

**MAKHADO PROJECT UPDATE**

MC Mining Limited (**MC Mining** or the **Company**) is pleased to provide an update on its fully licensed, shovel ready Makhado hard coking coal project (**Makhado Project** or the **Makhado**).

The salient features of the Makhado Project are:

- JORC Code compliant Coal Resources of 296 mineable tonnes in situ (**MTIS**)<sup>1</sup> in the Measured and Indicated categories
- JORC Code compliant run of mine (**ROM**) Coal Reserves of 69.3 million tonnes (**Mt**) in the Proved and Probable categories, which is expected to increase following completion of the implementation plans for Scenario 2
- Creation of an estimated 650 permanent employment positions when in full production

The Bankable Feasibility Study (**BFS**) was completed in April 2022 by independent mining consultancy Minxcon (Pty) Ltd and was followed by two alternative development scenarios that significantly improved the baseline BFS economic outcomes, as announced by the Company on 30 August 2022 and were supplementary chapters to the BFS. The alternative scenarios were assessed at pre-feasibility level and would require additional capital expenditure compared to the BFS base case scenario (**Base Case**). While the Base Case scenario was feasible and economically robust, the alternative scenarios resulted in improved project economics. The Base Case comprised the mining of the West Pit, followed by the East and Central Pits, the crushing and screen of the ROM coal to Makhado and the transportation of the screened material 135km to the modified Vele Colliery plant for processing.

Scenario 2, included as part of the BFS, was selected by the Board for implementation and included the initial mining of the East Pit, followed by the Central and West Pits, and the construction of a coal handling and processing plant (**CHPP**) at Makhado, rather than at the existing Vele facility, with an annual CHPP throughput capacity of two million tonnes per annum (**Mtpa**). Following this, the Company appointed Erudite (Pty) Ltd (**Erudite**) to complete the detailed study work for a full process plant design of the Makhado CHPP for Scenario 2.

The Company completed various studies in Q4 CY2022, enhancing the development plans for Scenario 2, including an optimization study on the Makhado CHPP. This optimisation study increases the Makhado CHPP annual run of mine feed capacity from 2.0Mtpa to 4.0Mtpa. The mine plans have been revised, as has the detailed CHPP and infrastructure design work which was completed by Erudite.

**Implementation Plan completed**

The Company has also made notable progress towards the completion of a detailed implementation

<sup>1</sup> Makhado Resources per the Company's 30 June 2022 Resources & Reserves Statement



plan (**Implementation Plan**) for the first five years of mining and processing operations. The Company has limited technical execution capacity and with a strategy to limit fixed overhead costs, has secured this execution capacity by contracting an outsourced owner's team and has also engaged key service providers to manage the Implementation Plan.

The Implementation Plan includes a detailed execution plan for the construction of the East Pit, Makhado CHPP, related infrastructure and a detailed mine plan for the first five years of operations. The key inputs of the Makhado Project were independently peer reviewed, and the Implementation Plan has been value-engineered improving the accuracy of the studies from the pre-feasibility study's  $\pm 30\%$  accuracy to an estimated accuracy of  $\pm 10\%$ . In addition, the noteworthy improvements to Scenario 2 under the Implementation Plan include:

- Revision of the mine plan resulting in the ROM from 3.2Mtpa to 4.0Mtpa, facilitating improved volume efficiencies and the planned ROM coal feed to the CHPP has increased by 30%. Previous development plans incorporated a crushing and screen plant that would have removed 1.2Mtpa of discard material prior to processing in the CHPP;
- The full ROM feed stream (4.0Mtpa) will now be processed through the CHPP to maximise coal yields, in contrast to the BFS's Base Case and Scenario 2 plans where the ROM coal was pre-screened and 2.0Mtpa crushed and screened coal was planned to be processed;
- Improved accuracy in interpreting the depth of oxidation to the top of the target coal seams from recent supplementary diamond core drilling. The limit of oxidation in the East Pit occurs at an average of 28 metres (**m**) below surface, compared to an average of 17m estimated for the West Pit which, in the BFS, was scheduled to be mined first. As a result, the strip ratio for the first five years of mining has increased from 2.7 to 3.0 (waste BCM: ROM tonne);
- The East Pit has higher compensating coal yields and is expected to have a life-of-mine (**LOM**) in excess of 13 years. The mining of the higher yielding East Pit and project enhancements results in hard coking coal (**HCC**) yields in the first five years of mining increasing from 19.4% as per the BFS, to 22.6%, a 16% improvement, in Scenario 2. Thermal coal yields increase by 9% (from 16.1% to 17.6%); and
- As a result of the above, Makhado would produce an average of 880,000t per annum (**tpa**) of HCC, compared to 540,000tpa in the BFS (an increase of 63%), while thermal coal production increases from 570,000tpa to an average of 650,000tpa (an increase of 14%) during the first five years of operation.

Key metrics for the Implementation Plan (first five operating years of the Makhado Project) compared to Scenario 2 of the BFS are summarised in the table below:

Parameter	Units	Implementation Plan	Scenario 2	Variance	Variance
Nominal annual throughput (annual)	Mtpa	4.0 <sup>1</sup>	3.2 <sup>2,3</sup>	+0.8	+25%
Strip ratio (five years/LOM)	Waste (BCM): RoM (t)	3.0 <sup>1</sup>	2.5 <sup>2</sup>	+0.9	+42%

Parameter	Units	Implementation Plan	Scenario 2	Variance	Variance
Yield – mid-vol 64 HCC (five years/LOM)	%	22.6 <sup>1</sup>	19.4 <sup>2</sup>	+3.2	+16%
Yield – thermal Coal (five years/LOM)	%	17.6 <sup>1</sup>	16.1 <sup>2</sup>	+1.5	+9%
Saleable Coking Coal (first five years)	Mt	4.0 <sup>4</sup>	3.1 <sup>5</sup>	+0.9	+30%
Saleable Thermal Coal (first five years)	Mt	3.1 <sup>4</sup>	2.6 <sup>5</sup>	+0.5	+21%

<sup>1</sup> Production for the first five years from the East Pit in terms of the Implementation Plan

<sup>2</sup> The mining plan envisaged 3.2Mtpa ROM mined that would have been crushed and screened and only 2.0Mtpa processed in the Makhado processing plant

<sup>3</sup> Average for the 21-year LOM which included the mining of the West, East and Central Pits

<sup>4</sup> Saleable coal production for the first five years of mining the East Pit

<sup>5</sup> Saleable coal production for the first five years of mining the West Pit and early mining of the East Pit

### Project expenditure

The higher volume of coal mined as well as CHPP processing capacity is anticipated to result in higher capital expenditure. Erudite has completed the detailed designs for the mine infrastructure and CHPP and is in the process of obtaining detailed execution quotes for the construction of the CHPP. This process is expected to be finished in July 2023 and will also cater for the enlarged mining and processing footprint. EHL Engineering (Pty) Ltd (**EHL**) has been engaged to design and construct the bulk power supply infrastructure, a process on the construction critical path. Enprotech (Pty) Ltd (**Enprotech**) has commenced the design and procurement of the flotation and filtration plant, a key part of the CHPP required to extract the HCC. The flotation and filtration plant is expected to cost R155 million (US\$8.6 million) and the Company has agreed in-principle with Enprotec that this part of the plant will be constructed on a build, own, operate, transfer (BOOT) basis.

The Makhado Project will be contractor-operated and, following the revised 4.0Mtpa mine plan, the Company has commenced an open tender process to select a mining contractor. The Company also anticipates commencing the processes to identify and appoint an outsourced CHPP operating contractor and analytical laboratory operator. These processes are expected to be completed in early Q3 CY2023. First coal production is expected 18 months from commencement of construction, which is expected to occur in H2 CY2023.

### Commencement of early works

Early works associated with the Implementation Plan commenced in February 2023, as planned, and these workstreams consist of activities with long lead times or to ensure that social and regulatory licenses are complied with. This includes the commissioning of the power line works, order placements for key long lead CHPP items and equipment, construction of the main access road and bridge, as well as accommodation and administration upgrades and fencing to secure the mine site. As previously



announced, during November 2022 the Board approved an expenditure budget of ZAR71.3 million (US\$4.1 million) for Makhado early works. The Board also approved the commitment of a further R45.0 million (US\$2.5 million) for the long lead time items.

**Godfrey Gomwe, Managing Director and Chief Executive Officer, commented:**

*“Substantial progress has been made to convert the previous mining studies into an Implementation Plan for the first five years of mining operation that is sufficiently detailed for the project execution with attractive economics. We are also pleased to now have an owner’s team in place, as well as a reputable and expert Engineering, Procurement & Construction Manager in Erudite. The peer-reviewed studies completed in late CY2022 and Q1 CY2023 have resulted in increased processing capacity leading to higher production of hard coking coal as well as the thermal coal by-product. The increase in product yields is also very pleasing and enhances the project economics.*

*The Company anticipates that the funding arrangements will be concluded in early Q3 CY2023 with the tender adjudication for major contractors, notably the mining contractor and CHPP operator, in early Q3 2023, followed by the final investment decision soon thereafter, ensuring that the Makhado Project execution processes are broadened from early works to include full scale implementation. First coal production is expected 18 months from CHPP construction start-date.*

*The appointment of EHL to proceed with the design and construction of the 14 km power line ensures that the supply of electricity to Makhado is in place for prior to the commencement of operations.”*

**Godfrey Gomwe**  
**Managing Director and Chief Executive Officer**

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BSM Sponsors Proprietary Limited is the nominated JSE Sponsor			



This announcement has been approved by the Company's Disclosure Committee.

This announcement contains inside information for the purposes of Article 7 of the Market Abuse Regulation (EU) No. 596/2014, as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018, as amended.

### About MC Mining

MC Mining is an AIM/ASX/JSE-listed coal exploration, development and mining company operating in South Africa. MC Mining's key projects include the Uitkomst Colliery (metallurgical and thermal coal), Makhado Project (hard coking coal), Vele Colliery (semi-soft coking and thermal coal), and the Greater Soutpansberg Projects (coking and thermal coal).

### Glossary

Term	Definition
CHPP	Coal handling & processing plant
HCC	hard coking coal
JORC	Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition
Indicated Coal Resource	Maximum distance between points of observation of 1,000 metres ( <b>m</b> ) and a maximum Halo radius of 500m
Inferred Coal Resource	Maximum distance between points of observation of 4,000m and a maximum Halo radius of 2,000m
Measured Coal Resource	Maximum distance between points of observation of 500m and a maximum Halo radius of 250m
MTIS	mineable tonnes in situ
LOM	life of mine
Probable Coal Reserves	A Probable Coal Reserve is the economically mineable part of an Indicated, and in some circumstances, a Measured Coal Resource. The confidence in the modifying factors applying to a Probable Coal Reserve is lower than that applying to a Proved Coal Reserve.
Proved Coal Reserve	A Proved Coal Reserve is the economically mineable part of a Measured Coal Resource. A Proved Coal Reserve implies a high degree of confidence in the Modifying Factors.
ROM	run of mine
SAMREC	South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves

### Statements of intention

Statements of intention are statements of current intentions only, which may change as new information becomes available or circumstances change.

MC Mining has ensured that the mineral resources quoted are subject to good governance arrangements and internal control. The Company has engaged external independent consultants to update the mineral resource in accordance with the JORC Code 2012 and SAMREC 2016. The units of measure in this report are metric, with Tonnes (t) = 1,000kg. Technical information that requires subsequent calculations to derive subtotals, totals and weighted averages may involve a degree of rounding and consequently introduce an error. Where such errors occur MC Mining does not consider them to be material.

The Company's principal competent person is Mr J.C.H.K. Sparrow who is in full time employ of MC Mining as the Group Geologist. Mr Sparrow, who is a registered professional scientist of good standing with the South African Council for Natural Scientific Professions (SACNASP) (400109/03) and acts the Competent Person under the AIM Rules - Note for Mining and Oil & Gas Companies, he has read and approved the technical disclosures in this announcement.