



ExplorersConference

Battery Minerals Limited
February 2019

Board Management



Jeff Dowling
Non-Exec Chairman



David FlanaganManaging Director



Brett SmithNon Exec Director



Gilbert George Non Exec Director



Paul Glasson Non Exec Director



Ivy Chen
Non Exec Director



Ben VanroonChief Operating Officer



Nick Day Chief Financial Officer



Nick Stephens Head of Marketing



Naomi Scott General Counsel



Tony Walsh Company Secretary & GM Corporate

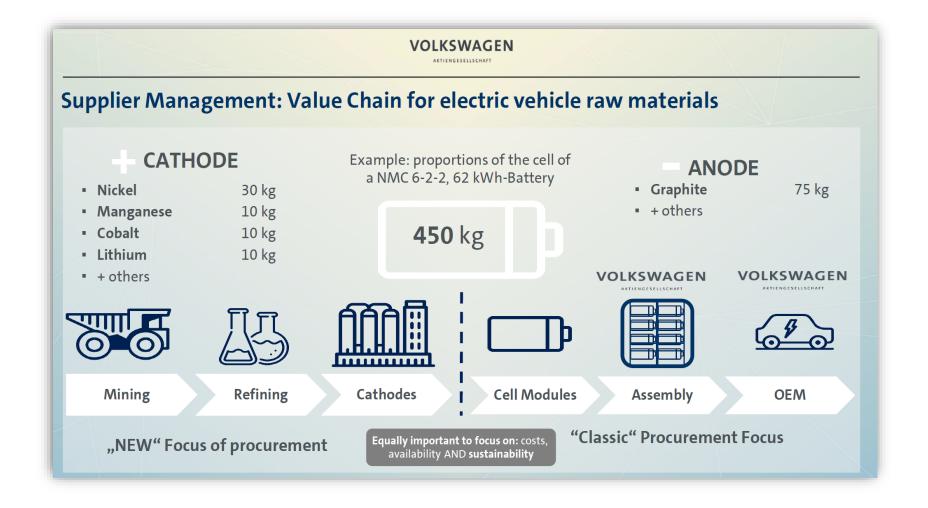








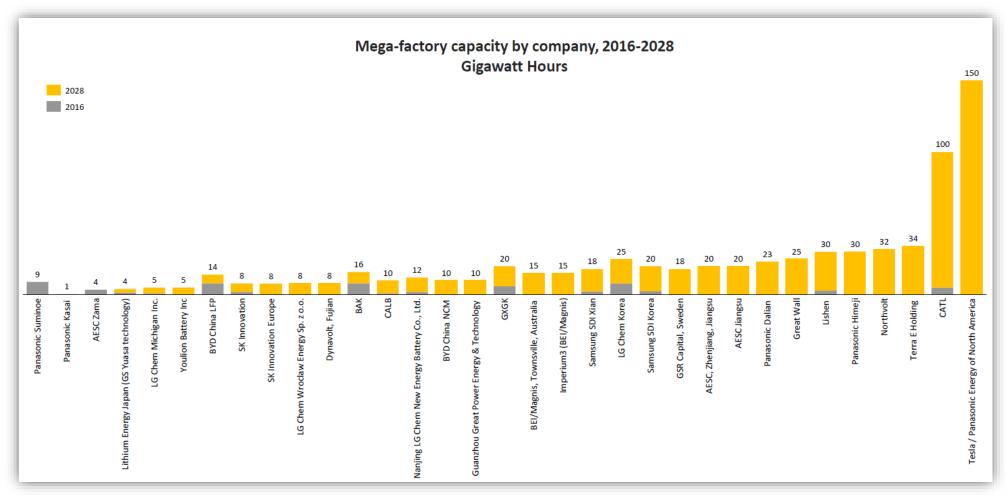
Graphite in Electric Vehicles- VW







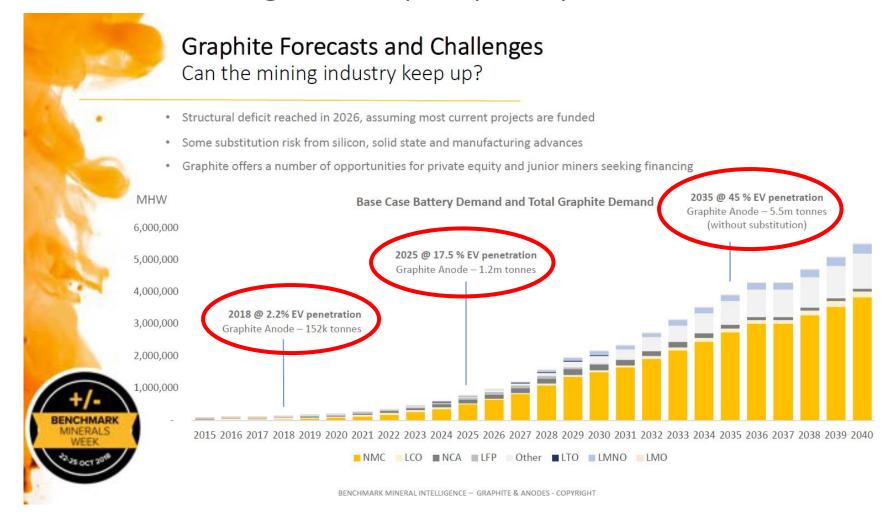
Benchmark Intelligence - Megafactory Capacity - Oct 2018





Benchmark Minerals Intelligence – Megafactory Capacity Oct 18



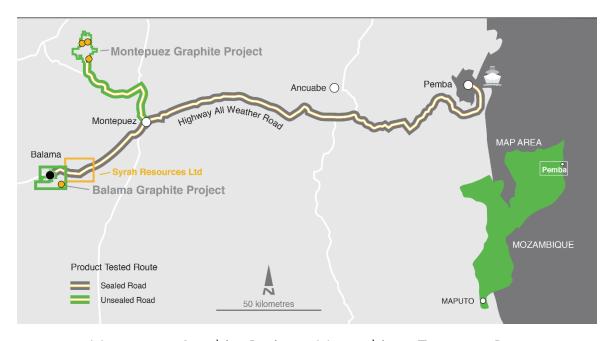




Montepuez Graphite Project - Phase 1



Montepuez Graphite Project ¹	(First Module)
Capex to complete ⁴	US\$39.5 M
C1 Opex (concentrate/t first 10yrs)	US\$361/t
Grade processed	11% TGC (12% for first 18yrs)
Plant Type and Scale	Modular, ~500ktpa
Projected Payback	<2 years
EBITDA per annum ¹	>US\$30 Mpa
Metallurgical Recovery weathered	80%
Metallurgical Recovery fresh	85%
Mine Life	+50 years
Montepuez Basket Price ³	US\$1,064/t
Graphite Concentrate purity	>96% TGC
Mineral Resource ²	119.6Mt at 8.1% TGC
Current Ore Reserve ¹	42.2Mt at 9.3% TGC



Montepuez Graphite Project - Mozambique Transport Route

- Time to first exports ~ 15 months from finance
- Origin Capital Mandated to deliver project finance, Technical DD complete, lender engagement underway
- Mining Licence granted, port allocation, offtake agreements in place. No regulatory impediments to commencing production and exports
- 1. See ASX announcement on 4 December 2018 for "Increase in Montepuez Graphite Reserve" for detailed disclosure. Ore Reserves prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed
- 2. See ASX announcement on 18th October 2018 for "Group Resources Update" for detailed disclosure, Mineral Resources prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed
- 3. Based on the 31 October 2018 Benchmark Mineral Intelligence (BMI) FOB China graphite prices (spot prices), the basket price of Montepuez 96% TGC graphite concentrate is US\$1,064.63/t.
- Lapex to complete excludes VAT (which is expected to be refunded after production commences), Australian and Mozambique corporate costs incurred between project finance close and commercial production, project finance and equity funding fees, working capital needed during ramp up and any potential cost overruns.



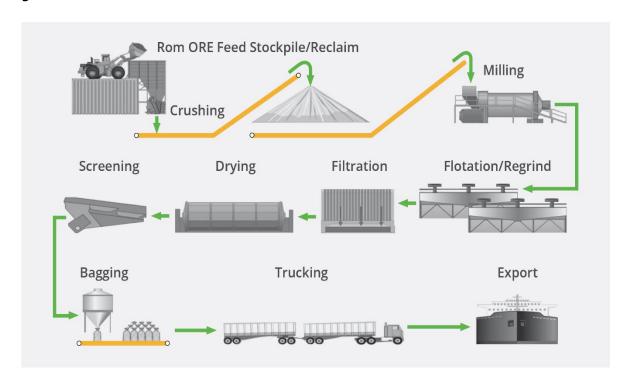


Montepuez Graphite Project - Resources & Reserves

Montepuez Graphite Project ¹ November 2018 Ore Reserve Estimate						
Deposit Ore type Ore (Mt) TGC (%)						
	Weathered	3.58	8.31			
Buffalo	Fresh	16.80	10.06			
	Subtotal	20.38	9.75			
	Weathered	2.41	8.39			
Elephant	Fresh	19.41	8.87			
	Subtotal	21.82	8.82			
	Weathered	5.98	8.34			
TOTAL	Fresh	36.21	9.42			
	TOTAL	42.19	9.27			

Montepuez 2018 Mineral Resource Estimate
(2.5% TGC Cut-off) ²

	Total Mineral Resource				
Туре	Mt % TGC Cont. Graphite (1000 tonnes)				
Weathered	10.3	7.7	790		
Primary	109.2	8.1	8,870		
Total	119.6	8.1	9,660		



Montepuez Graphite Project - Process Flowsheet and Transport

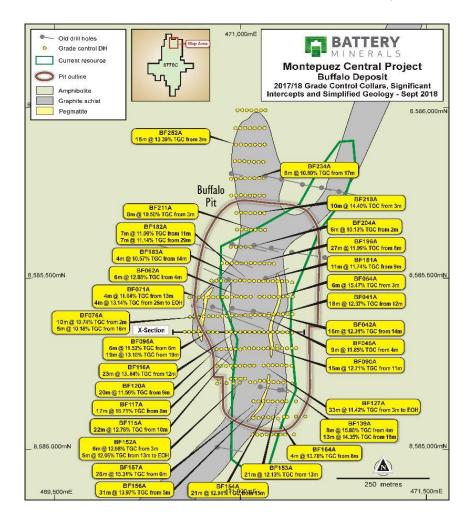


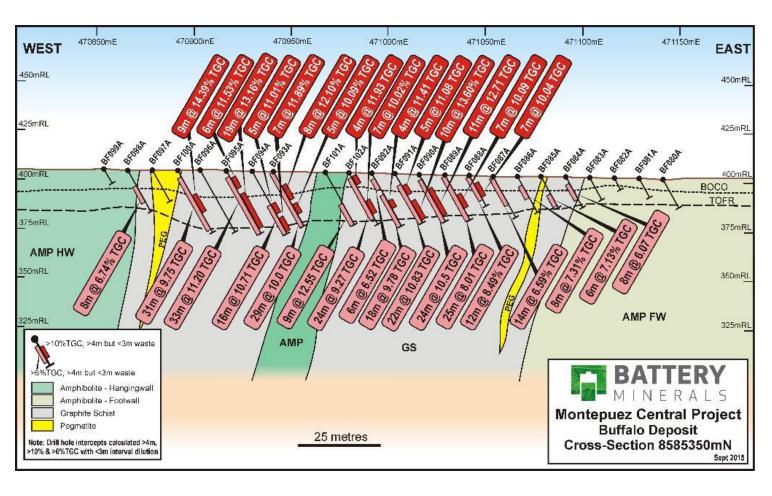
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^{2.} See ASX announcement on 18th October 2018 for "Group Resources Update" for detailed disclosure, Mineral Resources prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed



Buffalo Deposit - RC Grade control - complete







Tailings Storage Facility (TSF) - Wall Complete











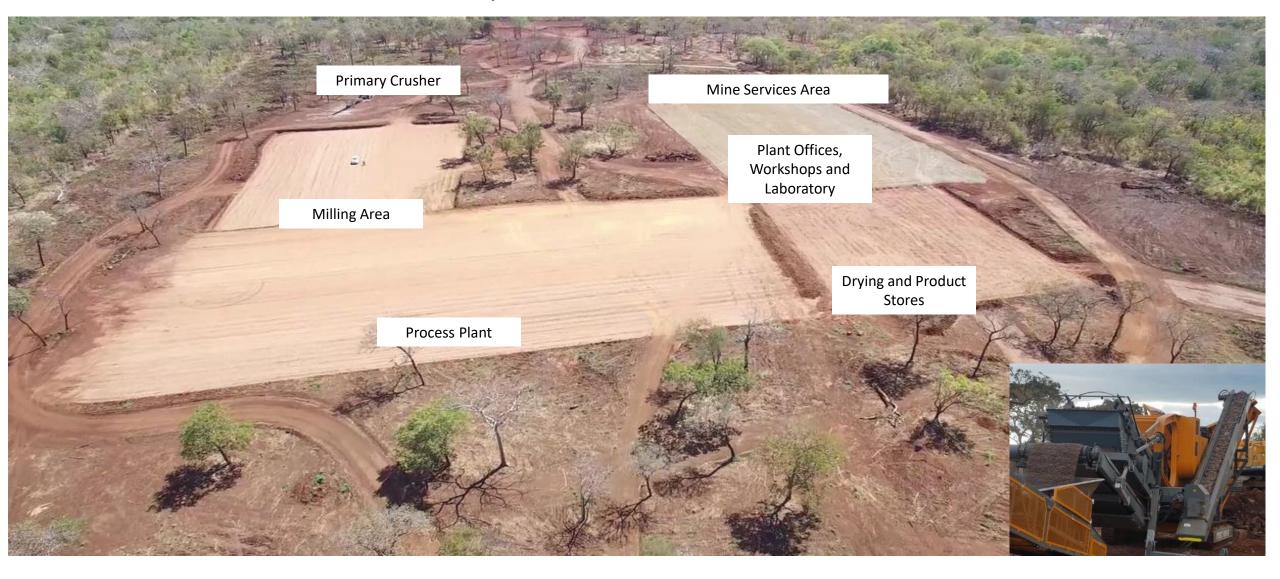






Plant Site Earthworks - Complete

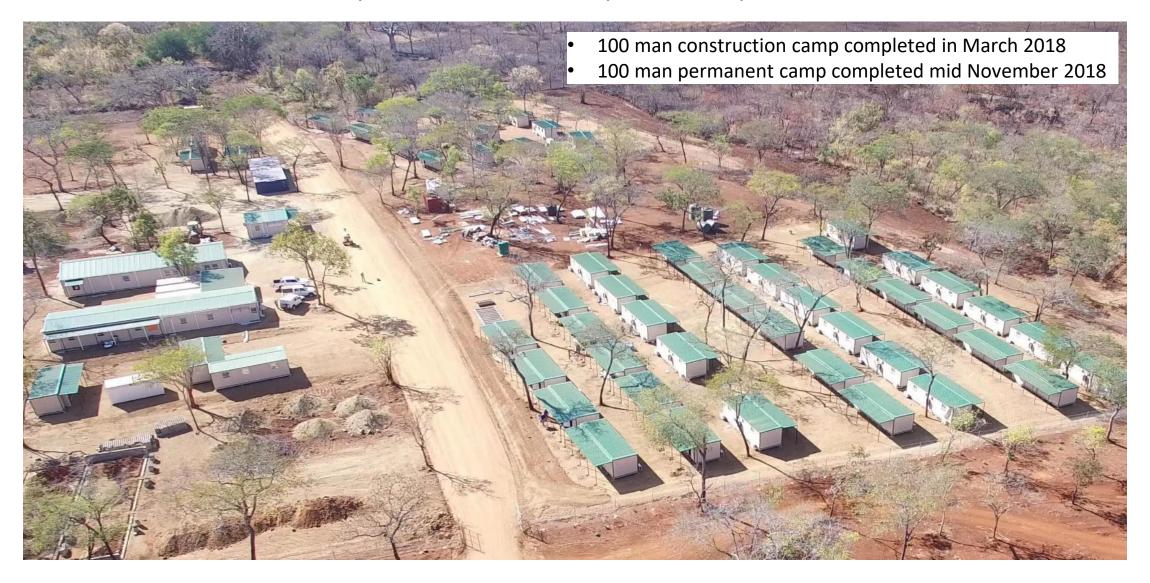






Construction and Operations Camp - Complete









Pemba Port

- **Port Allocation approved:** at Pemba Port for 100,000tpa of graphite concentrate
- Pemba Port: 8-12m deep berthing water,
 capacity 3 4Mtpa cargo and goods
- Vessels: Geared. 30,000t to 40,000 vessels, Container and break bulk facilities
- Shipping Route: Vessel availability as required as Pemba is located on coastal shipping route between Durban and Dar es Salam
- Port Authorities planning expansion of capacity and security for 2020
- Currently loading 12-14 containers per hour (CPH) expanding to 20 CPH











Montepuez Project Main Camp - Complete





















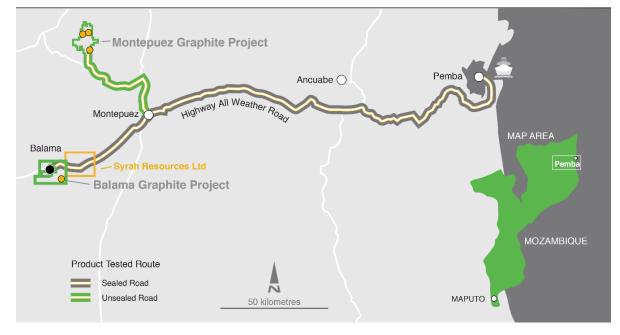




Balama Central Graphite Project - Feasibility Study



Balama Central Graphite Project	Feasibility Study Dec 2018
Annual graphite production	58,000pa
Capex (pre-production)	US\$69.4 M
Opex (concentrate/t first 8 yrs)	US\$363/t
Grade Processed	12.5% TGC
Plant Type and Scale	Modular, ~550ktpa
Projected Payback	~2.3 years
Net Operating Cash Flow	>US\$30 Mpa
Metallurgical Recovery	>93%
Mine Life	+35 years
Balama Central Basket Price ³	US\$1,106/t
Graphite Concentrate purity	+96% TGC
Mineral Resource ²	32.9Mt at 10.2% TGC
Ore Reserves ¹	19.7Mt at 11.1% TGC



Balama Central Graphite Project - Mozambique Transport Route

- ESIA: Due to be completed and submitted early 2019
- Mining License Application: To be submitted in 2019



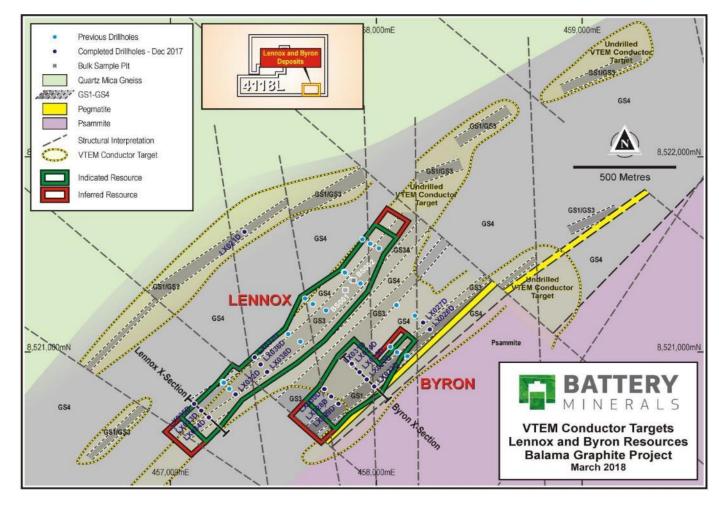
[.] See ASX announcement on 12 December 2018 for "Maiden Reserve for Balama" for detailed disclosure. Ore Reserves prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed

^{2.} See ASX announcement on 29th March 2018 for "Mineral Resource Doubles at Balama" for detailed disclosure, Mineral Resources prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed

^{3.} Based on the latest Benchmark Mineral Intelligence (BMI) CIF China forecast graphite prices for 2022

Balama Central Graphite Project - Feasibility Study





Total Mineral Resource ²					
Domain	Type	Cont. Graphite			
		Mt	%	kt	
	Weathered	3.2	15.7	498	
High Grade GS1 (>10% TGC)	Primary	9.1	15.7	1,429	
(* 1070 100)	Sub-Total	12.3	15.7	1,927	
Medium Grade (6 to 10% TGC)	Weathered	4.2	6.9	288	
	Primary	16.4	6.9	1,142	
	Sub-Total	20.6	6.9	1,430	
	Total	32.9	10.2	3,357	

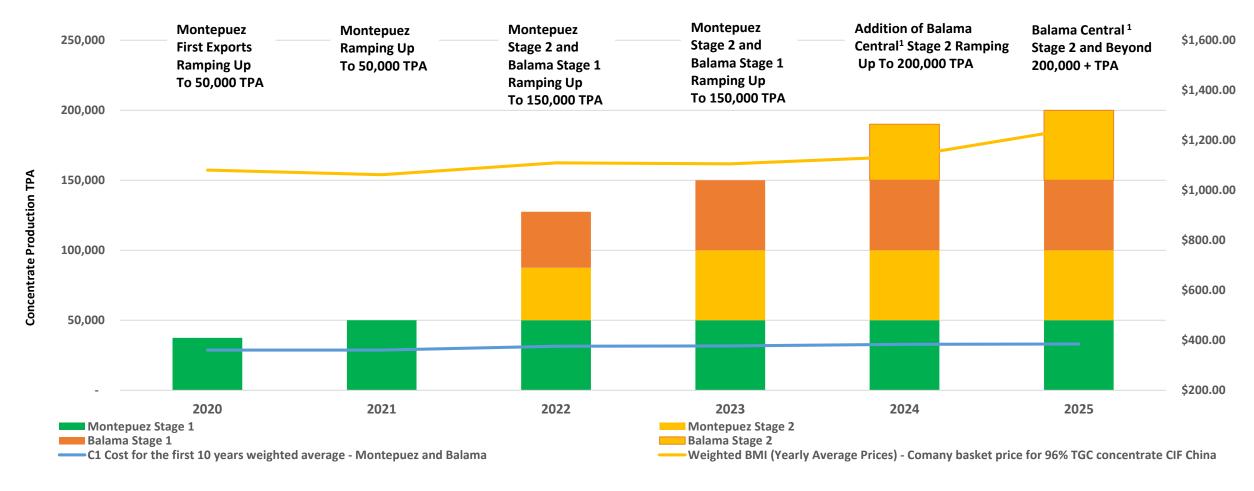
Ore reserve Estimate (6% TGC cut-off grade) ¹					
Pit	Ore type	TGC (%)			
Lennox	Weathered	3.36	11.09		
	Fresh	8.19	11.70		
Total 11.55 11.52					
Byron	Weathered	2.08	10.18		
	Fresh	6.02	10.49		
	10.41				
Total Weathered		5.44	10.74		
	Fresh	14.21	11.19		
	Total	19.66	11.06		

- 1. See ASX announcement on 12 December 2018 for "Maiden Reserve for Balama" for detailed disclosure. Reserves prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed
- 2. See ASX announcement on 29th March 2018 for "Mineral Resource Doubles at Balama" for detailed disclosure, Resources prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed



Battery Minerals - Production Profile





Note 1: Battery Minerals Limited completed a feasibility study and announced a maiden Ore Reserve estimate for its Balama Central Graphite Project in December 2018. The decision to invest in Stage 1 and Stage 2 of the Balama Central Graphite Project will be subject to the completion of all necessary feasibility studies, permit applications, construction, financing arrangements, port access and execution of infrastructure-related agreements.

Note 2: The ramp start date for Montepuez included in this slide are subject to Montepuez project finance being finalised in H1 2019.



Purification and Spheroidisation Testwork

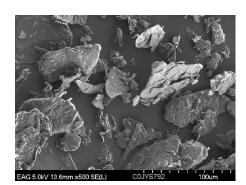




- Progress todate
 - Purification success with Urbix environmentally friendly, low temp
 <80°C, non-HF, process with no impact on flake morphology

Sample Fraction	Initial purity, %TGC	Final Purity, %TGC
-43 micron	95.2	99.95
-150 +43 micron	97.1	99.97
+300 micron	94.3	99.95
-300 +180 micron	93.6	99.98

- Spheroidising testing complete analysis in progress
- Programme completion end 2018



Flake Concentrate

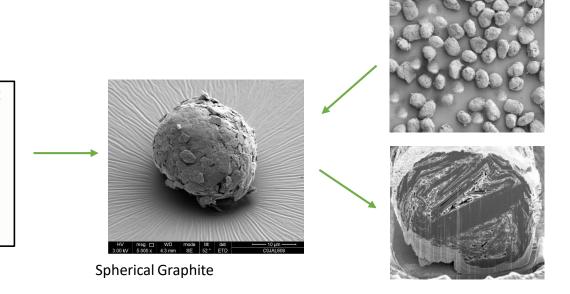
Graphite Concentrate @ ± 95%TGC

Urbix proprietary innovative purification and spheroidisation technology

Purified Spherical Graphite @ +99.95% TGC

Montepuez flake identified with high crystallinity, ultra low Boron content, unique flake morphology and URBIX Purification technology together opening potential new markets

- Nuclear, Concrete, Composites, and military applications
- Montepuez flake used by URBIX in US Department of Energy
- Grant for Nuclear Grade Graphite Development
- Urbix Pilot Plant:
 - Capacity 24,000 tpa+ Purified Flake Graphite
 - High overall recoveries +75% for PSG





Community Engagement - on track





























Project Finance progress



- Independent Technical Report completed on Montepuez Graphite Project implementation plan
- 2. Independent Marketing Report completed on graphite market, offtake and price forecasts
- 3. 12 potential financiers (banks and funds) have signed CAs and are reviewing information in a data-room
- 4. Three site visits conducted for potential financiers and investors
- 5. Four <u>non-binding</u> Indicative Terms exchanged so far with potential financiers, more expected to be exchanged
- 6. Next steps in March and June 2019 Quarters include:
 - review of and advice on <u>non-binding</u> indicative terms
 - additional site visits by potential financiers,
 - further due diligence by potential financiers,
 - legal documentation preparation







Next Steps

- 1. Complete Montepuez project finance
- 2. Complete detailed engineering and procurement
- 3. Award remaining construction contracts
- 4. Urbix, Anode and other downstream Scoping Study
- 5. Construct process plant and remaining infrastructure
- 6. Start mining processing and exporting
- 7. Investigate Vanadium and other opportunities
- 8. Complete construction of Montepuez within 12 15 months of project finance being finalised















Appendices



- Current Projects Summary
- Mineral Resources, Reserves,
- Lithium ion Batteries
- Disclaimer
- Competent person statements





Description

Element

Regulatory

Montepuez project Summary

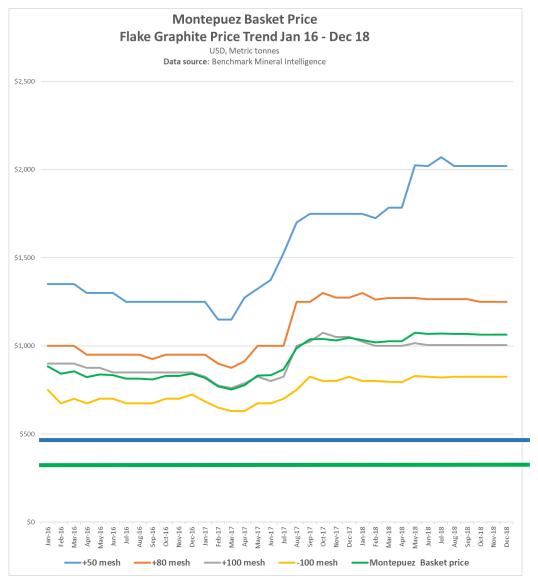
Process Engineering	"Lowest Risk" modular design philosophy. DFS + VES + Detailed engineering and advanced execute commenced. Crushing plant already on site and commissioned.
Construction	Construction has started. 100 person village constructed and commissioned. Tailings storage facility constructed. Site roads complete. Plant site earthworks complete.
Production	Mining fleet and plant design structured for conservative delivery of required tonnages. Mining rate and crushing rate achieved comfortably. Expecting lowest quartile costs.
Product Market	Pricing forecasts verified by independent market analysts. Looking to contribute 5-10% of each of the key natural graphite market segments. The company has 4 offtake

agreements with groups which currently supply into each of these segments. 3 offtake customers are global top 10 graphite consumers. Resource/Reserve Digability resolved through trial mining. Test pit 2,500 tonnes reconciled well with reserve model. Drilled to 50 x 12.5 metre spacings for measured and indicated

- contributing > 42Mt Reserve. This is a conversion of 75% of the Measured and Indicated resource. Granted mining Licence, All environmental approvals granted, Port capacity allocation assigned. No impediments to export and product sales
- Infrastructure Haulage route tested with 2,500 tonne bulk sample haulage to Pemba. Port allocation assigned to BAT for 100.000tpa.
 - Total Capex USD\$51.2M, USD\$13.8M already spent. Only USD\$37.4M in construction spend remaining
- **CAPEX** Strong mining culture, Vale, South 32, large LNG Projects USD\$140BN in different stages of execution. Strong mining law. Fiscal stability regimes. Strong international Mozambique arbitration capabilities. Mining Agreement opportunities available to projects over USD\$5M. Currently in progress.
- Growth High confidence capital and operating estimate to expand production to 100ktpa for ~USD\$35M. Company has a spherical plant in USA in JV since 2016. 3 years of purification and spheronisation/spheroidisation testwork completed to date. Identified several non HF Downstream
- toxic acid purification techniques available to the company in addition to completing a PreFeasibility study on production of purified and coated spherical graphite as a standalone operation in Reno Nevada USA. Testwork is mature.
- Community and Independent auditors have verified the project would comply with an audit against United Nations Equator principles as they relate to community and environment. This is a significant achievement for our company. Environment

BMI - Montepuez Basket Price Jan 16 to Dec 18





Montepuez Graphite Project

- Higher Fines flake product
- Robust basket price of circa US\$1,064/t1

Balama Central Battery Minerals - Flake Graphite Concentrate Sizing

Flake size	Flake size (mesh)	Flake size (micron)	% of concentrate	TGC grade
Fine	-100 Mesh	0 - 150	57.0%	96.0%
Medium	+100 Mesh	+150 -180	11.3%	96.0%
Large	+80 Mesh	+180 -300	20.7%	96.0%
Jumbo	+50 Mesh	+300	11.0%	96.0%

Battery Minerals (Montepuez) delivered cost for first <u>ten</u> years of US\$461cost per tonne cif China

Battery Minerals (Montepuez) Opex cost for first <u>ten</u> years of US\$361 per tonne FOB Pemba



^{1.} Based on the 31 October 2018 Benchmark Mineral Intelligence (BMI) FOB China graphite prices (spot prices), the basket price of Montepuez 96% TGC graphite concentrate is US\$1,064.63/t.



Description

Element

Product Market

Resource/Reserve

Regulatory

Construction

Infrastructure

Mozambique

Growth

Balama Project Summary

Process Engineering	"Lowest Risk" modular design philosophy. Concept Study, Scoping Study, Feasibility Study complete.
Production	Mining fleet and plant design structured for conservative delivery of required tonnages.

High quality resource and reserve estimation completed by independent consultants with benefit of real estimates and technical data from

58ktpa, XXX/t OPEX, XXX/t current basket price,

Project

Pricing forecasts verified by independent market analysts. Exports not earlier than Q1 2021.

Mining licence application expected for submission in early 2019.

Construction is yet to commence but will incorporate learnings from the Montepuez project.

Haulage route tested with 2,500 tonne bulk sample haulage to Pemba. We have provided an expression of interest for a supporting port allocation and will advance these discussions more formally in 2019.

arbitration capabilities. Mining Agreement opportunities available to projects over USD\$5M. Negotiation is yet to commence but we expect to be able to benefit from precedents set as part of the Montepuez Mining Agreement

High confidence capital and operating estimate to expand production to 100ktpa.

Opportunities will be examined in due course. Balama specific anode material production test work is currently only at a high level. Downstream

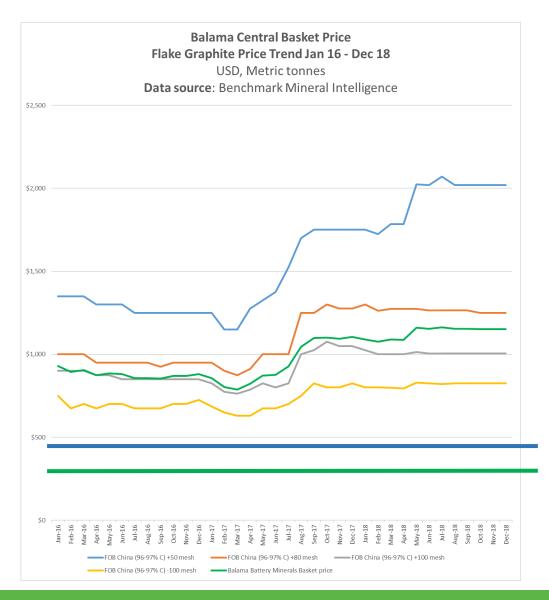
The Graphite resource at Balama contains vanadium. Currently 4-6,000 tpa of vanadium is discharged to the tailings dam as a by product of the graphite concentration Vanadium process. The company is evaluating production and sale of an upgraded vanadium concentrate. The current vanadium price is >USD\$50,000/t

Strong mining culture, Vale, South 32, large LNG Projects USD\$140BN in different stages of execution. Strong mining law. Fiscal stability regimes. Strong international

The company is continuing to collect data and engage with local communities consistent with industry best practice. Environmental Impact Assessment due for Community and completion in December 2018 Environment

BMI - Balama Central Basket Price Jan 16 to Dec 18





Balama Central Graphite Project

- Higher Jumbo and Large flake product
- Higher basket price of circa US\$1,106/t1

Balama Central Battery Minerals - Flake Graphite Concentrate Sizing

Flake size	Flake size (mesh)	Flake size (micron)	% of concentrate	TGC grade
Fine	-100 Mesh	0 - 150	49.4%	96.0%
Medium	+100 Mesh	+150 -180	22.1%	96.0%
Large	+80 Mesh	+180 -300	6.8%	96.0%
Jumbo	+50 Mesh	+300	21.6%	96.0%

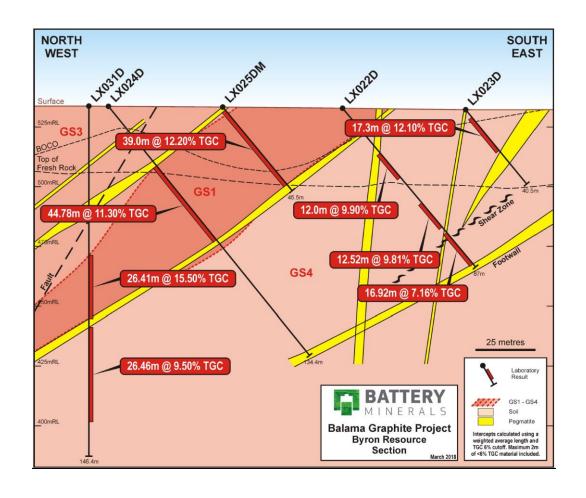
Battery Minerals (Balama Central) delivered cost for first eight years of US\$463 cost per tonne cif China
Battery Minerals (Balama Central) Opex cost for first eight years of US\$363 per tonne FOB Pemba

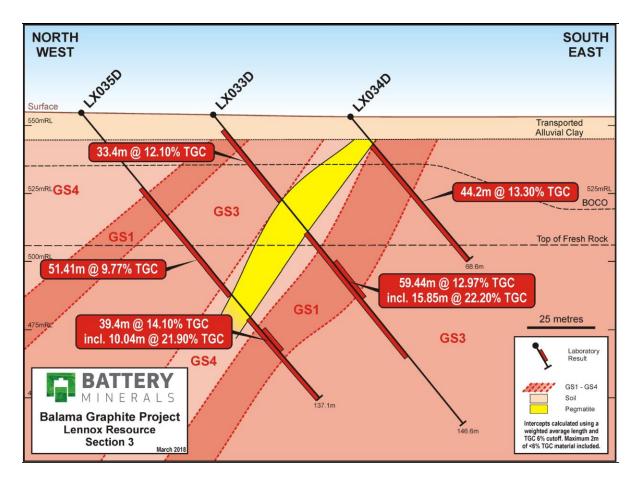


^{1.} Based on the latest BMI CIF China graphite prices for 8 years starting 2022, the forecast basket price of Balama Central 96% TGC graphite concentrate in 2022 is \$1,106/t for the weathered material and \$1,275/t for fresh material.



Balama Central Deposit

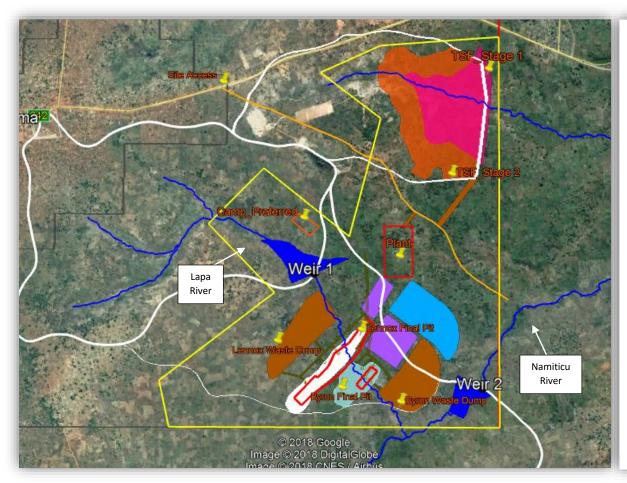


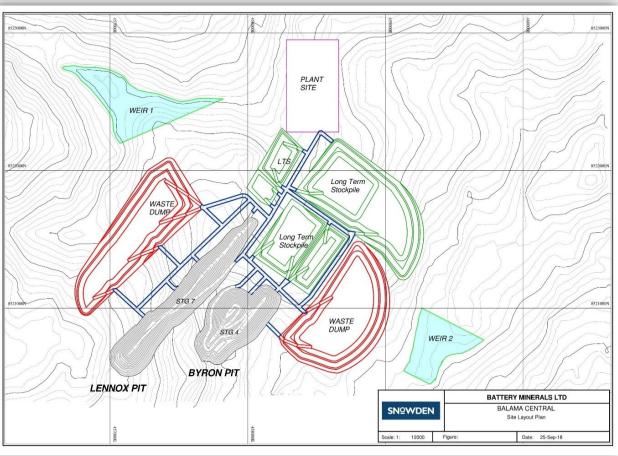




Balama Feasibility Site Layout









Offtake with Key Graphite Processors in China & USA



Group	Term / Amount	Description	Comments
Qingdao Guangxing Electronic Materials Co. Ltd	3 years 10ktpa	One of China's largest graphite groups Researches & develops, manufactures and sells graphite products including spherical graphite, flake graphite and powdered graphite.	 Annual production: Raw material production: 70ktpa; Purified graphite production: 12ktpa; Processed graphite production: 40ktpa; Investment in 2017 to introduce additional capacity of 30ktpa for flake graphite, 6ktpa tonnes for spherical graphite and 6ktpa of powdered graphite.
Qingdao Black Dragon Graphite Co. Ltd	3 years 10ktpa	One of China's largest consolidated graphite companies five wholly owned or JV subsidiaries. Aggregately, the group operates 3 mining permits, 1 exploration permit, 2 diversified graphite plants, 2 graphite sheet plants and 1 flake graphite plant.	Annual production:Flake graphite: 60ktpa;Spherical graphite: 2.4ktpa
Qingdao Keshuo New Materials Technology Co. Ltd	3 years 10ktpa	Private Chinese processor of graphite for the anode market associated with Qingdao Taihelong New Energy Materials Co. Ltd (Taihelong), a spherical graphite manufacturer.	Taihelong's annual spherical graphite production is 6ktpa.
Urbix Resources	3 years and option for +3 years 5ktpa and option for +6ktpa	One of the largest natural graphite providers in the USA. Specializes in all aspects of the graphite value chain. Premier provider of graphite ore, refined graphite powders, graphene, and other advanced graphite products.	



Project Summary



Project	Description	Status
Montepuez Graphite Project stage 1 50,000tpa, planning for expansion to 100,000tpa (stage 2)	 Produce 50,000tpa @ >96% TGC BMI Basket price FOB Moz >USD\$1106/t OPEX cost FOB Moz USD \$361/t for first ten years CAPEX remaining @ Jan 1, 2019 USD \$39.5M Target mine life +30 years at 12% TGC run of mine grade 	 DFS, VES, Detailed eng., Camp, Roads and plant site CPL Oct 2018 Tailings Dam wall and earthworks will be complete by December 2018, providing sufficient water for construction, commissioning, and operations Extensive community consultation Granted Mining Licence, Env. Appr., Port export allocation Offtake agreements Project Financing; Origin Capital+Morgans+Hartleys Origin Capital have appointed DD team to act on behalf of prospective lenders. Detailed project review, site visit, graphite market analysis - well advanced.
Balama Graphite Project Stage 1 50,000tpa, planning for subsequent expansion to 100,000tpa	 Produce 50-55,000tpa @ >96% TGC BMI Basket price FOB Moz >USD \$1106/t Feasibility Study Dec 2018 (SS) OPEX cost FOB Moz USD \$363/t FS CAPEX ~ USD \$50M FS Expansion CAPEX USD \$35M Feasibility Study completed in December 2018 	 Scoping Study (SS) Completed Feasibility Study Underway due for reporting Dec Qtr 2018 Mining Licence Application and Environmental approvals process is due to commence in Dec Qtr 2018
Downstream Graphite Processing	MOU with URBIX and work programme now well advanced on demonstrating viability of low cost, production of purified spherical graphite (PSG)	Results due in December Quarter 2018
Exploration	The Company's tenements are highly prospective for additional graphite resources. The Company has completed extensive infill, strike extension and exploration drilling during 2018. Opportunity to significantly increase runof mine grade, mine life and production while also lowering costs.	 Results are due in December 2018 New resource estimates are also pending for Montepuez
Vanadium Opportunity	Current Graphite resources contain vanadium. The vanadium entirely reports to the tailings and presents a commercial opportunity. 98% V2O5 current price USD >\$20/lb	 The Company has completed initial test work and is currently engaging with parties to earn either project or corporate equity as part of completing an initial scoping study The objective of the test work is to establish that a vanadium rich concentrate can be generated as a by product and sold at a profit.





Montepuez CAPEX

Area	Total Capex USD\$	Spent to Date USD\$	Remaining Capex USD\$
Process Plant and Power	28,129,000	4,160,000	23,969,000
Mining Equipment and Light Vehicles	4,378,000	72,000	4,306,000
Camp infrastructure and fit-out	3,108,000	3,108,000	0
Earthworks, Tailings Storage Facility and Water Storage	3,834,000	3,491,000	343,000
Buildings, officers and workshops	1,814,000	62,300	1,751,700
Owners costs	4,747,000	1,772,000	2,975,000
Pre-production Costs	4,926,000	47,000	4,879,000
Freight	1,672,000	389,000	1,283,000
Total	52,608,000	13,101,300	39,506,700





Montepuez - Flake Graphite Concentrate Sizing

Montepuez – LOM Flake Graphite Concentrate Sizing						
Flake size	Flake size (mesh)	Flake size (micron)	% of concentrate	TGC grade		
Fine	-100 Mesh	0 - 150	57.1%	96%		
Medium	+100 Mesh	+150 -180	11.3%	96%		
Large	+80 Mesh	+180 -300	20.7%	96%		
Jumbo	+50 Mesh	+300	11.0%	96%		



Montepuez - Ore Reserve Estimate



Montepuez Graphite Project - November 2018 Ore Reserve Estimate

Deposit	Ore type	Class	Ore (Mt)	TGC (%)
	Weathered	Probable	3.58	8.31
Buffalo	Fresh	Probable	16.80	10.06
	Subtotal	Probable	20.38	9.75
	Weathered	Probable	2.41	8.39
Elephant	Fresh	Probable	19.41	8.87
	Subtotal	Probable	21.82	8.82
	Weathered	Probable	5.98	8.34
TOTAL	Fresh	Probable	36.21	9.42
	TOTAL	Probable	42.19	9.27

Notes:

- The Ore Reserve estimate was compiled under the supervision of Mr Jon Hudson who is an employee of Snowden Mining Industry Consultants and a Fellow of the South African Institute of Mining And Metallurgy. Mr Hudson has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that he has undertaken to qualify as a Competent Person as defined in the JORC Code.
- The Ore Reserve was estimated above a cut-off of 3.4% TGC for weathered and 4.3% TGC for fresh.
- All Ore Reserve tonnes have been rounded to the nearest 10,000 tonnes and grade to the nearest 0.01.
- The Ore Reserve estimate includes small amounts of Inferred material in the form of mining edge dilution.



Balama Central CAPEX



BALAMA CENTRAL CAPEX	US\$
Process Plant	20,893,575
Non-Process Infrastructure	7,709,246
Mining	8,171,160
EPCM	3,200,000
Owner's Costs	9,221,324
RAP	4,132,600
Non-Mining Mobile Fleet	1,939,648
TSF and Bulk Water Storage	6,838,080
Freight	1,786,170
Contingency	4,126,083
Owner's Contingency	1,408,000
TOTAL	69,425,887



Balama Central - Opex Weathered



Summary of Weathered Ore Operating Ct Estimate

	Ор	Proportion of	
Category	US\$/y	US\$/t product	Total Opex
Labour	3, 260,031	56.09	14.6%
Power	4,581,540	78.82	20.6%
Reagents & Consumables	4,051,021	69.69	18.2%
Maintenance Materials	615,404	10.59	2.8%
G&A	2,349,312	40.72	10.6%
Product Logistics	3,914,138	67.34	17.6%
Mining & Earthworks	3,490,476	60.05	15.7%
Total	22,261,921	383.00	100.0%

Notes:



¹⁾ Above table excludes Government Royalties.

²⁾ Above table based on average blended ore of 50,000 tpa TGC production rate and ~1.4Mtpa mined and process run of mine (ROM) ore at an average rate of ~500,000tpa at 12% TGC

Balama Central - Opex Fresh



	Ор	Proportion of	
Category	US\$/y	US\$/t product	Total Opex
Labour	3,260,031	56.09	12.8%
Power	4,581,540	78.82	18.0%
Reagents & Consumables	4,051,021	69.69	15.9%
Maintenance Materials	615,404	10.59	2.4%
G&A	2,349,312	40.72	9.2%
Product Logistics	3,914,138	67.34	15.4%
Mining & Earthworks	5,743,365	115.48	26.3%
Total	24,514,810	438.42	100.0%

Notes:



¹⁾ Above table excludes Government Royalties.

²⁾ Above table based on average blended ore of 50,000 tpa TGC production rate and ~1.4Mtpa mined and process run of mine (ROM) ore at an average rate of ~500,000tpa at 12% TGC

Balama Central - Flake Graphite Concentrate Sizing



Product Description	Size Fraction	Weathered	Fresh
Jumbo	+300 μm	9.5%	26.0
Coarse	+180 μm	5.3%	7.4
Medium	+150 μm	22.5%	22.0
Fines	-150 μm	62.7%	44.62





Balama Central Project Reserves

Probable Ore Reserve Estimate (6% TGC cut-off grade)						
Pit	Ore type	Ore (Mt)	TGC (%)			
Lennox	Weathered	3.36	11.09			
	Fresh	8.19	11.70			
	Total 11.55 11.52					
Byron	Weathered	2.08	10.18			
	Fresh	6.02	10.49			
	Total	8.11	10.41			
Total	Weathered	5.44	10.74			
	Fresh	14.21	11.19			
	Total	19.66	11.06			





Balama Central Project Resources

Total Mineral Resource						
Domain	Туре	Tonnage	TGC	Cont. Graphite		
		Mt	%	kt		
	Weathered	3.2	15.7	498		
High Grade GS1 (>10% TGC)	Primary	9.1	15.7	1,429		
	Sub-Total	12.3	15.7	1,927		
	Weathered	4.2	6.9	288		
Medium Grade (6 to 10% TGC)	Primary	16.4	6.9	1,142		
	Sub-Total	20.6	6.9	1,430		
	Total	32.9	10.2	3,357		







<u>Total Mineral Resource</u> As of October 2018 for the Montepuez and Balama Central Projects is **152.6Mt** @ **8.5% TGC for 13.03Mt** of graphite reported at a 2.5% and 6% TGC cut-off respectively.

Battery Minerals <u>Group Mineral Resource Estimate¹ (2.5% - Montepuez, 6% - Balama TGC Cut-off)</u>

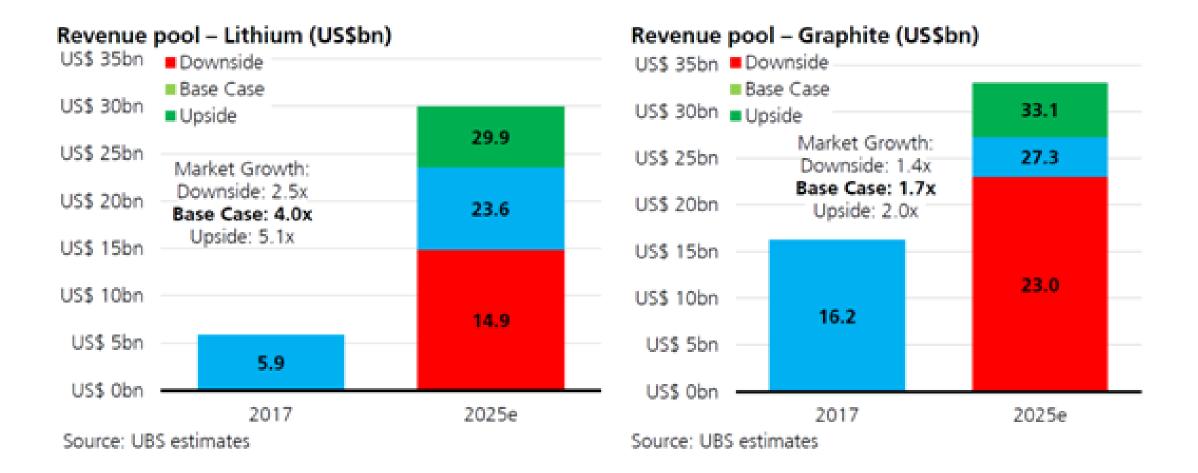
		Group Total Mineral Resource			
Ductook	Deposit	Tonnes	TGC	Cont. Graphite	
Project		Mt	%	kt	
Montepuez	Elephant	76.9	7.3	5,620	
Womepacz	Buffalo	42.6	9.5	4,050	
Balama Central	Lennox	21.9	10.2	2,230	
Balama Central	Byron	11.0	10.2	1,120	
Total		152.5	8.5	13,030	



^{1.} Note: See ASX Announcements dated 18th October 2018 entitled Group Resources Update for full details and CP signoffs. 1

Billion Dollar Opportunity from Graphite







Graphite in EV's



Figure 51: Mass of Raw Materials in Lithium-Ion Figure 52: Energy Capacity Levels of Lithium-Based **Batteries, % Graphite Contribution Batteries** ■ Low to Typical Energy Range ■ Typical to High Energy Range LFP 29% LFP LMO 22% LMO NMC 29% Typical Energy Capacity **NMC** (Wh/kg) LCO 32% LCO NCA 33% NCA 250--> 0% 10% 20% 30% 40% 50% 60% 70% 80% Mass Contribution of Lithium-Ion Battery Materials 100 200 300 400 500 Source: Bloomberg New Energy Finance, Credit Suisse estimates Source: Battery University, Credit Suisse estimates





Credit Suisse top 10 predictions about your future car by 2040

- 1. 1 in 4 cars will be Powered by Batteries: 1/3 of production and 1/4 of cars on the road will be electric by 2040. Europe to power up faster than the US.
- 2. Electric cars will be the most cost savvy option: You will save about 100 dollars a year buying and using full battery vehicles compared to gasoline cars by 2040.
- 3. Electric vehicles provide a roadmap for lower CO2: average new cars will have around 60gCO2/km emissions 1/3 of today's average output. This should lower annual CO2 emissions by >1Gt meaning car emissions are on track to limit runaway global warming.
- **4. You will use your car like a mobile phone:** 90 percent of charging will be done in the office or at home overnight. This will consume 1,000TWh of electricity which equals 2.5 percent of global demand.
- 5. Hands-free an option if you can afford it: Self-driving cars will make up about 14 percent of car production letting you kick back and enjoy the journey. However, this will add around \$1,000 dollars per car electronic content and require insurance for both owning and using autonomous vehicles.
- 6. No need to look under the hood: Batteries become the heart of your electric car we will require 3.7TWh of batteries per year which will need circa 100 Tesla sized Gigafactories (already the biggest building on earth) and around 3 million tons of lithium carbonate.
- 7. Think sustainable chemistry not German engineering: battery specs will differentiate vehicle performance, this will require careful chemistry choices to avoid production bottlenecks for metals like cobalt in the supply chain.
- **8. Electricity the new gasoline:** gas consumption will be down 30 percent by 2040 to 280 billion gallons per year replaced by electricity generated from renewable sources.
- 9. Don't be tempted to wait for fuel cell cars as they don't make carbon sense: Using hydrogen to power cars produces water at the tailpipe but hydrogen comes from natural gas which means CO2 emissions are similar to gasoline cars in total.
- 10. ...and definitely don't wait around for flying cars scientists are working hard on trapping anti-matter to figure out if it will "fall up" giving us the ability to create a flying car. CERN managed it with 309 anti-hydrogens for 1000 seconds. Unfortunately, just 1 kilogram of this material would contain the equivalent energy 700 million gallons of gasoline and is highly unstable so don't hold your breath.



Disclaimer & Competent Persons Statement



Forward Looking Statements

- Statements and material contained in this Presentation, particularly those regarding possible or assumed future performance, resources or potential growth of Battery Minerals Limited, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Such forecasts and information are not a guarantee of future performance and involve unknown risk and uncertainties, as well as other factors, many of which are beyond the control of Battery Minerals Limited. Information in this presentation has already been reported to the ASX.
- Battery Minerals confirms that all the material assumptions underpinning the production targets for its Montepuez and Balama Central graphite projects and any of the forecast financial information derived from these production targets, in the 4 and 12 December 2018 ASX announcements, on these projects continue to apply at the date of release of this presentation and have not materially changed. Battery Minerals confirms that it is not aware of any new information or data that all material assumptions and technical parameters underpinning the estimates in the 4 and 12 December 2018 announcements continue to apply and have not materially changed.

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 port access made in relation to Battery Minerals are subject to the
 completion of all necessary feasibility studies, permit applications,
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 infrastructure-related agreements. Where such a reference is made, it
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 information about the Mineral Resources and Ore Reserves, as well as the
 relevant competent persons' statements.
- Any references to Exploration Results, Ore Reserve and Mineral Resource estimations should be read in conjunction with the competent person statements included in the ASX announcements referenced in this presentation as well as Battery Minerals' other periodic and continuous disclosure announcements lodged with the ASX, which are available on the Battery Minerals' website.

- The information in this report that relates to Battery Minerals'
 Mineral Resources or Ore Reserves is a compilation of previously published
 data for which Competent Persons consents were obtained. Their
 consents remain in place for subsequent releases by Battery Minerals of
 the same information in the same form and context, until the consent is
 withdrawn or replaced by a subsequent report and accompanying
 consent.
- The information in this Presentation that relates to Montepuez Mineral Resources and Ore Reserves is extracted from the ASX Announcements dated 18 October 2018 and 4 December 2018 respectively, both of which are available at Battery Minerals website in the ASX announcement page.
- See ASX announcements on the Balama Central Feasibility Study dated 12 December 2018 for details, Table 1 and Competent Person Statement
- Any references to Mineral Resource estimates on the Balama Central Project should be read in conjunction with the competent person statements included in the ASX announcements referenced in this report (See ASX announcement dated 29 March 2018 entitled "Resources double at Balama Central graphite project in Mozambique" for full details and Competent Persons Statement) as well as Battery Minerals' other periodic and continuous disclosure announcements lodged with the ASX, which are available on the Battery Minerals' website.
- The information in this presentation that relates to Battery Minerals'
 Balama Central Mineral Resources is a compilation of previously published
 data for which Competent Persons consents were obtained. Their
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 withdrawn or replaced by a subsequent report and accompanying
 consent.
- The information in this presentation that relates to Mineral Resources in the ASX announcement dated 29 March 2018 and entitled "Resources double at Balama Central graphite project in Mozambique" which is available at Battery Minerals website at http://www.batteryminerals.com.au in the ASX announcements page.

- Battery Minerals confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the market announcements continue to apply and have not materially changed. Battery Minerals confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.
- Battery Minerals Limited released the results of a DFS on its Montepuez Project on 15 February 2017 & its Value Engineering Study (VES) results for Montepuez on 18 October 2017. These releases are available on Battery Minerals' website & ASX.

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