

Black Rock Mining and the Mahenge Project

Best-In-Class Graphite Mine Development

121 Conference, New York

17-18 October 2019



BLACK ROCK
MINING LIMITED



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Competent Person(s) Statement

The information in this report that relates to Exploration Results and Mineral Resource Statements is based on information compiled by John de Vries, who is a member of the AusIMM. He is an employee of Black Rock. John de Vries has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 and 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

The information that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd) and Mr Aidan Patel (Consultant with Patel Consulting Pty Ltd). Mr Barnes and Mr Patel are members of the Australian Institute of Mining and Metallurgy and have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Barnes, Mr Patel and Mr de Vries consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

The Ore Reserves have been compiled by Black Rock, under the direction of Mr John de Vries, who is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr de Vries is a full-time employee of Black Rock and holds performance rights in the company as part of his total remuneration package. Mr de Vries has sufficient experience in Ore Reserve estimation relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves".

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Various statements in this presentation constitute statements relating to intentions, future acts and events. Such statements are generally classified as "forward looking statements" and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates" and similar expressions are intended to identify forward-looking statements. Black Rock cautions shareholders and prospective shareholders not to place undue reliance on these forward looking statements, which reflect the view of Black Rock only as of the date of this presentation. The forward looking statements made in this presentation relate only to events as of the date on which the statements are made.



Black Rock at a glance

Emerging premium graphite player

Australian-listed company (ASX: BKT)

100%-owner of Mahenge Graphite Project

Located in Tanzania

Mineral Resource of 212Mt at 7.8% TGC¹

Ore Reserve of 70Mt at 8.5% TGC¹

Long-life project producing high-purity,
coarse distribution graphite concentrate

Outstanding forecast economics

Construction-ready subject to RAP, financing
and confirmation of Tanzanian agreement

Capital structure

ASX ticker	BKT
Share price (7 October 2019)	\$0.06
Shares on issue	622.5 M
Options and performance rights	57.0 M
Market capitalisation (diluted)	A\$41 M
Cash (30 September 2019)	A\$3 M
Debt (30 September 2019)	Nil

Major shareholders

Copulos Group	21.2%
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¹ For further detail on Mineral Resource and Ore Reserve estimates refer to Appendix slides.

The leaders to deliver

Proven mine
development, project
finance and African
operating experience

Board

John de Vries, Managing Director and CEO

- Mining Engineer with over 35 years' experience in mine development and operations; professional experience spans Africa, the Pacific, the FSU, North and South America and Australia
- Previously General Manager Technical Services with St Barbara, integral in the 2014 turnaround; earlier operational management roles at BHP Nickel West and Orica Mining Services

Richard Crookes, Non-Executive Chairman

- Geologist with over 30 years' executive experience in the resources and finance industries; raised capital and financed a number of projects globally, including across Africa
- Prior roles include Investment Director at Mining PE Fund EMR Capital, Executive Director in Macquarie's Metals & Energy Capital and Chief Geologist / Mining Manager at Ernest Henry Mining

Ian Murray, Non-Executive Director

- Finance Executive with over 20 years' corporate experience in the publicly listed resources sector; led highly successful project developments, major acquisitions, company restructures and stock exchange listings
- Previous roles include CEO of Gold Road Resources, CEO and CFO of DRDGold Ltd, Director of Rand Refinery Ltd and GoldMoney.com, and senior positions at KPMG, PwC and Bioclones

Gabriel Chiappini, Non-Executive Director & Company Secretary

- Chartered Accountant with over 20 years' experience in the commercial sector; assisted a number of companies to list on the ASX and involved with total equity and debt raised of over A\$400M
- Over the last 15 years has held positions of Director, Company Secretary and Chief Financial Officer in both public and private companies with operations in Australia, the UK and the US

Executive management

Raymond Hekima, Vice President – Corporate (Tanzania)

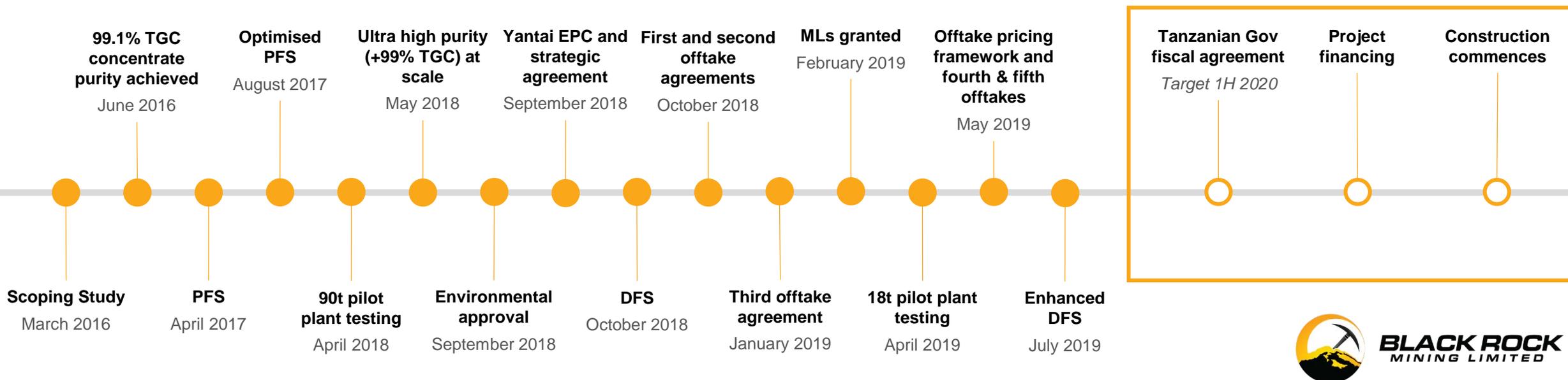
- Qualifications in Environmental Sciences and Management with over 13 years' experience in the government and corporate sectors, including significant specific permitting expertise
- Responsible for overall business and operations in Tanzania and key relationships and interactions with national government, local government, NGO's and community relations



What we have delivered to date

A sector-leading approach to managing project and market risks

- Largest pilot plant run of any graphite development project globally
- Highest TGC purity achieved at commercial scale through simple flotation
- Diverse portfolio of credible offtake partners
- Detailed offtake pricing framework agreed
- Right-sized market entry profile and modularised scalability
- Enhanced DFS level of project definition
- Sector-first EPC vendor-bid plant proposal with performance warranty
- Environmental approval and MLs granted



A snapshot of the Mahenge Graphite Project

Simple open pit mine development with outstanding forecast returns

US\$1.2B

Post-tax, ungeared, real NPV₁₀

45%

Post-tax, ungeared, real IRR

83ktpa

Phase 1 output (1Mtpa ROM)

US\$116M

Phase 1 development capex

350ktpa

Phase 4 output (4Mtpa ROM)

95 – 99%+ TGC purity
59% +80 mesh, 41% -80
Concentrate product

US\$1,301/t

Basket graphite price (net FOB)

US\$494/t

LOM All-In-Sustaining-Cost

26 years

Initial operating life

Following release of the Enhanced Definitive Feasibility Study (DFS) on the Mahenge Graphite Project in July 2019 (see Black Rock ASX release dated 25 July 2019, *Mahenge Enhanced DFS with Executive Summary*), Black Rock confirms that it is not aware of any new data or information that materially affects the results of the Enhanced DFS. All material assumptions and technical parameters, including in the estimation of Mineral Resources or Ore Reserves, underpinning the estimates in the Enhanced DFS continue to apply and have not materially changed. The estimated Ore Reserves and Mineral Resources underpinning the production and financial forecasts in the Enhanced DFS were prepared by Competent Persons in accordance with the requirements in Appendix 5A (JORC Code).



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Black Rock: The premier graphite exposure

A world-class deposit with a superior development strategy

01

Upstream focus with highly economic mine project

06

Premier location and logistics options

02

Deep evaluation work at real commercial scale

07

Fit-for-purpose project execution plan

03

Leading product purity and residual chemistry

08

Responsibly sourced, sustainable graphite

04

Sensible market entry and growth strategy

09

Blended, risk-adjusted finance process

05

Realistic and transparent graphite price views

10

Superior stakeholder engagement

01

Upstream focus with highly economic mine project

Leveraging our experience and expertise in the right places

- Core upstream, mine development strategy at Mahenge
- Strongly differentiated from many of our graphite development peers
- Key competitive advantage is our resource and its properties
- Focussed on where our experience and expertise lets us extract value
- No downstream 'backfill' or attempted market creation/insertion
- Seeking to supply our customers, not compete with them
- Large deposits drive 25+ year mine life at expanded production rates
- Enhanced DFS evidences outstanding forecast economics



02

Deep work at real commercial scale

Provides strong
knowledge of our
project proposition

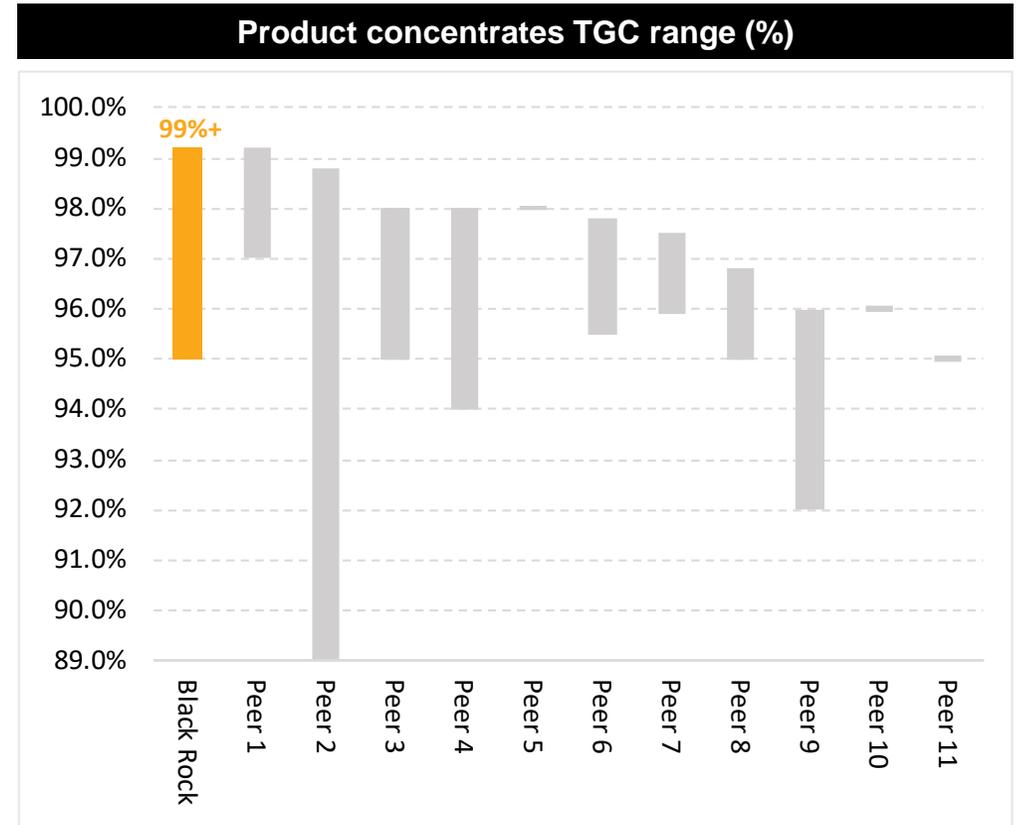
- Graphite is far from homogeneous
- We have done the work needed to truly understand our:
 - Deposit properties
 - Mine and process parameters
 - Key product streams
- Our testwork results have been delivered at **commercial scale**
- Two major pilot plant runs totalling almost 110 tonnes of material
 - 90t at SGS Lakefield (Canada); 50t Cascade deposit and 40t Ulanzi
 - 18t at Yantai Jinyuan (China); Ulanzi deposit
- Strong consistency of performance and results



Leading product purity and residual chemistry

A critical differentiator

- No overprint mineralisation = ability to deliver superior product purity and residual chemistry
- Enables 99%+ TGC concentrate purity with solely conventional flotation processing (at commercial scale)
- Highest grade and cleanest graphite concentrate globally; as recognised by leading market experts
- Achieved without excessive polishing = maintaining coarse flake size distribution
- Superior value-in-use properties
- Nature of residual chemistry particularly critical
- Distinct, and now widely recognised, Mahenge deposit signatures



Source: Publicly available company data, October 2019

Peer basket comprises the following ASX-listed graphite project developers: WKT, MNS, GPX, HXG, SYR, BAT, VRC, TON, KNL, SVM, BEM

- Sensible entry size (~85ktpa concentrate): limited enough to allow product market integration but significant enough to deliver meaningful returns
- Coarse distribution of Mahenge enables an effective dual project:
 - Approx. 60% coarse flake (+80 mesh; +180 microns) for premium large flake markets of limited competition and demanding product
 - Approx. 40% medium and fine flake (-80 mesh; -180 microns) for traditional graphite markets and EV battery usage
- Our initial production of medium/fine flake (~33ktpa) represents only around 5% of the current total market size for this competitive product
- Diversity of offtake partners (now at 5) reduces counterparty/contract risk
- Modularised further growth driven by customer demand and market pull

04 Sensible market entry and growth strategy

Right-sized and hitting the premium segments

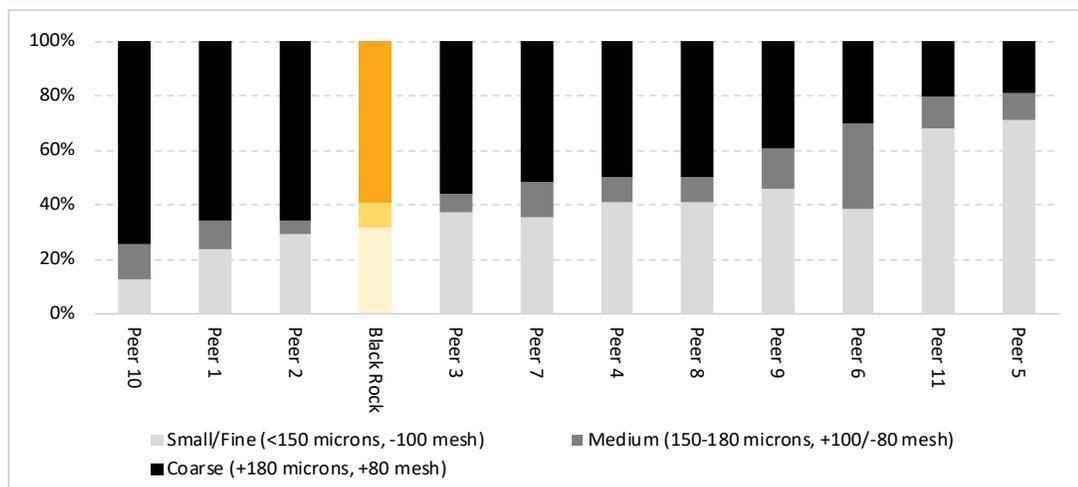
For full details on existing offtake arrangements refer to Black Rock ASX releases dated 22 October 2018, 29 October 2018, 7 January 2019 and 8 May 2019

Chart source: Publicly available company data, October 2019

Peer basket comprises the following ASX-listed graphite project developers: WKT, MNS, GPX, HXG, SYR, BAT, VRC, TON, KNL, SVM, BEM



Concentrate product flake size distribution



Initial offtake (tonnes, graphite concentrate)	Year 1
Heilongjiang Bohao	20,000
Qingdao Fujin	10,000
Taihe Soar	20,000
Qingdao Yujinxi	20,000
Yantai Jinyuan	15,000
TOTAL	85,000

05

Realistic, transparent price views

Reflective of actual
market dynamics
and trends

- Balanced approach relative to peers
 - Lower relative large flake prices given less liquid markets and significance to basket price calculation
 - Higher relative medium/fine flake prices given observed purity premium and Mahenge concentrate grades
- Based on:
 - Prevailing Refwin (China) and Lone Star Tech (ex-China) price data
 - Roskill forecast price deck (2018)
 - Agreed customer offtake pricing framework¹

Enhanced DFS segments (Mesh #)	Segment pricing (US\$/t)	Basket weight (%)	Shipping (US\$/t)	Channel & agent (US\$/t)	Contract discounts (US\$/t)	Basket FOB (US\$/t)
+32	1,579	5	1.65	1.97	1.97	73
+50	1,449	18	5.96	6.52	6.52	242
+80	1,444	36	11.89	12.98	12.97	481
+100	1,378	9	3.06	3.19	3.19	118
-100	1,314	32	10.52	10.44	10.44	386
	1,404	100	33.08	35.10	35.10	1,301

Prices based on average concentrate purity of 98% graphite by LOI



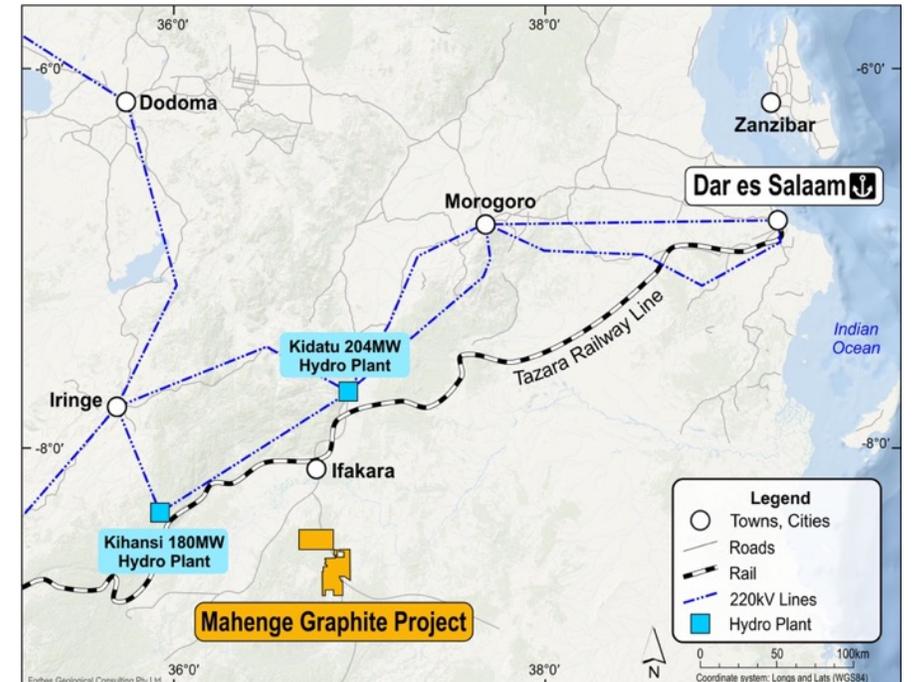
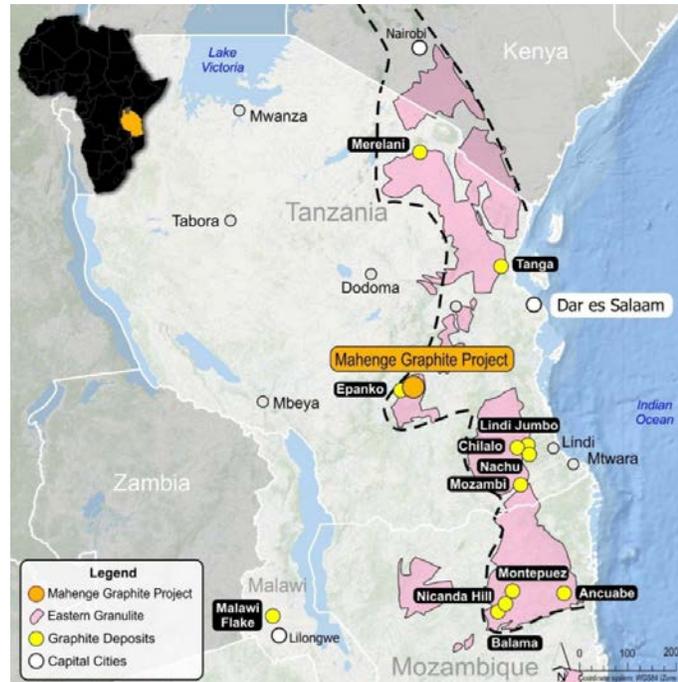
¹ For full details on agreed customer offtake pricing framework refer to Black Rock ASX release dated 8 May 2019, *BKT Delivers Offtake Framework Pricing Agreements*

06

Premier location and logistics

A key differentiator that drives value

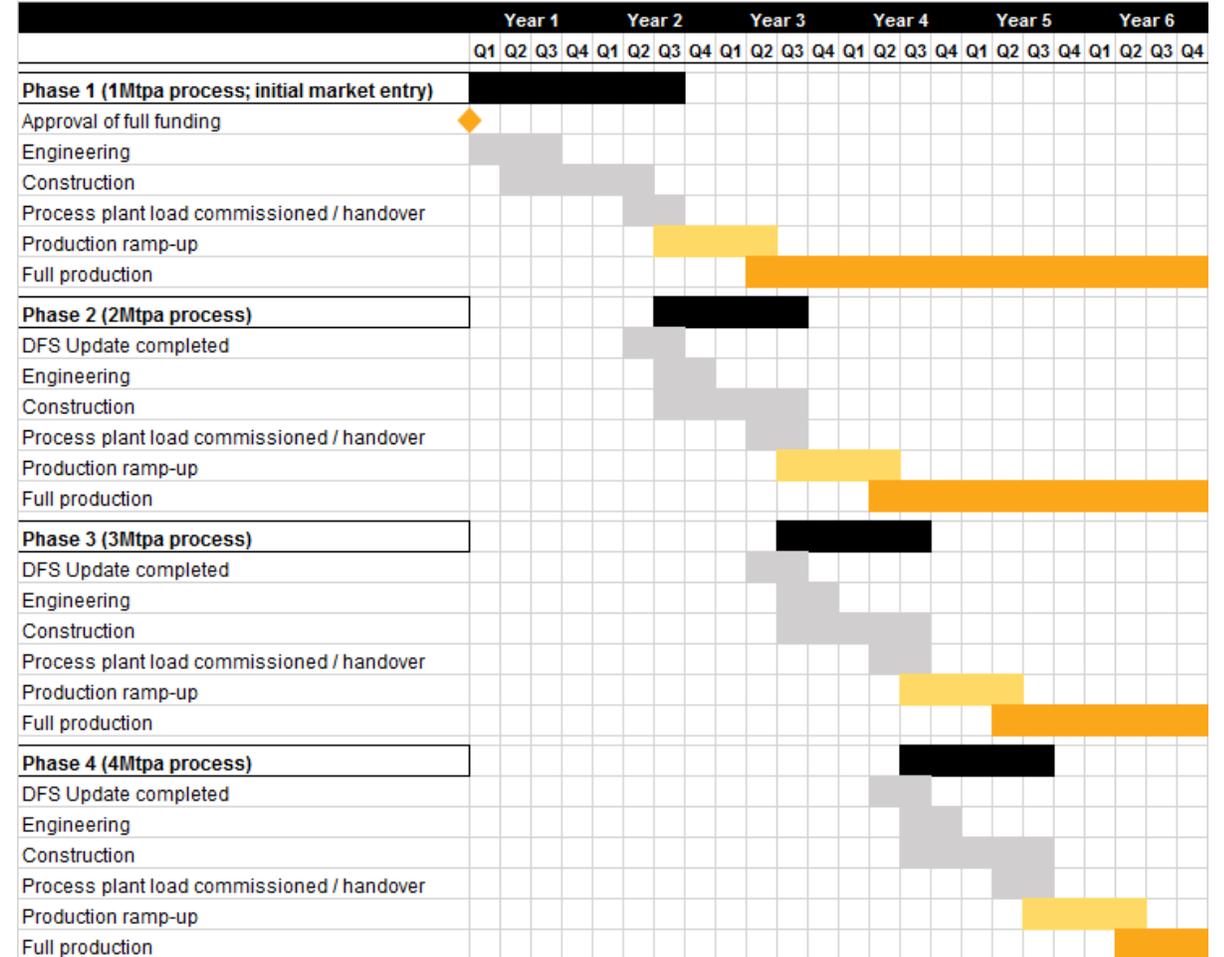
- Northern location of Mahenge offers significant competitive cost advantage
- Proximity and access to rail and major port at Dar es Salaam
- Dar es Salaam the premier coastal export option
 - High-volume container port, superior logistics, no seasonal interruption and greater service area (versus Mtwara, Pemba, Nacala)
 - Lower working capital requirements and easier inventory management
 - Minimises frictional costs and erosion of FOB value – key drivers
- Ready pathway to grid power and excellent trucking supply route/logistics



Fit-for-purpose project execution plan

Low risk build and a plant design dedicated to product consistency

- Major fabrication of plant components prior to shipping and on-site construction
- Initial diesel genset power generation to minimise start-up and early supply risk
- High level of plant automation and multiple reprocess points ensures consistency of product
- Contract mining strategy
- Modular growth execution (4 x 1 Mtpa stages) driven by market pull
 - Meeting the market rather than force feeding it
 - Disciplined approach to FID at each phase



- Equator Principles framework fully employed
- Complete traceability of supply chain and proof of ethical sourcing
- Strong community support and predominant use of local workforce
- Access to hydro grid power (low emissions footprint)
- Large grind size permits dry stack tailings management: eliminates dam failure risk, neutral water balance (ie no net draw), reduced footprint
- Ultra high purity concentrate product = low consumer downstream acid use
- Resource scale delivers long-life asset

08

Responsibly sourced, sustainable graphite

Ethical supply chain requirements met or exceeded

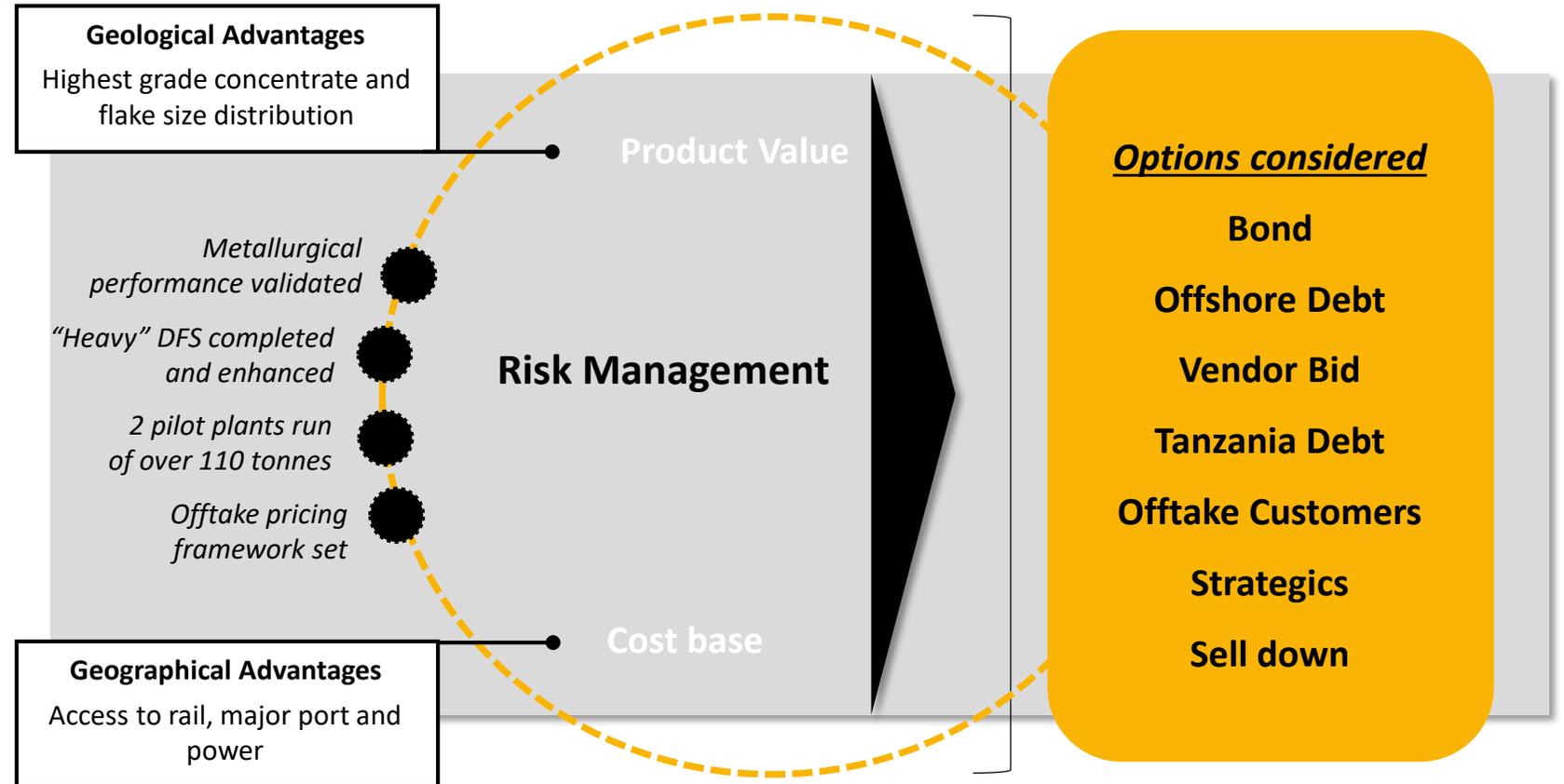


09

Blended, risk- adjusted finance process

To secure the right
funding mix

- Targeting a blended project financing model
- Matching risks to participants best placed to manage them
- Key potential finance stakeholders include EPC vendor, offtake counterparties and Tanzanian government
- ICA Partners mandated as finance adviser



10 Superior stakeholder engagement

Establishing a long-term business to the benefit of all local stakeholders

- Major project drives embedded national value
- Focus on building appropriate, long-term sustainable relationships
- Tanzania remains an excellent domicile – stable and LT conflict-free
- Permits received:
 - Environmental permit
 - Mining licence(s)
 - Resettlement Policy Framework – approved – RAP in progress
- Current process to formalise Tanzanian ownership interest (16% free carry interest) and fiscal agreement; target completion 1H 2020
- Local workforce
 - Strong community support
 - Reduced turnover and ongoing training costs



Black Rock and the Mahenge Project

The leading graphite development proponent

- **Simple open pit project with outstanding forecast returns**
- **Sector-leading product purity and residual chemistry proven at commercial scale**
- **Premier project location and logistics**
- **Risk-appropriate and achievable funding, project execution, market entry and growth strategies**
- **Realistic, transparent pricing outlook and agreed framework**
- **Responsibly sourced, sustainable supply and superior stakeholder engagement**





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Appendix: Mahenge Project Detail



Mineral Resource and Ore Reserve estimates

Category	Tonnes (Mt)	Grade (%TGC)	Contained Graphite (Mt)
Ore Reserves			
Proven	0	0	0
Probable	69.6	8.5	6.0
Total Ore Reserves	69.6	8.5	6.0
Mineral Resources			
Measured	25.5	8.6	2.2
Indicated	88.1	7.9	6.9
Total Measured and Indicated Resources (M&I)	113.6	16.5	9.1
Inferred	98.3	7.6	7.4
Total Measured, Indicated and Inferred Resources (M, I & I)	211.9	7.8	16.6



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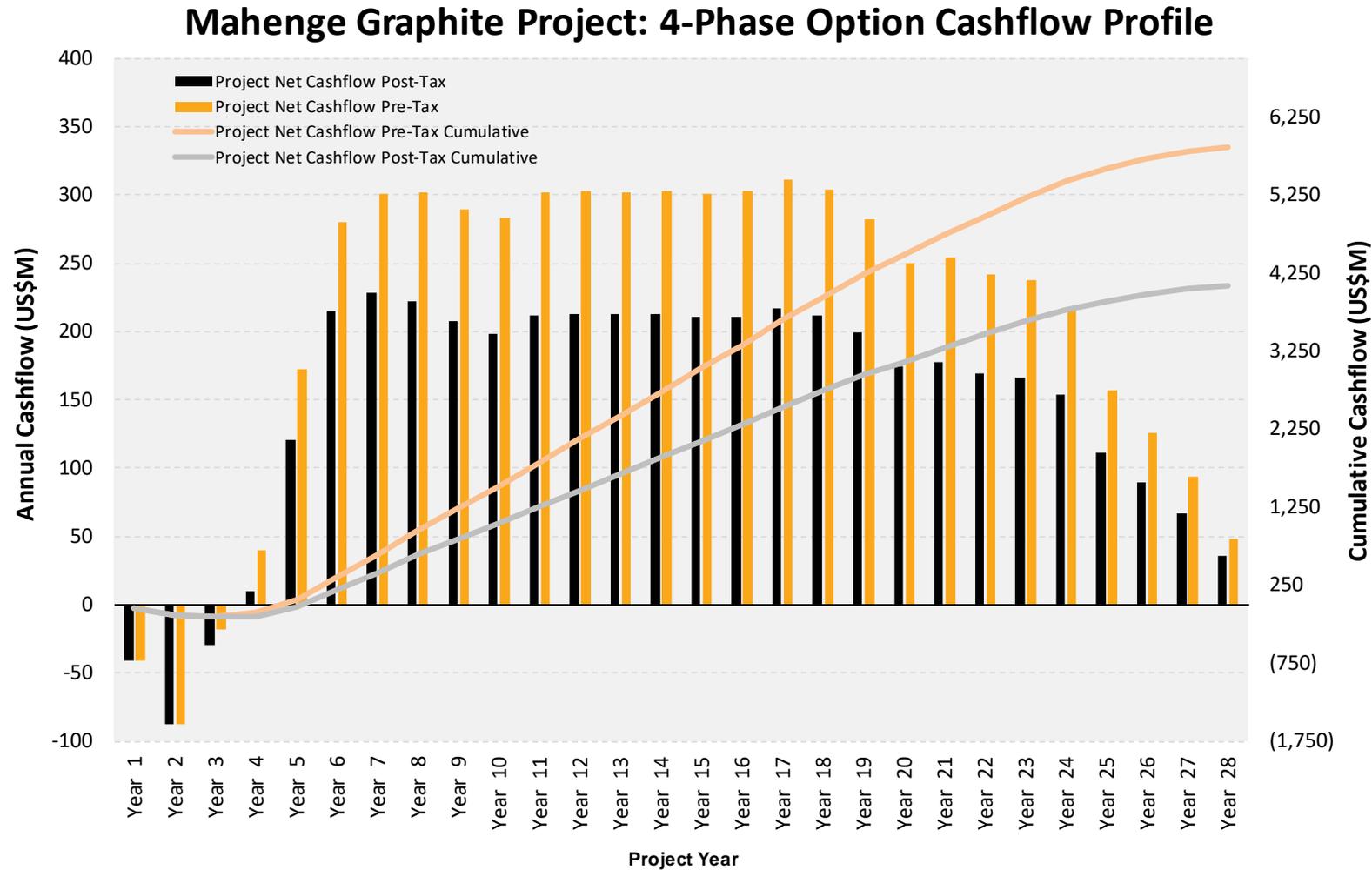
Enhanced DFS: Projected economics

Financial performance summary	Unit	LOM
Project life	Years	27.5
Operating life	Years	26.0
Total LOM net revenue	US\$M, real	9,619
Graphite price (real)	US\$/t	1,301
Total project development capital costs	US\$M	337
C1 cost: real (including withholding tax)	US\$/t	397
C3 cost: real (including withholding tax)	US\$/t	494
Stable state EBITDA (after year 5)	US\$M, real	306
Project NPV @ 10.0% - post tax, ungeared after 16% free carry	US\$M, real	1,161
Project NPV @ 8.0% - post tax, ungeared after 16% free carry	US\$M, real	1,489
Project IRR – post tax, ungeared after 16% free carry	%, nominal	44.8
Maximum project drawdown	US\$M, real	199.1
Maximum cash draw period – from construction start	Years	3.5
Breakeven graphite price (constant real price so NPV=0)	US\$/t	576



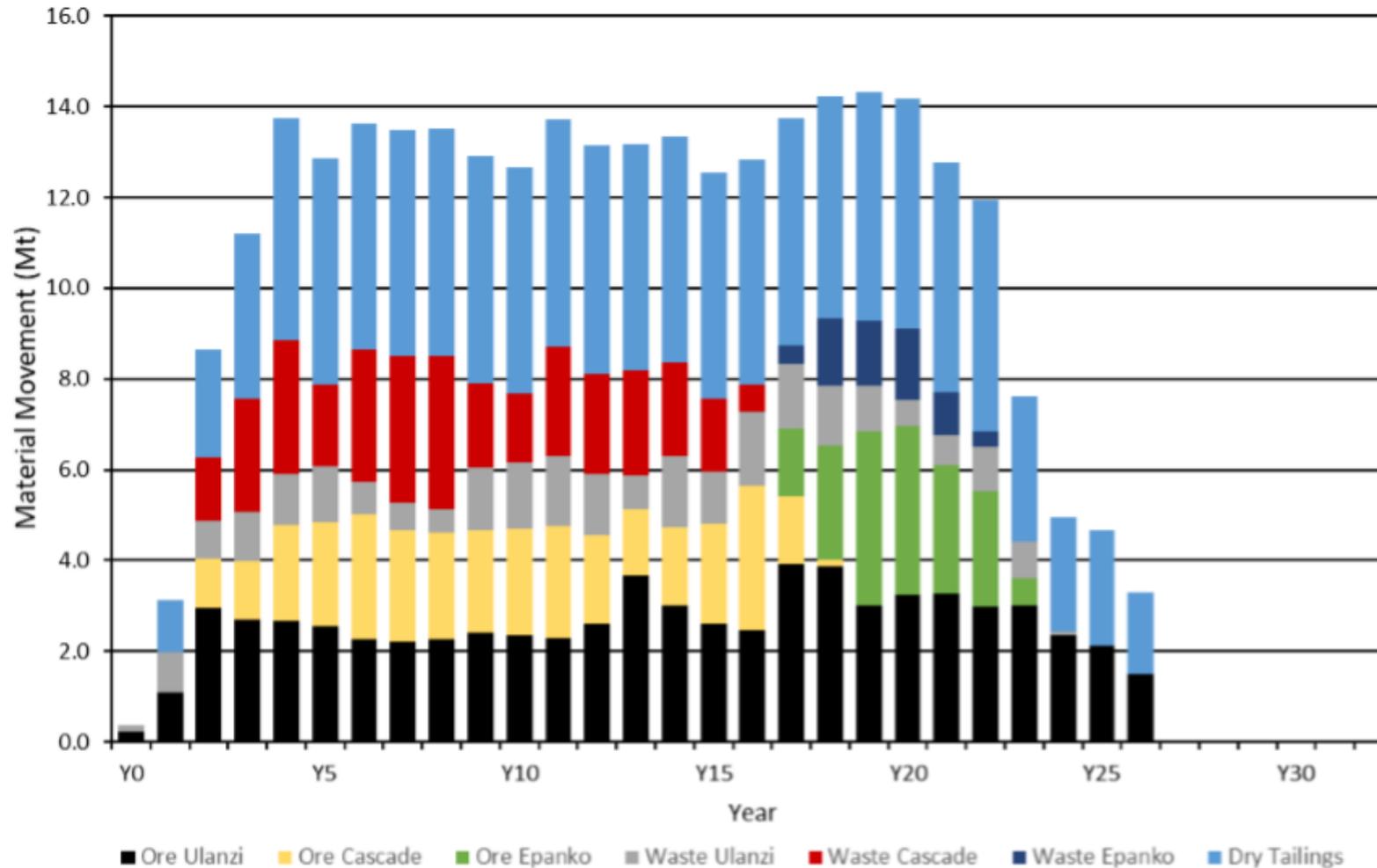
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Enhanced DFS: Forecast cashflow profile



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Enhanced DFS: Mining profile



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Enhanced DFS: Operating cost estimates

Cost	Unit	Onsite power generation (rental)	Grid power (TANESCO)
Charge to provide services (fixed cost)	US\$/month	176,000	70,118
Power supply (variable cost)	US\$/kWh	0.263	0.067

Area	LOM average		
	US\$M pa	US\$/t ore feed	US\$/t graphite product
Mining	30.3	8.28	106.38
Processing	48.1	13.16	169.08
Administration	4.9	1.34	17.26
Logistics (Black Rock)	6.8	1.87	24.04
Transport and Freight	21.6	5.92	75.99
Total	111.7	30.58	392.76



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Enhanced DFS: Capital cost estimates

Area (WBS Level 1)	Stage 1 '000 US\$	Stage 2 '000 US\$	Stage 3 '000 US\$	Stage 4 '000 US\$	Total '000 US\$
Mining	10,165	-	-	-	10,165
Ifakara	1,366	1,041	727	682	3,816
Infrastructure	14,315	3,325	53,705	40,976	112,321
Process plant	50,877	45,300	4,737	4,293	105,207
Site support (temporary services)	1,767	194	194	194	2,349
Indirects	9,904	6,955	8,468	6,955	32,282
Owners Costs	16,174	5,160	6,294	5,160	32,788
Contingency	11,000	7,500	11,200	8,800	38,500
Total	115,569	69,474	85,324	67,060	337,428



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Enhanced DFS: Graphite pricing (at 98% LOI)

Enhanced DFS price deck segments (Mesh #)	Segment pricing (US\$/t)	Basket weight (%)	Shipping (US\$/t)	Channel & agent (US\$/t)	Contract discounts (US\$/t)	Basket FOB (US\$/t)
+32	1,579	5	1.65	1.97	1.97	73
+50	1,449	18	5.96	6.52	6.52	242
+80	1,444	36	11.89	12.98	12.97	481
+100	1,378	9	3.06	3.19	3.19	118
-100	1,314	32	10.52	10.44	10.44	386
	1,404	100	33.08	35.10	35.10	1,301

Prices based on average concentrate purity of 98% graphite by LOI

Customer offtake pricing framework	Regular	Premium	Ultra
Nominal Graphite Grade (TGC)	94.5% - 95.5%	97.5% - 98.25%	>99%
CIF China (ex-duty) (US\$/tonne)	\$1,117	\$1,490	\$2,161
Reference exchange rate	RMB/USD 6.71		
Rise & fall pricing reference US\$/tonne	95% TGC - #100 mesh Benchmark Minerals \$950/t as at Nov 2018		

For full details on the agreed customer offtake pricing framework refer to Black Rock ASX release dated 8 May 2019, *BKT Delivers Offtake Framework Pricing Agreements*



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