BOTSWANA Metals Limited

ABN 96 122 995 073

ASX Code: BML

TO: **COMPANY ANNOUNCEMENTS OFFICE**
ASX LIMITED

DATE: **22 SEPTEMBER 2016**

FURTHER SULPHIDES INTERSECTED IN REGIONAL DRILLING AT TAKANE

HEADLINES:

- **First hole MTDD 003 hits further zones of disseminated sulphides between 362m – 410m**
- **Second Hole at MAK 1 (MKDD001) Target, intersects sulphides at 232m (Figure 1) and 263m depth**
- **Pyrrhotite and chalcopyrite (copper sulphide) identified in all sulphide zones**
- **Effectiveness of SQUID EM technology in locating sulphides is once again demonstrated**
- **Drilling has commenced at Kudu 1 Target**
- **Target is for Nickel + Copper +Cobalt +PGEs**



Figure 1: Examples of the heavily disseminated pyrrhotite + chalcopyrite mineralisation in core from around 232m down hole in MKDD001. This style of sulphide mineralisation is visually similar to the host sulphides of Ni + Cu + Co + PGEs at the Maibele North Resource some 21km to the southwest.

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Figure 2: Examples of the disseminated and stringer pyrrhotite mineralisation (bronze coloured mineral) in core from around 365m down hole in MTDD003.

The Board of Botswana Metals ("BML") is pleased to advise that the first two holes, at the Mmats 1 and Mak 1 targets, in the regional drilling program by JV partners BCL Limited on PL54 – Takane, have been completed. Both holes have successfully intersected a number of disseminated and stringer sulphide zones containing chalcopyrite (Copper sulphide) and pyrrhotite (iron sulphides associated with nickel mineralisation at Maibele North). These are the first two holes from a three-hole program designed to test priority Ni-sulphide targets that are marked by prominent VTEM anomalies and corresponding SQUID EM conductors coincident with of ultramafic intrusions and anomalous Cu and Ni soil geochemistry (see ASX announcement 15/08/2016). The third hole located at the Kudu 1 target has commenced on a double shift to complete the program as soon as possible.

Program Details

Mmats 1 Target

Drilling has concluded after one hole at the Mmatsiane (Mmats1) prospect where a large (>1km), strongly conductive plate at a depth of approximately 400m (Figures 1 and 2) was the target. Drill hole MTDD003 initially intersected shallow disseminated and stringer pyrrhotite and chalcopyrite mineralisation at 84m to 90m and at 92m to 92.6m (see ASX release 12/09/2016). Pyrrhotite is the primary host sulphide to nickel mineralisation at the nearby Maibele North deposit. A number of deeper zones of disseminated sulphide mineralisation also containing pyrrhotite and chalcopyrite were intersected between 362m – 410m and correspond well with the position of the modelled SQUID conductor at 398m depth. This zone contains disseminated sulphides from 362m – 370m, 380m – 395m and 398 – 410m down hole.

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These sulphide intersections in the first and only hole at Mmatsiane are considered extremely encouraging because they contain the sulphide minerals pyrrhotite, chalcopyrite and pyrite which are associated with the Ni+Cu+Co+PGEs mineralisation at the nearby advanced Maibele North deposit. These intersections are indicative of a fertile sulphide mineralised system and demonstrate the potential for the discovery of additional sulphide deposits regionally in the Magogophate Shear Zone (MSZ).

Mak1 Target

The second hole (MKDD001) in the program at the Mak 1 target has also recently been completed to a depth of 299.6m. This hole has also successfully intersected sulphide mineralisation in two zones at 232m and 263m down hole. The 25cm zone at 232m (Figure 1) is particularly encouraging and shows heavily disseminated sulphides of pyrrhotite and chalcopyrite and is visually reminiscent of much of the host sulphides and textures at the Maibele North Resource.

BML have always considered the Mak1 target as highly promising, with a number of strong VTEM conductors appearing to surround an ultramafic intrusion (Figure 5). Follow up SQUID EM surveys over a portion of the VTEM anomalies uncovered a very strong conductor at approximately 260m depth and guided the design of MKDD001. This drill hole has produced further intersections indicative of a potentially mineralised sulphide system and has once again demonstrated the great effectiveness of the SQUID EM technique in locating sulphides in the MSZ.

Kudu 1 Target

The third hole in the program is underway at Kudu 1 and is currently at 24m depth. The target is a very strong SQUID EM conductor associated with an ultramafic rocktypes and a strong magnetic response reminiscent of pyrrhotite at approximately 390m depth.

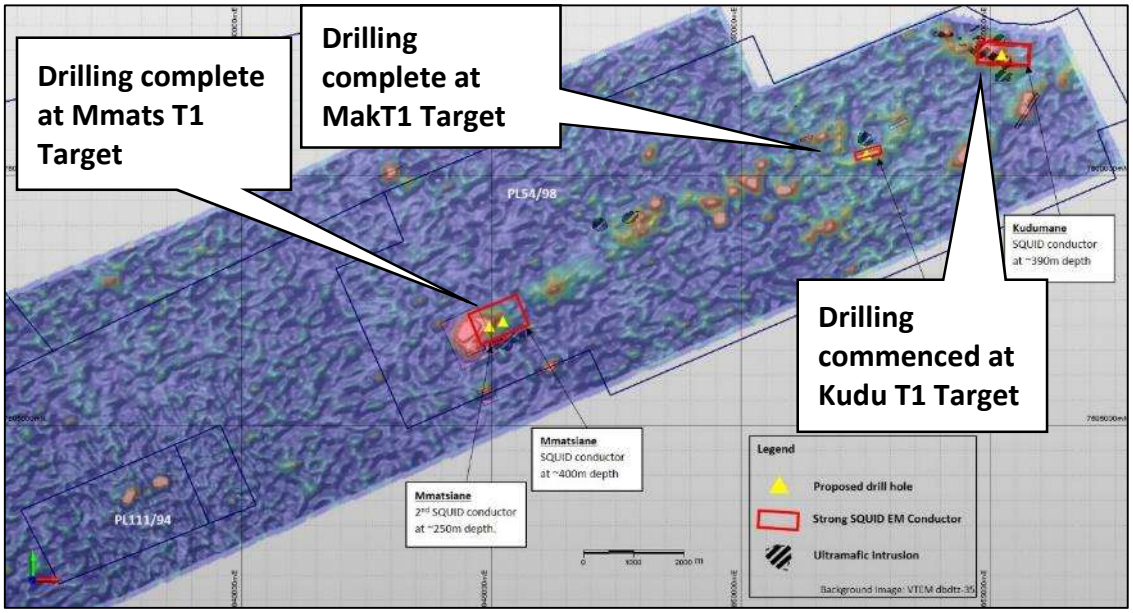


Figure 3: Regional plan view of PL54/98 showing the SQUID EM conductors (Red Rectangles) to be targeted by diamond drilling (Holes indicated by yellow triangles).

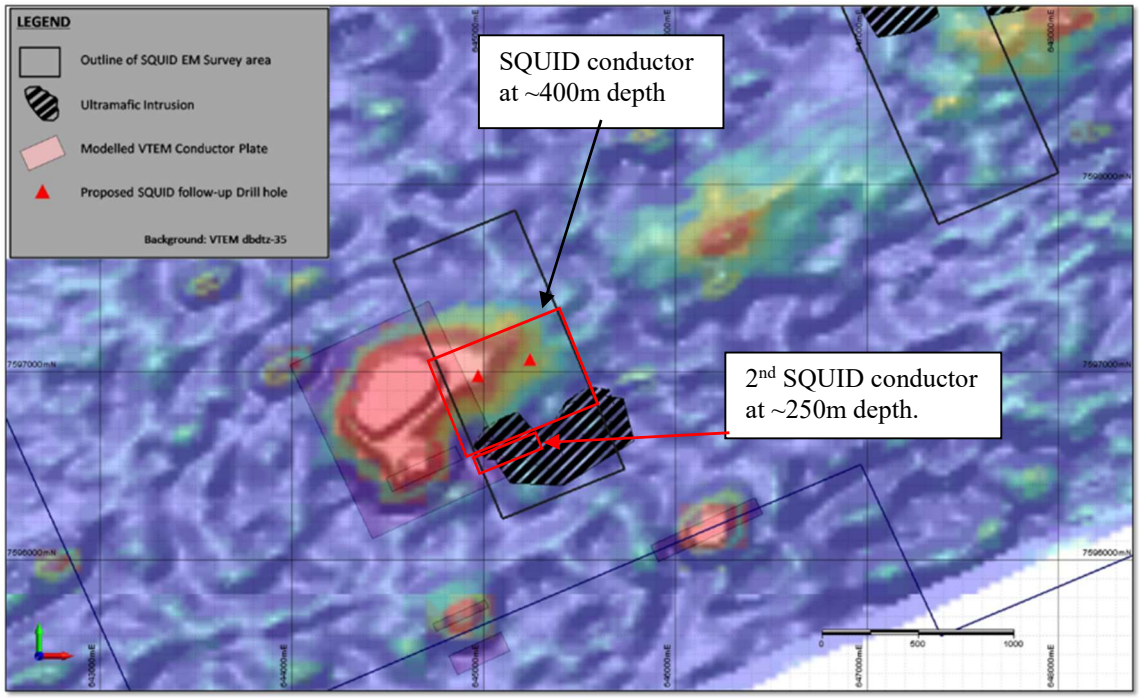


Figure 4 Mmats T1 Prospect: Location of the SQUID Survey (black rectangle) in relation to the VTEM anomalies (red blobs), VTEM conductor plates (faint pink rectangles) and mapped ultramafic bodies (black hashed shape). The red triangles indicate the position of the proposed drill holes

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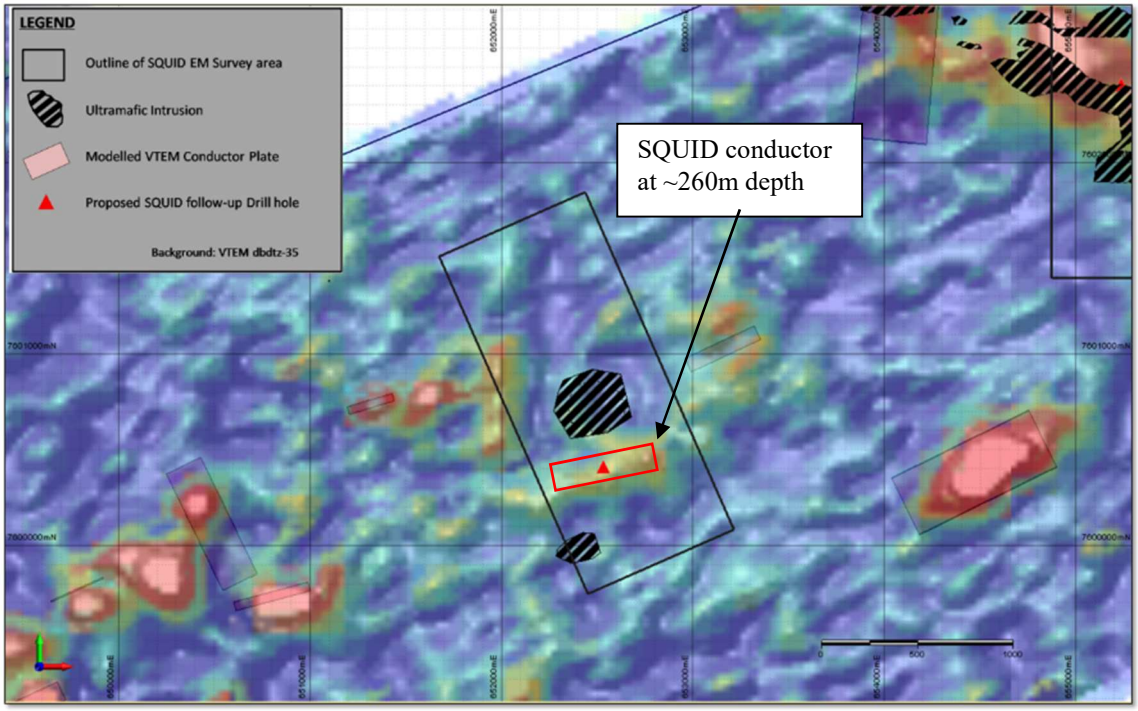
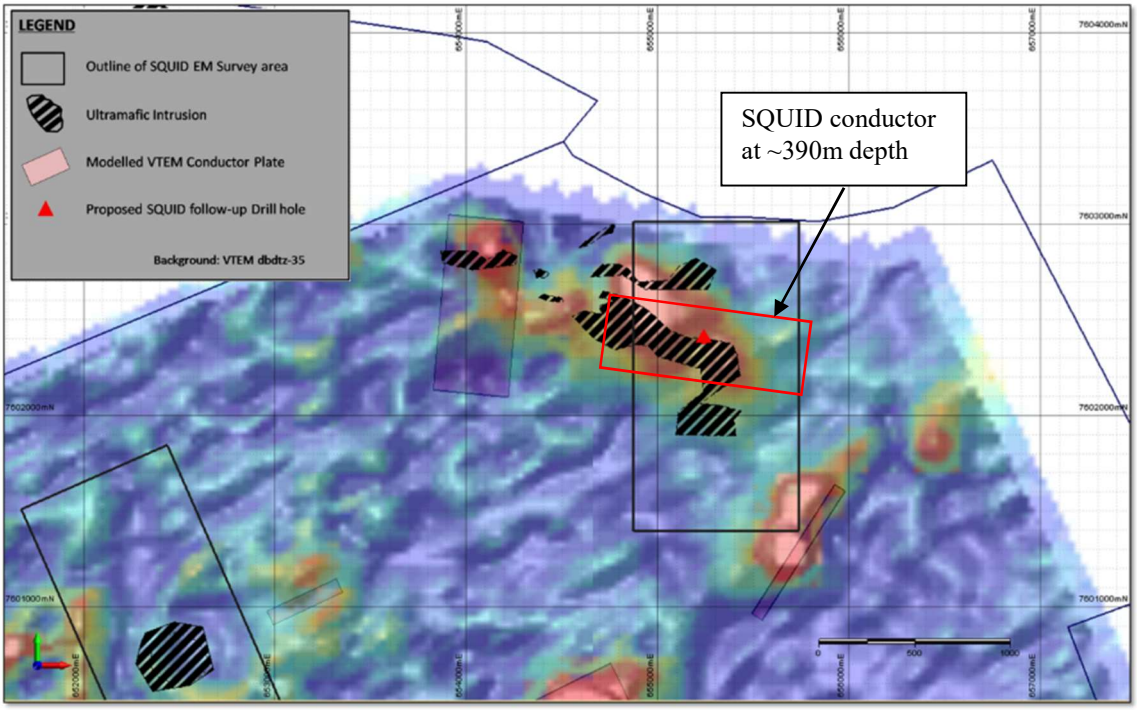


Figure 5: Mak T1 Prospect: Location of the SQUID Survey (black rectangle) in relation to the VTEM anomalies (red blobs), VTEM conductor plates (faint pink rectangles) and mapped ultramafic bodies (black hashed shape). The red triangle marks the position of MKDD001.



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Figure 6: Kudu T1 Prospect: Location of the SQUID Survey (black rectangle) in relation to the VTEM anomalies (red blobs), VTEM conductor plates (faint pink rectangles) and mapped ultramafic bodies (black hashed shape). The red triangle indicates the position of the recently commenced drill hole. Note the size of the conductive anomalies coincident with the ultramafic intrusions and that the SQUID survey only covered a portion of the prospective terrain.

The mineralised cored intersections will be assayed at an independent laboratory to determine if the sulphides are carrying nickel, copper, cobalt and PGEs .

The market will be kept informed as results from the program are received.

Patrick Volpe
Chairman

The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled by BML staff on site and provided to Mr Steve Groves who is a Member of The Australasian Institute of Geoscientists. Mr Groves is a consulting geologist to BML and has previously been employed as the Exploration Manager at BML. Mr Groves 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 as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Groves consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

APPENDIX 1 – JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

CRITERIA	JORC Code Explanation	Commentary
Sampling techniques	- *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*	• **Drill core is arranged neatly in 1m core trays for HQ (typically weathered rocks above the limit of oxidation) and 1.5m core trays for NQ core from competent rock. Core is marked at every metre along an orientation line.** • **Samples for independent laboratory analysis are collected at appropriate geological and or mineralization boundaries and are generally 1m or less in width.** • **Spot analysis using an XRF analyser has been undertaken at every 10cm interval across the sulphide mineralised intervals at the BML site office in Tshokwe using a portable XRF analyzer (INNOV-X Delta Premium). Industry standards and blanks are used to monitor the calibration of the instrument.**

CRITERIA	JORC Code Explanation	Commentary
	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.	• **This information is used as a guide to the potential Ni tenor of the sulphides and primarily used to determine appropriate sampling intervals for independent Laboratory analysis**
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).*	• **The holes referred to in this release have been drilled by Reverse Circulation or HQ Diamond core through the weathered rock and NQ Diamond Core through unweathered rock and the mineralized zones.** • **All core drilling is standard tube method.** • **All competent core from the current program is oriented using a spear orientation method.** • **Historic holes have been either NQ core, HQ core or Reverse Circulation percussion methods.**
Drill sample recovery	- *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.* - *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.*	• **The core is measured after every run, and the results are compared to the actual run to calculate core recoveries. Core is handled with care to avoid breakage and crumbling. Core is washed and laid onto holding core trays.** • **HQ core is used on friable ground, rotation speeds and water pressure are monitored to avoid destroying the core. A soft rubber mallet is used to drive out core from the barrel.** • **No significant core loss or recovery issues have been recorded in the current drill program.**
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.* - *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* - *The total length and percentage of the relevant intersections logged.*	• **All core will be photographed with beginning, ending and intermediate intervals clearly marked on each box. Core will be photographed prior to sampling or any other procedures that may disturb the initial orientation of the core.** • **The core will be logged in appropriate detail including identification of lithology, structure, alteration, mineralization and other notable characteristics.**

CRITERIA	JORC Code Explanation	Commentary
		• **Percentages of core recovery and Rock Quality Descriptor (RQD) will be included in the log. The core recovery will be calculated based on each drill run (interval). The RQD calculation will be based on the total length of core sections recovered that are greater than 2.0 times the core diameter for each drill run or interval.**
Sub-sampling techniques and sample preparation	- *If core, whether cut or sawn and whether quarter, half or all core 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 maximise 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.* - *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• **Core is cut along the marked orientation line, half core is sampled for metallurgical test work. The remaining half core is cut for quarter core for lab assaying and storage.** • **No field duplicates were taken.** • **For lab dispatch, blanks and certified reference material are inserted at every 5th sample for QAQC.**
Quality of assay data and laboratory tests	- *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* - *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.*	**SGS South Africa** • **For all samples the analytical techniques used a four acid digest multi element suite with ICP/OES or ICP/MS finish (25 gram or 50 gram FA/AAS for precious metals). The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica based samples. The method approaches total dissolution of most minerals. Total sulphur is assayed by combustion furnace.** • **Platinum group elements and gold to be assayed by Fire Assay following either Pb or NiS collection followed by ICP-MS finish.** **BCL Laboratory - Selebi Phikwe** • **All samples to be assayed for Ni and Cu via Aqua Regia and Atomic Absorption Finish to a detection limit of 0.01%**

CRITERIA	JORC Code Explanation	Commentary
		• The laboratory at the Selebi Phiwke Ni-Cu mine is currently un-certified. **BCL Laboratory – Tati Ni** • All samples to be assayed for Ni and Cu via XRF (X-ray Fluorescence) to a detection limit of 0.01% (Method PAS 10) • The BCL Limited laboratory at Tati-Ni is SANAS accredited to the ISO 17025 international standard.
Verification of sampling and assaying	- *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.*	• **The data were examined by the senior personnel on site.** • **The primary data were audited and verified and then stored in a SQL relational data base.** • **No data have been adjusted.**
Location of data points	- *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 data were recorded in longitude/latitude WGS84.** • **The terrain is largely flat.** • **Down hole surveys are carried out on all holes at 4m intervals using a Flexit survey tool.** • **N/A – All historic drillholes have been surveyed using DGPS with an accuracy of <1m.**
Data spacing and distribution	- *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 current drilling is designed to test geophysical targets (EM conductors) for the presence of sulphide mineralization in new regional target areas** • **The drill hole spacing is deemed appropriate for achieving the objectives of the program**
Orientation of data in relation to geological structure	- *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*	• **The program involves single vertical drill holes into the modeled flat-lying conductors** •

CRITERIA	JORC Code Explanation	Commentary
	material.	
Sample security	*- The measures taken to ensure sample security.*	• **Samples were taken and transported by BCL personnel to the BCL site office Prior to XRF analyses the samples are locked in the BCL office.**
Audits or reviews	*- The results of any audits or reviews of sampling techniques and data.*	• **The data were examined by the independent consultant Mr Steve Groves of Perth in Australia and considered appropriate.**

Section 2 Reporting of Exploration Results

CRITERIA	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	*- 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.*	• **The results reported in this announcement are located in PL54/98 which is a granted Exploration Licence held by African Metals Limited, a 100% owned subsidiary of Botswana Metals Limited.** • **PL54/98 is subject to a Joint Venture agreement with BCL Limited.** • **PL54/98 was recently extended for a further two years and is in good standing.**
Exploration done by other parties	*- Acknowledgment and appraisal of exploration by other parties.*	• **Interpretations and conclusions in this announcement refer in part to results generated by historic exploration work conducted by Roan Selection Trust, Falconbridge, Cardia Mining and Botswana Metals.** • **Botswana Metals considers all previous exploration work to have been undertaken to an appropriate professional standard.**

CRITERIA	JORC Code Explanation	Commentary
Geology	- *Deposit type, geological setting and style of mineralisation.*	• **The Takane project area is hosted within the Magogaphate Shear Zone - a major geological structural feature, generally considered to mark the boundary between the Archaean aged (>2.5 billion year old) Zimbabwean Craton and the Limpopo Belt or Limpopo Mobile Zone (LMZ). . The nickel-copper deposits of Selebi Phikwe lie within the northern part of the Central Zone of the Limpopo Mobile Belt, whilst the nickel copper deposits of Phoenix, Selkirk and Tekwane lie in the Zimbabwean Craton. The Central Zone of the LMZ comprises variably deformed banded gneisses and granitic gneisses, infolded amphibolites and ultramafic intrusions that that have the potential to host Ni-Cu sulphide mineralization.**
Drill hole Information	- *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.*	• **A table detailing collar coordinates and relevant directional information of the current drill program is included in the release.**

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Data aggregation methods	- *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.*	• **N/A**
Relationship between mineralisation widths and intercept lengths	- *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').*	• **The precise geometry of the mineralization with respect to the drill hole angle is not known and thus, all drill hole results are reported as down hole length.** • **The drill holes in the current program are vertical reconnaissance holes based on the modelled EM conductor targets. The orientation of the mineralization is unknown and true width is unknown.** • **Geotechnical logging is under way to address the geometry of mineralisation.**
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.*	• **Plan view and/or cross section maps of the reported drill holes are included in this announcement.**
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.*	• **N/A**

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Other substantive exploration data	- *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.*	• **There is no other material exploration data that have not been previously reported.**
Further work	- *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* - *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• **The Takane Project is at a regional greenfields exploration phase and the objective of the current drill program is to establish the likelihood of Ni-sulphide mineralization to occur on the tenement.** • **Should this concept be proven, then work consisting of follow up geophysics and further drill testing will ensue in an effort to establish Ni-sulphide resources in the area**

APPENDIX 2 – Collar Details Drill Program

Table 1: Drill hole details for the program

Prospect	East	North	Dip	Depth	Comment
Kudu1	655239E	7602406N	-90	425m	Very large conductor with EM response reminiscent of pyrrhotite
MKDD001	652533E	7600410N	-90	300m	Very Strong conductor
MTDD003	644976E	7596981N	-90	425m	Very large, strong conductor
Mmats 1	645245E	7597068N	-90	450m	Same conductor as above – Not drilled at this stage