

# 1 APPENDICES

## Appendix 1: Abbreviations

The following acronyms and abbreviations are used in this Report:-

Abbreviation	Definition
161 PR	Prospecting Right LP30/5/1/1/2/161PR
204 MR	Mining Right LP30/5/1/2/2/204MR
38 PR	Prospecting Right LP30/5/1/1/2/38PR
ABET	Adult Basic Education and Training
amsl	above mean sea level
ARD	Apparent Relative Density
Baobab or the Client	Mining and Exploration (Pty) Ltd
BEE	Black Economic Empowerment
Btu	British thermal units
CAM Laboratory	CAM Analytical Laboratories (Pty) Ltd
CAPM	Capital Asset Pricing Model
CBIPPPP	Department of Energy's Coal Baseload Independent Power Producer Procurement Programme
CHP	Coal Handling Plant
CHPP	Coal Handling and Processing Plant
CIL	Coal India Limited
CIMVAL	Canadian Institute of Mining established a Special Committee on Valuation of Mineral Properties
CoAL	Coal of Africa Limited, now MCM
CPP	Processing Plant
CPR or the Report	Independent Competent Person's Report Independent Competent Persons Report on the Makhado Lite Project - Limpopo Province, South Africa
CV	Calorific Value
DCF	Discounted Cash Flow
DFS	Definitive Feasibility Study
BFS	Bankable Feasibility Study
DMC	Dense Medium Cyclone
DMR	South African Department of Mineral Resources
DMS	Dense Medium Separation
DRDLR	Department of Rural Development and Land Reform
DTM	Digital Terrain Model
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EIMS	Environmental Impact Management Services (Pty) Ltd
EMP	Environmental Management Plan
EPA	Eugene Pretorius and Associates (Pty) Ltd
ESDP	Enterprise and Supplier Development Programme
Exxaro	Exxaro Resources Limited
FC	Fixed Carbon
FCFE	Free Cash Flow to Equity
FCFF	Free Cash Flow to the Firm
FEED	Front End Engineering Design
FOB	Free on Board

Abbreviation	Definition
FSI	Free Swelling Index
GTIS	Gross Tonnes <i>In Situ</i>
HDSAs	Historically Disadvantaged South Africans
HRD	Human Resource Development
ICT	Information and Communication Technology
IM	Inherent Moisture
IRR	Internal Rate of Return
Iscor	Iron and Steel Industrial Corporation, now ArcelorMittal SA
IWUL	Integrated Water Use Licence
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 Edition)
KPIs	Key Performance Indicators
LED	Local Economic Development
LoM	Life of Mine
Makhado or Project	Makhado Lite Coal Project
MCC	Motor Control Centre
MCM or the Company	MC Mining Limited
MCoL	Makhado Centre of Learning
MERSeta	Manufacturing, Engineering and Related Services SETA
Minxcon	Minxcon (Pty) Ltd
Motjoli	Motjoli Resources (Pty) Ltd
MPRDA	Mineral and Petroleum Resources Development Act, No 28 of 2002
MSA	MSA Group (Pty) Ltd
MTIS	Mineable Tonnes <i>In Situ</i>
mtoe	million tonnes of oil equivalent
NEMA	National Environmental Management Act, No. 107 of 1998
NWA	National Water Act, No. 36 of 1998
OES	One Environmental System
PEM	Prospectivity Enhancement Multiplier
PSD	Particle Size Distribution
RBCT	Richards Bay Coal Terminal
RD	Relative Density
Regulus	Regulus Investment Holdings (Pty) Ltd
RoM	Run of Mine
SAMREC Code	South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves
SANAS	South African National Accreditation System
SANS	South African National Standard
SANS 10320:2004	South African National Standard: South African guide to the systematic evaluation of Coal Resources and Coal Reserves
Sekoko	Sekoko Resources (Pty) Ltd
SIB	Stay in Business
SLP	Social and Labour Plan
The Guideline	Australian Guideline 2014 for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves
TS	Total Sulphur
TTIS	Total Tonnes <i>In Situ</i>
USD or US\$	United States Dollar

<b>Abbreviation</b>	<b>Definition</b>
VALMIN Code	Code and Guidelines for the Technical Assessment and/or Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports (2015 Edition)
Venmyn Deloitte	Venmyn Deloitte (Pty) Ltd
VM	Volatile Matter
WML	Waste Management Licence
ZAR	South African Rand

*Appendix 2: Competent Person's Certificate*

## Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and  
Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

The Report titled:

**Makhado LoM and Ore Reserve Update Announcement ('Report')**

Prepared on behalf of:

**MC Mining Limited**

### Statement

- I, **John Charles Henry Knox Sparrow, a full-time employee of MC Mining Limited**
- confirm that I am the Competent Person for the Coal Resources estimate and Report for the Makhado Project.
- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code 2012 Edition, having in excess of five years' experience, which is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a registered professional with the South African Council for Natural Scientific Professions (registration # 400109/03), which is a 'Recognised Professional Organisation' (RPO), included in a list promulgated by the ASX from time to time.
- I have reviewed the Report to which this Consent Statement applies.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in our supporting documentation relating to Material Coal Assets and Liabilities.

### Consent

I consent to the release of the Report and this Consent Statement by the directors of:

**MC Mining Limited**



**John Charles Henry Knox Sparrow**

**28/06/2023**

Signature

Full name

Date

## Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and  
Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

The Report titled:

**Makhado LoM and Ore Reserve Update Announcement ('Report')**

Prepared on behalf of:

**MC Mining Limited**

### Statement,

- I, **BEN BRUWER (a consultant to MC Mining Limited in my Personal Capacity (and private Company: Abconn (Pty) Ltd,**
- confirm that I am the Competent Person for the Coal Reserves estimate and Report for the Makhado Project.
- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code 2012 Edition, having five years' experience, which is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a registered professional with the South African Institute of Mining and Metallurgy, which is a 'Recognised Professional Organisation' (RPO), included in a list promulgated by the ASX from time to time.
- I have reviewed the Report to which this Consent Statement applies.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in our supporting documentation relating to Material Coal Assets and Liabilities.

### Consent

I consent to the release of the Report and this Consent Statement by the directors of:

**MC Mining Limited**



**Barend Johannes BRUWER**

**28 June 2023**

Signature

Full name

Date

The Competent Person for the Coal Resource estimate, Mr. John Sparrow, is well known to Ben Bruwer and the Coal Resource estimate is well received and accepted and assumed correct.

The Coal Reserves estimate for the West and Central Pit areas remain unchanged and were compiled by CP Mr. D v Heerden in 2022. Minxcon and Daan van Heerden are well known to Ben Bruwer and the Coal Reserves estimate is accepted and assumed and declared correct. The additional work on the East Pit was subsequently performed by an extensive and very competent team of experts comprising of the MCM Makhado Project owner's team, as well as consultants of various other institutions and companies.

#### **CERTIFICATE of COMPETENT PERSON - COAL RESERVES: EAST PIT - B Bruwer**

As the author of the report titled Makhado LoM and Ore Reserve Update Announcement - Limpopo Province, South Africa prepared for Baobab Mining & Exploration (Pty) Ltd with an effective date of 30 June 2023 ("Report"), I hereby state:-

1. My name is Barend Johannes Bruwer and I am Director of:-

**Abconn (Pty) Ltd**

West Building, CB Centre,

75 Durham Road,

Clubview, Centurion, South Africa

2. I am a Mining Engineer affiliated with the following professional associations, which meet all the attributes of a Professional Association or a Self-Regulatory Professional Association, as applicable (as those terms are defined in the JORC Code):-

<b>Class</b>	<b>Professional Society</b>	<b>Year of Registration</b>
Member	South African Institute of Mining and Metallurgy (MSAIMM Reg. No. 701068)	1992

3. I graduated with a B Eng (Mining) degree from the University of Pretoria in 1994
4. I have worked as a Mining Engineer for more than 30 years with my specialisation lying within Mineral Resource to Reserve and mine design, planning and scheduling. I have completed a number of Mineral Reserve estimations and mine plans pertaining to various commodities, including coal, using approaches described by the JORC Code.
5. I am a "Competent Person" as defined in the JORC Code.
6. I undertook a personal inspection of the property, 8 February 2019.
7. I am responsible for the Reserve Report.
8. I am not aware of any material fact or material change with respect to the subject matter of the Report, which is not reflected in the Report, the omission of which would make the Report misleading.
9. I declare that this Report appropriately reflects the Competent Person's/author view.
10. I am independent of Baobab Mining & Exploration (Pty) Ltd.
11. I have read the JORC Code (2012) and the Report has been prepared in accordance with the guidelines of the JORC Code.
12. I do not have nor do I expect to receive a direct or indirect interest in the Makhado Project or Baobab Mining & Exploration (Pty) Ltd.
13. At the effective date of the Report, to the best of my knowledge, information and belief, the Report contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Signed at Cedar Rd, Fourways Golf Park on 28 June 2023.



---

**Ben Bruwer**  
B Eng (Min.),  
MSAIMM,

Appendix 3: JORC (2012) Table 1

SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	Explanation	Detail
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	<p>A 3 m drill run was drilled and reduced if poor recoveries or difficult drilling conditions were experienced. Core recovery within individual coal plies was measured with reference to the geophysical logs and, if found to be acceptable, logging commenced. Field logs were generated using printed logging forms and are archived at the MC Mining Limited ("MCM") head office in Johannesburg, South Africa. Logging data was subsequently captured in a dedicated Sable™ database.</p> <p>MCM defined seams or selected mining cuts by firstly selecting intervals comprising predominantly coal and then by identifying the sample names associated with those intervals and automatically allocating them to the seam.</p> <p>Whole core sampling was conducted and sample intervals were selected on the basis of the geophysical logs. Samples were numbered from the base upwards and correspond to the same stratigraphic interval in every drillhole. Six potentially mineable seams were identified within the Coal Zone.</p>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	<p>Total core (seams + partings) was sampled.</p> <p>Standard industry practice has been applied to the sampling processes carried out. Laboratories are required to calibrate their coal analytical equipment daily and are also required to partake in round robin proficiency tests to ensure a high standard of results.</p>
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	<p>Drilling has largely comprised diamond core drilling in order to obtain whole core for sampling and analysis.</p>

SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	Explanation	Detail
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	<p>278 NQ diamond core drillholes were drilled by Iscor pre-2008 on the current Project Area. The drillholes were closely and evenly distributed along strike of the deposit near the sub-outcrop and at shallow depths. Deeper holes were drilled at greater, but still consistent distances, with depth and along strike. It is assumed that the drilling methods were conventional and pre-date triple-tube wireline techniques. There were likely biased losses of the brittle, higher quality, vitrinitic coal during drilling due to the use of single or double tube core barrels.</p> <p>Four PQ3 diamond drillholes were completed in 2006-2007 on the farms Windhoek 649 MS and Lukin 643 MS.</p> <p>The first 25 Coal of Africa Limited ("CoAL"; now MCM) drillholes were pre-collared to a depth of 10m with a tri-cone bit prior to diamond drill coring. From July 2009, this practice was abandoned in favour of coring from surface, with steel casing installed to the base of weathering. All holes were drilled using triple tube techniques in order to minimise loss of core, particularly of fines.</p> <p>From 2008, 172 in-fill PQ3 diamond drillholes were completed on Windhoek 649 MS, Tanga 648 MS, Fripp 645 MS and Salaita 188 MT, followed by 24 T6 LDD holes on Tanga 648 MS. In 2010, 13 percussion holes were drilled on Tanga 648 MS within the area identified for the bulk sample. In 2011 and 2012, five PQ3 diamond drillholes were completed on Lukin 643 MS and Boas 642 MS, the latter which is not included within the Project Area, and five LDD holes on Fripp 645 MS. The LDD holes were drilled by GeoMechanics using a T6 (146mm) drill bit, which produced a core of 122.8mm in diameter. The collar positions were surveyed and the CoAL geologist was responsible for the logging and sampling of the drillholes.</p> <p>All Rio Tinto and CoAL drillholes were drilled vertically.</p>
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	<p>The core recovery was measured within each individual coal ply with reference to the geophysical logs, if found to be acceptable, logging commenced.</p> <p>A minimum recovery of 98% within coal horizons and 95% in non-coal sediments was enforced. 31 Drillholes have less than 95% core recovery and are mainly Iscor drillholes.</p>
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	The core size was changed from HQ3 to PQ3 after the initial 25 exploration drillholes in order to obtain more sample material and maximise core recovery.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	CoAL conducted whole core sampling and sample intervals were selected on the basis of the geophysical logs.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	<p>Core was not split prior to logging in order to minimise the effects of oxidation. Lithological depths were finalised after reconciliation with the geophysical wireline logs. Field logs were generated using printed logging forms and are archived at the MCM offices in Johannesburg. The logging data was subsequently captured in a dedicated Sable™ database.</p> <p>Geotechnical logging has only been incorporated in the last 15 to 20 drillholes on Lukin 643 MS and Salaita 188 MT.</p> <p>All LDD drillholes were wireline logged to obtain accurate coal depth measurements.</p> <p>Logging has been done in sufficient detail to support appropriate Coal Resource estimation and technical studies.</p>



SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	Explanation	Detail
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	The core logging was both qualitative and quantitative. The core was logged in detail and was accompanied by downhole survey data for correlation purposes. Core photography using a hand-held digital camera was initiated in January 2009 and was sporadic until November 2009. Since then, all cores have been photographed. There is sufficient drillhole data available to state a Coal Resource that includes measured resources.
	The total length and percentage of the relevant intersections logged.	Total core is logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	All core was taken.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Core samples were analysed.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The laboratories followed the ISO and SANAS standard set of tests and methods which are used for coal analyses by South African laboratories.  The samples were crushed to -12.5mm rather than drop shatter tested as required for coking coal projects at DFS level. The -0.5mm fraction was excluded from the washability test work.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	ISO and SANAS standard tests and methods are employed.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Full core is sampled.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Coal seams are sampled with partings, which is appropriate for coal.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Samples from the Rio Tinto drilling campaign were analysed at ALS Brisbane, Australia (ISO 17025 accredited). Products were returned to South Africa for petrographic analysis. Samples from the first 25 drillholes drilled by CoAL were sent to the SABS laboratory in Secunda, South Africa (SANAS accredited, SABS/ISO/IEC 17025:2005). Owing to delays in the reporting of analytical results, CoAL relocated all unprocessed samples from SABS to Inspectorate (SANAS accredited). Since July 2009, two laboratories have been used by CoAL. Core exploration samples have been sent to the CAM Laboratory in Polokwane, South Africa (SANAS accredited). Large diameter core samples were analysed at the ACT Laboratory in Pretoria, South Africa. ACT is not SANAS accredited but is utilised by multiple coal mining companies particularly with regard to coking coal. It has been subjected to laboratory audits and regularly participates in recognised 'round robin' quality control procedures with the results and certificates openly available.  Analytical testwork carried out includes proximate analysis, calorific value, total sulphur, forms of sulphur, ultimate analysis, ash fusion temperatures, plasticity, dilatometry, ash composition, free swelling index, and hardgrove grindability index, amongst others. The majority of the tests employed ISO methods. Where no ISO methods are available, the SANS method is used. In-house methods are only employed if the method has been validated against an international methodology.
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Helicopter-borne, aerial magnetic and radiometric surveys were conducted with a line spacing of 50m with a nominal sensor ground clearance of 15m to 25m. Further details are unknown.  A LIDAR survey completed via a fixed wing aircraft at a height of approximately 1,100m. A 70kHz laser provided ground elevation data to a 15cm vertical and 30cm horizontal accuracy. Digital colour images were obtained with a pixel size of 15cm and transformed to orthophotos. The survey was based on WGS84 datum and Lo29E projection. Ellipsoidal heights were transformed to orthometric heights in Xform 4.3 using the Southern Africa Quazi geoidal model. No horizontal transformation was carried out because the final survey was required on the WGS84 datum.

SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	Explanation	Detail
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<p>Laboratories are required to calibrate their coal analytical equipment daily and are also required to partake in round robin proficiency tests to ensure a high standard of results. All result reports are verified by the laboratory manager and any inconsistencies or variations about the laboratory's specifications are reanalysed. Ash vs. CV are plotted for all samples. Any samples with a correlation of less than 0.90 are reanalysed.</p> <p>No standard or duplicate samples were submitted for analysis and no repeat or laboratory cross checks were requested. Reliance is often placed on the internal quality controls of the laboratories.</p> <p>MCM has validated all results in Sable™.</p>
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	<p>Laboratories are required to calibrate their coal analytical equipment daily as well as partake in round robin proficiency tests to ensure a high standard of results. All result reports are verified by the laboratory manager and any inconsistencies or variations about the laboratory's specifications are reanalysed.</p> <p>CoAL requested that the laboratories plot ash versus CV curves for all samples. Any samples with a correlation of less than 0.90 are reanalysed.</p> <p>All results in Sable™ have been validated by MCM through basic tests on cumulative results and checking of logs.</p>
	Discuss any adjustment to assay data.	Relative Density was corrected to <i>in situ</i> moisture basis. No further adjustments have been made to the coal quality data.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	<p>The combined drilling database is stored in a Sable™ database management system. The database includes the parameters for the thickness and depth below surface. The Raw and Wash qualities of CV, moisture, ash, volatile matter and fixed carbon contents are also stored on database.</p> <p>Reviews of the database have been conducted by multiple independent consulting firms in accordance with mineral industry regulations.</p> <p>Bagged samples were stored in a locked refrigerated container prior to dispatch to the laboratory. Laboratories were instructed to retain excess material in air-tight plastic bags for possible further analytical work.</p>
	The use of twinned holes.	No holes have been twinned.
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	<p>For structural modelling purposes, the reported collar positions for the Rio Tinto drillholes were adjusted to the LIDAR survey.</p> <p>The CoAL drillholes were generally initially sited in the field using a hand-held Garmin™ GPS device. Once the drillholes were completed, the collar positions were accurately surveyed using Leica™ GPS equipment by P Matibe and Associates, which is registered (No PLS0915) with the South African Council for Professional and Technical Surveyors (PLATO).</p>
	Specification of the grid system used.	<p>The LIDAR survey was based on WGS84 datum and Lo29E projection.</p> <p>The grid system used for location of drillhole data points is unknown.</p>
	Quality and adequacy of topographic control.	Drillhole elevations have been compared at the recorded northing and easting co-ordinates against elevations estimated from the LIDAR survey, or from topographic plans where there is no LIDAR coverage. Large discrepancies in elevations (up to 55m) were noted for the majority of drillholes, suggesting that most of the collar elevations were determined from non-differential, hand-held GPS readings. For structural modelling purposes, MCM adjusted the reported collar positions for the Rio Tinto drillholes to the LIDAR survey. The Rio Tinto drillholes were not used for resource estimation purposes.

SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	Explanation	Detail
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drillhole spacing is based on an approximate 250 m grid along strike and 100m on dip for near surface resource. The deeper resource was drilled at approximately 1,000m along strike with a 500m on dip grid.  The Coal Resource classification was based on the recommended distances defined in The Guideline, whilst considering the technical parameters as set out in Section 43 of The Guideline.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	In most instances the drillhole spacing for the Measured Resources is less than that recommended in The Guideline.
	Whether sample compositing has been applied.	The individual samples were composited per seam and the full seam was modelled.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The coal seams dip at approximately 4° to 18° to the north, averaging at 12°. The drillholes were all drilled vertically to provide the best intercept angle to achieve an unbiased sample.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	As above.
Sample security	The measures taken to ensure sample security.	Samples were double-bagged with each bag sealed with cable ties and labelled. All bagged samples were stored in a locked refrigerated container prior to transportation to the laboratory in a closed truck. Once at the laboratories, the samples were subject to the standard security measures of the respective laboratories  On-site CoAL (now MCM) personnel and various laboratories ensured sample security under a chain of custody.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The sample data has been extensively internally reviewed with regards to QAQC. In addition, the database was reviewed by Mineral Corporation (2010), Venmyn Deloitte (2013) and MSA (2015, 2016, 2017).  The seam code assignment was changed from Iscor to CoAL standards but this has not been applied consistently. As such, the current database may contain seam code discrepancies. This is however identified as a low risk.

SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	Explanation	Detail
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The mineral rights are held under a mining right LP30/5/1/2/2/204MR over 7,651.2833 ha valid for Coal to 25 January 2046. The right is held by Baobab Mining and Exploration (Pty) Ltd, which is majority (69%) owned by Coal of Africa Limited. The mining right encompasses the farms Windhoek 847 MS, Mutamba 668 MS, Tanga 849MS, Daru 848MS, Fripp 645 MS, Lukin 643MS and Salaita 188 MT in the Limpopo Province, South Africa.  Surface rights of Tanga 849MS, Windhoek 847 MS and Daru 848 MS are held by Fumaria, a wholly-owned subsidiary of MCM. Fumaria and Baobab will enter into a lease agreement for the properties before construction commences. Lukin 643MS and Salaita 188MS are under native land claims and are in the process of being restored to the land claimants. Once the expropriation process has been completed, Baobab will enter into a lease agreement with the applicable community. The farm Fripp 645

SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	Explanation	Detail
		<p>MS is state owned land under custodianship of the Mpephu Traditional Council. At the appropriate time, MCM will enter into a lease agreement process.</p> <p>No further third party agreements, titles or interests are applicable.</p>
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	<p>The mining right is valid to 25 January 2046. The Project has a valid mining right, EMP, IWUL and EA and are therefore fully permitted to commence with construction.</p> <p>There are no legal actions against the Company.</p> <p>MCM ensures regular, meaningful and transparent engagement with the land claimants and applicable communities to ensure security of the Project.</p>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Mr. J Sparrow accepts Minxcon's opinion that past exploration has been carried out under acceptable industry standards. Minxcon acknowledged the previous exploration work conducted by Iscor, Rio Tinto and CoAL.
Geology	Deposit type, geological setting and style of mineralisation.	Coal forms in sedimentary environments due to the accumulation, compaction and induration of variously altered plant matter. Coal is a readily combustible sedimentary rock containing more than 50% by mass and more than 70% by volume, carbonaceous material. Coal typically occurs as seams and the presence thereof is determined by the palaeo-depositional environment occurring at the time of deposition and subsequent preservation mechanisms. Formation of coal and the resultant quality of coal is determined by the depositional setting and pressure and temperature conditions post-deposition and post-compaction.
Drillhole Information	<p>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</p> <ul style="list-style-type: none"> <li>* easting and northing of the drillhole collar</li> <li>* elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>* dip and azimuth of the hole</li> <li>* down hole length and interception depth</li> <li>* hole length.</li> </ul>	A total of 506 drill holes were drilled over the property. 278 were NQ, 181 were PQ3, 34 were T6 and 13 were 8 inch drillhole sizes.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	15 drillholes were not included in the estimation and these include the drilling in 2011 and 2012 of 5 geotechnical holes and 10 LDD holes for bulk sampling.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.	No Capping or cutting of the qualities were carried out.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Whole seam composites were created and used in the estimation.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents were calculated. Not applicable.
Relationship between mineralisation widths and intercept lengths	<p>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</p> <p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</p>	All drillholes were drilled vertical and with a minimal dip to the coal seams. As such the roof and floor intersections of the seams were used to interpolate between data points and create interpreted surfaces for estimation. The estimation of seam volumes is therefore calculated between the surfaces and as such the true thickness is used as opposed to the apparent thicknesses for calculations.

SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	Explanation	Detail
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to, a plan view of drillhole collar locations and appropriate sectional views.	<p>The project is beyond an exploration project and has Coal Resources. Below is a plan showing the location of the drillholes incorporated into the project.</p>
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All available exploration data for the Makhado Project area has been collated and reported. All data from all holes has been reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<p>Aerial magnetic and radiometric surveys have been completed, which highlighted structural features over the Project Area.</p> <p>A bulk sampling box cut was excavated in order to confirm the coal and coking product properties of the coal, and to test various processing options. In addition, a 10% ash coking coal product was tested in the pilot coking ovens of ArcelorMittal at its Newcastle and Vanderbijlpark plants, both as standalone and in blends, with results indicating good coking potential. The bulk sample was also used to obtain RoM, product and discard samples to test for mining and metallurgical process design, equipment selection and sizing, and to observe the coal in the various stages of extraction and processing, blasting, extraction, crushing, screening and beneficiation and materials handling.</p>
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Future exploration is planned that includes reverse circulation or other drilling and sampling to further define the limit of oxidation at the East Pit edge and obtain geotechnical information, open hole drilling to further define the individual mining horizon correlation in the first five years of mining, PQ3 drilling to

SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	Explanation	Detail
		determine drop shatter and PSD characteristics, and large diameter drilling (T6146) to further delineate the size envelopes for the plant set up. The number of additional drillholes is still under consideration.
		Further geotechnical work is planned to supplement the existing work completed civil structures and the Mutamba river bridge.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	The number and location of planned holes are still under consideration.

SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	Explanation	Detail
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	The source data are stored in a Sable™ database which is managed and maintained by the MCM CP.
	Data validation procedures used.	Sable™ has been set up to run validations on the analytical data on import into the program. The integrity of the washability data is validated by visually ensuring that the ash content is increasing when compared to an increasing wash density, increasing CV and volatile matter. Further validation is completed by comparing ash content versus RD and ash versus CV through scatter plots.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	A site visit was conducted to the Makhado property on 02 November 2017. The site visit was guided by Mr John Sparrow, Mr Uwe Engelmann and Mr Michiel Breed.  During the site visit, the property was inspected including the box cut. The bulk sample processing site was visited and the associated run of mine stockpiled was viewed.  The Competent Person of this document is Mr John Sparrow, who has since undertaken numerous further site visits.
	If no site visits have been undertaken indicate why this is the case.	Site visits have taken place as described above.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	Mr John Sparrow has a high level of confidence with respect of the current model and associated resource estimates.
	Nature of the data used and of any assumptions made.	All drillholes with seam intersection data were used, to generate the physical seam models on which the estimates of seam volumes were based.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Any alternative interpretation would not adversely affect the current geological model.
	The use of geology in guiding and controlling Mineral Resource estimation.	The Upper, Middle, Middle Lower, Bottom Upper and Bottom Lower Seam floor elevations have been modelled in order to identify any abrupt elevation changes that would indicate the presence of faulting and also to identify the general dip across the project area. The abrupt floor elevation differences clearly illustrate the positions of a number of faults within the project area, most notably over the farm Lukin 643MS, where a large fault is present, resulting in the upthrow of the Eastern Block of coal, limiting its aerial extent relative to the coal in the Western Block.
	The factors affecting continuity both of grade and geology.	The model of the physical parameters of the seam were cut along any significant structures, whilst the quality parameters were modelled across it. All physical and quality parameters were plotted and visually inspected to ensure they were acceptable for geological interpretation. Dolerite dykes, as well as fault planes, were incorporated into the 3D structural model.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The project extends approximately 17km along strike with a dip of 12° to the north. A limit of approximately 30m of oxidation has been used to limit the upper boundary near the outcrop. The open cast depth has been theoretically defined as 200m below topography and this is the limit of the resource

SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	Explanation	Detail
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	All historical and previous exploration data has been collated, by MCM, into a Sable™ database. This database was used, by MCM, in the estimation of the coal resources of the Makhado Project. Both the physical and quality parameters of the various seams were modelled. Grids with a 20m mesh were estimated using the Minex™ general purpose gridding function using a 2.5km search radius. The model of the physical parameters of the seam was cut along any significant structures, whilst the quality parameters were modelled across it.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Minxcon performed a check estimate in Datamine using ID <sup>2</sup> . No production records are available.
	The assumptions made regarding recovery of by-products.	Wash products were generated of 10% and 25.6% Ash content to determine the yields of coking coal and thermal coal products
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	The caking property of coke, phosphorous content and total sulphur content have been assessed across the deposit using results obtained from approximately 60% of the CoAL drillholes.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	A grid node size of 20m was used for the estimate with a drillhole spacing of where a search distance of 2,500m was used.
	Any assumptions behind modelling of selective mining units.	No assumptions were assumed with regards a selective mining unit.
Estimation and modelling techniques (continued)	Any assumptions about correlation between variables.	No assumptions were made about the correlation between variables.
	Description of how the geological interpretation was used to control the resource estimates.	The model of the physical parameters of the seam was cut along any significant structures, whilst the quality parameters were modelled across it.
	Discussion of basis for using or not using grade cutting or capping.	No capping was used as no outliers were observed in the statistical analysis
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	During the data collection process the sample results were graphed to check the correlation between the ASH and the CV. If the correlation was less than 0.9 the samples were re-assayed. As part of the estimation process the drillhole results are visually compared to the estimation model to check the correlation. The seam roof and floor contacts are also check with the seam wireframes.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The air dried density used to calculate the tonnage may be different to the in situ moisture density which may have a resultant effect on the tonnage calculations. The relationship between these two parameters was established for the Soutpansberg coalfield from four samples taken on a nearby project. The difference between the two parameters is negligible (1.5%) and therefore it is deemed acceptable to use the apparent or air dried density for tonnage calculations.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The following cut-offs or limits are applied, by MCM, to the Resources: <ul style="list-style-type: none"> <li>the Resource blocks are limited according to the boundaries of the respective NOPR/MR;</li> <li>the Resource blocks are limited to the seam sub-crop;</li> <li>the Resource blocks are limited to the Resource extrapolation limits;</li> <li>a minimum seam thickness limit of 0.5 m is applied prior to the reporting of GTIS;</li> <li>a limit of oxidation of 30 m used, based on actual results from the bulk sampling pit that indicate the limit could be shallower at 18m in some areas;</li> <li>limit of 20% volatile matter. All material less than 20% volatiles were excluded;</li> <li>a limit of 50 m around all known geological structures and dykes;</li> <li>maximum depth of 200 m for open-castable Coal Resources in the calculation of MTIS;</li> <li>geological losses of 5%, 8% and 10% are applied to Measured, Indicated and Inferred Resources, respectively, prior to the reporting of TTIS. These losses take into account any unforeseen geological features, such as dykes and faults, which have not been identified in the drilling and which may have a negative impact on the Coal Resources. The percentages applied increase with decreasing drillhole spacing.</li> </ul>

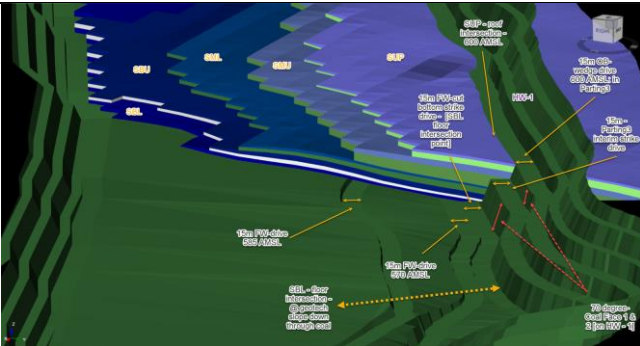
SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	Explanation	Detail
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	The coal within open-castable areas generally occurs at depths to a maximum of approximately 200 m from surface.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<p>The Coal Resources were declared as a GTIS, TTIS and MTIS with a primary product of 10% ash (for coking coal) and a secondary product of 24.9 CV DAF (for thermal coal). This is based on the washability results conducted on the coal sampling. The theoretical product yields for the two products range from 14.4% to 19.9% for the primary coking and secondary middlings thermal coal products respectively. A fines product was also modelled for the East Pit deposit to supplement the theoretical yields in calculating the Coal Reserves. 72.8% of fines yielded HCC and 19% yielded Thermal Coal. No fines adjustments were considered for the West and Central Pit deposits, and hence no changes for that portion of the Coal Reserves were considered or reported.</p> <p>A bulk sampling box cut was excavated in order to confirm the coal and coking product properties of the coal, and to test various processing options. The bulk sample was also used to obtain RoM, product and discard samples to test for mining and metallurgical process design, equipment selection and sizing, and to observe the coal in the various stages of extraction and processing, blasting, extraction, crushing, screening and beneficiation and materials handling.</p> <p>Details of the metallurgical process is detailed in section 4 of the table (Estimating and Reporting of the Coal Resource).</p>
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Sufficient room is available on the project site to locate appropriately designed carbonaceous discard stockpiles. The environmental authorisation granted prescribes measures to be taken when exploiting the deposits. No environmental factors or assumptions preclude the deposit from being mined, hence considered in the Makhado Coal Resource estimation.
Bulk density	<p>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</p> <p>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</p> <p>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</p>	<p>Each individual sample that was analysed had the RD analysed on the RAW coal sample.</p> <p>Dry bulk density determination of the -50mm fraction, from a 60 ton bulk sample in 2011 by the Research and Development Division of Exxaro Resources Limited (Exxaro) in South Africa</p>



SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	Explanation	Detail
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	A maximum spacing of 500m between points of observation has been used to determine a measured resource Category. A maximum spacing of 1,000m between points of observation has been used to determine an indicated resource Category. A maximum spacing of 4,000m between points of observation has been used to determine an inferred resource category for this estimation. A measured, indicated and inferred resource has been identified in the Makhado Project area reflecting the competent person's level of confidence in the seam structure and quality continuity, based on the data currently available.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Appropriate consideration has been used with regards drillhole spacing, core recovery and geological interpretation with regards the classification in accordance with guidelines as provided in Reporting Codes and the Australian Guidelines for the estimation and Classification of Coal Resources.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The results reflect the best appropriate estimate based on the available information and reflects the Competent Person's view of the coal deposit in question.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The Makhado Project Coal Resource was previously reviewed by Venmyn Deloitte (Pty) Ltd in 2013 and the MSA Group in 2015. No adverse finding were recorded.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	Mr. John Sparrow is confident the estimation is appropriate for the type of deposit, and that appropriate statistical methodologies have been used.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The Coal Resource relates to the global estimate.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No production data is available as the project is still under development.

SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES		
Criteria	Explanation	Detail
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	Resources estimation reported according to the guidelines of JORC 2012 using a Minex grid model. A 3D regularised block model was then created and utilised for the mine design and scheduling [Datamine type mining model and DESWIK suite of mining software for optimization (LG), design and scheduling.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Coal Resources are state inclusive of the Coal Reserves.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Various site visits were conducted to the Makhado property on 02 November 2017. The site visit was guided by Mr John Sparrow, Mr Uwe Engelmann and Mr Michiel Breed. During the site visit, the property was inspected including the box cut. The bulk sample processing site was visited and the associated run of mine stockpiled was viewed. The Competent Person of this document is Mr. Ben Bruwer, visited the site on 8 February 2019 and several times thereafter.
	If no site visits have been undertaken indicate why this is the case.	Site visits have taken place as described above.

Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	Makhado is currently under development and has not historically been mined. A bulk sample pit (box cut) was excavated on the farm Fripp 645MS by Iscor during its exploration programme and a further bulk sample pit was excavated by CoAL during 2011 on the farm Tanga. A Definitive Feasibility Study was completed for a 12Mtpa operation. Several studies have been subsequently undertaken, culminating in Scenario 2 Plan (August 2022) for a 3.2Mtpa operation, a value-engineered development scenario based on the BFS of April 2022. The latest LOM Plan has been prepared to a feasibility study level. Measured, Indicated and Inferred Coal Resources were classified and used to derive the LOM Plan Coal Reserves. No Inferred Resources were present within the designed pits nor incorporated in the resulting Coal Reserves estimate.
	The Code requires that a study to at least Prefeasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	A Definitive Feasibility Study and more recently (April 2022) a Bankable Feasibility study were completed for a 12Mtpa & 4Mtpa Life of Mine plan respectively. A value-engineered development scenario for a 3.2 Mtpa operation, to a prefeasibility level of study (Scenario 2), was conducted in August 2022. The Life of Mine plan has now also been completed to a feasibility study level, with accompanying financial evaluation to confirm its commercial and technical viability. The Life of Mine plan takes into consideration all the relevant modifying factors.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	The Coal Resources were considered up to a depth of 200m below surface. An oxidization cut-off of 28 m and a minimum coal seam thickness of 0.5m were applied. A volatile matter content of 20% was also applied. The primary coking coal product has a maximum ash content of 10% and the secondary thermal coal product has a calorific value of 24.9%.
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).	The resource model was regularised into a mining model. Detailed designs for the various open pits were conducted adhering to the set design criteria. The pit designs were constrained by the farm boundaries, the Mutamba River and the presence of the Mudimeli settlement and associated blasting stand-off perimeter. The Fripp farm boundary was used as a mining limit.
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	The coal deposit is classified as a steep-dipping multi-seam coal deposit. Six coal seams are present of which five are economically extractable. The selected mining method is terrace mining with no coal seam blasting. Coal will be mechanically dug out and removed using truck and hydraulic excavators. The interburden is to be blasted and loaded separately. The inclination of the coal seam enabled the access to the coal deposit from the low wall. External waste deposition will be conducted initially, as sufficient space becomes available backfilling will commence. The low wall and highwall designs followed the recommendations from the geotechnical study.
	The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	Middindi Consulting (Pty) Ltd completed a geotechnical study during the Definitive Feasibility Study. An update by Stellar Consulting formed part of the 2022 to 2023 LOM update, which focused on the mining of the East Pit. The geotechnical parameters include a 70° bench face angle and a 61.9° overall slope angle in the fresh material and a 70° bench face angle and a 48° overall slope angle in the weathered material. The overall slope angle for the pit is 47.6°. The angles include the berm widths. The slope angles excludes the ramp and will flatten where the ramp is present. The ramp gradient is 10% and the width is 20m for single lane traffic and 30m for double lane traffic. The low wall design follows the coal seam to minimise contamination with 5m benches.

		
	<p>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</p> <p>The mining dilution factors used.</p> <p>The mining recovery factors used.</p> <p>Any minimum mining widths used.</p> <p>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</p> <p>The infrastructure requirements of the selected mining methods.</p>	<p>The Bottom Middle Seam was excluded as this seam is not economically viable. A minimum seam width of 0.5m and the oxidized coal (30m below surface) was included as waste material.</p> <p>Geological loss of 5% for measured, 8% for indicated with 10% losses for inferred resource. A mining loss of 5% and contamination of 5%.</p> <p>A practical yield (plant organic efficiency) of 95% on the primary product is applied. The fines recovery is included for the East Pit deposit, and 72.8% of fines are yielded for HCC and 19% on the thermal product.</p> <p>A minimum seam width of 0.5m was applied.</p> <p>The mineable coal resources are either Measured Coal Resources or Indicated Coal Resources. No Inferred Coal Resources were included in the Life of Mine plan or the Coal Reserves.</p> <p>The access ramps are planned on the southern extend of the pits in the low wall. The non-carbonaceous waste rock dumps are situated close to the ramp entry points to reduce hauling distances. Carbonaceous waste rock dumps are also required. Once sufficient area is available backfilling of waste material will be conducted. The three pits require the development of box-cuts to enable steady-state mining and backfilling.</p>
<p>Metallurgical factors or assumptions</p>	<p>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</p> <p>Whether the metallurgical process is well-tested technology or novel in nature.</p> <p>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</p> <p>Any assumptions or allowances made for deleterious elements.</p> <p>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</p> <p>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</p>	<p>Coarse coal washing will take place by means of dense medium separation cyclones. The fines and ultra-fines will be recovered by means of spirals and froth flotation.</p> <p>The processing plant equipment selection and flowsheet design is based on well-tested and understood coal processing (or washing) technologies and methods.</p> <p>Bulk samples were utilised for pilot plant testwork. The bulk sample is deemed to be representative of the ore body. Additional test work was conducted on large diameter boreholes.</p> <p>No allowances have been made for deleterious elements. The tailings are expected to contain high sulphur. The tailings will be deposited as backfill into the mined out areas in the pit once enough pit room has been created.</p> <p>Bulk samples were utilised for pilot plant testwork. The bulk sample is deemed to be representative of the ore body. Additional test work was conducted on large diameter boreholes.</p> <p>The Coal Reserve estimation is appropriate. The estimation is based on a coking coal product (10% ash) and a thermal coal (25.6% ash) product.</p>
<p>Environmental</p>	<p>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of</p>	<p>There is an approved Environmental Authorisation in place for the Makhado Project. Continuous assessment and monitoring feedback must be conducted during mining operation, as required by the governing laws. An approved Integrated Water Use Licence is in place.</p> <p>No major environmental impacts have been identified.</p>

	approvals for process residue storage and waste dumps should be reported.	
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	<p>The project area is easily accessible via the N1 national road and various regional roads. Minor upgrades will be required on the direct project access road. The project access road will have to be constructed with the inclusion of a bridge over the Mutamba river.</p> <p>Services such as power and water is available to the region. Power supply to the project will require the construction of a 15km 22kV power line onto the project site. Sufficient capacity will be available for the project requirements. Water supply for the project will be sourced mainly from groundwater influx into open pits and boreholes located on various farms with in or adjacent to the project area. Indications are that the combined sources have sufficient capacity to supply water to the project.</p> <p>Besides the well-established road network transport can also be done with rail freight. The main rail line from the Zimbabwean border at Beitbridge running to the south is located to the west of the project. Rail sidings in close proximity to the project include the Huntleigh rail siding and the Musina rail siding.</p> <p>Main population centres within a 150km radius include Musina, Makhado and Polokwane. Labour, accommodation and services can with relative ease be sourced from these population centres. Services include, airfields, hospitals, police stations and industrial suppliers.</p>
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	Capital estimates have been prepared using past study estimates, market inquiries and empirical databases compiled by various service providers and are within a $\pm 10\%$ accuracy level for the first five years of mine establishment and operation and $\pm 30\%$ thereafter.
	The methodology used to estimate operating costs.	Mine operating costs were obtained from prospective contractors and have been estimated to a $\pm 10\%$ level of accuracy for the first 14 years of mining operations. The overhead owner's cost were provided by the Company's finance and administration department.
	Allowances made for the content of deleterious elements.	Costs are included in financial modelling and provisioning for rehabilitation of mines.
	The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.	The price forecasts are based on forecasts sourced by from Afriforesight's long term coal price consensus forecasts as from June 2023.
	The source of exchange rates used in the study.	The exchange rate forecasts are based on forecasts sourced from ABSA Bank's long term USD:ZAR foreign exchange rate consensus forecasts as from June 2023.
	Derivation of transportation charges.	Transport charges were estimated by a contractor and are deemed to be appropriate for the operation.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	A product offtake agreement is in place with ArcelorMittal South Africa Limited ( <b>AMSA</b> ) to supply AMSA, domestically, with up to 450ktpa of steelmaking HCC and arrangements exist for the marketing of the balance of saleable production.
The allowances made for royalties payable, both Government and private.	The unrefined Mineral and Petroleum Resources Royalty Act formula was used for this Project.	
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	The price forecasts are based on forecasts sourced from Afriforesight's long term coal price consensus forecasts as from June 2023. The exchange rate forecasts are based on forecasts sourced from ABSA Bank's long term USD:ZAR foreign exchange rate consensus forecasts as from June 2023. Yields are based on the metallurgical testwork and fines recovery adjustment derived from supplementary drill core and size analyses.
	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	Co-product prices were based on historical discount trends to forecasted prices of a similar product. The price forecasts are based on forecasts sourced from Afriforesight's long term coal price consensus

		forecasts as from June 2023. A 64 Mid Vol HCC price forecast of USD215 per tonne (FOB) <sup>1</sup> average over the LOM, and an API4 Thermal Coal (6,000kcal) price forecast of USD108 per tonne (FOB) <sup>2</sup> average over the LOM were assumed.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	South Africa is the world's fifth-largest coal exporter and exports about 25% of its coal production. Asia, and India in particular, is the biggest importer of South African coal, followed by Europe, Africa, the Middle East and the Americas. Most of the country's coal exports are transported through the Richards Bay Coal Terminal ("RBCT"), which exported 68.9-million tonnes of coal in 2016. The Australian government's Office of the Chief Economist, however, noted in its Resources and Energy Quarterly for September 2017 that South Africa's thermal exports were up 17% in the first three months of 2017, with exports of approximately 76Mt forecasted for 2017. Forecast for 2018 and 2019 remain at approximately the same levels. The Energy Information Administration ("EIA"), forecasts that, between 2013 and 2040, Australia's coal exports will increase by 85-million tonnes of coal, while Southern Africa (South Africa mainly) is expected to lift its coal exports by 23-million tonnes.
	A customer and competitor analysis along with the identification of likely market windows for the product.	India is the biggest buyer of South African coal exports. The Energy Information Administration ("EIA"), forecasts that, between 2013 and 2040, Australia's coal exports will increase by 85-million tonnes of coal, while Southern Africa (South Africa mainly) is expected to lift its coal exports by 23-million tonnes. It adds that the higher exports in from these two regions are mainly owing to rising thermal coal imports in Asia. Coking coal demand is also expected to increase due to higher steel production, especially in India.
	Price and volume forecasts and the basis for these forecasts.	Volume forecasts based on reserve LoM plan and HCC fines not included in the reserve plan, but deemed reasonable based on test work. Prices as per forecasts sourced from client from Afriforesight's long term coal price consensus forecasts as from June 2023.
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	A product offtake agreement is in place with ArcelorMittal South Africa Limited ( <b>AMSA</b> ) to supply AMSA, domestically, with up to 450ktpa of steelmaking HCC and arrangements exist for the marketing of the balance of saleable production.
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.	<p>The weighted Average Cost of Capital ("WACC") was used to calculate the discount rate for the project. The following were considered:-</p> <ul style="list-style-type: none"> <li>• Annualised risk free rate of 10.01% was considered an acceptable risk-free rate.</li> <li>• The market risk premium of 6.0%, a rate generally considered as being the investor's expectation for investing in equity rather than a risk-free government bond.</li> <li>• The beta of a stock is normally used to reflect the stock price's volatility over and above other general equity investments in the country of listing. Minxcon used an in-house model to calculate a beta for Makhado based on a number of operational risks. A beta of 0.53 was calculated.</li> <li>• The D:E ratio of 42.78%:57.22% was used in the financial model.</li> </ul> <p>This resulted in a real WACC discount rate of 6.05% post tax to value the Project.</p> <p>In generating the financial model and deriving the valuations, the following was considered:-</p> <ul style="list-style-type: none"> <li>• This Report details the optimised cash flow model with economic input parameters;</li> <li>• The cash flow model is in constant money terms and done in ZAR;</li> <li>• The DCF valuation was set up in financial years ending June, valuation date is Jan 2023;</li> <li>• The impact of the Mineral Royalties Act using the formula for unrefined minerals was included;</li> <li>• Working Capital was also taken into account;</li> </ul>

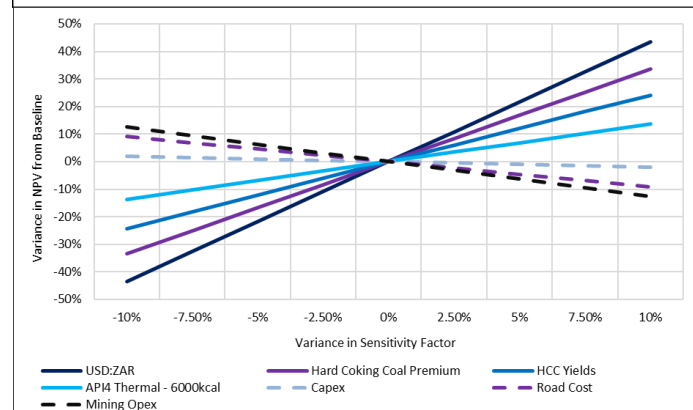
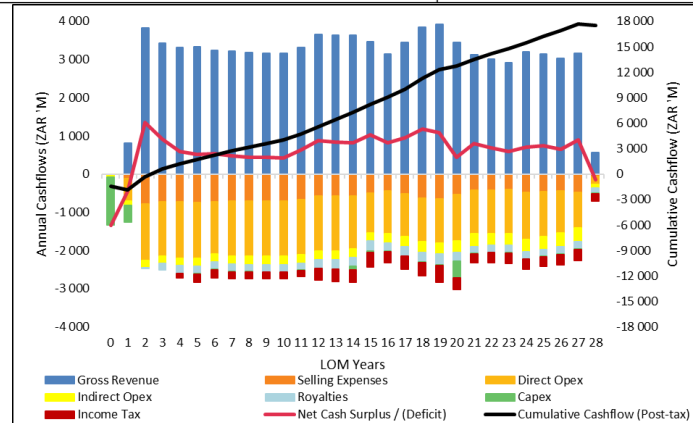
<sup>1</sup> Afriforesight coal price consensus long-term forecasts as from June 2023.

<sup>2</sup> Ibid.

NPV ranges and sensitivity to variations in the significant assumptions and inputs.

- Valuation of the tax entity was performed on a stand-alone basis; and
- The full value of the operation was reported for the mine.

Unit Revenue and Operating Margins		US\$/Salable t	ZAR/Salable t
Gross Revenue		114	2 144
Gross Revenue less Fully-allocated Cost (C3)		31	581
Fully-allocated Cost Margin (C3 Margin)		27%	
EBITDA Margin		30%	
LOM Financial Metrics		US\$ 'M	ZAR 'M
Free Cashflow (Post-tax)		936	17 615
<b>NPV Post Tax @ 6%</b>		<b>361</b>	<b>6 805</b>
NPV Post Tax @ 10%		211	3 979
Internal Rate of Return (IRR)		37%	



The NPV is most sensitive to variances in the USD:ZAR Forex rate, HCC price and HCC yields. The NPV increases by 45%, 35% and 25%, respectively, when the USD:ZAR Forex rate, HCC price and HCC yields

		are each increased by 10%. Conversely, the NPV is less sensitive to changes in mining operating costs and product trucking costs. The NPV decreases by 12% and 9% when mining costs and product trucking costs are increased by 10% respectively. The break-even HCC and TC indexed prices, where the NPV is zero, were calculated to be US\$171/t and USD86/t respectively.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	An approved Social and Labour Plan is in place. A number of social responsibility projects and programmes have been formulated and are primarily focused on the development of employees and upliftment of the local community.
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	
	Any identified material naturally occurring risks.	Risk assessments workshops held and no material risks.
	The status of material legal agreements and marketing arrangements.	A product offtake agreement is in place with ArcelorMittal South Africa Limited ( <b>AMSA</b> ) to supply AMSA, domestically, with up to 450ktpa of steelmaking HCC and arrangements exist for the marketing of the balance of saleable production.  A contract for the construction of the powerline is in place with EHL Engineering Pty Ltd. EHL have been chosen to supply power to the mine for 1.5MVA Bulk Supply at 22kV, and develop the electrical infrastructure. This contract is an Engineer, Procure and Construct (EPC/Turnkey) Contract which is based on the FIDIC Silver Book with a contract price of approximately R55 million.
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	All governmental approvals as required have been approved. The Project has a valid mining right, EMP, IWUL and EA and are therefore fully permitted to commence with construction.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	The Indicated Coal Resources and Measured Coal Resources were converted in Probable and Proved Coal Reserves. The Coal Reserve comprises of 92% Measured Coal Resources and 8% Indicated Resources.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The results as presented appropriately reflect the CP's view of the deposit.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	The Probable Reserves only contains 8.5Mt of Indicated Resource which were derived from the Measured/Indicated split of: 92.0% Measured & 8.0% Indicated Coal Resources The Proved Coal Reserves of 97.8 Mt ROM is derived from the Measured Coal Resources.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	N/A
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	The coal classification is based on extensive drilling and the current classification is to a feasibility level of accuracy. The Coal Reserve classification includes Measured and Indicated resources. Inferred Resources are extracted prior to the Coal Reserve quantification as displayed in the table and waterfall graph. The Bottom Middle Seam was excluded from the Coal Resources due to the lower economic viability of the seam. The modifying factors utilised in the conversion to Coal Reserves referenced prior feasibility studies and the Scenario 2 Plan (August 2022). The modifying factors have been documented in the Project Definition Statement compiled as part of preparing for the implementation of the project.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The statement relates to global estimates on a full project basis.

	<p>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</p>	<p>The modifying factors utilised for the conversion from Coal Resources to Coal Reserves are well documented in the completed Project Definition Statement, referencing the mining studies completed in 2022 to a feasibility study level of confidence.</p>
	<p>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</p>	<p>The Coal Reserve was compared to the previous Coal Reserve by Minxcon stated 22 March January 2022. The changes in the Coal Reserve statement is tabulated extensively in the main Report of this 30 June 2023 team declaration. The Coal Reserves for the Central and West Pit areas are unchanged from 2022 and increased in the East Pit with 36.9Mt, from 17.7Mt to 54.6Mt ROM coal. The slight increase in yield of 3.0% for HCC &amp; 1.6% for Thermal coal is a result of the larger mining target area of the East Pit with naturally higher yields compared to the West &amp; Central Pit, as well as further analysis of the fines product yield which was done and written up in technical note. Overall yield for the total Reserve increased with 1.4% points for HCC and 0.4% for the Thermal Coal Product.</p>