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**14 September 2021**

**ASX ANNOUNCEMENT**

## **Nifty Copper Project Drilling Update**

### **HIGHLIGHTS**

- **Eastern drilling program targeting untested areas of oxide/transitional mineralisation on eastern limb successfully completed with first assay results expected shortly**
- **Native copper, chalcocite and covellite intersected in 3 zones from first metallurgical diamond hole on eastern limb**
- **Western drilling program testing for up-plunge extensions to oxide/transitional mineralisation in progress**
- **Sonic drill rig currently testing waste dumps for material historically classified as mineralised waste**
- **6,000m resource infill and extensional RC drilling program underway at the Maroochydore Copper Project**

Executive Director Barry Cahill commented:

*"We have a diamond, a sonic and two RC drill rigs currently operating so expect to have a steady flow of news over the months ahead. This supports our plans for a heap leach restart to establish an efficient, long-term producing copper mine at Nifty."*

*The stronger than expected copper mineralisation that has been intersected from our first metallurgical diamond hole, includes native copper observed in 3 distinct zones, which we expect to extend the former open pit."*

Cyprium Metals Limited (ASX:CYM) ("**Cyprium**" or the "**Company**") is pleased to provide the following progress update on drilling at the Nifty Copper Project located in the north-eastern Pilbara region of Western Australia.

### **Eastern drilling**

A total of 18 holes for 3,011 m were completed on the eastern limb extending from the former Nifty open pit (Figure 1). The program was undertaken to increase the density of existing drilling over the previously identified oxide and transitional zone copper mineralisation and to test for potential extensions to the east.

First assay results are expected shortly.



*Figure 1 / Nifty Copper Project drilling locations (local grid)*

## Metallurgical drilling

The first metallurgical diamond hole 21NDMT001 was drilled into the existing resource at the eastern end of the Nifty open pit (Figure 1).

The hole intersected native copper, chalcocite and covellite at downhole depths of 129.8 to 133.3m, 141.3 to 152.3m (Figures 2 to 4) and 154.56 to 155.35m.

A second metallurgical hole was recently completed in the same area with the third hole currently in progress.

The drill core is currently being logged prior to sampling and despatch for analysis and metallurgical testwork.





*Figure 2 | Hole 21NDMT001: 141.4m to 141.5m showing native copper and chalcocite.*



*Figure 3 | Hole 21NDMT001: 148.2m to 148.4m showing native copper, covellite, chalcopyrite and chalcocite.*





*Figure 4 | Hole 21NDMT001: 150.3m to 150.5m showing native copper, covellite, chalcopyrite and chalcocite.*

### **Western drilling**

The 16,000m RC drilling program to test for potential up-plunge extensions to the oxide and transitional mineralisation at the western extremity of the Nifty open pit is well advanced. The second RC drill rig currently at Maroochydore will return towards the close of the dry season to complete the remaining shallow holes.

### **Sonic drilling**

The sonic drill rig is currently assessing the waste dump area (Figure 1) for potential low grade mineralised waste that could add to the base load for the heap leach restart.

### **Maroochydore drilling**

The second RC drill rig recently commenced a 6,000m first phase oxide/supergene resource infill and extensional drilling program at the Maroochydore Copper Project located ~85km south east of Nifty.



*Figure 5 | RC drill rig at Maroochydore.*

A 4,500m first phase sulphide resource RC drilling program has also been designed and to commence this year if weather permits. In the event of the wet season preventing commencement of this program, it will be rescheduled to March/April 2022 when access to the project can be re-established.

Diamond drilling will commence in late September to obtain samples for first pass metallurgical testwork. It is expected that the metallurgical diamond drilling campaign will be completed prior to the wet season, and the drill rig will return to Nifty to complete the planned diamond drilling programs.





*Figure 6 | RC drill samples from the third hole at Maroochydhore.*

**This ASX announcement was approved and authorised by the Board on Cyprium Metals Limited.**

**For further information:**

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## Competent Person

The information in this report that relates to Exploration Targets, Exploration Results and the estimation and reporting of the Nifty Mineral Resource Estimate is an accurate representation of the available data and is based on information compiled by external consultants and Mr. Peter van Luyt who is a member of the Australian Institute of Geoscientists (2582). Mr. van Luyt is the Chief Geologist of Cyprium Metals Limited, 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: Nifty drillhole collar table

Hole ID	Hole Type	Survey Type	East	North	RL m	Dip °	Azimuth °	Depth
21NDMT001	DDH	DGPS	352905 <sup>1</sup>	7603824 <sup>1</sup>	297.9 <sup>1</sup>	-70.0	025.2	170
			102710 <sup>2</sup>	50500 <sup>2</sup>	10297.97 <sup>2</sup>			

Note: 1 - MGA 94 Zone 50, 2 – local grid

## About Cyprium Metals Limited

Cyprium Metals Limited (ASX: CYM) is an ASX listed company with copper projects in Australia. The Company has a highly credentialed management team that is experienced in successfully developing sulphide heap leach copper projects in challenging locations. The Company's strategy is to acquire, develop and operate mineral resource projects in Australia which are optimised by innovative processing solutions to produce copper metal on-site to maximise value.

The Company has projects in the Murchison and Paterson regions of Western Australia, that is host to a number of base metals deposits with copper and gold mineralisation.

### Paterson Copper Projects

This portfolio of copper projects comprises the Nifty Copper Mine, Maroochydore Copper Project and Paterson Exploration Project.

The Nifty Copper Mine ("Nifty") is located on the western edge of the Great Sandy Desert in the north-eastern Pilbara region of Western Australia, approximately 350km southeast of Port Hedland. Nifty contains a 2012 JORC Mineral Resources of 658,500 tonnes of contained copper. Cyprium is focussed on a heap leach SX-EW operation to retreat the current heap leach pads as well as open pit oxide and transitional material. Studies will investigate the potential restart of the copper concentrator to treat open pit sulphide material.

The Maroochydore deposit is located ~85km south east of Nifty and includes a shallow 2012 JORC Mineral Resources of 486,000 tonnes of contained copper.

An exploration earn-in joint venture has been entered into with IGO on ~2,400km<sup>2</sup> of the Paterson Exploration Project. Under the agreement, IGO is to sole fund A\$32 million of exploration activities over 6.5 years to earn a 70% interest in the Paterson Exploration Project, including a minimum expenditure of A\$11 million over the first 3.5 years. Upon earning a 70% interest, the Joint Venture will form and IGO will free-carry Paterson Copper to the completion of a Pre-feasibility Study (PFS) on a new mineral discovery.

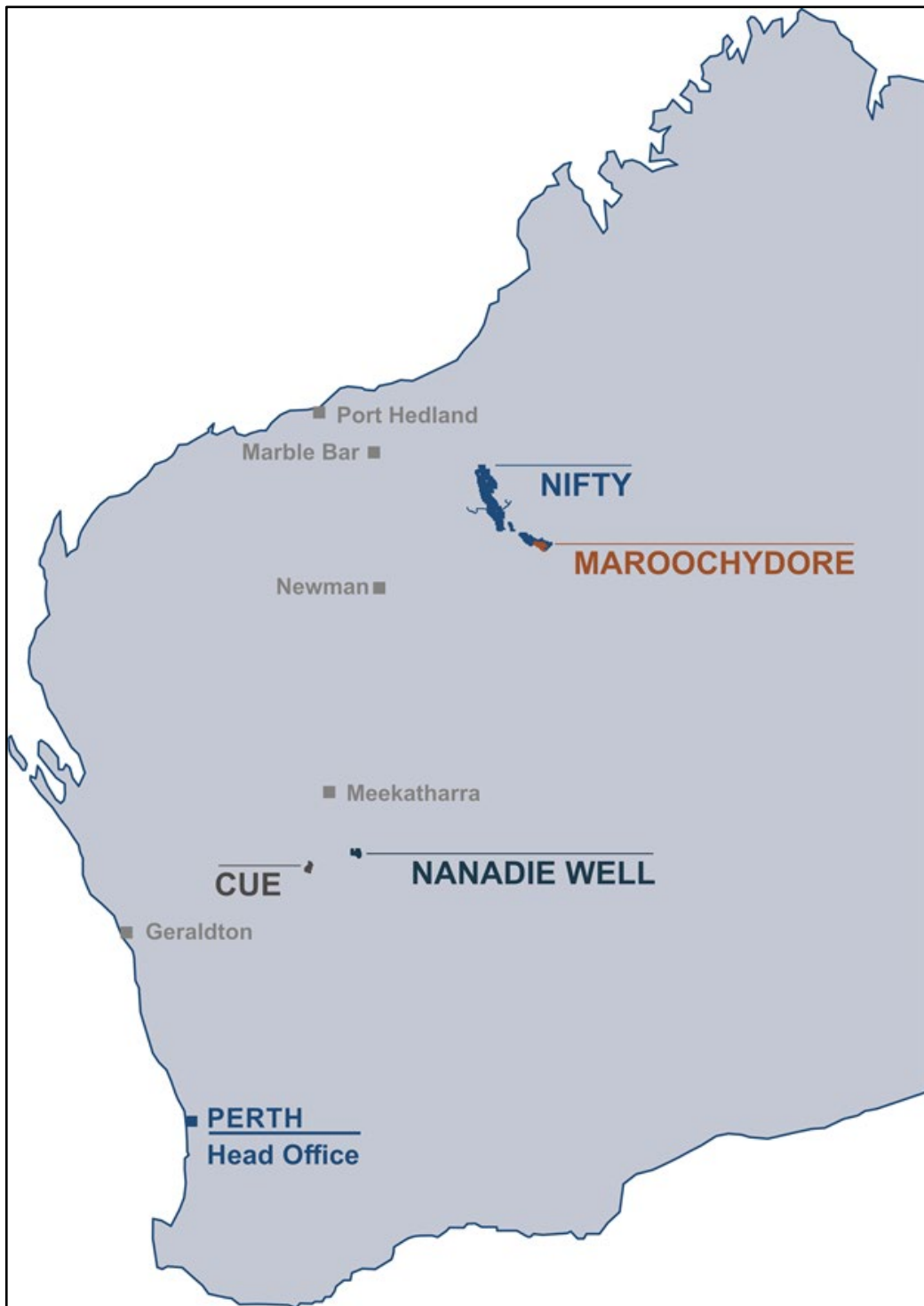
### Murchison Copper-Gold Projects

Cyprium has an 80% attributable interest in a joint venture with Musgrave Minerals Limited (ASX: MGX) at the Cue Copper-Gold Project, which is located ~20km to the east of Cue in Western Australia. Cyprium will free-carry the Cue Copper Project to the completion of a definitive feasibility Study (DFS). The Cue Copper-Gold Project includes the Hollandaire Copper-Gold 2012 JORC compliant Mineral Resources of 51,500 tonnes contained copper, which is open at depth. Metallurgical test-work has been undertaken to determine the optimal copper extraction methodology, which resulted in rapid leaching times (refer to 9 March 2020 CYM announcement, "Copper Metal Plated", <https://cypriummetals.com/copper-metal-plated/>).

The Nanadie Well Project is located ~650km northeast of Perth and ~75km southeast of Meekatharra in the Murchison District of Western Australia, within mining lease M51/887.

The Cue and Nanadie Well Copper-Gold projects are included in an ongoing scoping study, to determine the parameters required to develop a copper project in the region, which provides direction for resource expansion work.





*Cyprium Metals project locations*

## JORC Code, 2012 Edition – Table 1 report

### Nifty Copper Deposit

#### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><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></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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></p>	<p>The deposit has been drilled and sampled using various techniques with diamond and reverse circulation drilling utilised for mineral estimation. This information comes from surface and underground and is on variable spacing along and across strike. The total metres within the immediate vicinity of the deposit are 283,227m. The holes are drilled on most occasions to intersect as near as possible perpendicularly the synclinal east plunge mineralisation.</p> <p>The drilling programs have been ongoing since initial discovery to both expand the mineralisation and provide control for mining. The hole collars were surveyed by employees/contractors of the various owners with the orientation recorded. Down hole survey was recorded using appropriate equipment. The diamond core was logged for lithology and other geological features.</p> <p>The diamond core varied from HQ to NQ in diameter and mineralised intervals and adjacent locations are sampled by cutting the core in half based on contacts of lithology and other geological features.</p> <p>The diamond core samples will be submitted for metallurgical testwork.</p>
Drilling techniques	<p><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></p>	
Drill sample recovery	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p>	<p>The core recovery is recorded in the database and in most instances was in excess of 95% within the fresh/sulphide zones. This was assessed by measuring core length against core run.</p> <p>The ground conditions in the mineralised zone are competent. In areas of less competent material core return is maximised by controlling drill speed.</p>



Criteria	JORC Code explanation	Commentary
	<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>	Whilst no assessment has been reported, the competency of the material sampled would tend to preclude any potential issue of sampling bias.
<i>Logging</i>	<p><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></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>The routine logging of core and chips describes the general geology features including stratigraphy, lithology, mineralisation, alteration etc. For the majority of holes this information is sufficient and appropriate to apply mineralisation constraints. Some core drilling is orientated and structural measurements of bedding, joints, veins etc. has occurred as well as fracture densities.</p> <p>Geological logging has recorded summary and detailed stratigraphy, lithology, mineralisation content, and alteration, some angle to core axis information, vein type, incidence and frequency, magnetic content.</p> <p>The entire length of all holes, apart from surface casing, was logged.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><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></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>All core to be sampled will be half cored using a mechanical saw. It is not known if the core will be consistently taken from the same side of the stick.</p> <p>Samples for metallurgical testwork consists of the entire recovered core.</p> <p>No field duplicate information was observed.</p> <p>The style of mineralisation and high sulphide content does not rely on grain size as being influential on grade. Thus, there is confidence in the overall grade of the deposit being fairly represented by the sampling.</p>
<i>Quality of assay data and laboratory tests</i>	<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>No analytical results are being reported.</p> <p>No geophysical tools were utilised to ascertain grade.</p>

Criteria	JORC Code explanation	Commentary
	<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>	Standard and blanks were included with all samples sent for analysis in the rate of between 1 in 20 and 1 in 50. The most recent reporting covering the majority of holes used in the estimate provide support for the quality of the Cu assays.
<i>Verification of sampling and assaying</i>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>The extensive data set was reviewed by various parties including Maxwell Geoscience and DataGeo and the intersections within the mineralisation were confirmed.</p> <p>No twinned holes observed but there was a significant amount of closely spaced supportive drilling results.</p> <p>Field data was captured electronically, validated by the responsible geologist and stored on corporate computer facilities. Protocols for drilling, sampling and QAQC are contained with company operating manuals. The information generated by the site geologists was loaded into a database by the company database administrator and underwent further validation at this point against standard acceptable codes for all variables.</p>
<i>Location of data points</i>	<p><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> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>The collar positions were resurveyed by the Company surveyor or their contractors from a known datum. The survey is on a known local grid with demonstrated control. The orientation and dip at the collars was checked (aligned) by the geologist and down hole recording of azimuth and dip are taken at 30m intervals on most occasions using appropriate equipment. Accuracy tests in downhole surveys have been conducted on recent drilling and show negligible variation against 'Gyro' survey by independent third party.</p> <p>The regional grid is GDA94 Zone 50 and the drilling was laid out on a local grid.</p> <p>Topographic control is from surface survey - note the deposit modelled is totally underground and is not influenced by surface topography.</p>
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	The majority of drilling utilised was on 40m x 20m grid pattern drilled from surface specifically targeting lithological and hence mineralisation sequence definition, while current underground drill spacing was 20m to 25m on average.
	<p><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></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>The geological sequence is well understood from the mining which supports the current drill spacing as adequate for both grade continuity assessment and lithological modelling</p> <p>The sampling reflects the geological conditions. For Mineral Resource estimation a 2m composite length was chosen to reduce composite copper grade variability and facilitate variogram modelling, why still maintaining reasonable resolution for estimation.</p>



Criteria	JORC Code explanation	Commentary
<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. 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>	Given the shape of the sequence, the drilling as best as practically possible, was orientated to intersect the sequence perpendicularly. No sampling bias was considered to have been introduced.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	The samples once collected and numbered are stored in the site core yard. Each sample bag was securely tied with the pre-printed sample number on the bag and transported to either the onsite laboratory or by commercial contractors to Perth. Upon receipt at the laboratory the samples were checked against the dispatch sheets to ensure all samples were present.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Resources and reserves were routinely reviewed by the previous owner's Corporate technical team. Database management companies have over the past 3 years audited the drill hole database and found it representative of the information contained.

## 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.  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 Nifty deposit is situated on Mining Lease M271/SA, which is 100% held by Nifty Copper Pty Ltd, a wholly owned subsidiary of Cyprium Metals Ltd.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	WMC Resources Ltd discovered Nifty in 1980 by using regional ironstone sampling and reconnaissance geology. Malachite staining of an outcrop and Cu-anomalous ironstones from dune swale reconnaissance sampling were the initial indicators. This was followed up by lag sampling on a 500 x 50m grid that detected a 2.5 x 1.5km Cu-Pb anomaly. Secondary Cu mineralisation was intersected in percussion drilling in mid-1981, with high grade primary ore (20.8m at 3.8% Cu) discovered in 1983. WMC commenced open pit mining of the secondary oxide ore in 1992 and continued mining until September 1998 when Nifty was sold to Straits Resources. The Nifty project was purchased by Aditya Birla Minerals Ltd from Straits Resources in 2003. Nifty open pit mining

Criteria	JORC Code explanation	Commentary
		<p>ceased in June 2006. Copper extraction using heap leaching ceased at Nifty in January 2009.</p> <p>Nifty underground mining of the primary (chalcopyrite) mineralisation started in 2009. The Nifty project was purchased from Aditya Birla in 2016 by Metals X Ltd. Cyprium Metals subsequently purchased the Patterson Copper Project, including the Nifty Copper Mine and infrastructure on 31 March 2021.</p>
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>The Nifty deposit is hosted within the folded Neoproterozoic Broadhurst Formation which is part of the Yeneena Group. The Broadhurst Formation is between 1000 m to 2000 m thick and consists of a stacked series of carbonaceous shales, turbiditic sandstones, dolomite and limestone. The Broadhurst Formation hosts all known significant base metal occurrences including the Nifty copper mine and the Maroochydore, Rainbow and Warrabarty prospects. Structurally, the dominant feature is the Nifty Syncline which strikes approximately southeast-northwest and plunges at about 6-12 degrees to the southeast. The stratabound copper mineralisation occurs as a structurally controlled, chalcopyrite-quartz- dolomite replacement of carbonaceous and dolomitic shale within the folded sequence. The bulk of the primary mineralisation is largely hosted within the keel and northern limb of the Syncline.</p>
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 1 and Appendix 1 in the body of this announcement.
	<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 information is excluded.
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>	No weighting, averaging or cut-off calculations apply to this announcement.



Criteria	JORC Code explanation	Commentary
	<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> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p>No analytical results are reported in this announcement.</p> <p>No metal equivalent calculations were applied.</p>
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><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></p>	<p>Mineralisation reported in this announcement is from holes drilled to intersect the steeply dipping north limb of the Nifty syncline. Holes were drilled at an angle of 70° to the syncline.</p> <p>The 11m of mineralisation intersected from 141.3m to 152.3m downhole in metallurgical hole 21NDMT001 represents a true width of ~7.6m of mineralisation.</p>
<p><i>Diagrams</i></p>	<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>	<p>Included in the body of the report.</p>
<p><i>Balanced reporting</i></p>	<p><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></p>	<p>Included in the body of the report.</p>
<p><i>Other substantive exploration data</i></p>	<p><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></p>	<p>A summary of previous material geological work relating to the Nifty mineralisation is reported in the JORC 2012 Table 1 Report section of this announcement.</p>
<p><i>Further work</i></p>	<p><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></p> <p><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></p>	<p>The Nifty resource currently remains open to the east and south and is currently being drill tested by the company. Phase 2 drilling will be designed as phase 1 results are received.</p> <p>Operational feasibility studies have commenced and will form inform future announcements to the market as they are finalised.</p>

