</p> <p>Certified Reference Materials (CRM) and blanks have been submitted with the laboratory samples at a rate of 1 CRM or blank in 20. The CRM/blank results when returned by the lab will be analysed by Cyprium metals for their performance and remedial actions commenced should they be quired.</p> <p>Bureau Veritas also conducts their own quality control standards and blanks, the results of which will be provided to Cyprium Metals.</p>
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<p>Hollandaire Prospect</p> <p>Cyprium Metals Diamond Drilling</p> <p>The Cyprium Chief Geologist and Senior Project Geologist have visually verified significant mineralisation intersections in diamond core at the Hollandaire Prospect.</p>
	<i>The use of twinned holes.</i>	<p>Hollandaire Prospect</p> <p>Cyprium Metals Drilling</p> <p>5 twinned holes of previous operator's drilling have been completed in July and August 2019. Analysis of these drillholes will be completed as the data becomes available to Cyprium staff.</p>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<p>Hollandaire Prospect</p> <p>Cyprium Metals Drilling</p> <p>Data for the completed drillholes has been collected using spreadsheet templates prepared by WPData consultants and Ocris logging software on Panasonic Toughbook laptop computers utilising standardised library lookup tables. Data is being sent to WPData consultants for validation and compilation into an SQL database hosted by WPData</p>
	<i>Discuss any adjustment to assay data.</i>	No adjustments have been made to the assay data received for the drilling programme the subject of this announcement or for the Hollandaire prospect generally
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and</i>	<p>Hollandaire Prospect</p> <p>Cyprium Metals Diamond Drilling</p>

Criteria	JORC Code explanation	Commentary
	<i>other locations used in Mineral Resource estimation.</i>	Drillhole collars were set out using a handheld Garmin GPS with an accuracy of +/- 3m. The completed drillhole collars will be picked up with a differential GPS when a survey contractor is available to mobilise to site. Downhole surveys were completed at with a north seeking gyroscopic tool, not subject to downhole magnetic interference.
	<i>Specification of the grid system used.</i>	GDA94, zone 50.
	<i>Quality and adequacy of topographic control.</i>	The Hollandaire natural surface was aerial surveyed by Arvista Surveys on 21/8/2019. The survey was subsequently processed into a digital terrain model which was provided to Cyprium which now comprises the topographical control at the prospect.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Not applicable – metallurgical test holes.
	<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 Mineral Resource or Ore Reserve estimation procedures apply to the exploration data being reported in this announcement.
	<i>Whether sample compositing has been applied.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Metallurgical sample compositing has been completed within the mineralised zones using the following metallurgical sample drillholes: Composite 1: <ul style="list-style-type: none"> 19HOMET001: 45.70m to 88.4m 42.7m for 221.76 kg @ 0.76% Cu Composite 2: <ul style="list-style-type: none"> 19HOMET002: 82.40m to 110.10m 19HOMET003: 75.80m to 97.20m 49.1m for 302.80 kg @ 5.20% Cu.
<i>Orientation of data in relation to geological structure</i>	<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>	Hollandaire Prospect Cyprium Metals Diamond Drilling The metallurgical sample drillholes were designed to provide first pass samples of the Hollandaire prospect and have been drilled through well mineralised sections of the deposit. The drillholes are oriented at 90° to maximise sample return for

Criteria	JORC Code explanation	Commentary
		metallurgical testing and while the drilling is not perpendicular to the overall mineralisation envelope no deviation of the drillholes was noted and no bias is expected in their sample return.
	<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>	Hollandaire Prospect Cyprium Metals Diamond Drilling Cyprium believes that the orientation of the diamond drillholes on the metallurgical drilling programme achieves unbiased sampling of the Hollandaire deposit.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Hollandaire Prospect Cyprium Metals Diamond Drilling Core was delivered in trays secured to pallets to the Cue depot of the McMahon Burnett Transport Company for delivery to ALS laboratories Balcatta WA. Company personnel inspected the core on arrival, no damage or interference with the samples was noted and assay determinations reflect visual quantities of copper sulphides in the drill core.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews of the sampling techniques or data have been conducted.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<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>	Hollandaire Prospect The Hollandaire Prospect is located on exploration tenements E20/699 and E20/629 which form part of the Cue Copper Project, a joint venture with Musgrave Minerals the subject of the ASX announcement dated 25 March 2019.
	<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>	Exploration tenements E20/699 and E20/629 are current and in good standing.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>The Hollandaire, Colonel, Mt Eelya, Eelya South and Rapier prospects in the Cue Project were identified in the 1970's by their outcropping gossans (oxidised sulphide material) in field mapping campaigns by Western Mining Corporation.</p> <p>Some exploration and development work was undertaken on the Cue project prospects from the 1980's to 2007 by Westgold Resources NL and Tectonic Resources NL however this was generally focussed on potential gold resources.</p> <p>Silver Lake Resources acquired the Cue Project from Tectonic Resources in 2007 and commenced regional exploration which also focussed on gold but did include multi-element geochemical analytical work. This further defined the previously identified copper/gold/silver anomalism at Hollandaire.</p> <p>Silver Lake commenced aircore drilling at Hollandaire in 2011 and discovered the sulphide copper/gold mineralisation in the same year.</p> <p>Hollandaire was resource definition drilled in 2011 and 2012 with the first 2004 JORC mineral resource estimate completed by Silver Lake towards the end of 2012.</p> <p>Musgrave Minerals acquired the Cue project in November 2015 from Silver Lake Resources and commenced exploration planning that year with drilling and geophysical work on the Cue project beginning in 2016.</p> <p>Musgrave Minerals last completed field work in the Cue Project before signing the Joint Venture with Cyprium Metals was a surface geophysical moving loop transient electro-magnetic survey over 14 previously identified anomalies. Robust conductor models were generated for testing, which now</p>

Criteria	JORC Code explanation	Commentary
		forms part of Cyprium Metals proposed exploration programme in 2019 and 2020.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Hollandaire Prospect Various identified as VMS (Volcanogenic Massive Sulphide), VHMS (Volcanic Hosted Massive Sulphide) or epigenetic structurally hosted copper/gold mineralisation depending on the author.
Drill hole Information	<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> <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>	Refer to table at Appendix 1.
	<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>	No material drill hole information has been excluded from this announcement.
Data aggregation methods	<i>In reporting Exploration Results, weighting 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.</i>	Hollandaire Prospect Metallurgical master composites have been generated from 19HOMET001 to 19HOMET003 core samples the results of which are presented in Appendix 2. No top cutting has been applied nor is necessary for the reporting of significant intersections in the Hollandaire prospect.
	<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>	Hollandaire Prospect Metallurgical composites generated to best represent potential ore grade material for a conceptual operation at the Hollandaire Prospect.

Criteria	JORC Code explanation	Commentary
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	Not applicable
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	Hollandaire Prospect Metallurgical diamond sample drilling intercepts are expected to be approximately true width for 19HOMET001, 20% greater than true mineralisation width for 19HOMET002 and 10 to 20% greater than true mineralisation width for 19HOMET003 depending on yet to be fully determined mineralisation orientations in these holes.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	Hollandaire Prospect The metallurgical diamond sample drilling has been designed to intercept the known mineralisation at Hollandaire at 60°.
	<i>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').</i>	Hollandaire Prospect The metallurgical diamond sample drilling has been designed to intercept the known mineralisation at Hollandaire at 60°: downhole intersections are considered by Cyprium to equal true widths of the mineralisation for 19HOMET001 and be variously 10% to 20% greater for 19HOMET002 and 19HOMET003.
<i>Diagrams</i>	<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>	Refer to the plan and sections in the text of this announcement.
<i>Balanced reporting</i>	<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>	All copper values considered to be significant are presented in Appendix 2.
<i>Other substantive exploration data</i>	<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;</i>	All relevant exploration data is presented in the text, tables and figures of the announcement.

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	<i>potential deleterious or contaminating substances.</i>	
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Hollandaire Prospect Phase 2 drillholes and geophysical have been designed and are expected to commence in late 2019 or 1H 2020.
	<i>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>	Hollandaire Prospect To form the basis of a separate announcement.