

Diggers and Dealers Mining Forum

Shaun Verner, Managing Director and CEO

August 2019



Company Overview



Photo: Bagged Balama Graphite Product

Syrah's growth potential and optionality is focussed on value

<p>Balama: A Tier 1 asset</p>	<ul style="list-style-type: none"> • Long life asset, with over 50 years of mine life⁽¹⁾ and 350kt per year of graphite concentrate production capability⁽²⁾ • Balama is the largest integrated natural graphite mine and processing plant globally as measured by annual flake concentrate production capacity • High grade concentrate relative to current industry standards provides Syrah with the opportunity for development of a price premium advantage, over time • Balama's large Reserve and Resource⁽³⁾ allows for future plant expansion, potentially representing a low capital intensity option to meet incremental future graphite demand
<p>Exposure to High Growth Lithium-ion Battery Markets</p>	<ul style="list-style-type: none"> • Graphite is a key component of lithium-ion batteries used in electric vehicles and energy storage, both rapidly growing markets • Balama graphite product mix and specifications are suited for use in these markets
<p>First Mover Advantage</p>	<ul style="list-style-type: none"> • The ongoing ramp-up of Balama is establishing the asset as a base-load supplier of graphite globally • Syrah's strategy to produce and qualify Battery Anode Material (BAM) is intended to establish a core ex-Asia battery supply chain position
<p>Competitive Advantage in the BAM Value Chain</p>	<ul style="list-style-type: none"> • Balama's scale, quality and low production costs at full production capacity are key competitive advantage enablers in the delivery of Syrah's BAM strategy • Syrah's BAM strategy provides the opportunity to: <ul style="list-style-type: none"> • Produce value-added products compared to flake graphite and capture additional cash margin by establishing a core position in the battery supply chain • Provide an alternative source of BAM supply • Review potential for strategic operating or technical partnership in the project
<p>Vanadium Optionality at Balama</p>	<ul style="list-style-type: none"> • Balama contains a significant vanadium Resource which presents a potential value-accretive opportunity that Syrah will advance through Pre Feasibility Study • Vanadium, a by-product which is liberated during the graphite production process, could potentially be refined into a saleable product (V₂O₅)⁽⁴⁾ via processing of material currently reporting to tailings at Balama

(1) Life of mine based on current 113.3Mt Graphite Ore Reserves being depleted at 2Mt of mill throughput per annum

(2) Refer to ASX announcements dated 29 May 2015, 15 November 2016 and 29 March 2019

(3) Refer to ASX announcement dated 29 March 2019

(4) Scoping study on potential to refine vanadium as per the ASX announcement dated 30 July 2014

Balama Graphite Operation – a Tier 1 producing asset: The world's largest integrated natural graphite mine and processing plant

Location	<ul style="list-style-type: none"> Mozambique (Cabo Delgado Province)
Reserves and Resources⁽¹⁾	<ul style="list-style-type: none"> Graphite Reserves: 113.3Mt at 16.4% Total Graphitic Carbon (TGC) – 18.5Mt of contained graphite Graphite Resources: 1,423Mt at 10% TGC – 147Mt of contained graphite
Mining	<ul style="list-style-type: none"> Simple, open pit mining operation with low stripping ratio
Processing method	<ul style="list-style-type: none"> Conventional process that includes crushing, grinding, flotation, filtration, drying, screening and bagging
Processing plant capacity	<ul style="list-style-type: none"> 2 million tonnes ore per annum
Product	<ul style="list-style-type: none"> 94% to 98% Fixed Carbon (FC) concentrate to be produced across a range of flake sizes
Production	<ul style="list-style-type: none"> Production capability of 350kt of graphite concentrate per year Targeting 2019 production 205 - 245kt⁽¹⁾, dependent on (i) ongoing assessment of sales volume against price⁽²⁾, and (ii) production performance and quality performance
C1 cash operating cost⁽⁴⁾	<ul style="list-style-type: none"> Targeting a C1 cash operating cost towards ~US\$400 per tonne by end 2019, subject to recovery and production outcomes that will be driven by market conditions⁽³⁾ Expected to reduce towards US\$330 per tonne as the plant is optimised and ramps up to full capacity
Life of mine	<ul style="list-style-type: none"> Over 50 years⁽⁵⁾
Optionality	<ul style="list-style-type: none"> Balama's large Reserve and Resource allows for future plant expansion, potentially representing a low capital intensity option to meet incremental future graphite demand Vanadium, a by-product which is liberated during the graphite production process, could potentially be refined into a saleable product (V₂O₅)⁽⁶⁾ and presents a medium term, high value opportunity



Balama Graphite Operation

(1) Refer to ASX announcements dated 29 March 2019. All material assumptions underpinning the production target continue to apply, other than as updated in subsequent ASX announcements.
(2) Production and sales strategy will reflect trade-off between unit operating cost benefits versus pricing considerations of additional incremental supply into the market
(3) Unit C1 cash operating costs achieved will be sensitive to production outcomes (which will be driven by market conditions – see footnote above)
(4) Free on Board (FOB), Port of Nacala, excluding government royalties and taxes
(5) Life of mine based on current 113.3Mt Graphite Ore Reserves being depleted at 2Mt of mill throughput per annum
(6) Scoping study on potential to refine vanadium as per the ASX announcement dated 30 July 2014



Balama Graphite Operation and Marketing Update



Photo: Balama Graphite Operation Process Plant

Syrah is committed to sustainable operations – focussing on enduring safety, health, environmental and community outcomes

Health, Safety and Environment

- Strong safety record, TRIFR 0.3 as at 30 June 2019
- ISO:45001 Occupational Health and Safety Management Systems and ISO:14001 Environmental Management Systems certification achieved
- Malaria screening program
- Environmental Monitoring compliance with over 200 licence conditions
- Tailing Storage Facility Governance Framework implemented in line with industry leading practice



Tree Planting at Regadio Primary School for World Environmental Day



Balama Professional Training Centre Inauguration



Mine Open House with community members



Balama operations employees

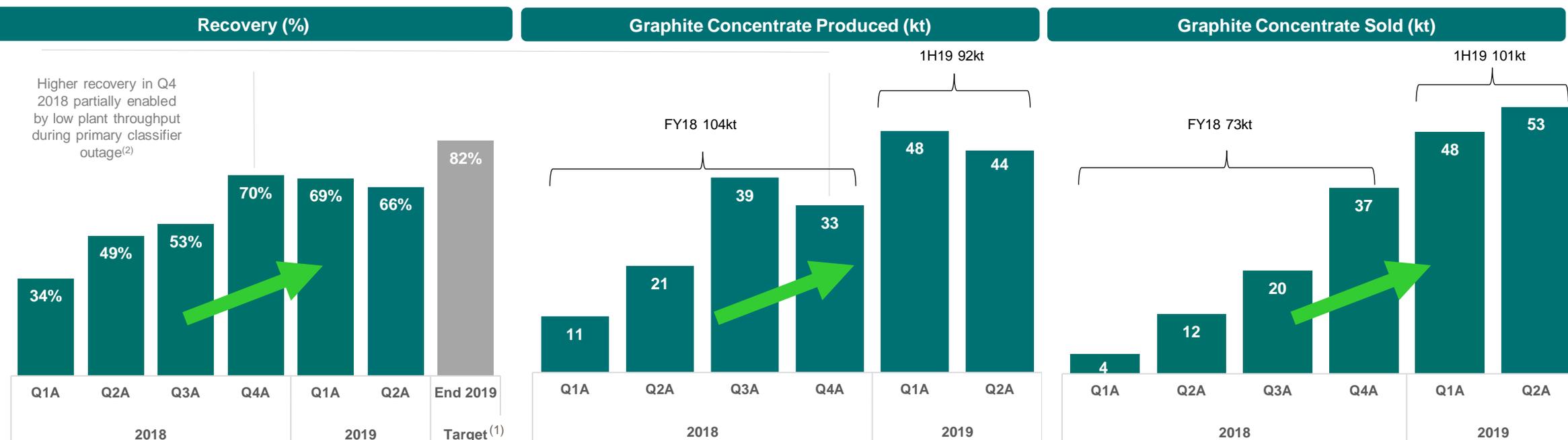
People and Community

- 96% Mozambican nationals, 55% from the local Host Communities
- Balama Professional Training Centre operational
- Mining Agreement finalised with Government of Mozambique (Sept 2018)



Operational performance improvement at Balama is underpinned by enhanced equipment management and increasing process control

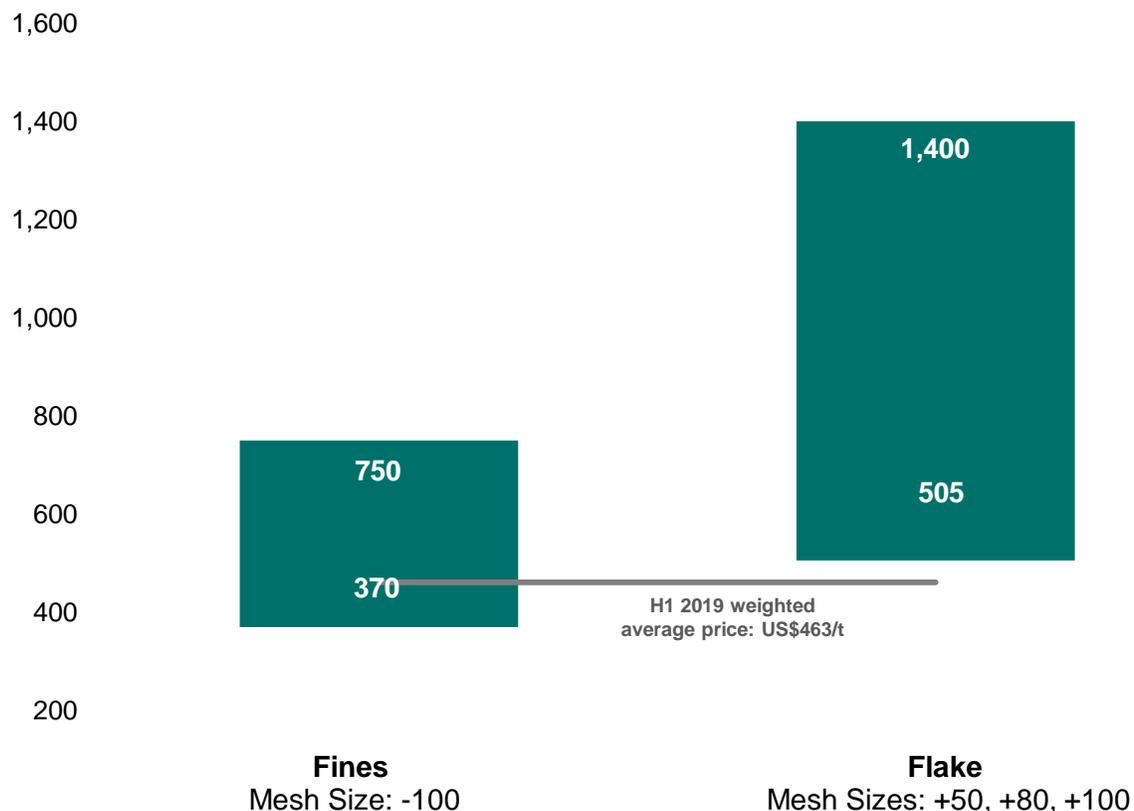
- Continued delivery of production improvement plan expected, target of 82% flake graphite recovery by the end of 2019⁽¹⁾
- Balama dispatch, cross-dock-facility and port capacity debottlenecked, allowing for required inventory management and sales
- Improved operating stability year to date 2019 provides baseline for cost base review and optimisation – currently in progress
- Operational focus on increased recovery and higher value products



(1) Target reflects combination of expected benefits from the implementation of enablers, refer to ASX announcement 19 June 2019
 (2) Refer ASX announcement dated 30 January 2019

Price realisation has been impacted by higher than planned fines sales into a competitive China market, but growth and product range are favourable

Product Price Ranges Achieved in 2019 YTD (US\$/t, CIF basis)



Coarse Flake Products (+50#, +80#, +100#)

- Coarse flake products achieving significant penetration into Europe and India
- Premium grade products (96%-98%) preferred in East Asia refractory markets

Fines Products (-100#)

- Fines price ex-China driven by incentive price to export a marginal tonne
- Syrah exports to China entering competitive and established domestic fines market; initial pricing challenging
- Syrah carbon grade, density, quality / low impurities establishing differentiated position
- Syrah becoming one of the largest fines product suppliers into the global electric vehicle supply chain
- Expect positive price support as China moves to market deficit for high grade fines product⁽¹⁾

Syrah's Weighted Average Price

- Influenced by product mix of flake sizes, carbon grade, delivery location and increased total market supply due to Balama ramp-up
- Pricing is bespoke and bilaterally agreed and there is no centrally accepted clearing price

Source: Syrah Resources Internal Analysis

(1) Refer to pages 10 and 11 of this presentation for discussion regarding China natural flake graphite market balance

Key variables of Syrah's weighted average price realisation have strong upside potential, and the focus is on those within Syrah's control

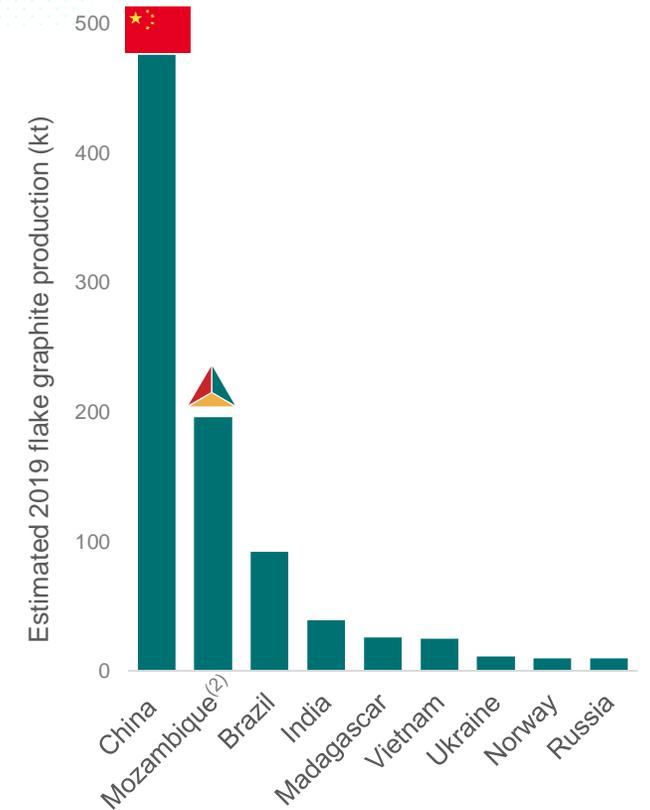
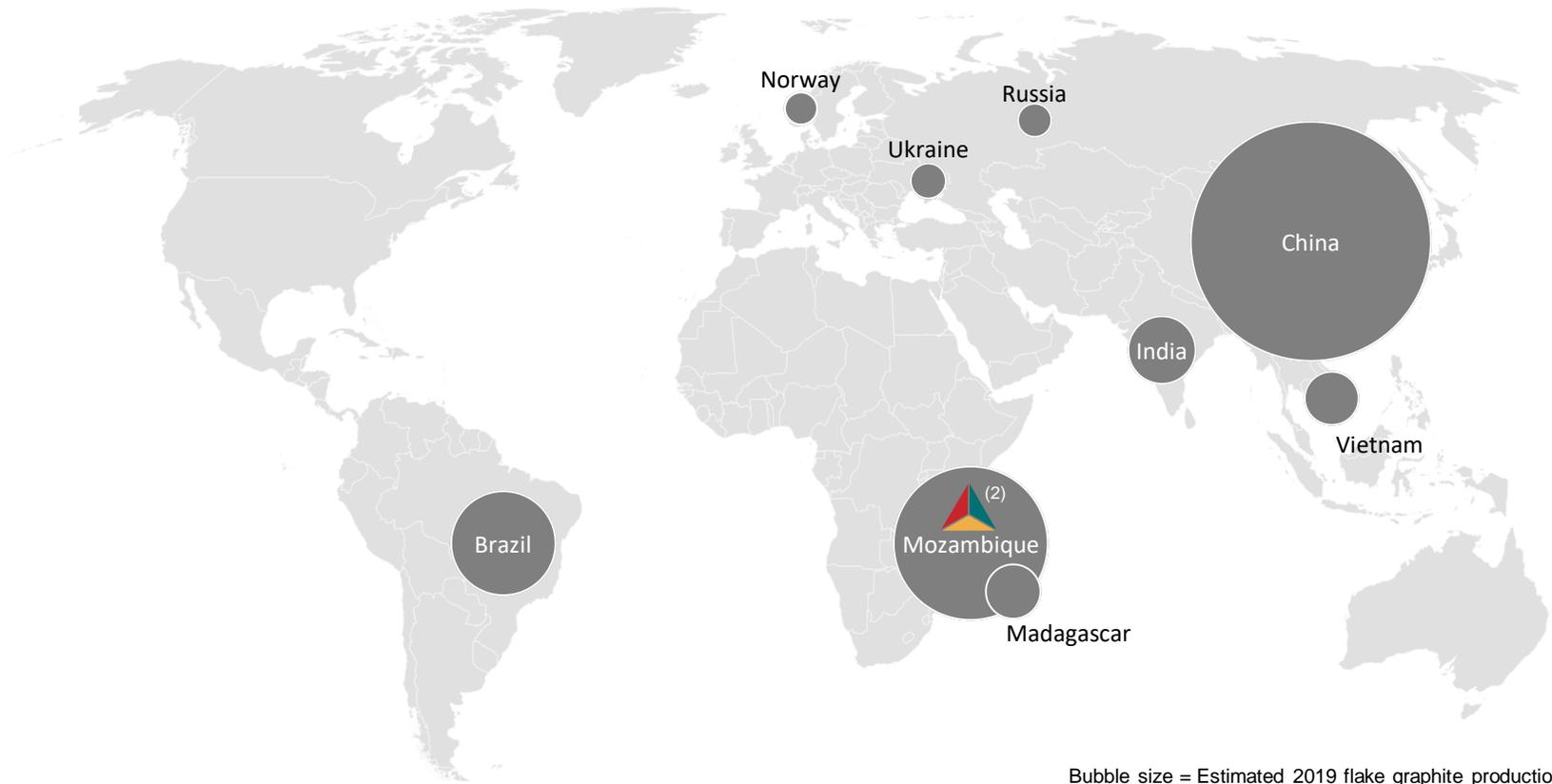
- In the short term, production and marketing flexibility needs to be maintained to react to supply / demand dynamics and conduct orderly price negotiations
- Pricing in the short term may decline or increase subject to the market balance, prior to an expected strengthening in the medium to long term

	Factor	Potential pricing improvements
Near Term Production Focus	Product mix	Product mix to 20% coarse flake in 2019, and later to 32% - enabling higher weighted average prices
	Grade	Production and price realisation of 96%-98% grade premiums
Near Term Marketing Focus	Market entry pricing & qualification	Completion of qualification process by customers, diminishing the impact of entry pricing on Syrah's weighted average price
	Regional split & alternative supply	Increased volume penetration into Ex-China markets
	Volume & reliability	Balama product quality and size to enable value-in-use and baseload supply premium realisation as supply certainty and quality becomes increasingly important
	Market balance	China market balance to transition to net importer of high quality fines over time – likely to induce higher pricing



Syrah is now the largest integrated producer globally, and provides a strategic ex-China source of supply, as demand growth increases

Estimated 2019 global natural flake graphite production (kt)⁽¹⁾



(1) Source (bubble chart and bar chart): Benchmark Mineral Intelligence, June 2019
(2) Benchmark Minerals Intelligence forecasts that Balama Graphite Operation will account for 98% of Mozambique production

Natural graphite demand growth supports Balama reaching full capacity; driven by battery anode material demand and the China market balance

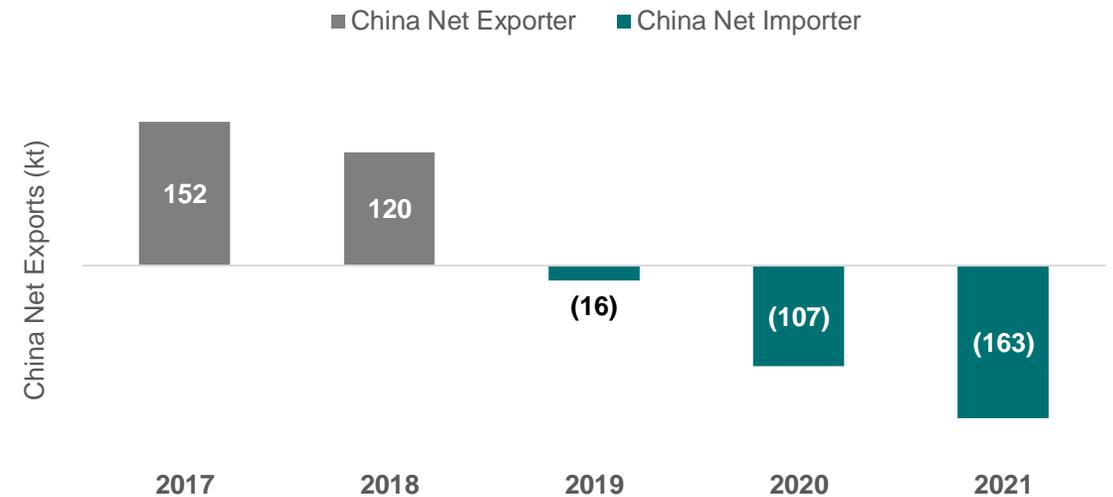
Significant fines growth driven by battery anode material demand



Source: Benchmark Mineral Intelligence, June 2019

- Fines market growth driven by demand from anode producers to support the increased capacity of lithium-ion factories and the objective to lower overall product costs
- Fines material remains the major natural graphite material used in anodes
- Coarse flake demand growth driven by expandable / foils / insulation, from a low base

China expected to soon become a net importer of natural graphite



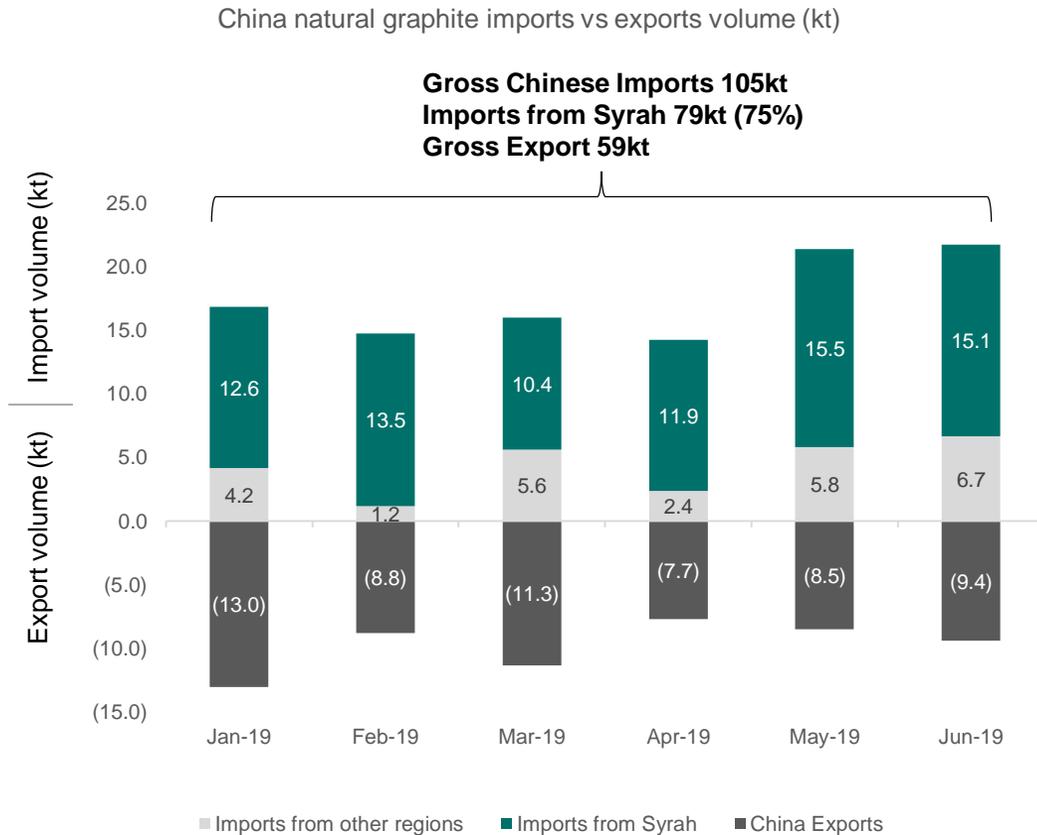
Source: Benchmark Mineral Intelligence, June 2019

- Benchmark Minerals Intelligence forecast China to become a net importer of natural flake graphite from 2019



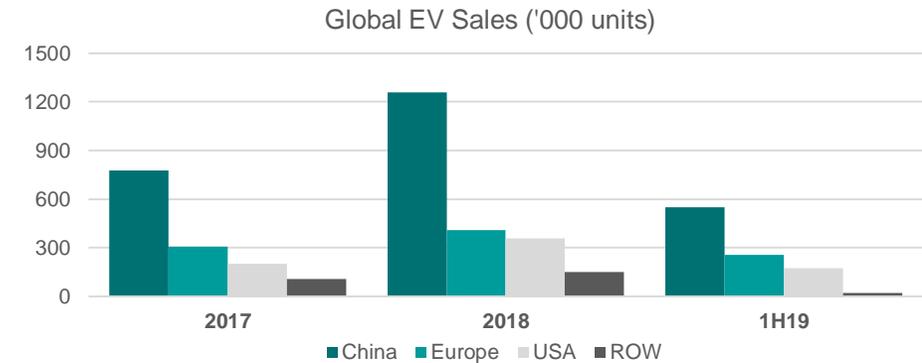
China has become a net importer of natural graphite for the first time in 2019 and exports are stable - demonstrating strong market growth

Growth in China natural graphite imports almost entirely from Syrah



Source: Qizheng Information Technology Co., Ltd

China continues to lead EV adoption



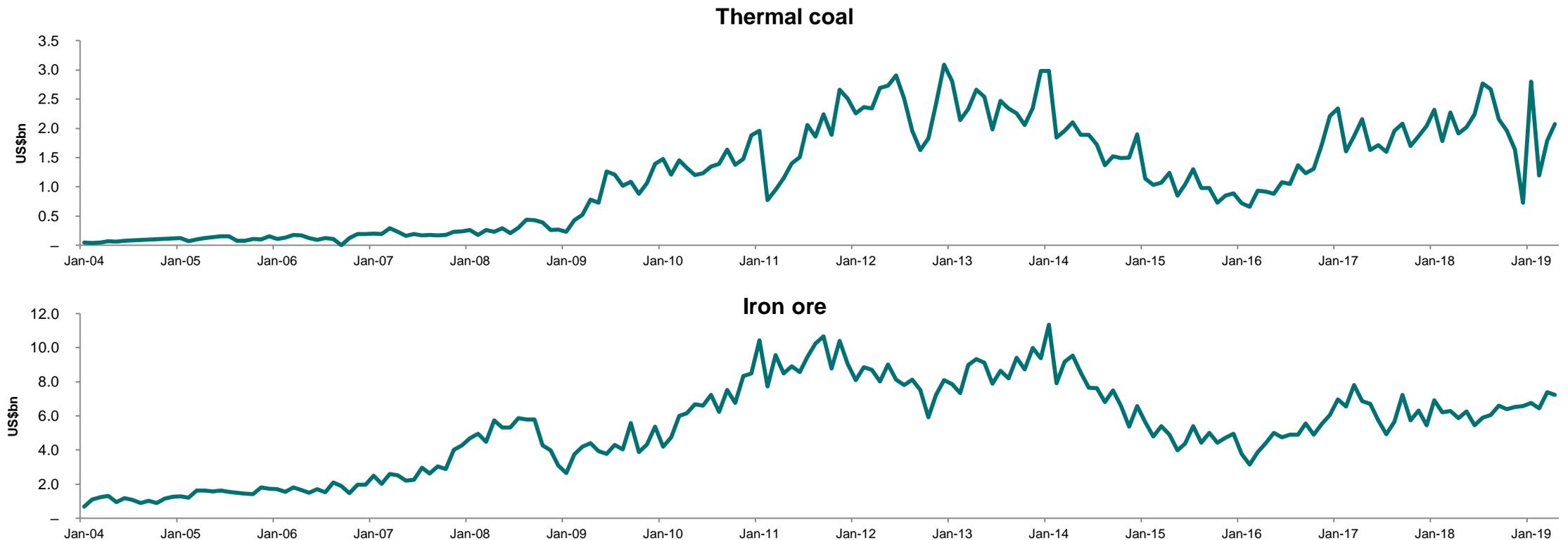
- Clear commitments to near term expansion of electric vehicle product ranges and volumes are expected to drive increased demand for all battery minerals
- China continues to lead EV adoption
 - Latest Chinese policy favours higher battery energy density
 - Chinese OEM preparing for cost competitiveness in preparation of zero subsidy after 2020

Source: Source: ITRI/ISTI (2019/06), EVvolumes.com, Bernstein

China has structurally changed the trade flow of commodities before; market balance and quality differentials will drive imports

- Despite having its own significant natural endowment of iron ore and coal, China has shown a growing preference for higher grade imported material
- Chinese anode material demand growth is expected to provide similar demand and price opportunity for high quality natural flake graphite

China's import value of key commodities



Source: Bloomberg
Notes: Represents dollar value imported into China



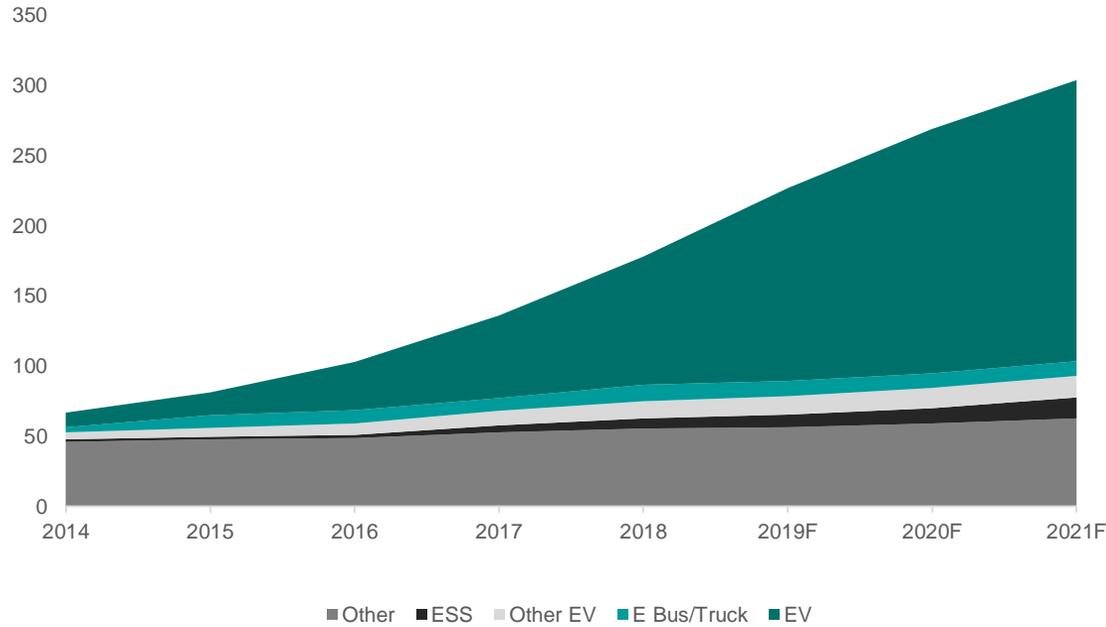
Battery Anode Material (BAM) strategy



Photo: Syrah's BAM plant in Louisiana

Li-ion battery growth is highly attractive; a consistent, high quality natural graphite source contributes to cost reduction and improved performance

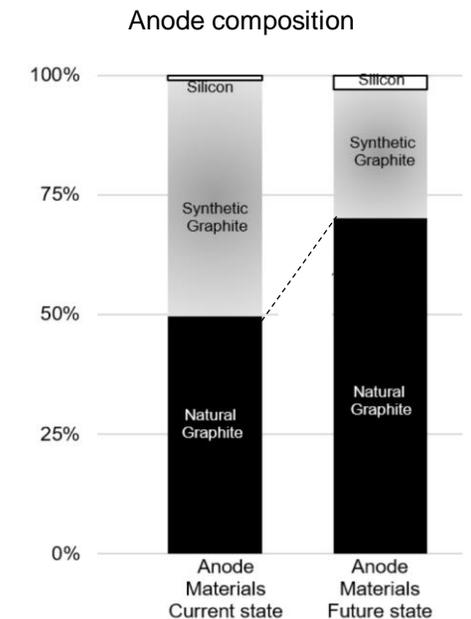
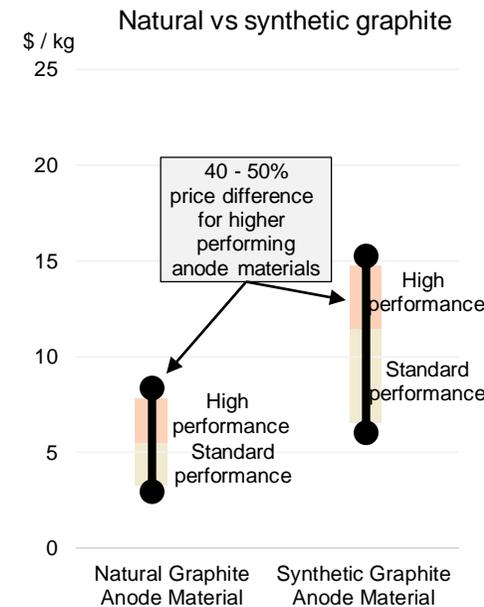
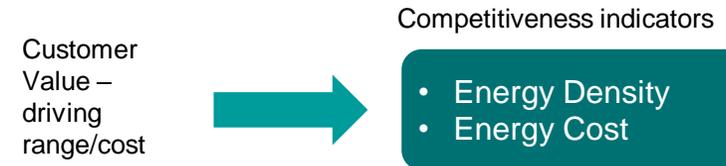
Global Li-ion Battery Demand (GWh)



- Natural graphite remains lower cost than synthetic graphite
- Natural graphite has a favourable energy density whilst synthetic graphite provides cycle life advantages
- <5% silicon (Si) and carbon graphite anode with Si subject to ratio and volume control

Source: ITRI/ISTI (2019/04)

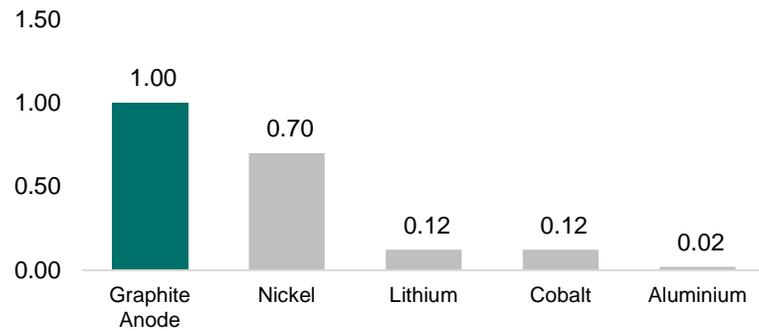
Car OEM Targets – battery performance, cost and safety



The graphite anode composition and mass in a lithium-ion battery is consistent and largely agnostic of cathode chemistry

Nickel Cobalt Aluminium (NCA)

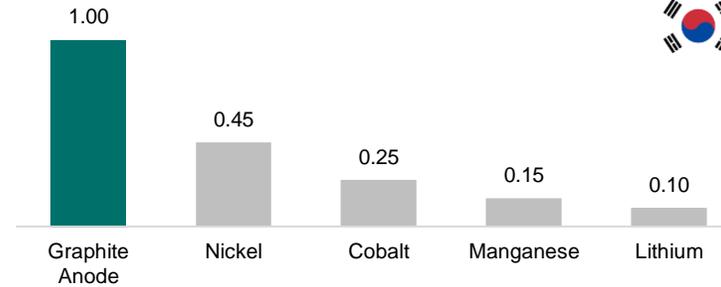
Kg per kWh



Preferred by



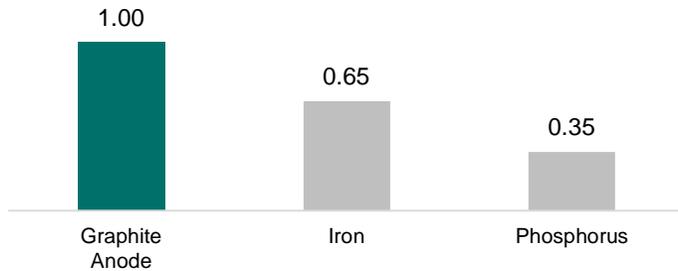
Nickel Manganese Cobalt (NMC⁽¹⁾)



Preferred by



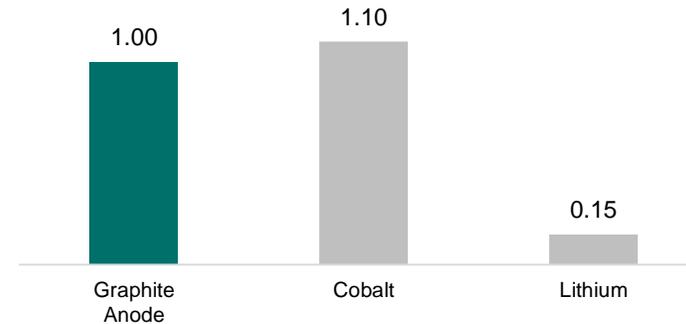
Lithium Iron Phosphate (LFP)



Preferred by



Lithium Cobalt Oxide (LCO)



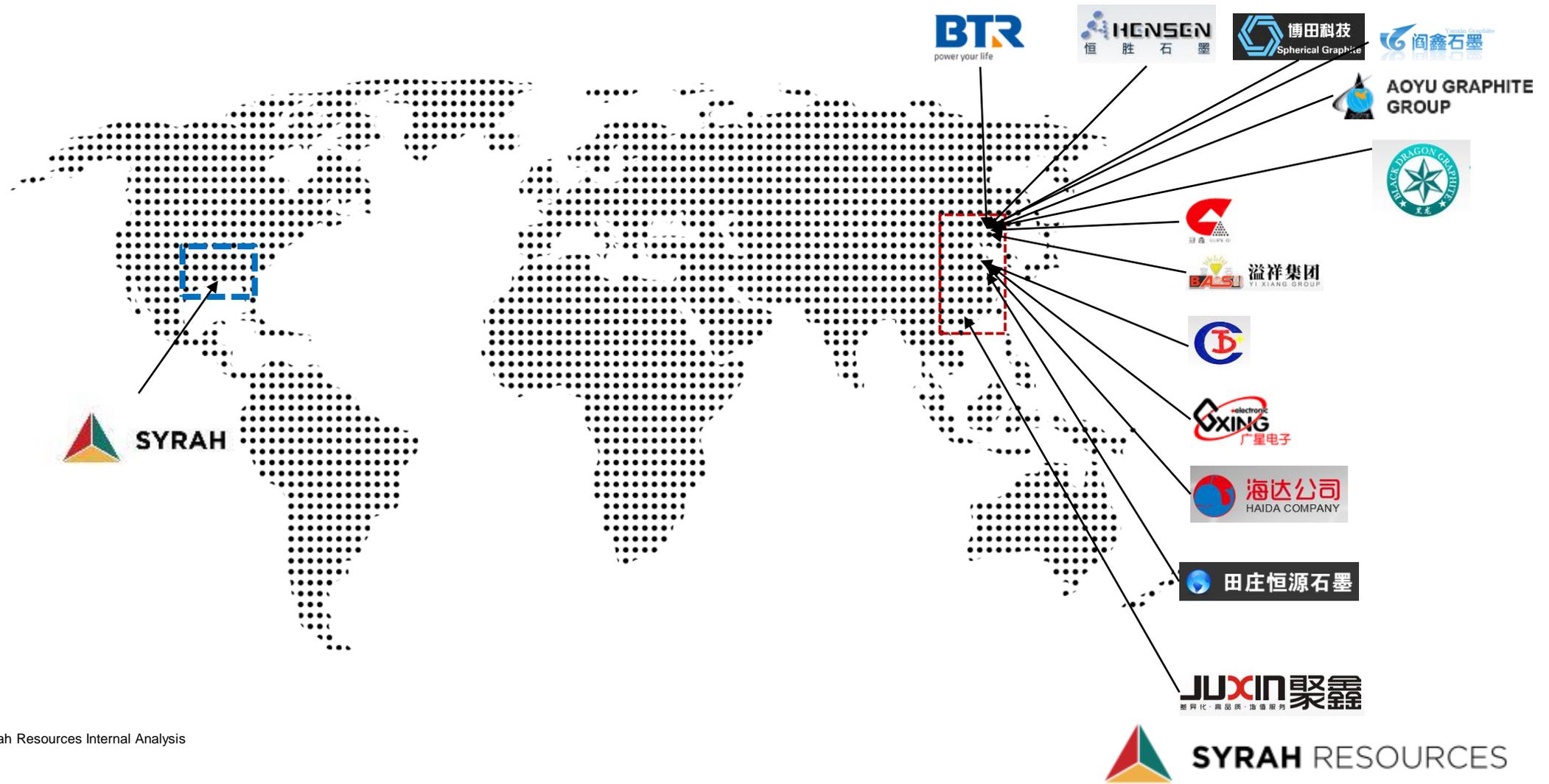
Preferred by



Legend:
█ Anode
█ Cathode Materials

Source: Syrah Resources
 Each kg of natural graphite anode material requires >2kg of natural flake graphite
 (1) NMC 523 Chemistry

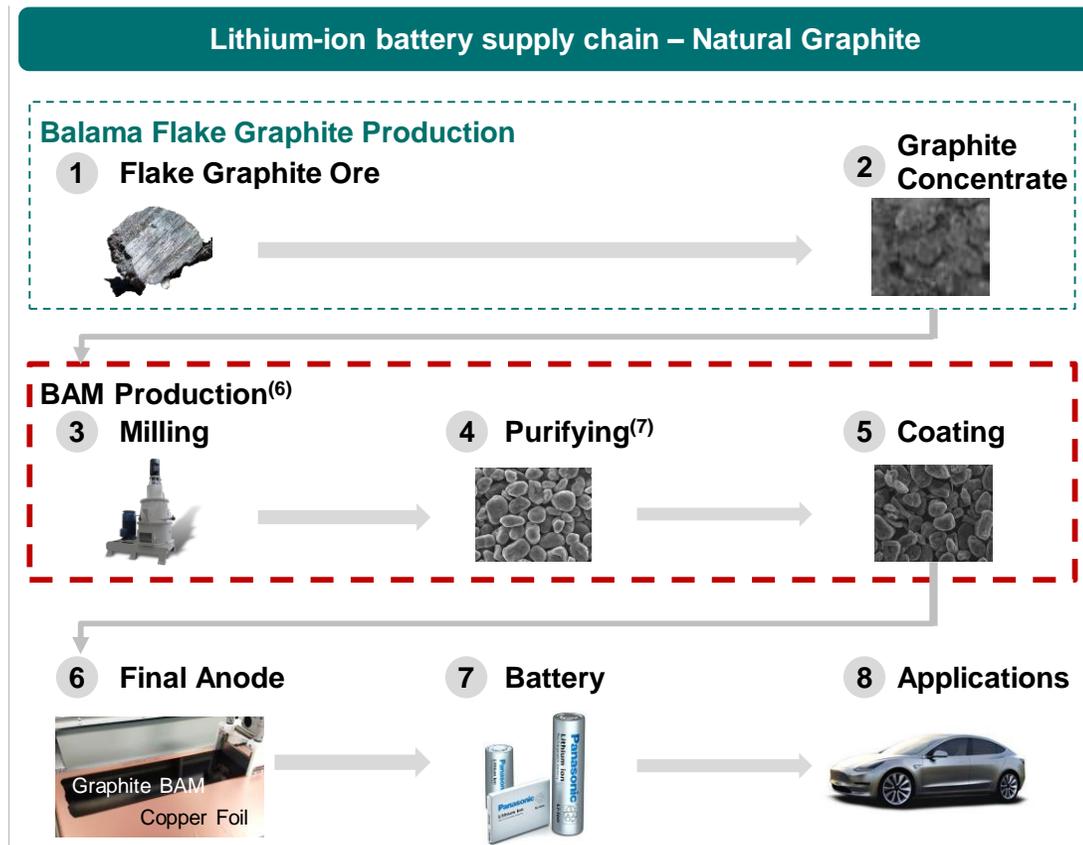
Until recently, uncoated natural spherical graphite supply was entirely Chinese – Syrah can provide an alternative source of supply



Source: Syrah Resources Internal Analysis

Syrah's Vidalia (USA) Battery Anode Material plant is key for market progression, qualification, product and strategic partnership development

Progress to Date	Mar 2018	Syrah precursor ⁽¹⁾ testing and benchmarking completed
	May 2018	Vidalia BAM site purchase agreement ⁽²⁾
	Aug 2018	Vidalia BAM site purchase completed ⁽³⁾
	Sep 2018	Phase 1 Commercial scale (10ktpa and 40ktpa) study completed - potential for attractive operating margins and opportunities for flow sheet and capital optimisation identified ⁽⁴⁾
	Dec 2018	5ktpa milling capacity installed – First production unpurified spherical graphite using Balama feed ⁽⁵⁾
Forward Plan	Q1 2019	Unpurified spherical graphite qualification samples dispatched to a range of potential customers
	Q2 2019	Utilise existing plant for product development and to establish customer base through provision of qualification samples
	Q3-Q4 2019	Commission batch purification plant and (i) dispatch purified spherical graphite samples to potential customers in Q3 (ii) produce pilot scale finished BAM products utilising Syrah purified spherical for Battery Manufacturer engagement in Q4



(6) Syrah's plant in Louisiana will initially have 5kt per annum of milling capacity and batch scale purification capability.

(7) Purifying can be achieved chemically or thermally. Plan is for Syrah Battery Anode Material plant to be capable of chemical purification.

- (1) Precursor materials refer to unpurified and purified natural spherical graphite
 (2) Refer to ASX announcement dated 23 May 2018
 (3) Refer to ASX announcement dated 16 August 2018
 (4) Refer to ASX announcement dated 30 January 2019
 (5) Refer to ASX announcement dated 31 December 2018





Vanadium Resource



Photo: Balama Graphite Open Pit Mining Operation

Syrah's Vanadium Opportunity

- Vanadium in the processed graphite ore, which currently reports to tailings, can be refined into a saleable product (V_2O_5)⁽¹⁾ and presents a medium term, high value opportunity
- Balama is a globally significant vanadium Resource, with potential for ~5ktpa of V_2O_5 production (vs. 2018 global production of ~73kt⁽²⁾)
- Review of 2014 Scoping Study during 2018 confirmed likelihood of attractive project economics, warranting progression to a Pre Feasibility Study (PFS)⁽³⁾
- Industry engagement underway, which will inform timing and scope for PFS

Outcomes of 2014 Scoping Study Review⁽¹⁾⁽³⁾

Review of 2014 Scoping Study	Review Conclusion (Using original grid power assumption)	Review Conclusion (Using diesel power assumption)
Capital costs	Higher	Higher
Operating costs	Lower	Higher
Project Economics	Positive	Positive

Balama Vanadium Resource at 31 Dec-18⁽¹⁾

Deposit	Category	Tonnes (Mt)	V_2O_5 (%)	V_2O_5 (t)
Ativa	Measured	23.4	0.38	88,223
	Indicated	11.0	0.39	43,066
	Inferred	17.3	0.40	68,859
Mualia	Inferred	118.7	0.45	529,927
Balama East	Measured	26.0	0.44	113,243
	Indicated	28.4	0.45	127,684
	Inferred	160.0	0.43	686,386
Total		384.6	0.43	1,657,388

(1) Refer ASX announcement dated 30 July 2014

(2) USGS estimate: <https://prd-wret.s3-us-west-2.amazonaws.com/assets/palladium/production/atoms/files/mcs-2019-vanad.pdf>

(3) Refer ASX announcement dated 30 January 2019

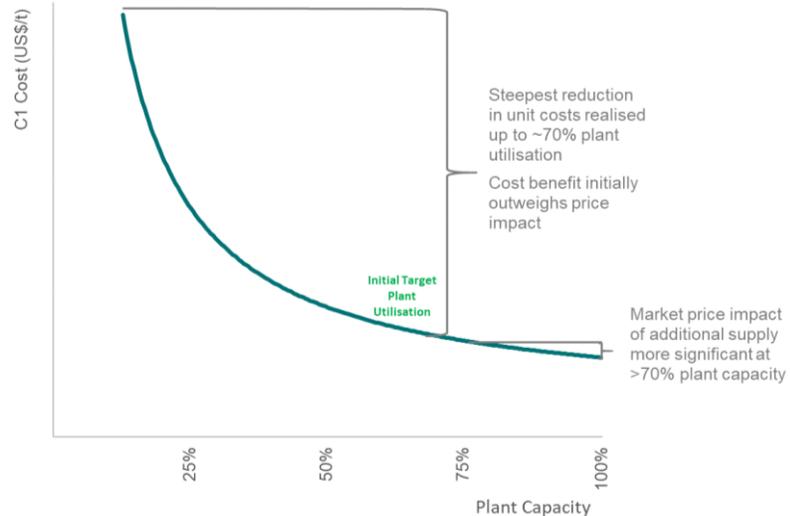


Finance

Photo: Balama Ore

Syrah's funding position supports production and market development, providing for orderly price negotiations and cost optimisation

Unit Cost vs Price tradeoff



- Drive unit cost decrease through increased production volume
- Plant design and cost base optimised @ > 70% capacity utilisation
- Price realisation driven by product mix, grade, regional split
- Potential price decline risk if production ramp up unconstrained
- Production ramp up therefore pursued in two steps: (i) Pursuing cashflow positive operations (unit cost decrease) and (ii) Additional high quality supply driven by incentive pricing (price realisation increase)
- Reduce risk of price decline, and maximises incentive signals

Available Cash and Liquidity

- Cash as at 30 June 2019: US\$64.7m
- Forecast cash as at 30 September 2019⁽¹⁾: ~US\$63.7m
- Available liquidity: Shareholder approval obtained for Convertible Note issue to AustralianSuper⁽²⁾ of A\$55.8 million (US\$38.2 million⁽³⁾)
- Total cash and available liquidity as at 30 September 2019 ~US\$100m

- (1) Includes funds from Retail Entitlement Offer, refer to ASX announcements 19 June 2019 and 11 July 2019
 (2) Refer to ASX announcement dated 1 August 2019
 (3) Translated at AUD:USD rate of 0.6848 as at 1 August 2019