

## EM targets identified at Teutonic Project

ASX ANNOUNCEMENT

8 August 2017

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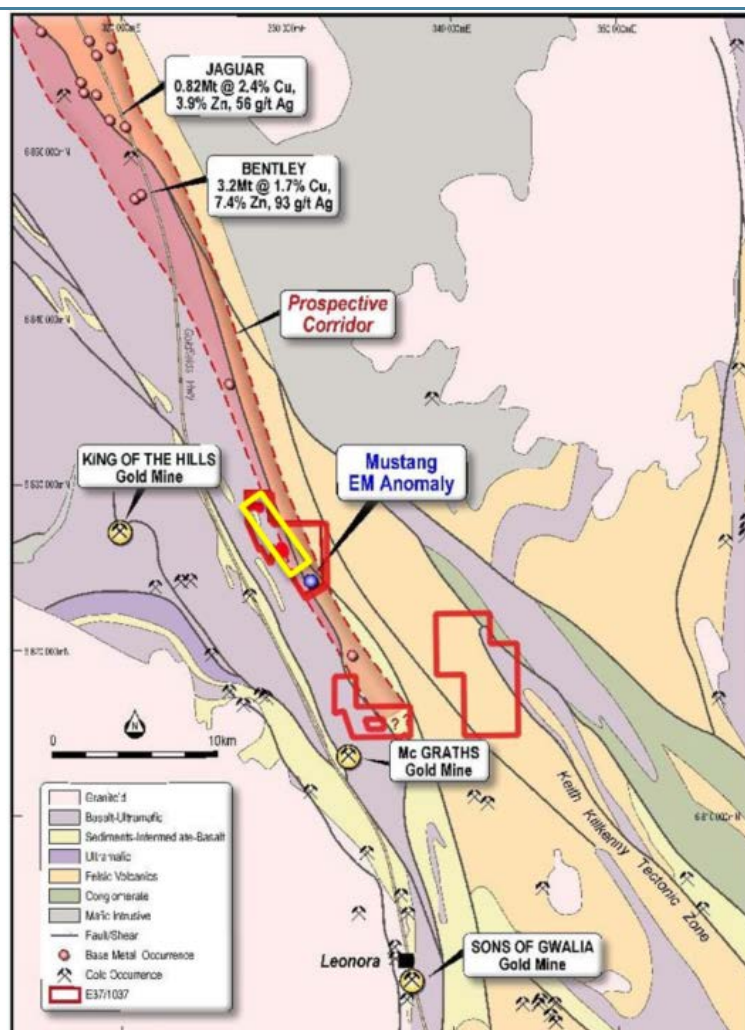
### HIGHLIGHTS

- Final data processing, modelling and interpretation of the recently completed MLEM survey data at the Company's Teutonic Project has identified priority geophysical target zones along 5.4km of prospective strike
- Four priority geophysical areas have been identified within the interpreted VMS corridor, considered prospective for VMS base metal mineralisation associated with a sequence of sediments and volcanic rocks.

Perth-based exploration Company **Metallum Ltd (ASX: MNE)** is pleased to provide the following update on the recently completed Moving Loop Electromagnetic (**MLEM**) survey at its Teutonic Project (ASX Announcement 23 May 2017).

The Company engaged the services of independent geophysical consultants to process and model the raw MLEM survey data. Following processing and modelling the information was integrated into the exploration model developed by the Company to target Volcanogenic Massive Sulphide (**VMS**) base metal mineralisation within the interpreted favourable host sequences. This work has identified priority MLEM conductors along strike to the northwest of the Company's Mustang prospect.

Metallum Chairman Winton Willesee said *"The Company is pleased by the recent MLEM results and the delineation of these targets within the target geological horizon. The identification of these geophysical targets provides further encouragement on the potential of the Teutonic Project to host VMS style mineralisation. The Company will continue to evaluate these targets and determine the best way to further test them."*

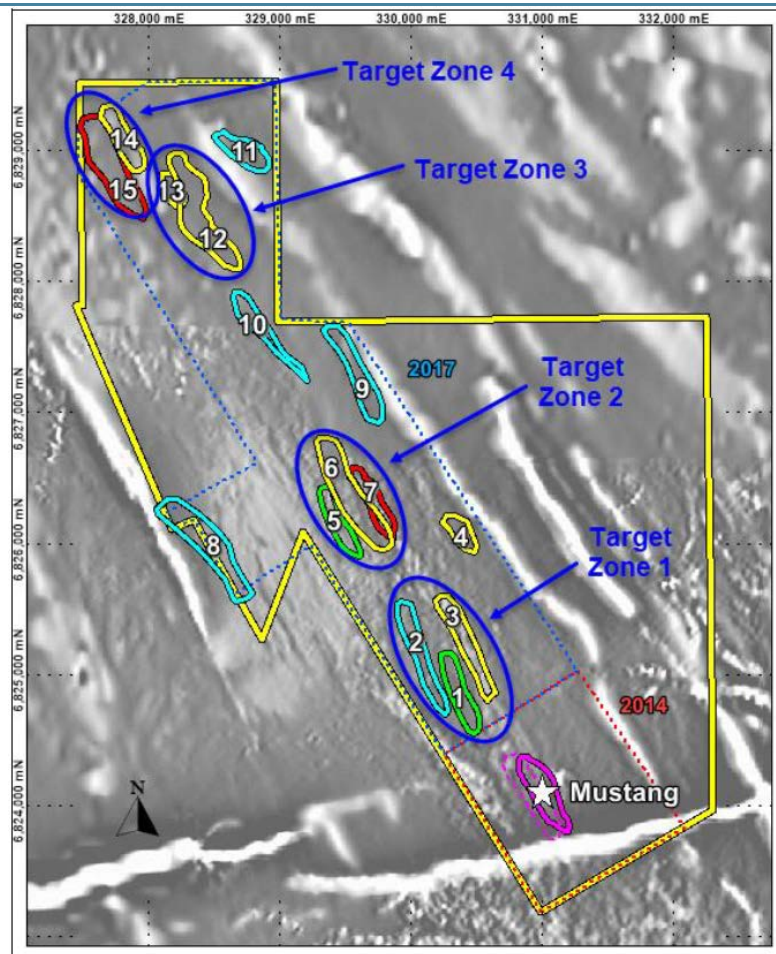


**Figure 1– Regional geology and location of the Teutonic Project and Mustang Conductor showing proximity to the Jaguar and Bentley VMS deposits. Resource figures for Bentley and Jaguar sourced from Independence Group’s website. Metallum tenements outlined in red, approximate area of recent MLEM survey in yellow.**

## MLEM ANOMALIES

The MLEM survey has identified 15 geophysical anomalies which occur within a NW-SE trending corridor, running along strike from the previously identified and drilled Mustang Prospect (ASX announcement 7 January 2016). The geophysical anomalies are interpreted to be associated with the contact between sedimentary rocks and a package of mafic to felsic volcanic rocks.

The anomalies have been grouped into four main target zones containing ‘clusters’ of priority EM anomalies. Further processing including three-dimensional conductor plate modelling was completed on anomalies in these target areas to provide a spatially referenced model for future drill planning.



**Figure 2 - MLEM anomaly areas coloured by priority, where red = highest priority 1 and light blue = lowest priority 4, overlain on a magnetic greyscale colour image (TMIRTP – 1VDAGC). Tenement E37/1037 is shown by the yellow outline and the Mustang Prospect is shown by the white star. The late EM time channel anomaly associated with the Mustang Prospect is shown by the pink outline.**

Target areas 3 and 4 are favoured for initial drill testing as they are spatially associated to a discrete magnetic anomaly located on the interpreted contact between sedimentary and mafic to felsic volcanic rocks. Other known VMS deposits in the region are located at or near similar geological contacts and the magnetic anomaly may represent an accumulation of pyrrhotite (sulphide) or magnetite which can be associated with VMS style mineralisation.

The Company's interpretation of the MLEM survey data has been largely focussed on integration of the available magnetic data and the MLEM data, as little outcrop has been located along the interpreted VMS corridor trend. This is due to the area being covered in a blanket of transported regolith with no outcrop existing. Work is ongoing to further resolve the geology and regolith over the area to allow more accurate EM conductor plate modelling for future drill targeting.

The next stage of work will comprise of compilation of all available historical geological mapping and drilling data to support a lithological and structural interpretation study to verify bedrock geology, along with the preparations required for a drilling program.

For more information visit the Metallum website at [www.metallum.com.au](http://www.metallum.com.au) or contact:

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**About Metallum Limited**

Metallum Limited (ASX: MNE) is an Australian-based company that acquires and develops copper and gold projects around the world. The Company currently has interests in its Australian-based Teutonic Project as well as the Comval Copper Project in the Philippines.

**Competent Person's Statement**

The information in this report that relates to Exploration Results is based on information reviewed by Mr Lyle Thorne (B App Sc (Hons) (Member AusIMM) and is a consultant to the Company. Mr Thorne 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 Thorne consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

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

Criteria	Explanation
Sampling techniques	<ul style="list-style-type: none"> <li>This ASX release reports on new targets generated at the company's Teutonic Project. The ASX release reports only on new targets generated from a recently completed Moving Loop electromagnetic Survey (MLEM). Sections describing drilling data collection and verification refer to previous drilling conducted at the Teutonic project and previously released to the ASX (ASX announcement 7 January 2016)</li> <li>MLEM Survey was designed by Resource Potentials Pty Ltd and field work was conducted by Gem geophysics Pty Ltd               <ul style="list-style-type: none"> <li>Key specifications of the MLEM survey are:                   <ul style="list-style-type: none"> <li>Stations Spacing: 100m</li> <li>Loop: 200m x 200m</li> <li>Line Spacing: 150m</li> <li>Components: x y z</li> <li>Line direction: 058-302 degrees</li> <li>Frequency: 0.5, 0.25 Hz</li> <li>Channels: SMARTem Standard.</li> <li>Receiver: Fluxgate</li> <li>Number turns: 2</li> <li>Current: Typically 60 A.</li> <li>Repeats: Minimum 3 consistent readings per station.</li> </ul> </li> </ul> </li> </ul> <p>Field calibration of the survey instruments using standards is undertaken each day. A minimum of 3 consistent readings per station are taken to ensure accuracy of data collected.</p>
Drilling techniques	<ul style="list-style-type: none"> <li>All holes were precollared using RC drilling and completed with diamond drill core tails.</li> <li>Diamond Drilling method has been used recovering NQ diameter drill core</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Drill sample recovery is generally 100% and is recorded for every meter of core recovered.</li> <li>Minor core loss was encountered but is not deemed material</li> </ul>
Logging	<ul style="list-style-type: none"> <li>All drill holes 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 sampling.</li> <li>Samples are coarse crushed to 3mm and then split produce a sub-fraction which has been pulverised to 90% passing 75 micron</li> <li>No duplicate samples have been carried out.</li> <li>Sample size is deemed appropriate.</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 20 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 have been surveyed using a handheld GPS instrument with appropriate control points used and referenced to ensure accuracy of survey information.</li> <li>Co-ordinates have an error of +/-5m..</li> <li>Co-ordinates are recorded in GDA94 co-ordinate system</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>The current drill spacing is deemed appropriate for the current early stage of exploration</li> </ul>

Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Wherever possible drill holes have been planned to intersect mineralised structures perpendicular to the structure.</li> <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 Company's geological consultant who conducted sample collection and the chain of custody from the drill to the sample preparation and logging facility is continually monitored by the consultant. Samples are shipped to the lab by qualified couriers or Company personnel under sealed 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 does not own any of the properties surveyed but is the appointed manager of the project</li> <li>Metallum has an exclusive option agreement to acquire up to 70% of the mineral tenement E37/1037 (refer to Company Prospectus released to the ASX on 13th May 2011).</li> </ul>
Exploration by other parties	<ul style="list-style-type: none"> <li>Historic drilling information has been utilised accessed through the Department of Minerals and Petroleum databases.</li> <li>Drilling was conducted by Sons of Gwalia Ltd between 1995 and 1997.</li> </ul>
Drill hole information	<ul style="list-style-type: none"> <li>Details of hole locations, depth and intercept depths are contained within this announcement.</li> <li>All down hole assay data is presented in Appendix 1.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>The Teutonic Project occurs within the Norseman-Wiluna greenstone belt. Within the north-west trending Keith-Kilkenny tectonic Zone</li> <li>Rock types observed include metasedimentary rocks and felsic-intermediate volcanic rocks and high Mg basalt and ultramafic intrusive rocks</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>Intercept widths are downhole widths, intercept calculated by length weighted average for all samples where length is the downhole length for each sample interval</li> <li>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><math>A \times B_1 = C_1, A \times B_2 = C_2, A \times B_3 = C_3</math></li> <li><math>A_1 + A_2 + B_2 = \text{total interval}</math></li> <li><math>(C_1 + C_2 + C_3) / \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>Drill holes were designed to be installed perpendicular to the interpreted strike of the mineralized structures unless stated.</li> <li>Intercept widths are downhole widths and are not true geological widths.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Pertinent maps, plans and sections are within this announcement</li> </ul>
Balanced Reporting	<p>All new exploration results relating to the announcement are reported.</p> <ul style="list-style-type: none"> <li>Terms like "best", "strongest" or "significant" are used to highlight those results considered most important in the context of the announcement.</li> <li>Some statements in this report regarding estimates or future events are forward-looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include, but are not limited to, statements concerning the Company's exploration programme outlook, target sizes and mineralised material estimates. They include statements preceded by words such as "anticipated", "expected", "target", "scheduled", "intends", "potential", "prospective" and similar expressions.</li> </ul>

Other substantive exploration data	<p>Location of Data Points</p> <ul style="list-style-type: none"> <li>Handheld GPS used for receiver/transmitter locations, co-ordinates GDA94/ MGA Zone 51</li> </ul> <p>Data spacing and distribution</p> <ul style="list-style-type: none"> <li>Station Spacing 10m with 2m and 5m infill where deemed appropriate</li> </ul> <p>Audits and reviews</p> <ul style="list-style-type: none"> <li>All geophysical data was collected and reviewed by an independent consultant.</li> <li>Several sources of conductors in the bedrock are possible, including but not limited to concentrations massive sulphide and graphitic black shales.</li> <li>A model of a conductive source is made from a combination of the measured data and assumptions made according to industry best practice. The resultant model should therefore be considered a “best estimate” of the conductive source, and not a definitive characterisation.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>Further exploration work including further data processing and drilling is required to further test the EM bedrock conductor</li> <li>Diagrams cannot be provided until final geophysical and geological models have been completed, other than what is presented within this notice.</li> </ul>