

## **SIMPLIFIED FLOWSHEET DELIVERS SIGNIFICANT CAPEX REDUCTION FOR PHOSPHATE FERTILIZER PLANT**

**Minbos Resources Limited (ASX:MNB) (“Minbos” or “the Company”)** is pleased to update the market on plant optimisation and flowsheet work completed on its Phosphate Fertilizer Plant, which has resulted in a material reduction in the forecast Capital Expenditure (CAPEX).

As announced in late December 2022, field trial results confirmed that the Company’s phosphate rock is suitable as a direct application fertilizer product in most of Angola’s major growing region<sup>1</sup>.

The Company responded with a review of its production profile which has resulted in a simplified flowsheet to produce Beneficiated Phosphate Rock (BPR) with the core plant equipment consisting of the crusher, dryer and bagging plant and identified capital cost savings of approximately \$US10 million.

### **SUMMARY OF COST SAVINGS BY MAJOR ITEMS**

Civil & Earthworks	\$US 1.2 M
Steel, Pipe & Platework	\$US 4.5 M
Electrical & Instrumentation Control	\$US 0.6 M
Supply Package	\$US 2.4 M
Other & Contingency	\$US 1.3 M
<b>Total</b>	<b>\$US 10.0 M</b>

Importantly, field trials demonstrated that BPR provided 90% of the yield increase vs. Mono-Ammonium Phosphate (MAP) fertilizer with much higher yields delivered by BPR fertilizer vs. control (unfertilized) crops. The BPR fertilizer has been designed not only to maximise agronomic potential, but also to meet the market at an attractive price performance point for commercial and Grow to Eat farmers.

The simplified flowsheet is also expected to deliver lower Operating Expenses (OPEX) due to lower energy, maintenance, and fixed cost requirements. The Process Flow Diagram for the simplified plant is shown below in Figure 1.

Under the revised plant optimisation and flowsheet, phosphate rock from the Cácata mine will be unloaded onto the phosphate stockpile where it is transferred to the crusher via a front-end loader. The phosphate rock crusher will be an open circuit cage mill, which will reduce the crush the phosphate rock to <1.4 mm. The material is conveyed from the crusher to a surge bin before entering the dryer where the moisture content is reduced to ~3%.

<sup>1</sup>MNB ASX Announcement- Field and greenhouse trials deliver strong relative performance for Cabinda Phosphate Fertilizer (1<sup>st</sup> December 2022)

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The dryer will be operated with a co-current airflow heated by a butane gas or diesel fired combustion chamber and burner. The dried phosphate rock will then be conveyed to the bagging plant where it is weighed and packaged in either 1 tonne bulk bags or 50kg bags depending on market requirements. The plant will be equipped with a fugitive dust collection system.

This system will consist of a network of pickup ducts connected to a baghouse type dust collector known as the fugitive dust baghouse. Dust from the fugitive dust baghouse will be discharged into a recycle screw conveyor where will be recycled into the system.

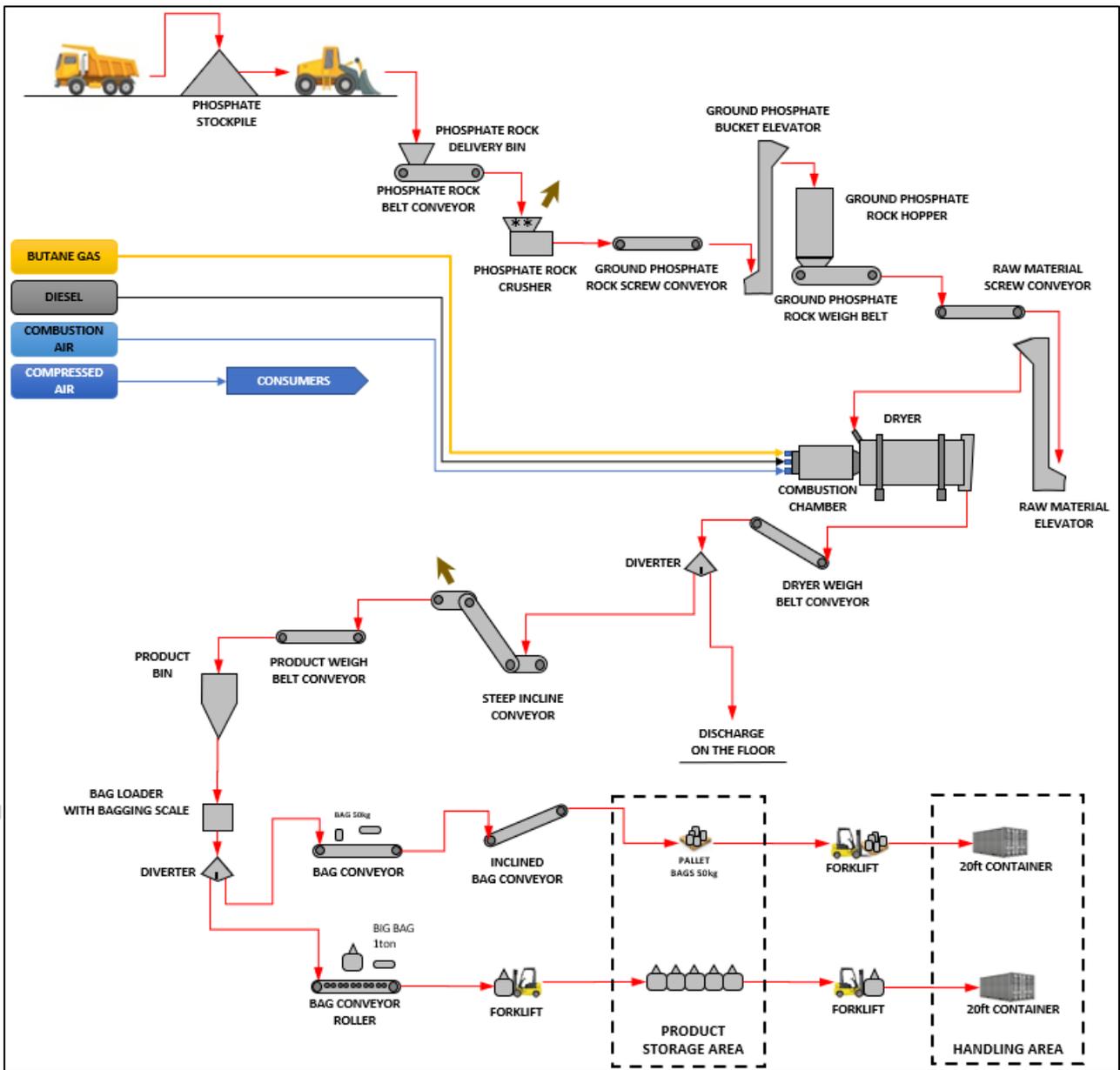


Figure 1: Cabinda Phosphate Fertilizer Plant, simplified process flow diagram.

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The Project life is currently 20 years based on the defined Ore Reserve, with a production schedule outlined in the DFS envisaging a ramp-up to full production of the facility over seven years.<sup>2</sup>

As part of the review, the Company completed feasibility work on a Stage 2 expansion for the plant. Stage 2 is now expected to more than double capacity, with updated CAPEX costs currently being reviewed.

The Company will continue its field trial work with the Instituto de Investigação Agronómica (IIA), with eight new field trial locations planned over the next 4 years, including trials with major sugar plantations SARIS (12,000Ha Republic of Congo), Biocom (30,000Ha Angola) and Grupo Carrinho (the largest food aggregator in Angola).

The IIA is Angola's national agricultural research and technological development institution, maintaining a net of 10 experimental stations, located in the different agro-ecological zones of Angola, with laboratories in the following areas: soil analysis, entomology, phytopathology, plant mineral nutrition, histology, and post-harvest.

**-END-**

This announcement is authorised for release by the Board of Minbos Resources Limited. For further information please contact:

**Investor and Media Enquires**

E: [info@minbos.com](mailto:info@minbos.com)

P: +61 8 6219 7171

**Compliance Statement**

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

**Forward Looking Statements**

Statements contained in this release, particularly those regarding possible or assumed future performance, revenue, costs, dividends, production levels or rates, prices, or potential growth of Minbos Resources Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

<sup>2</sup>MNB ASX Announcement – DFS Delivers Compelling Economics for Cabinda Project (17<sup>th</sup> October 2022)