



11 February 2021

**ASX CODE: MTB**

## **Kihabe-Nxuu Polymetallic Zn/Pb/Ag/Ge/V Project**

### **Analysis of Milled Size Fractions from Vertical Milling**

On 10 February 2021 the Company released to the market information regarding test work conducted to investigate whether or not there was any concentration of mineralisation within certain vertically milled size fractions.

Subsequent queries raised indicate there to be some misunderstanding of the results of the test work.

#### **Primary Purpose of Vertical Milling Test Work**

The primary purpose of the Vertical Milling test work conducted by Energy Densification Systems (EDS) South Africa was to determine whether or not Vertical Milling could be applied effectively to the Nxuu Deposit ore. The test work showed that Vertical Milling produced very encouraging results to the extent that the required power consumption can be reduced by as much as 40%, compared to the amount of power required for conventional Ball/SAG/Rod mills.

#### **Ancillary Test Work**

Further test work was then conducted to determine whether the Vertical Milling process caused excessive concentrations of mineralisation within certain size fractions. Such concentrations would potentially require additional separation processes, thereby making further processing more complex.

Assaying of the vertically milled size fractions has confirmed that Vertical Milling does not produce excessive concentrations of mineralisation within particular size fractions. This confirms that the application of a standard separation process from the overall milled product for the recovery of metal or concentrate is practicable and less complex compared to dealing with concentrations of mineralisation within certain size fractions.

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## Forward Looking Statement

This report contains forward looking statements in respect of the projects being reported on by the Company. Forward looking statements are based on beliefs, opinions, assessments and estimates based on facts and information available to management and/or professional consultants at the time they are formed or made and are, in the opinion of management and/or consultants, applied as reasonably and responsibly as possible as at the time that they are applied.

Any statements in respect of Ore Reserves, Mineral Resources and zones of mineralisation may also be deemed to be forward looking statements in that they contain estimates that the Company believes have been based on reasonable assumptions with respect to the mineralisation that has been found thus far. Exploration targets are conceptual in nature and are formed from projection of the known resource dimensions along strike. The quantity and grade of an exploration target is insufficient to define a Mineral Resource. Forward looking statements are not statements of historical fact, they are based on reasonable projections and calculations, the ultimate results or outcomes of which may differ materially from those described or incorporated in the forward looking statements. Such differences or changes in circumstances to those described or incorporated in the forward looking statements may arise as a consequence of the variety of risks, uncertainties and other factors relative to the exploration and mining industry and the particular properties in which the Company has an interest.

Such risks, uncertainties and other factors could include but would not necessarily be limited to fluctuations in metals and minerals prices, fluctuations in rates of exchange, changes in government policy and political instability in the countries in which the Company operates.

## Other important Information

**Purpose of document:** This document has been prepared by Mount Burgess Mining NL (MTB). It is intended only for the purpose of providing information on MTB, its project and its proposed operations. This document is neither of an investment advice, a prospectus nor a product disclosure statement. It does not represent an investment disclosure document. It does not purport to contain all the information that a prospective investor may require to make an evaluated investment decision. MTB does not purport to give financial or investment advice.

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**Forward looking statements:** This document contains forward looking statements which should be reviewed and considered as part of the overall disclosure relative to this report.

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## Competent Persons' Statements:

The information in this report that relates to mineralogical and metallurgical test work results conducted on samples from the Nxuu Deposit fairly represents information and supporting documentation approved for release by Mr Chris Campbell-Hicks, Metallurgist, FAusIMM (CP Metallurgy), MMICA, Non-Executive Director of the Company, who reviewed the content of the announcement. Mr Campbell-Hicks has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code and has consented to the inclusion in respect of the matters based on the information in the form and context in which it appears.

Mr Campbell-Hicks has for a number of years whilst working with Coffey Mining and other consultancies and companies made contributions to numerous Scoping Studies, Pre-feasibility Studies and Feasibility Studies under the 2004 JORC Code, the 2012 JORC Code and the Canadian National Instrument (NI 43-101). As such he qualifies as a Competent Person for reporting on matters pertaining to metallurgy, process engineering and interpretation of test work results and data for the establishment of Design Criteria for such studies.

The following extract from the JORC Code 2012 Table 1 is provided for compliance with the Code requirements for the reporting of drilling results.

**Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections).**

Criteria	JORC code explanation	Commentary
Sampling techniques	<p>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.</p>	<p><b>Mount Burgess Mining Diamond Core Holes</b></p> <p>HQ Diamond Core was marked and collected in sample trays, visually logged and cut in half. Samples were collected as nominal 1m intervals but based on visible geology with minimum samples of 0.3m and maximum samples of 1.3m. Half of each core was retained on site in core trays and the other half was double bagged and sent to Intertek Genalysis Randburg, South Africa where they were crushed. A portion of each intersection sample was then pulverised to p80 75um and sent to Intertek Genalysis for assaying via ICPMS/OES for Ag/Co/Cu/Ga/Ge/In/Pb/V/Zn.</p> <p><b>Mount Burgess Mining Reverse Circulation Holes</b></p> <p>Individual meters of RC drill chips were bagged from the cyclone. These were then riffle split for storage in smaller bags, with selected drill chips being stored in drill chip trays. A trowel was used to select drill chip samples from sample bags to be packaged and sent to Intertek Genalysis, Randburg, South Africa where they were crushed. A portion of each intersection’s sample was then pulverised to P80 75um and sent to Intertek Genalysis, Maddington, WA, for assaying via ICP/OES for Ag/Co/Cu/Pb/Zn.</p> <p><b>Mount Burgess Mining Diamond Core Samples submitted for Metallurgical Test Work</b></p> <p>The remainder of the crushed samples were then sent from Intertek Genalysis Randburg to Intertek Genalysis Maddington, Western Australia where they were then collected by the Company for storage. Samples from various intersections from six drill holes NXDD030, NXDD033, NXDD037, NXDD039, NXDD040 and NXDD043, as shown in Figure 1 of the Company’s announcement of 28 May 2019 to ASX, were selected by the Company for submission for sensor sorter metallurgical test work. These samples were chosen to determine if Sensor Sorter X-ray Test Work developed by STEINERT could be used to pre-concentrate zinc, lead, silver, germanium and vanadium pentoxide mineralization prior to milling and flotation. Results of the +4mm STEINERT Metallurgical Test Work were reported on 20 August 2019.</p>
	<p>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).</p>	<p><b>Mount Burgess Mining Diamond Core Holes</b></p> <p>HQ diameter triple tube was used for diamond core drilling. As all holes drilled into the Nxuu deposit were vertical holes the diamond core was not orientated.</p> <p><b>Mount Burgess Mining RC Hole</b></p> <p>One vertical RC hole was drilled into the Nxuu Deposit mineralised zone.</p>
Drill sample recovery	<p>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</p>	<p><b>Mount Burgess Mining Diamond Core and RC Holes</b></p> <p>Sample recoveries were in general high and no unusual measures were taken to maximise sample recovery other than the use of triple tube core for diamond core drilling. Mount Burgess believes there is no evidence of sample bias due to preferential loss/gain of fine/coarse material.</p>
Logging	<p>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource</p>	<p><b>Mount Burgess Mining Diamond Core Holes and RC Hole</b></p> <p>Holes were logged in the field by qualified Geologists on the Company’s log sheet template and of sufficient detail</p>

	<p>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.</p>	<p>to support future mineral resource estimation: Qualitative observations covered Lithology, grain size, colour, alteration, mineralisation, structure. Quantitative logging included vein percent. SG calculations at ~5m intervals were taken in the DD holes. All holes were logged for the entire length of hole. Logs are entered into MTBs GIS database managed by MTB in Perth.</p>
<p>Sub-sampling techniques and sample preparation</p>	<p>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</p>	<p><b>Mount Burgess Mining Diamond Holes and RC Hole</b></p> <p>HQ Core was sawn in half on site. Half of each core was retained on site in core trays and the other half was double bagged and labelled noting Hole# and interval both within the bag and on the bag. Sample bags were then placed in larger bags of ~40 individual samples and the larger bags also labelled describing the contents.</p> <p>Field duplicates were inserted at regular intervals.</p> <p><b>Core Retained on Site</b></p> <p>In November 2020:</p> <ul style="list-style-type: none"> <li>• ½ HQ diamond core amounting to 688 kg from 14 drill holes from the Nxuu Deposit was sent to EDS South Africa to conduct Vertical Milling Test work. Results from this test work were released to the market on 3 December 2020.</li> <li>• 330 kg of ½ HQ diamond core from 10 drill holes from the Nxuu Deposit was sent to STEINERT Australia to conduct bulk sensor sorter x-ray test work to verify initial test work reported to the market 20 August 2019.</li> <li>• 6-10 kg of ½ HQ diamond core from three Kihabe deposit drill Holes were sent to Naples University to conduct mineralogical test work to determine the host minerals for Vanadium and Germanium.</li> </ul> <p>All samples were assayed for Ag/Co/Cu/Ga/Ge/In/Pb/V/Zn.</p> <p>All RC sample bags were labelled with drill hole number and sample interval and collectively stored in larger bags with similar reference. Drill chip trays were all stored separately.</p> <p>All samples were assayed for Ag/Co/Cu/Pg/Zn.</p>
<p>Quality of assay data and laboratory tests</p>	<p>•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, hand-held XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibration factors applied and their derivation etc. • nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks ) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</p>	<p><b>All Mount Burgess Samples</b></p> <p>All samples, when originally assayed, were sent to Intertek Genalysis Perth, for assaying according to the following standard techniques:</p> <p><b>Diamond Core Samples</b></p> <ol style="list-style-type: none"> <li>(a) Ore grade digest followed by ICP – OES finish for Silver, Lead, Vanadium &amp; Zinc</li> <li>(b) Nitric acid/hydrofluoric acid specific digest for Germanium and Indium</li> <li>(c) Also 4 acid digest for silver, lead, zinc, germanium and gallium followed by AAS</li> </ol> <p><b>RC Samples</b></p> <p>Ore grade digest followed by ICP-OES for Ag/Co/Cu/Pb/Zn</p> <p>All samples submitted for the Steinert Test Work, once separated through the Sensor Sorter X-ray process, were then submitted to NAGROM Laboratories for the upgraded concentrates to then be assayed by mixed acid digest with ICP finish for Vanadium, Lead, Zinc and Silver.</p> <p>Mount Burgess quality control procedures include following standard procedures when sampling, including sampling on geological intervals, and reviews of sampling techniques in the field.</p> <p>The current laboratory procedures applied to the Mount Burgess sample preparation include the use of cleaning lab equip with compressed air between samples, quartz flushes between high grade samples, insertion of crusher duplicate QAQC samples, periodic pulverised sample particle size (QAQC) testing and insertion of laboratory pulp duplicates QAQC samples according to Intertek protocols.</p>

		Intertek inserts QA/QC samples (duplicates, blanks and standards) into the sample series at a rate of approx. 1 in 20. These are tracked and reported on by Mount Burgess for each batch. When issues are noted the laboratory is informed and investigation conducted defining the nature of the discrepancy and whether further check assays are required. The laboratory completes its own QA/QC procedures and these are also tracked and reported on by Mount Burgess. Acceptable overall levels of analytical precision and accuracy are evident from analyses of the routine QAQC data
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.	<b>All Mount Burgess Samples</b>  Assay results for samples were received electronically from Intertek-Genalysis and uploaded into MTB's database managed by MTB at its Perth Office.  Analytical results for Vanadium (V) from diamond core holes have been converted to V2O5 (Vanadium Pentoxide) by multiplying the Vanadium grades by 1.785.
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.	<b>All Mount Burgess Holes</b>  Drill hole collar locations were recorded at the completion of each hole by hand-held Garmin 62S GPS with horizontal accuracy of approx. 5 metres • Positional data was recorded in projection WGS84 UTM Zone 34S. The accuracy provided by the system employed is sufficient for the nature of the exploratory program. Downhole surveys were not conducted.
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.	<b>All Mount Burgess Holes</b>  Mount Burgess drilling campaigns were undertaken to validate historical drilling as well as to acquire further data for future resource estimation. The data spacing and distribution is currently insufficient to establish the degree of geological and grade continuity appropriate for the estimation of Mineral Resources compliant with the 2012 JORC Code.  Additional drilling is planned to determine the extent of mineralisation and estimate a Mineral Resource compliant with the 2012 JORC Code. Sample compositing was conducted on four Nxuu deposit drill holes, following receipt of assays from Intertek Genalysis, for the purpose of mineralogical and metallurgical test work.
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 material.	<b>All Mount Burgess Holes</b>  Mineralisation was typically intersected at -90 degrees at the Nxuu Deposit and the Company believes that unbiased sampling was achieved.
Sample security	The measures taken to ensure sample security.	<b>All Mount Burgess Holes</b>  Samples were taken by vehicle on the day of collection to MTB's permanent field camp and stored there until transported by MTB personnel to Maun from where they were transported via regular courier service to laboratories in South Africa.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<b>All Mount Burgess Diamond Core Holes</b>  An independent Geologist was engaged to review sampling and logging methods on site at the commencement of the program.  <b>Mount Burgess RC Hole</b>  MTB's Exploration Manager continually reviewed sampling and logging methods on site at the commencement of all programs.

**Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section).**

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 Kihabe-Nxuu Project is located in north-western Botswana, adjacent to the border with Namibia. The Project is made up of one granted prospecting licence - PL 43/2016, which covers an area of 1000 sq km. This licence is 100% owned and operated by Mount Burgess. The title is current at the time of release of this report, with a second renewal for a further two year renewal to 31 December 2022 granted in November 2020.  PL 43/2016 is in an area designated as Communal Grazing Area.
	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 licence is in good standing and no impediments to operating are currently known to exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Geological Survey of Botswana undertook a program of soil geochemical sampling in 1982. As a result of this program, Billiton was invited to undertake exploration and drilling activities in and around the project area. Mount Burgess first took ownership of the project in 2003 and has undertaken exploration activities on a continual basis since then.
Geology	Deposit type, geological setting and style of mineralisation.	The Kihabe-Nxuu Project lies in the NW part of Botswana at the southern margin of the Congo craton. The Gossan Anomaly is centred on an exposed gossan within the project. To the north of the project are granitoids, ironstones, quartzites and mica schists of the Tsodilo Hills Group covered by extensive recent Cainozoic sediments of the Kalahari Group. Below the extensive Kalahari sediments are siliciclastic sediments and igneous rocks of the Karoo Supergroup in fault bounded blocks.
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:  eastings 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	Information material to the understanding of the exploration results reported by Mount Burgess is provided in the text of the public announcements released to the ASX.  No material information has been excluded from the announcements.

Criteria	JORC Code Explanation	Commentary
	Competent Person should clearly explain why this is the case.	
Data aggregation methods	<p>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.</p> <p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p><b>All Mount Burgess Holes</b></p> <p>No data aggregation methods have been used. Vanadium results are reported without a top cut but the Company has used 100 ppm as a bottom cut.</p> <p>Vanadium Pentoxide results are reported by multiplying the Vanadium results by 1.785.</p>
Relationship between mineralisation widths and intercept lengths	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>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').</p>	<p><b>All Mount Burgess Holes</b></p> <p>The geometry of the mineralisation with respect to the drill hole angle is typically at -90 degrees at the Nxuu Deposit which is considered representative from a geological modelling perspective.</p>
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.	<p><b>Billiton Percussion Holes pre-fixed AP</b></p> <p>The Company has no available information for these holes other than collar and survey data and assay results</p> <p><b>All Mount Burgess Holes</b></p> <p>Appropriate maps, sections and mineralised drill intersection details are provided in public announcements released to the ASX. Refer to the Company's website <a href="http://www.mountburgess.com">www.mountburgess.com</a>.</p>
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.	Exploration results reported in Mount Burgess public announcements and this report are comprehensively reported in a balanced manner.
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, ground water, geotechnical and rock	

Criteria	JORC Code Explanation	Commentary
	characteristics, potential deleterious or contaminating substances.	
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	<p>Further works planned at the Project include additional drilling and surface mapping at the Kihabe-Nxuu Zinc/Lead/Silver/Germanium and Vanadium Project.</p> <p>Further metallurgical test work will be conducted to confirm the recovery of metals on site.</p>