



## ASX ANNOUNCEMENT

20<sup>th</sup> March 2017

### PLANT CAPEX TO DELIVER SUBSTANTIAL COST SAVINGS AT NAMEKARA

- **Installation of Intermediate Storage Facility (ISF) will deliver annualised cost savings of approximately A\$1.3 million**
- **Funds now drawn from recent financing facility from LB Investments and applied to plant improvements and working capital expenses at project**

Black Mountain Resources Limited (**ASX: BMZ**) (**Black Mountain** or the **Company**) is pleased to announce that it has commenced plant improvements at the Namekara Vermiculite Mine in Eastern Uganda. This follows the Company securing a US\$750,000 financing facility from LB Investments which has now been fully drawn down, with funds now being deployed on capital expenditure and working capital at the Namekara project.

Black Mountain is in the process of installing an Intermediate Storage Facility (ISF) that will be placed between the Wet Plant and the Dry Plant (see Figure 1). The installation is expected to cost A\$240,000 and will take three months to complete. This will deliver annualised operating cost savings of A\$1.3 million and payback is estimated within two months.

As well, additional operating cost savings and efficiencies will be achieved from the separation of the Wet and the Dry Plant which is expected to materially improve the overall processing plant's Effective Operating Time (EOT). The key benefit of this EOT improvement is increased production capacity and availability.

#### **MANAGEMENT COMMENTARY**

**Black Mountain's Chairman and Chief Executive Officer Julian Ford commented:** *"This capex delivers almost immediate benefits and improvements to the operations and operating cost base at the Namekara Vermiculite Mine. This means we can improve production levels and deliver greater output to our growing customer base."*

*"The operating cost savings that we expect to achieve from this capex is helping make Namekara a viable and competitive vermiculite supplier to the global market. This is our goal and we are delivering on that. These process improvements are just the start in the continuous process improvement we are rolling out at Namekara."*

Further details on the ISF, background on the Namekara Vermiculite Mine, and Mine Gate margin comparisons are provided below.

Black Mountain also expects to shortly provide an update to shareholders on positive sales progress and further mine development, exploration and operational progress.

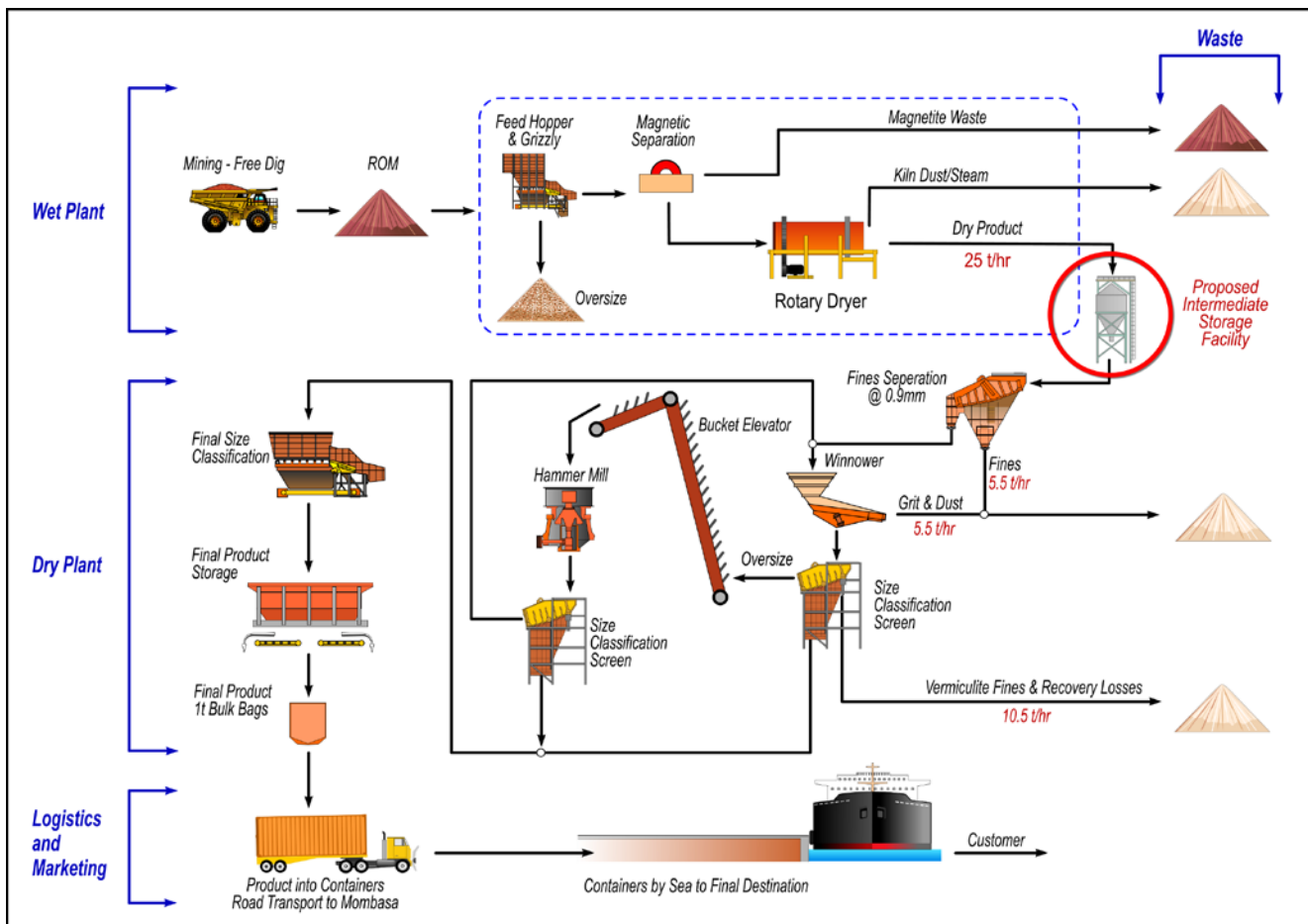


Figure 1: Namekara Vermiculite - Schematic of Process Flow Diagram

### **INTERMEDIATE STORAGE FACILITY (ISF)**

The ISF will consist of a storage silo of approximately 300t with associated tripper conveyer, feed conveyer and recovery feeder equipment. The ISF will be placed between the current drying kiln and the primary double deck sizing vibratory screens as shown in Figure 1. The ISF will allow for a material improvement in the fuel efficiency of the drying kiln, which is currently operating at less than 50% of its design capacity of 50 to 60 tonne per hour. Following these flow sheet changes, the drying kiln will be run on a single shift only at 50 to 60 t/hr and will fill the ISF silo over a 12-hour shift. Continuous feed to the dry plant will be done on a 24/7 basis at 25t/hr.

The key benefit of these modifications will be a 50% to 60% improvement in fuel efficiency which is forecast to achieve a fuel **savings of ~A\$1.3 million per annum**. In addition to these energy savings, the Company has identified a host of minor modifications that it plans to make to the kiln, which will further improve energy efficiency. A bench marking exercise has shown that the Namekara drying costs will still be 3 times the industry benchmark.

Additional savings, which are also expected but have not been quantified, will be delivered from a separation of the Wet and the Dry Plant which is expected to materially improve the overall process plant Effective Operating Time ("EOT"). The prime benefit of this EOT improvement will be an increased in the process plant production capacity. A secondary benefit will be the ability to feed the Dry Plant with a steady feed, and so improve the current air separation winnowing efficiency of the dry plant. The effective air separation winnowing recovery efficiency is currently in the range of 50% to 60%. These additional benefits have not been factored into the ~A\$1.3 million annual savings predicted from this improved fuel efficiency.

### **ABOUT THE NAMEKARA VERMICULITE PROCESS PLANT**

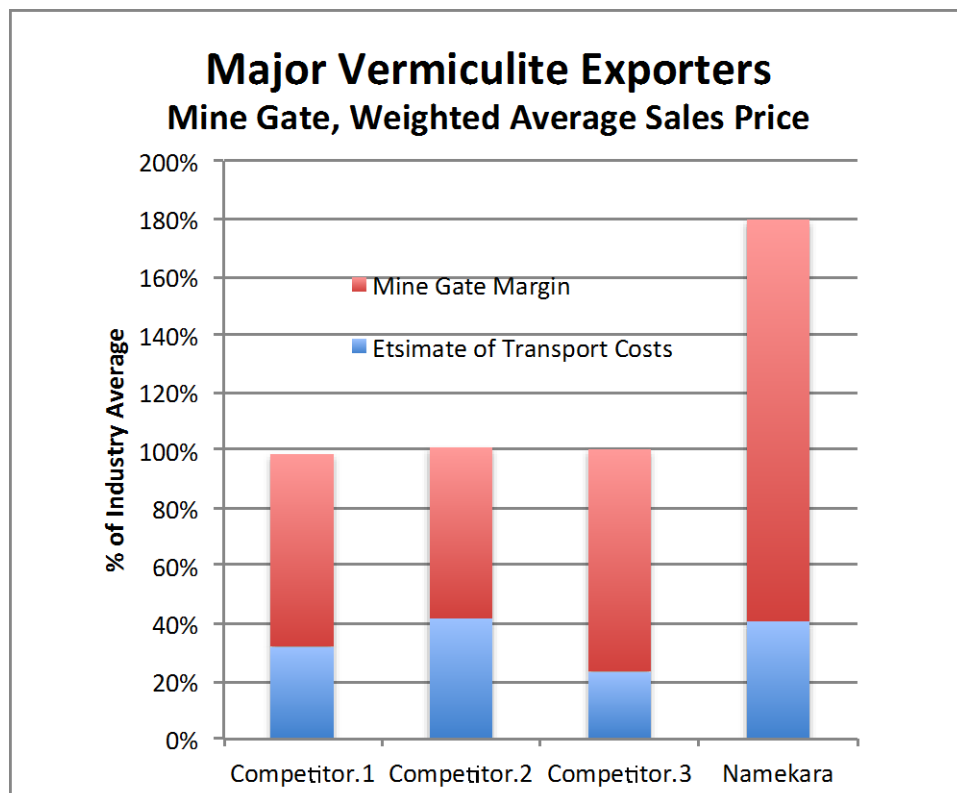
The Namekara Vermiculite Process Plant (NVPP) was built in 2011/2012 by Gulf Industrials by an in-house team, based on the design principles of the Palabora Vermiculite Plant, then owned by Rio Tinto and Anglo American.

The plant was never fully commissioned and operated intermittently before operations were suspended following financial difficulties of the then owner, Gulf Minerals Limited. The ad hoc nature of the NVPP design provides a number of achievable opportunities for process plant efficiency and production throughput improvements.

Since BMZ took over operations at Namekara in mid 2016, a number of improvements have been made and considerable test work carried out. The drying Kiln test work on which these process improvement parameters are based was completed over a period of 2 months in July and August 2016.

#### **PRODUCT AND PROCESS COST IMPROVEMENT OPPORTUNITIES**

Due to the unique geology of the Namekara mineralisation, Namekara enjoys significantly above average vermiculite flake size. This above average flake size when added to the favourable exfoliation and colour characteristics allows the project to attract a significantly improved weighted average price for its product. This is best illustrated by the average gross sales net price at the mine gate as shown in Figure 2 below.



**Figure 2: Gross Net Sales Price at Mine**

The four vermiculite mines shown in Figure 2 currently account for approximately 85% of the world's vermiculite seaborne trade. In spite of Namekara's premium product pricing, the operation is currently only marginally profitable due to its high operating cost base. The high cost base is a function of the process plant design and operations and is not due to fundamental factors such as logistics, or physical characteristics such as ore-body or metallurgy. The installation of the ISF and EOT mentioned above, is just the start of a number of continuous improvement planned enhancements that BMZ plans to make at Namekara.

-ENDS-

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