



## Metallum completes San Sebastian acquisition

ASX ANNOUNCEMENT

10 December 2014

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### Highlights

- **Metallum takes 100% ownership of the San Sebastian concession and mine**
- **700 tonnes of material ready for trucking immediately**
- **Grade control sampling of shaft stockpiles averaging 6.84% Cu**

Perth-based copper developer **Metallum Ltd (ASX: MNE)** is pleased to announce it has obtained 100% ownership of the San Sebastian concession, part of the El Roble Copper Project in Chile.

Metallum Managing Director, Mr Zeff Reeves, said: "The completion of the San Sebastian acquisition is a major achievement for the Company. We see San Sebastian as a key area within the El Roble project where we have commenced underground mining activities on a major high grade copper vein, and we can now commit to increasing our activities there.

"We have been preparing the first delineated stope area for mining by installing two access shafts in the vein to join the 1040 level with the old mine at the 1090 level. This work has produced approximately 700 tonnes of high grade material which we will begin trucking to the treatment plant immediately. The vein has widened as we have advanced upwards with widths of up to 4 metres having been encountered and an overall average width of around 2.50 metres.

"We hope to complete installation of the access shafts during December 2014 and begin production stoping as soon as possible, which will see the rate of extraction dramatically increase as the first stope is extracted. We are very excited about the prospects at San Sebastian and see other opportunities to establish additional mining fronts in the short term to further enhance our extraction rates and delineate further high grade zones for mining," Reeves added.

Under the option agreement to acquire 100% of the San Sebastian concessions, Metallum was required to pay a total consideration of US\$250,000 (ASX announcement 27 August 2014). This has now been paid and ownership of the concession transferred to Metallum.

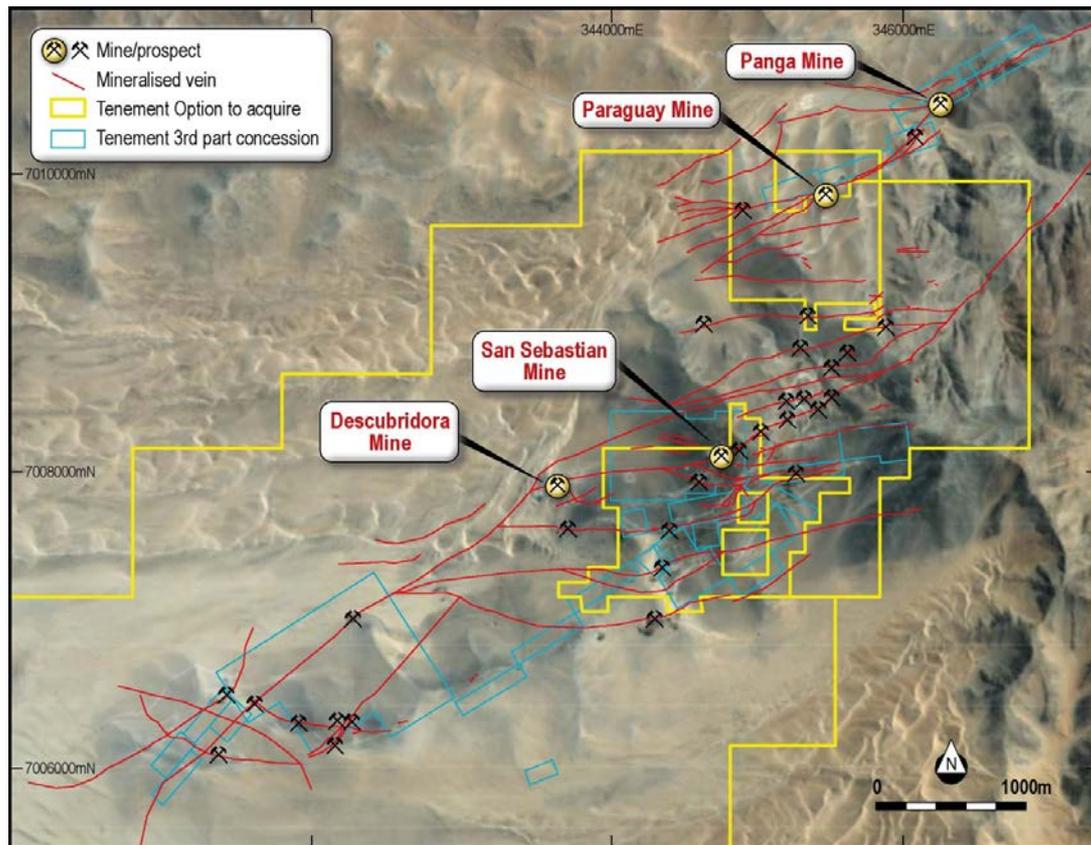
Preparatory work has been ongoing at San Sebastian, with delineation of the first stoping panel having been completed and access shafts installed within the vein in preparation for stoping.

This work has produced approximately 700 tonnes of material which has been stockpiled and ready for trucking to the treatment plant. Stockpiled material includes approximately 30 tonnes of high grade direct smelter material grading in excess of 15% Cu. It is planned that this material will be trucked over the next two weeks.

Grade control sampling from stockpiles of material from the shafts has averaged 6.84% copper, these samples are routinely collected as "grab" samples from stockpiles and sent to the local laboratory for analysis for acid

soluble copper. It should be noted that the final grade of delivered material will not be known until the material has been processed. *Grab sampling may not be representative of final processed grade.* Full results from stockpile sampling are presented in Appendix 1.

Other work planned for San Sebastian during December 2014 includes continued horizontal development of the 1040 level and earthworks below the 1040 level to expose the vein and establish an additional development heading. This will enable the establishment of additional stope areas and further increase the volume of material able to be trucked to the mill through December and January 2015.



**Figure 1 – Map of the north east sector of the El Roble Project, Chile, showing the location of the San Sebastian mine within a strike continuous mineralised corridor where Metallum has mapped over 60km of prospective veins**



Figure 2 – San Sebastian mine and vein looking north. Note favorable topography for access, vertical distance between the 1040 level and 1090 level entrances is approximately 50m. Work is planned to establish additional mining access tunnels into the vein below the 1040 level.

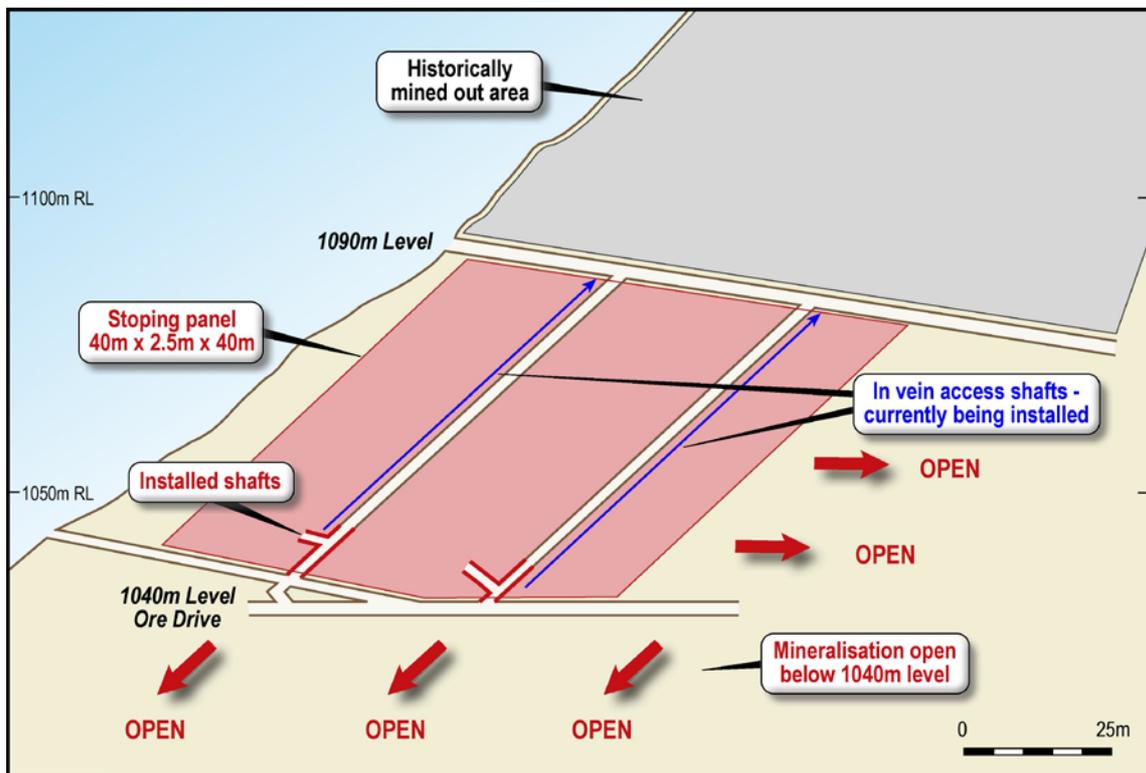


Figure 3- Schematic long section of the San Sebastian mine showing location and access of the first stopping panel currently being prepared between the 1040 level and 1090 level.



## **Competent Person's Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Zeffron Reeves (B App Sc (Hons) (Applied Geology) MBA, MAIG), a member of the Australian Institute of Geoscientists. Mr Reeves has sufficient experience that 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 as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Reeves is a full time employee and Managing Director of Metallum Limited. For new Exploration Results, Mr Reeves consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. For previously released Exploration Results, the Company confirms that the form and context in which the information is presented has not been materially modified and it is not aware of any new information or data that materially affects the information included in the relevant market announcements, as detailed in the body of this announcement.

## APPENDIX 1 – ASSAY RESULTS

<b>Sample ID</b>	<b>Laboratory</b>	<b>Location</b>	<b>Sample type</b>	<b>Method</b>	<b>Soluble Cu (%)</b>
MGC 05036	Cesmec	1040 Level	Development stockpile	Grab	2.36
MGC 05044	Cesmec	1041 Level	Development stockpile	Grab	4.62
MGC 00297	CESMEC	1042 Level	Shaft 1 Stockpile	Grab	13.15
MGC 00298	CESMEC	1043 Level	Shaft 1 Stockpile	Grab	4.38
MGC 00314	CESMEC	1044 Level	Shaft 1 Stockpile	Grab	7.62
MGC 00315	CESMEC	1045 Level	Shaft 1 Stockpile	Grab	5.55
MGC 00323	CESMEC	1046 Level	Shaft 1 Stockpile	Grab	7.62
MGC 00357	CESMEC	1047 Level	Shaft 1 Stockpile	Grab	6.68
MGC 00358	CESMEC	1048 Level	Shaft 1 Stockpile	Grab	5.15
MGC 00359	CESMEC	1049 Level	High Grade Stockpile	Grab	19.44
MGC 00360	CESMEC	1050 Level	Shaft 1 Stockpile	Grab	7.89

**APPENDIX 2: JORC Table 1, Section 1 Sampling Techniques and Data**

Criteria	Explanation
Sampling techniques	<ul style="list-style-type: none"> <li>• Minimum sample interval was 0.25m and maximum of 1.00m are collected from core, sampled to geological boundaries.</li> <li>• Rock chip samples collected are of a minimum 2kg weight.</li> <li>• Minimum sample interval was 0.50m and maximum of 2.00m were collected along installed channels.</li> <li>• Stockpile grab samples randomly select broken rock material to collect a nominal 4kg of sample weight.</li> <li>• Samples sent to ALS Laboratories, Copiapo, Chile and to Cesmec laboratory, Copiapo Chile</li> <li>• Samples submitted to ALS were pulverised to obtain a 30g charge for fire assay for gold</li> <li>• ALS samples used a 0.5g charge was digested by four acid near total digest and analyses using ICP-OES for multi-element analysis, including copper</li> <li>• ALS Ore grade copper samples over 10,000ppm (10%) are re-assayed using AAS</li> <li>• High grade gold samples over 10 g/t are re-assayed using a fire assay fusion and gravimetric finish.</li> <li>• Samples submitted to Cesmec Laboratory used a 0.5g charge, aqua regia digest and ICPMS finish</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• NA - No drill results are presented in this announcement</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• NA - No drill results are presented in this announcement</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• All drill holes and rock samples are geologically logged by qualified geologists.</li> <li>• Geological data is recorded in the Company's geological database.</li> <li>• Logging is qualitative in nature and describes lithology, alteration, structure and mineralisation visually observed by the logging geologist.</li> <li>• Total length of each sample interval has been logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• The sample collection and preparation technique is deemed suitable and industry standard for drill core and rock sampling.</li> <li>• Samples are coarse crushed to 70% passing 2mm and then split produce a 30g sample for gold assay and 0.5g sample for multi-element assay. Sub samples are then pulverised to 85% passing 75 microns prior to assay.</li> <li>• No duplicate samples have been carried out.</li> <li>• Sample size is deemed appropriate.</li> <li>• Samples may be subject to nonuniform grade distribution and nugget effect in relation to copper grade due to geological and mineralogical characteristics.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• Assay techniques are deemed suitable and accurate for the elements being tested.</li> <li>• Standard reference materials have been submitted in each sample run every 20 samples.</li> <li>• Blank reference materials are submitted in each sample run every 50 samples.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• All significant intersections have been calculated using weighted averaging to sample length.</li> <li>• All significant intersections have been checked by alternative company geological personnel.</li> <li>• No duplicate sampling or twinned holes have been completed</li> <li>• All data collected is done so in accordance with the Company's written data collection procedures and is kept within the Company's electronic database. Original sample logs and written data collection forms are also retained in the Company's data library.</li> <li>• No adjustment to data has been done.</li> </ul>
Locations of data points	<ul style="list-style-type: none"> <li>• All drill holes and channels have been surveyed using a measurement from known survey points in underground areas with appropriate control points used and referenced to ensure accuracy of survey information.</li> <li>• Stockpile samples are from mixed and blended material sourced from multiple locations within the mine.</li> <li>• Co-ordinates have an error of +/-10cm.</li> <li>• Co-ordinates are recorded in PSAD56 co-ordinate system</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>• The current drill and channel spacing is deemed appropriate for the current early stage of exploration</li> </ul>
Orientation of data in relation to	<ul style="list-style-type: none"> <li>• Wherever possible drill holes and channels have been planned to intersect mineralised</li> </ul>

geological structure	<p>structures perpendicular to the structure.</p> <ul style="list-style-type: none"> <li>• Drill Hole intercepts are downhole widths and do not indicate true widths of any mineralised structure.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• All sampling was conducted under the supervision of the companies project manager who supervised sample collection and the chain of custody from the drill to the sample preparation and logging facility is continually monitored by the project manager. Samples are shipped to the lab by qualified couriers or Company personnel under locked bags.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• No audit or review has been conducted due to the early stage exploration nature of the work.</li> </ul>

## JORC Table 7: Section 2 Reporting of Exploration Results

Criteria	Explanation
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Metallum owns 100% of the San Sebastian concessions through its 99% owned Chilean subsidiary, Mining Group Chile Limitada.</li> </ul>
Exploration by other parties	<ul style="list-style-type: none"> <li>No information has been used in this report from exploration by other parties.</li> </ul>
Drill hole information	<ul style="list-style-type: none"> <li>Details of channel, drill holes, depth and intercept depths are contained within this announcement (Appendix 1).</li> </ul>
Geology	<ul style="list-style-type: none"> <li>The El Roble Project and San Sebastian mine area consists of quartz and iron oxide veins, containing copper and gold mineralisation. The veins are hosted within intrusive dioritic and andesitic volcanic rocks of the Chilean Cretaceous Belt.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>Intercept widths are along channel widths, intercept calculated by length weighted average for all samples and no internal dilution was used, where length is the along channel length for each sample interval</li> <li>Intercepts comprise of aggregated length weighted average for all samples taken in each channel. Length weighted averages have been calculated using the following formula assuming 3 samples were taken from the channel, where: A=sample interval, B=sample assay value <ol style="list-style-type: none"> <li>1) <math>A1 \times B1 = C1</math>, <math>A2 \times B2 = C2</math>, <math>A3 \times B3 = C3</math></li> <li>2) <math>A1 + A2 + B2 = \text{total interval}</math></li> <li>3) <math>(C1 + C2 + C3) / \text{total interval} = \text{length weighted grade average}</math></li> </ol> </li> <li>No metal equivalent values have been used.</li> </ul>
Relationship between mineralization widths and intercept lengths	<ul style="list-style-type: none"> <li>Channels were designed to be installed perpendicular to the interpreted strike of the mineralized structures unless stated.</li> <li>Intercept widths are along downhole widths and are not true geological widths.</li> <li>Reported copper grade from stockpiles may not be representative of actual copper grade of the stockpiled material</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Pertinent maps, plans and sections are within this announcement</li> </ul>
Balanced Reporting	<ul style="list-style-type: none"> <li>Full results of all samples taken are presented in Appendix 1 of this announcement.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>No other data other than that presented has been used or relied upon.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>Further exploration work including mapping, sampling and drilling is required, on areas throughout the property.</li> <li>These areas will be identified in the future through further analysis and interpretation of results.</li> <li>Diagrams cannot be provided until areas for future exploration have been identified, other than what is presented within this notice.</li> </ul>