mount burgess mining

ASX Code: MTB

21 November 2019

PROPOSED ROUTE FOR PRODUCING VANADIUM PENTOXIDE FROM THE COMPANY'S NXUU DEPOSIT

85% of current world production of Vanadium Pentoxide (V2O5) is produced as a co-product during steel making, extracted from Titaniferous Magnetite deposits, mined mainly in South Africa and China.

V2O5 is also produced as a co-product during steel making in Russia.

Extensive resources of Titaniferous Magnetite occur in Australia, China, Russia and South Africa. Other known magnetite deposits occur in various parts of the world such as Brazil, Chile, Madagascar, Malaysia, Sweden and Finland.

In China and Russia, iron containing around 1.5% Vanadium (V) is produced from Magnetite in blast furnaces at typical 900 - 1300 deg C temperatures and removed as a slag containing between 14% to 22% V2O5.

In South Africa, iron is produced from Magnetite through pre-reduction of the Magnetite with powdered coal in rotary kilns. This is then reduced to a slag containing up to 25% V2O5 in arc furnaces typically at 2000+ deg C.

The slags are then roast leached in kilns or multi-hearth furnaces again at 900 - 1300 deg C, with sodium carbonate, chloride or sulphate, to produce sodium vanadates. The sodium vanadates are then leached in water, after which ammonia and sulphuric acid are added to produce precipitated ammonium vanadates.

The ammonium vanadates are then heated under controlled conditions to remove the ammonia and convert the vanadates to various oxide vanadates.

The oxide vanadates are then decomposed in furnaces to produce a V2O5 liquid. The V2O5 liquid is then cast onto a chilling wheel to produce V2O5 powder.

PRODUCTION OF VANADUIM PENTOXIDE FROM THE COMPANY'S NXUU DEPOSIT OXIDE VANADATE DESCLOIZITE

Through mineralogical test work conducted by ALS Laboratories, it has been confirmed that the Vanadium at the Company's Nxuu Deposit in Botswana, is hosted in the oxide vanadate DESCLOIZITE. In DESCLOIZITE the equivalent mass of Vanadium Pentoxide (V205) is 1.785 times the mass of Vanadium.

Through metallurgical test work conducted by ALS laboratories, it has been confirmed that 80.40% of Vanadium can be recovered from DESCLOIZITE through the simple process of flotation using a Hydroxamate collector for recovery.

Potentially, as this vanadium salt/mineral is in an oxidised state, it should be suitable for acid dissolution as follows:

1. The associated (oxidised) lead and zinc carbonates can be dissolved in Methane Sulphonic Acid (MSA), along with any calcium, copper, iron in manganese should they be present, with the Vanadium remaining in the undissolved residue for separate dissolution in sulphuric acid.
2. The dissolved vanadium can then be extracted into an organic phase with an appropriate organic solvent.

The above processes need to be confirmed through a test work program.

Potentially the vanadium in the organic phase should then be able to be stripped with either acid or soda ash solution and precipitated. The Vanadium precipitate can then be filtered and dried. The dried precipitate is then, if necessary, calcined in a small furnace to produce a saleable Vanadium product.

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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Competent Person's Statement:

Mr Chris Campbell-Hicks, Metallurgist, FAusIMM (CP Metallurgy), MMICA, Non-Executive Director of the Company, who reviewed the content of the announcement, 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.

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