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DISCOVERY OF ZIRCON RICH HEAVY MINERAL SAND MINERALISATION

IN CAPE YORK PENINSULA, FAR NORTH QUEENSLAND

Metallica Minerals Ltd ("Metallica") is pleased to announce it has discovered potentially substantial zircon-rich heavy mineral sand (HMS) mineralisation on the western side of the far north area of Queensland's Cape York Peninsula.

The discovery was made during Metallica's maiden regional reconnaissance drilling program on EPM 15371, a tenement held 100% by Metallica through its wholly-owned subsidiary company, Oresome Australia Pty Ltd.

The site is approximately 160km north of Metallica's Urquhart Point zircon-rutile HMS project located near Weipa (Figure 1). Drilling was aimed at further defining the mineralisation identified previously by Metallica from a recent helicopter reconnaissance surface sample which recorded (from laboratory analysis) 2.9% heavy mineral (HM), comprising 54% zircon and 35% titanium minerals.

This initial drill program consisted of 36 shallow auger holes drilled to an average depth of approximately 3.7 meters (m) and all holes were no more than six meters, covering an approximate 1.8 kilometers (km) long by 0.8 km wide area along the south-eastern edge of a regional Exploration Target (*) called T16 (see attached map Figure 2). T16 is a low lying vegetated sand dune with a length of approximately 14 km in a north-south orientation and over 200-300 m wide, situated 3 km inland from the shoreline (Refer photograph below).

The drilling and sampling supervision and the estimation of the HMS content of each sample was conducted by experienced mineral exploration geologist, Mr Brett Duck where 34 of the 36 holes were visually estimated to contain mineralisation consistent with the previous surface sample in fine to medium sand with very low slimes (or clay content) observed. From visual estimation, the heavy mineral (HM) fraction appeared to be approximately half zircon and the other half mostly black minerals (a significant portion of which is expected to be titanium rich minerals).

All HM mineralisation is close to surface with an average thickness of approximately 2m and an average visually estimated HM content of approximately 3 to 4% HM. The T16 drill program was constrained to 36 holes out of an originally planned 200 drill hole program, when heavy rain hampered access. As a result, six widely spaced reconnaissance drill holes were drilled on the access track outside the T16 target area on leaving the project site; in some of these holes low grade to trace HMS mineralisation was observed.

A total of 152 samples were submitted to the R.J Robbins laboratory in Brisbane for HM grade analysis and a breakdown of zircon, titanium, iron oxide and other minerals. The results are expected in the next few weeks followed by a more detailed release. Samples from this drilling programme will be set aside for preliminary metallurgical testwork and zircon, titanium minerals (i.e. rutile, ilmenite) quality analysis.

Managing Director, Mr Andrew Gillies:

"This is a positive outcome on new work in this new large target area and gives confidence about potential further discoveries across Metallica's nearly 300km length of mostly sandy, near coastal tenements on Cape York, particularly given the lack generally of systematic heavy mineral sands exploration to date in the region.

"T16 is our first target to be drill tested on our regional tenement portfolio and we have at least 10 other priority regional targets in our Cape York holdings. Given our Urquhart Point zircon-rutile deposit and now T16 results to date, it is fair to say the region is highly prospective for mineral sands, particularly zircon and rutile."

*Exploration Target statement: It needs to be emphasised that the exploration results being reported on above are based on visual estimation and therefore are a preliminary analysis of the extent of the heavy mineral sand mineralisation from visual observations (laboratory analysis of the samples collected are expected to be received in the next 3 weeks) and therefore the estimation of the heavy mineral (HM) content or grade and extent of the mineralisation within the target area is still conceptual in



nature and therefore is insufficient information for the estimation of a Heavy Mineral Sand (HMS) Resource. Hence it is uncertain if further exploration will be sufficient to convert this Exploration Target's mineralisation to a Resource or if the mineralisation identified will extend further within the Exploration Target area (i.e. T16 Target). See attached <u>Table 1</u> (JORC Code, 2012 Edition Section 1 Sampling Techniques and Data and Section 2 Reporting of Exploration Results.



Photo: Aerial view over the middle of the T16 target area looking south toward the relatively small 1.8 km by 0.8 km area drilled along the southeast edge of the T16 target.



Photo: Augur drilling on the T16 target exploration area (November 2013)



On 20 November 2013 the Queensland Government released for consultation the latest draft of the Cape York Regional Plan (CYRP). Under the draft plan which is open for consultation until March 2014, the T16 target is included in areas under which mining activities may be restricted. Metallica is yet to fully understand the influence and effect on any possible future mineral project development plans of this draft CYRP. Further assessment will be undertaken and we will update the market in due course on how this draft CYRP may have any effect on the T16 target area (and the majority of other exploration tenements held by Oresome Australia Pty Ltd). However in light of our discovery announced today, Metallica will be liaising further with the Queensland Government and expects to lodge a submission on the CYRP during the consultation period.

The drilling of T16 is Metallica's last field program in Cape York for 2013. The Company is planning to resume exploration drilling activities in early 2014, after the end of the pending wet season and subject to the outcomes of the draft CYRP.

For more information please contact:-

Andrew Gillies, Managing Director

Metallica Minerals Ltd Phone: +61 07 3249 3000

Email: admin@metallicaminerals.com.au

Competent Persons Statement

The Technical information contained in this report has been compiled and/or supervised by Mr Andrew Gillies B.Sci (Geology) M.AusIMM (Managing Director of Metallica Minerals Ltd) who is a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (M.AusIMM). Mr Gillies has relevant experience in the mineralisation, exploration results and targets being reported on to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Gillies consents to the inclusion of this information in the form and context in which it appears in this release.

The information in this report that relates to Exploration Results and observed mineralisation is based on information compiled by Brett Duck (a geologist of 42 years experience), and a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy and a contract consultant to Metallica Minerals Ltd. Mr Duck has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Duck consents to the inclusion of this information in the form and context in which it appears in this release/report.

See attached <u>Table 1</u> (JORC Code, 2012 Edition Section 1 Sampling Techniques and Data and Section 2 Reporting of Exploration Results.





Figure 1: Metallica's Cape York HMS project Tenements







JORC CODE, 2012 EDITION - TABLE 1 REPORT TEMPLATE

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<i>Sampling</i> <i>techniques</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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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 (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. 	 Auger drill samples were taken at every 1 meter (m) interval and extracted by spinning the augers to the depth required and then pulling the rods out to catch the sample on the auger flights. To maintain representivity, upper level materials caught on the outside of the auger sample were brushed off by hand. A bucket was placed under the auger and the selected interval scraped into the bucket for bagging. Sampling of dry and loose material near surface, especially in the first meter, was done by rotating the auger until the sample appeared at surface and then the material was removed into a bag. Sampling at depth was as described above. All materials recovered from the auger (approximately 80% of the material recovered from the hole for each metre) were collected into a labelled calico bag which was placed in a white polywoven sack for dispatch to the laboratory. A small representative sub-sample (approx 100grams) was selected by hand and hand-panned in a white panning dish to produce a tail of concentrated heavy mineral sand (if any contained within sample). The presence or not of heavy minerals was identified for approximate composition and total percentage estimation.
Drilling techniques	• 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).	 Drill type was by auger (approximately 90mm diameter), drilled in and pulled out. No samples were taken below the water table.
Drill sample	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 	• Weights of material varied depending on moisture content (dry to moist or wet). Weights were not measured and accurate recoveries are not determined due to the reconnaissance nature of the intended program.



Criteria	JORC Code explanation	Commentary
recovery	 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. 	 Every attempt was made to maximize recovery for each drilled meter by taking each sample off the auger when pulled from the hole.
		 It is considered that bias did not occur due to preferential loss of material. Certain highly concentrated layers may not have been adequately sampled although from the 152 samples logged and panned, there were no concentrated layers observed.
Logging	 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. 	• The sampled one metre intervals were logged in detail and where considered relevant internal boundaries were noted. The level of detail required for this assessment was considered more than adequate for this reconnaissance exploration drilling program.
	 Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections legged 	 Logging included visual estimates of heavy mineral (HM) concentration including estimation of total HM content as well as an estimation of zircon and other HM components.
	 The total length and percentage of the relevant intersections logged. 	 A total of 152 samples representing each meter of drilling were logged and panned.
Sub-	If core, whether cut or sawn and whether quarter, half or all core taken	The samples represented soil samples taken off spiral augers.
sampling techniques and sample preparation	 taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples. 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. 	 The samples were taken off the augers at the natural moisture content.
		• The samples have not yet been received by the laboratory. Therefore have not yet been prepared for assay (see later release).
		 Quality Control (QC) procedures will be covered in subsequent releases as assays are completed.
		• No field duplication of samples was conducted due to reconnaissance nature of this program.
		• The sample sizes are appropriate being in excess of 2 kg each. Grain size of the HM was consistently of the order of 100 micron ().
	 Whether sample sizes are appropriate to the grain size of the material being sampled. 	
Quality of	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered	 No assays have been conducted to date as samples have not yet been analysed by a laboratory
assay data	ay data partial or total.	 No geophysical tools have been used in analysis because it was not



Criteria	JORC Code explanation	Commentary
and laboratory tests	 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. 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. 	considered necessary for the intended outcome of the sampling program.When the samples reach the laboratory, QC procedures will be included in the next report released.
<i>Verification of sampling and assaying</i>	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 This has been a reconnaissance exploration program to determine the presence or not of mineralisation and the data received was not intended for resource estimation purposes. No twinned holes were used due to the early stage of this investigation into accessing the presence of mineralisation. Documentation of the primary data will be included in a report detailing the reconnaissance program with data developed and tabulated in spreadsheets and document files held by the Competent Person and the host company. There is no planned adjustment to assay data.
<i>Location of data points</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. Specification of the grid system used. Quality and adequacy of topographic control. 	 The drill collars were located by hand held GPS considered to have an accuracy of ± 4 m. The system used was GDA94 Zone 54L. The base topographic control is the local 1:50,000 topographic map (Doughboy Creek) which is adequate to identify overall and specific locations.
<i>Data spacing and distribution</i>	 Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	 The drill holes were spaced at nominal 100m spacing. The aim of the program was to determine the presence or not of what appears to be significant heavy mineral sand mineralization (zircon and titanium rich minerals) for later delineation and possible resource drilling. The spacing was adequate for this purpose. To this early stage no compositing has taken place due to the lack of previous results available to make this determination.
Orientation	Whether the orientation of sampling achieves unbiased sampling of	Considering the deposit type the sampling has shown the presence of



Criteria	JORC Code explanation	Commentary
of data in relation to geological structure	 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. 	 broad zones of continuity of mineralisation in an unbiased manner. It is considered that the only type of concentrated structure that could affect the results is narrow buried channels that may have high grades suggesting that the program as designed, would give conservative results, should such an occurrence be encountered.
Sample security	The measures taken to ensure sample security.	• The samples were bagged into white polywoven sacks and kept at the house of one of the contractors, then palleted and shrink wrapped for shipment. It is considered that due to the style (HM with zircon and rutile) and the value of the mineralisation potential, interference was extremely remote.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• A detailed review of the sample protocols has not been carried out as this is a reconnaissance exploration program not leading to resource estimation.

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>	 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. 	 EPM15371 is held by Oresome Australia Pty Ltd, some 3 km east of the mouth of the Cotterell River on the western side of Cape York. There are no joint venture agreements, no historical sites and there is an agreement with the local Indigenous Groups represented by the Apudthuma Land Trust. The area is covered by the Draft Cape York Regional Plan (DCYRP). The Cape York Plan has not been finalised and it is anticipated that should the exploration advance that there may be increased restrictions due to the location.
<i>Exploration done by other parties</i>	• Acknowledgment and appraisal of exploration by other parties.	• As far as Metallica is aware, there has been no other exploration done in this target area by any other company, therefore this is considered a significant Greenfield exploration HMS discovery and potentially of a new mineral field.



Criteria	JORC Code explanation	Commentary
Geology	 Deposit type, geological setting and style of mineralisation. 	 The target is for HM dominated by zircon and titanium minerals (rutile and ilmenite) mineral sands
<i>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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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. 	 There were 36 vertical holes, auger drilled to a maximum depth of 6 meters (averaging 3.7 m) and drilled on the south east edge of the T16 target. A further six, 3 m deep, holes were drilled as wild cat holes on the exit from the site along the access track. Although regarded as inaccurate, the average RL of all collars from the hand held GPS was 8 m above sea level and this fits when comparing the 1:50,000 Doughboy Creek topographic map. It is considered not pertinent to include all of the collar RLs and depths for the 42 holes for what is a preliminary reconnaissance mineral exploration program, however the area covered by the 36 holes in the target is bounded by Eastings 625,200E and 625,900E and Northings 8,742,400N and 8,744,000N. The six wildcat holes extended to 8,752,528N.
<i>Data aggregation methods</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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 No assays have been undertaken therefore no weighting has been made. Visual HM grade estimations have been made and these will be used to limit assay techniques for those samples that are believed to carry in excess of 2% total HM. All samples were taken over 1 m lengths and any aggregation used in the future will be covered in the appropriate report at that time No metal equivalent values are used.
<i>Relationship between mineralisation widths and intercept lengths</i>	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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'). 	 Mineral relationships will be reported as they are identified. The mineralisation is regarded as horizontal due to the nature of the style of deposit and as the holes are vertical all intercepts are regarded as having True Width. The down hole depths are True Widths.



Criteria	JORC Code explanation	Commentary
Diagrams	 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. 	 <u>Map is attached</u> to the release showing all collars on the topography.
Balanced reporting	 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. 	 no assays or analysis have yet been completed and it is considered best to report in detail the laboratory analysis with appropriate supporting documentation. All drill hole results and the significance of which will be reported in the next release.
<i>Other substantive exploration data</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. 	 The site was located because of a known strand line, dunal sand and a coastal belt of sand formations which have potential to contain heavy minerals such as zircon, rutile and ilmenite. The regional exploration project area covers an area between Weipa and Bamaga near the tip of Cape York Peninsular (a distance of approximately 300 km). There is a known zircon-rutile HMS deposit near Weipa (Urquhart Point). Exploration targets within this regional belt of sand were further identified through analysis of airborne radiometric data flown by the State Government and interpreted by Salva Resources Pty Ltd and the Competent Person.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	 It is planned that further drilling will be carried out when access is available in 2014 following the rainy season.
	 Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas provided this information is not commercially sensitive. 	• Follow-up drilling will include areas already drilled as well as areas extending southwards for 4.7 km, the sub-parallel dune system to the west extending over 7.5 km and a dune system to the south and east of 5 km length.