

## QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 30 SEPTEMBER 2020

**Minbos Resources Limited** (ASX:MNB) ("Minbos" or "the Company") is pleased to provide an update on its activities over the September quarter. The Company's focus during the period was to complete the Cabinda Phosphate Project Scoping Study and advancement of the Definitive Feasibility Study.

### HIGHLIGHTS

- Results from the Cabinda Phosphate Project Scoping Study completed, demonstrating the Project to be technically and financially robust<sup>1</sup>.
- With the initial scoping study complete, the Company is moving quickly to complete a Definitive Feasibility Study (DFS), which will be used to obtain funding with debt and equity financiers.
- Appointment of relevant service providers to progress and complete DFS including:
  - Appointment of FEECO International (FEECO) for the basic engineering package associated with the planned granulation plant major equipment<sup>2</sup>.
  - Appointment of Grupo Simples to conduct an Environmental Impact Study (EIS) and a Waste Management Plan (WMP)<sup>3</sup>.
  - Appointment of HCV Africa to complete two Environmental and Social Impact Assessments (ESIA)<sup>4</sup>.
  - Appointment of DRA Global to provide engineering and design services (post September quarter end)<sup>5</sup>.

### CORPORATE

- Firm commitment of AU\$2.265m capital raise from sophisticated investors at AU\$0.0015 per share via two tranche placement. Tranche 1 for AU\$1.272 successfully settled. Settlement of the second tranche placement (AU\$993,000) will be subject to shareholder approval at the Company's Annual General Meeting. Funds raised will be used to further the DFS activity and for working capital requirements.
- Annual General Meeting scheduled for 3 November 2020.

<sup>1</sup> ASX Announcement - Cabinda Phosphate Project Scoping Study

<https://www.investi.com.au/api/announcements/mnb/2252c2e1-51d.pdf>

<sup>2</sup> ASX Announcement - DFS – FEECO Granulation Plant Engineering Underway

<https://www.investi.com.au/api/announcements/mnb/ba1484b9-365.pdf>

<sup>3</sup> ASX Announcement - Appointment of Grupo Simples for Cabinda Phosphate Project EIS

<https://www.investi.com.au/api/announcements/mnb/f7f577f8-5d4.pdf>

<sup>4</sup> HCV Africa Appointed to Complete ESIA For The Cabinda Phosphate Project

<https://www.investi.com.au/api/announcements/mnb/d5043b45-f71.pdf>

<sup>5</sup> Appointment of DRA Global to Progress Cabinda DFS

<https://www.investi.com.au/api/announcements/mnb/e2544171-1e0.pdf>

## SCOPING STUDY

- Cabinda Phosphate Project Scoping Study completed, demonstrating the Project to be technically and financially robust. Base case **after-tax NPV of US\$159 million and an after-tax IRR of 40%.**
- Agronomic trials of the Cabinda Phosphate Rock, enhanced by granulation with MAP (monoammonium phosphate), demonstrate agronomic effectiveness for soils, crops, and climates typical in Angolan and Middle Africa.
- The Mineral Resource for the Cácata Phosphate Rock deposit stands at 27Mt at 17.7% P<sub>2</sub>O<sub>5</sub> including, 15.2Mt at 24.5% P<sub>2</sub>O<sub>5</sub> in Measured & Indicated categories.
- An open-pit mineral production target of **6.5Mt @ 30.2% P<sub>2</sub>O<sub>5</sub>** has been selected from pit optimisation studies utilising only Measured and Indicated Mineral Resources.
- The project is forecast to have low capital costs due to the high-grade of the mine production target which can be utilised without beneficiation in the granulation plant.
- MAP makes up ~50% of the operating costs but also sets the price for the Enhanced Phosphate Rock, providing a natural hedge against operating costs.
- Results will be used to initiate discussions with debt and equity financiers for the construction of the project and frame the scope of work for a DFS.

The Scoping Study demonstrates the Cabinda Project is expected to generate strong cash returns from a relatively small US\$22-28M capital outlay. The Cabinda Project will directly impact the agriculture sector, Angolan national food security, government revenues and the local population for many years to come, all the while promoting Angola as an attractive investment destination and delivering value for Minbos shareholders.

The Scoping Study is based on the Mineral Resource Estimate for the Cácata deposit reported on 5 December 2013, comprising of 27Mt @ 17.7% P<sub>2</sub>O<sub>5</sub> (at a cut-off grade of 5% P<sub>2</sub>O<sub>5</sub>) in the Measured and Indicated categories.

### Financial Outcomes:

The project level Scoping Study provides estimates for 100% of the project. Minbos holds an 85% interest in the project and will carry in-country partner Soul Rock Ltda (Soul Rock) for a 15% interest and recover the investment made on behalf of Soul Rock from project cashflow.

The Cabinda Project is based on an initial name plate capacity of 150,000tpa of enhanced Phosphate Rock but is forecast to commence production at 50,000tpa. The plant is forecast to expand in two stages adding a second and third granulation circuit to reach a name plate capacity of 450,000tpa after 8 years.

Table 1 below reports the financial outcomes of the Scoping Study based on the assumptions identified in table 2.

**TABLE 1: BASE CASE KEY METRICS**

SCOPING STUDY OUTCOMES	LOW		HIGH
EBITDA LoM (US\$M)	\$747	-	\$1,101
Pre-tax NPV (US\$M)	\$191	-	\$308
Pre-tax IRR (US\$M)	41%	-	59%
<b>After-tax NPV (US\$M)</b>	<b>\$159</b>	-	<b>\$260</b>
<b>After-tax IRR (%)</b>	<b>40%</b>	-	<b>58%</b>
Pre-production Capex (US\$M)	\$27.9	-	\$22.4
Average Selling Price (US\$/t)	\$222	-	\$290
Cash Operating Costs LoM <sup>a</sup> (US\$/t)	\$121 <sup>b</sup>	-	\$141
Payback Period (Years)		3	
Life of Mine (Years)		21	
Average Annual Production (ktpa)		368	

<sup>a</sup>Cash operating costs include all mining, transport, granulation, shipping, government royalties, site administration and raw material purchase costs.

<sup>b</sup>The low case contemplates a lower MAP price which decreases revenues, but because MAP comprises approximately 50% of the operating costs it also decreases the operating costs in the low case. The reverse is reflected in the high case.

**TABLE 2: KEY PARAMETERS AND ASSUMPTIONS**

PARAMETER	
<b>GENERAL / ECONOMIC</b>	
Discount Rate	10%
MAP Price range (US\$/t)	357-482
<b>MINING / PRODUCTION</b>	
Average LOM strip ratio	3.76
LOM Phosphate Rock Production Target (Mt)	6.54
Average P <sub>2</sub> O <sub>5</sub> Grade Mined	30.2%
Phosphate Rock Mined ramp-up (ktpa)	43 - 432
Enhanced Phosphate Rock Production ramp-up (ktpa)	50 – 450
Enhanced Phosphate Rock % of final product	84%
Relative Agronomic Effectiveness (RAE)	85%
<b>COST ASSUMPTIONS</b>	
LoM Average Mining Costs (US\$/t plant feed mined)	3
LoM Average Granulation Costs (US\$/t)	15
G & A (US\$/pa)	3
Transport (US cents/t.km)	10
Shipping (US\$/t)	9.30
Royalty	2%
Corporate Tax Rate (First 8 years tax free)	25%

## DEFINITIVE FEASABILITY STUDY APPOINTMENTS

### FEECO International

- The Company signed a contract with the FEECO for the basic engineering package associated with the planned granulation plant major equipment in September.
- FEECO has been engaged to prepare a basic engineering package for the granulation plant which will be provided to the Study Engineer to complete the site engineering and construction plan as part of the DFS. The work is expected to take 8-10 weeks including:
  - Electrical including piping and instrumentation design (P&ID).
  - Granulation Plant Layout including preliminary loading and utility estimates.
  - Process Control Philosophy<sup>6</sup>.

### Grupo Simples

- Grupo Simples engaged to prepare and complete both an EIS and WMP based on specialist environmental and social impact assessment reports for the purpose of obtaining an Installation Environmental License required for the construction of the Cácata Mine and the Caio Granulation Plant at Porto de Caio<sup>7</sup>.

### HCV Africa

- HCV Africa has been appointed to undertake Environmental and Social Impact Assessments (ESIAs) for the Caio Granulation Plant and the Cácata Mine. HCV Africa will undertake specialist baseline studies and impact assessments, including:
  - Fauna (terrestrial: herpetofauna and avifauna and mammals)
  - Aquatic ecology
  - Flora/vegetation
  - Air quality
  - Noise
  - Soils
  - Hydrology
  - Hydrogeology
- ESIAs completed by HCV Africa will form the basis of the EIS and a WMP to be completed

<sup>6</sup> ASX Announcement - DFS – FEECO Granulation Plant Engineering Underway  
<https://www.investi.com.au/api/announcements/mnb/ba1484b9-365.pdf>

<sup>7</sup> ASX Announcement - Appointment of Grupo Simples for Cabinda Phosphate Project EIS  
<https://www.investi.com.au/api/announcements/mnb/f7f577f8-5d4.pdf>

by Grupo Simples<sup>8</sup>.

#### DRA Global

- DRA Global has been engaged to deliver all necessary study management, design, engineering and estimating work required to complete the DFS design on the Caio Granulation Plant and associated infrastructure including:
  - Plant and Infrastructure Layout
  - Civil Structural, Mechanical and Piping
  - Electrical & Instrumentation
  - Site services and connections
  - Capital and Operating Costs to DFS +/- 10-15%
  - Procurement plan, and
  - Construction and Implementation plan<sup>9</sup>

#### DECEMBER QUARTER - EXPECTED ACTIVITIES

- Mineral Investment Contract (MIC) for the Cacata Concession is expected to be executed shortly. The MIC lays out the rights and obligations attaching to the concession. Given the previous exploration undertaken on the project, Minbos has been able to bypass the prospection phase.
- Following the execution of the MIC, negotiations regarding land allocation, port access, utilities and offtake agreements will commence with the relevant authorities, and the project will be referred to Ministry of Environment to commence approval formalities.
- FEECO and IFDC are expected to provide the energy and mass balance and process flowsheet to DRA for the commencement of the Caio Granulation Plant engineering.
- Field trials will be installed in seven different locations in Angola by the Angolan Instituto de Investigação Agronómica to compare Enhanced Phosphate Rock with commercial fertilizers in four different crops. Greenhouse trials will continue in the IFDC greenhouse with the initial crop (soybean) to be harvested this quarter and the first residual crop (winter wheat) to be planted in the same pots.
- The Ambato Rare Earths project remains on hold during the wet season in Madagascar. The Company has been approached by parties interested in the project and it is expected that the discussions will take shape after the results of the US election are known.

<sup>8</sup> HCV Africa Appointed to Complete ESIA For The Cabinda Phosphate Project  
<https://www.investi.com.au/api/announcements/mnb/d5043b45-f71.pdf>

<sup>9</sup> APPOINTMENT OF DRA GLOBAL TO PROGRESS CABINDA DFS  
<https://www.investi.com.au/api/announcements/mnb/e2544171-1e0.pdf>

- Alphier is progressing discussions under NDA with several European and African Development Finance Institutions as well as domestic and international banks. We expect several of these parties to gain approval to engage this quarter allowing the project finance due diligence to move ahead in parallel with the DFS.
- The Company is seeking to strengthen the board and align the skillset and experience of the board with its development and production agenda. Discussions with several suitable candidates is ongoing.

### MINBOS ASX ANNOUNCEMENTS

The Quarterly Activities Report contains information extracted from ASX market announcements reported in accordance with the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves” (“2012 JORC Code”)

Further details (including 2012 JORC Code reporting tables where applicable) of information referred to in this Quarterly Activities Report can be found in the following announcements lodged on the ASX:

04 Oct 2020	Appointment of DRA Global to progress Cabinda DFS
24 Sep 2020	HCV Africa appointed to complete ESIA for Cabinda Project
23 Sep 2020	Appointment of Grupo Simples for Cabinda Phosphate Project
10 Sep 2020	Consolidation/Split - MNB
10 Sep 2020	Minbos Receives Firm Commitments for \$2.265m
01 Sep 2020	DFS FEEO GRANULATION PLANT ENGINEERING UNDERWAY
26 Aug 2020	Cabinda Phosphate Project Scoping Study

### CORPORATE

The Company currently has 6,502 billion shares on issue with no unlisted options or performances rights. At the end of the quarter, the Company had cash on hand of AU\$1.450 million.

Subject to approval of all resolutions at the AGM on the 3<sup>rd</sup> November and following the 20 for 1 consolidation, the Company will issue an additional 369 million shares and will add AU\$0.993 million to cash on hand via tranche 2 of the placement announced on 2<sup>nd</sup> September.

As set out in section 6 of the Appendix 5B, the Company made payments to related parties of the entity of AU\$42,000 in the quarter ended 30 September 2020. This was made of up of AU\$36,000 paid in Director fees and AU\$6,000 paid in legal fees to a Director related entity.

**–ENDS –**

This announcement is authorised for release by Board of Minbos Resources.

### For further information, please contact

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### ABOUT MINBOS

Minbos Resources Limited (ASX: MNB) is an ASX-listed exploration and development company which won an international tender for the Cabinda Phosphate Project in March 2020. Minbos and its in-country partner, Soul Rock Ltda (15% carried interest), won the tender based on producing Enhanced Phosphate Rock as a substitute for fertilizers currently imported by the Angolan Government for distribution to wholesalers and farmers.

The Company's vision is to build a nutrient supply and distribution business that stimulates agricultural production and promotes food security in Angola and the broader Middle Africa region.

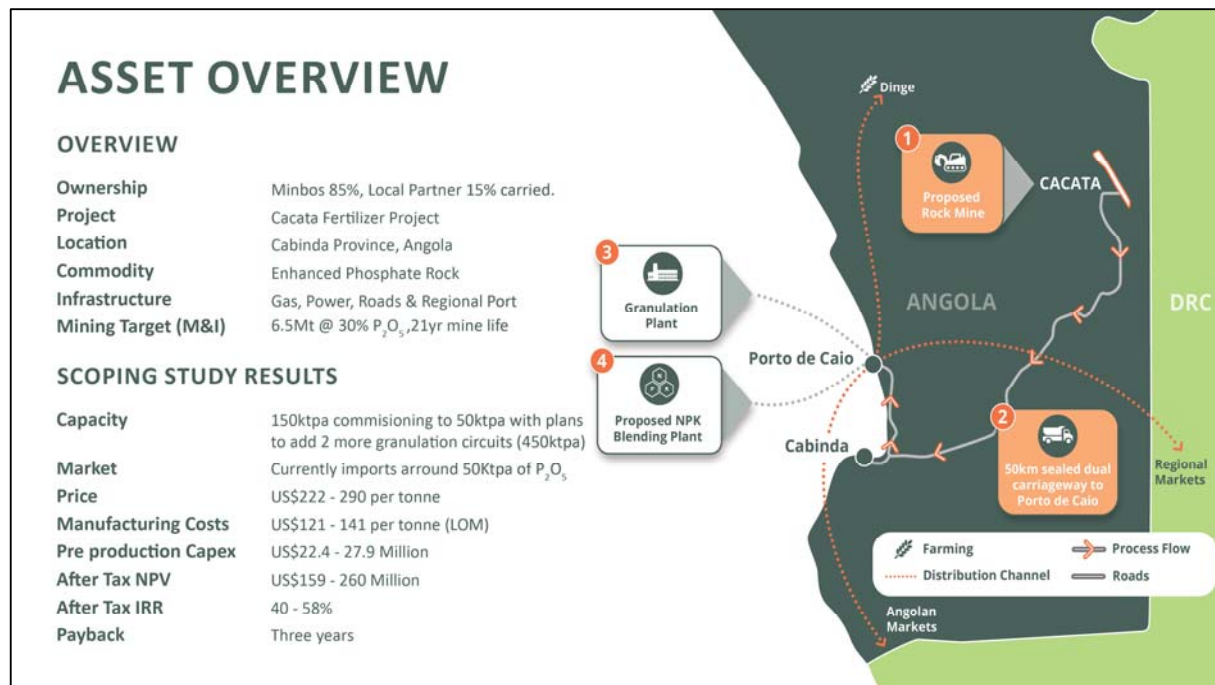


Figure 1 - Location of Cabinda Project highlighting the experience and institutional knowledge the Company has acquired over the years