



## **ASX Release**

11 December 2013

### **Chinalco Yunnan Copper Resources Ltd (ASX: CYU)**

#### **MT ISA EXPLORATION PROGRAM UPDATE**

- **Reconnaissance rock chip assays up to 27% copper, 2.9g/t gold, 7g/t silver and 884ppm molybdenum from a sample taken at Native Companion.**
- **Rock chip samples from gossan outcrop potentially extend the Blue Caesar zone for 1000 metres to the northwest.**

Chinalco Yunnan Copper Resources Limited (CYU) continues to make excellent progress with its exploration activities across its tenure holdings near Mt Isa in north-west Queensland.

On 17 September CYU announced it had entered into farm-in agreements with Altona Mining Ltd (ASX:AOH) and Elementos Ltd (ASX:ELT). These entitle CYU the right to explore for copper, gold and other minerals and ultimately earn a majority interest in mining leases (MLs) and exploration permits (EPMs) situated near Cloncurry in the world-class Mt Isa Inlier in north-west Queensland.

On 24 October CYU announced the results of a 13 reverse circulation (RC) drillhole program at Millenium which validated historic drill results and identified a (potentially) large multi-metal mineralised system in a splay fault adjacent to the Quamby Fault Zone.

Reconnaissance rockchip sampling from new and existing prospects continue to return highly prospective results. At **Native Companion**, in the north of the CYU tenement package (which forms part of Altona's Roseby South project), initial reconnaissance has identified a 2 kilometre zone of historic workings associated with gossanous outcrop along a fault zone that assayed at **27% copper, 2.9g/t gold, 7g/t silver and 884ppm molybdenum**. This geochemistry is significant as it confirms CYU's belief that the Native Companion zone has potential for Kalman and Elaine style deposits. These deposits originate from deep crustal fluids and occupy splay-faults adjacent to regionally extensive fault zones such as the Rose Bee Fault, Pilgrim Fault and Mary Kathleen Shear.

In addition, mapping and rock chip sampling to the northwest of CYU's **Blue Caesar** prospect has potentially extended the strike of this mineralized zone for 1000 metres. Discontinuous zones of gossan, assaying from **0.2% to 3% copper** with elevated cobalt, have been sampled through extensive soil cover.

A sample from gossan outcrop at the **Jubilee** prospect, to the west of Blue Caesar, returned **3% copper and 1.85 g/t gold**.

*(Note - Blue Caesar is a CYU 70% / Goldsearch (ASX:GSE) 30% venture pursuant to the Mount Frosty Joint Venture – with CYU/Goldsearch earning-in up to 75% from Mount Isa Mines Limited subject to Mount Isa Mines having a buy back right so as to retain a 51% interest in the Mount Frosty Joint Venture).*

A summary of the sample results from these exploration activities is set out in the table below:

Prospect	SAMPLE	Au g/t	Ag ppm	Co ppm	Cu %	East MGA	North MGA
Native Companion	411585	2.86	7.2	89	26.9	413600	7741200
Blue Caesar North	412462	0.021	<0.2	169	0.22	397318	7700549
	412463	0.059	0.2	226	3.0	397305	7700653
	412464	0.007	<0.2	281	0.36	397275	7700638
	412465	0.059	<0.2	96	0.21	397379	7700717
	412466	0.002	0.5	27	0.98	397203	7700670
	412467	1.14	0.2	230	0.48	397048	7700881
Jubilee	411584	1.85	0.4	254	3.0	396690	7699947

Figure 1 (refer below) includes a diagram indicating the location of the rockchip samples across CYU's Mt Isa tenure package. The Blue Caesar inset highlights the sample areas to the north of the surface expression of copper mineralization intersected in the drilling programs during 2013 (shown in yellow).

CYU Managing Director, Paul Williams, said that these reconnaissance rock sample assays demonstrate a level of geochemical anomalism that clearly justifies CYU's enthusiasm for its Mt Isa projects and will assist with planning for the 2014 exploration program in the region.

On behalf of the Board

Paul Williams  
 Managing Director  
[paul.williams@cycal.com.au](mailto:paul.williams@cycal.com.au)  
 +61 419 762 487

### About CYU

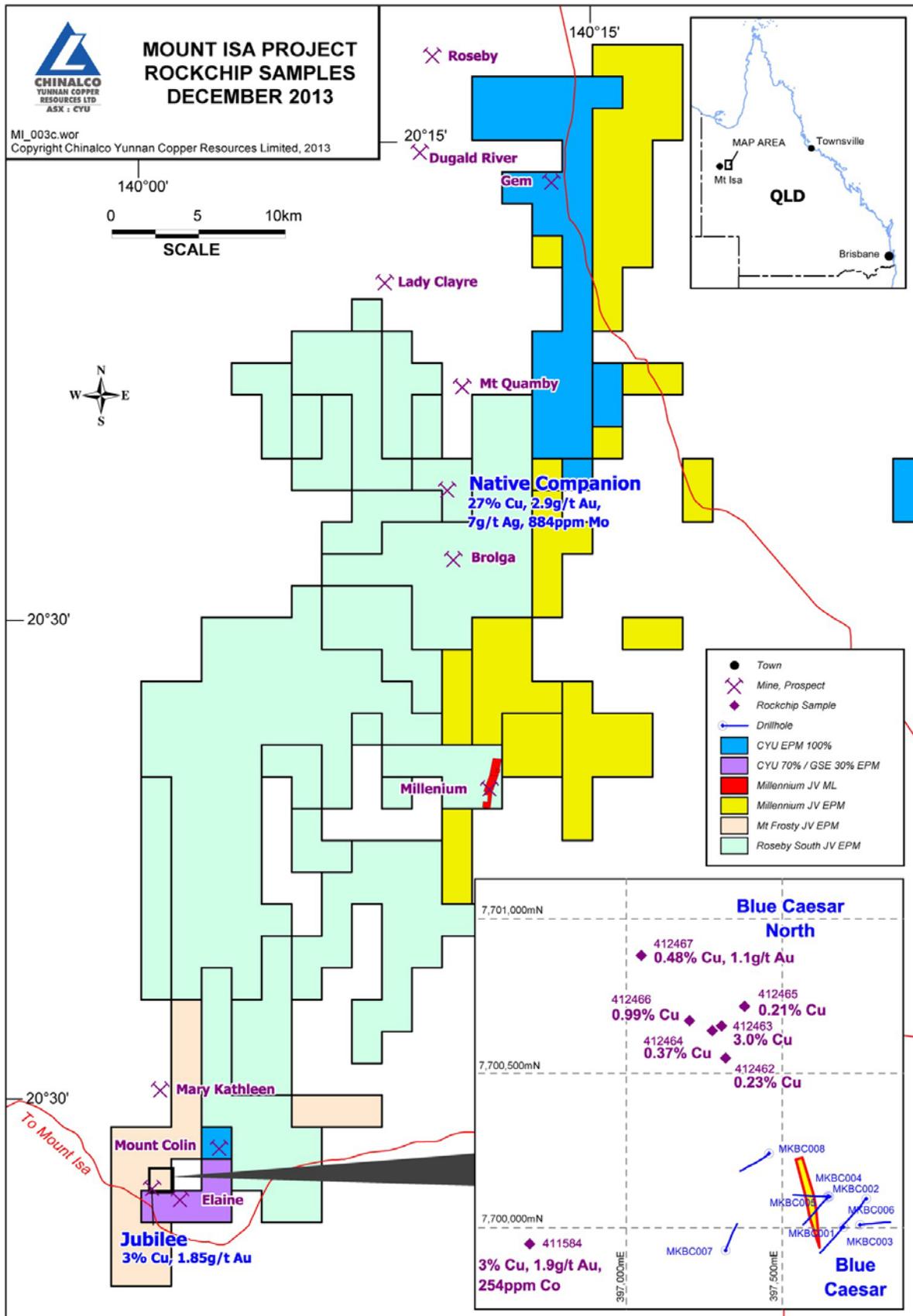
Chinalco Yunnan Copper Resources Ltd (CYU) is a resource exploration and development company with project interests in the Mt Isa region of north Queensland, Chile and northern Laos.

CYU's largest shareholder is China Yunnan Copper (Australia) Investment and Development Co Ltd ("CYC"), owning 43% of the total issued shares in CYU. CYC is a wholly-owned subsidiary of Kunming-based Yunnan Copper Industry (Group) Co Ltd, which is the third largest producer of smelted copper product in China. In turn, Yunnan Copper Group is a subsidiary of Aluminium Corporation of China (Chinalco) which is the largest producer of aluminium product in China and the second largest world-wide. CYU has offices in Brisbane, Mt Isa and in Santiago. The Company is listed on the ASX under the symbol "CYU".

### Competent Person's Statement

*The information regarding exploration activities and information set out in this ASX Release is based on information compiled by Mr Trevor Leahey, a Competent Person, who is CYU's Exploration Manager, a Chartered Professional Geologist and a Member of the Australasian Institute of Mining and Metallurgy. Mr Leahey has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that is 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". Mr. Leahey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

**Figure 1**  
 (Location of the sample areas across the CYU Mt Isa tenure package)



# JORC Code, 2012 Edition – Table 1 – ROCK-CHIP SAMPLING

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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></li> </ul>	<ul style="list-style-type: none"> <li>• Reconnaissance rock chip samples of gossan, quartz and/altered rock collected from outcrop by a qualified geologist in the process of “characterizing” the rock geochemistry.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling undertaken at this stage</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling undertaken at this stage</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling undertaken at this stage</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><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></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling undertaken at this stage</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Samples are disk pulverized to 90% &lt; 75µm.</li> <li>Pulps are analyzed by ALS (Mt Isa) using method code ME-ICP41, a 34 element determination using an aqua regia digestion with ICP-AES determination. Gold is determined at ALS (Townsville) using method code TL-43, an aqua regia digest of 25g and ICP-AES determination.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Laboratory CSV files are merged with GPS Location data files using unique sample numbers as the key.</li> <li>No adjustments made to assay data</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li><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></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>Samples are located using handheld GPS receivers.</li> <li>UTM projection GDA94 Zone 54</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral</i></li> </ul>	<ul style="list-style-type: none"> <li>Reconnaissance sampling of available outcrop.</li> <li>Results will not be used for resource estimation.</li> <li>No compositing has been applied.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Rock-chip samples are collected transverse to the strike of the outcrop.</li> <li>• No bias is believed to be introduced by the sampling method.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples are hand delivered to the ALS Mt Isa laboratory</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Internal review of methodology is undertaken regularly by senior company personnel.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• CYU holds in excess of 1000km<sup>2</sup> of contiguous EPMs through various joint venture agreements and its own holdings</li> <li>• There are no known impediments to exploration in the current area of operations.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No previous detailed exploration.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• CYU is exploring for large tonnage multi-metal mineral associations that originate from deep crustal/mantle derived fluids that are concentrated along large regional sutures</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• <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> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• No drilling undertaken at this stage</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> <li>● <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></li> </ul>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>● <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></li> <li>● <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></li> <li>● <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>● No data aggregation methods have been used.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>● <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>● <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>● <i>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></li> </ul>	<ul style="list-style-type: none"> <li>● No drilling undertaken at this stage</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>● <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></li> </ul>	<ul style="list-style-type: none"> <li>● See release</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>● <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></li> </ul>	<ul style="list-style-type: none"> <li>● Not Applicable</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>● <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></li> </ul>	<ul style="list-style-type: none"> <li>● Reconnaissance Exploration only</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>● <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> </ul>	<ul style="list-style-type: none"> <li>● Follow-up sampling and geologic mapping</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"><li data-bbox="344 204 1196 292">• <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></li></ul>	