

### **Q4 2019 Quarterly Activities Report**

22 January 2020 Shaun Verner – Managing Director & CEO



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# Q4 2019: Key Points

Company wide cost restructure on track	<ul> <li>On track to achieve target of 20% to 25% cost reduction (at 15kt per month production rate), cost reductions of approximately</li> <li>15% implemented and realised from 1 January 2020.</li> </ul>
Production moderated	<ul> <li>Production of 15kt flake graphite during the quarter (September quarter: 45kt). Production was moderated for Q4 2019 in response to sudden and material reduction in prices observed in Q3 2019¹.</li> <li>Prevailing demand will drive Balama production volume through Q1 2020.</li> </ul>
Signs of price stabilisation evident	<ul> <li>Weighted average selling price (CIF) of US\$458/t (September quarter: US\$391/t), increase versus prior quarter predominately due to product mix and geographic mix.</li> <li>Inventory availability and weaker year-on-year electric vehicle (EV) production growth suppressed global natural graphite prices during the quarter.</li> <li>Signs of inventory drawdown and price stabilisation evident from late in Q4 2019 due to reduced Balama production and seasonal Chinese production closures.</li> </ul>
Options remain to react to market scenarios through 2020	<ul> <li>The cost restructure and production moderation to date has been executed with optionality retained to react promptly to improved market demand.</li> <li>Further cash preservation strategies available if the market imbalance observed in H2 2019 is prolonged.</li> </ul>

# Building a position in the anode supply chain

Leveraging the globally significant Balama asset to develop an integrated battery anode material and industrial products business



# Balama a globally significant resource – leading practice ESG

Size of Balama ore Reserve, > 50 year mine life<sup>1</sup>, and high Reserve grade (16% total graphitic carbon) enables participation in long term EV growth



### **Vertical integration**

Value added processing of flake graphite to active anode material by Syrah enabled by long mine life at Balama



### Global mega trend

Decarbonisation of the transport sector, via Lithium-ion battery powered electric vehicles (EV), is gaining momentum

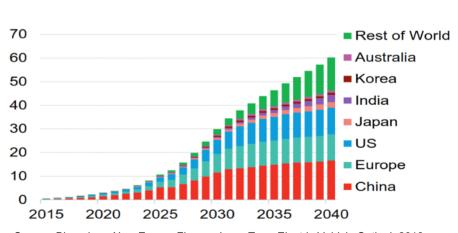
#### **Balama Open Pit Mining Operation**



#### Syrah's downstream processing of flake graphite in Louisiana



#### Annual passenger EV sales forecast by region (million cars per year)

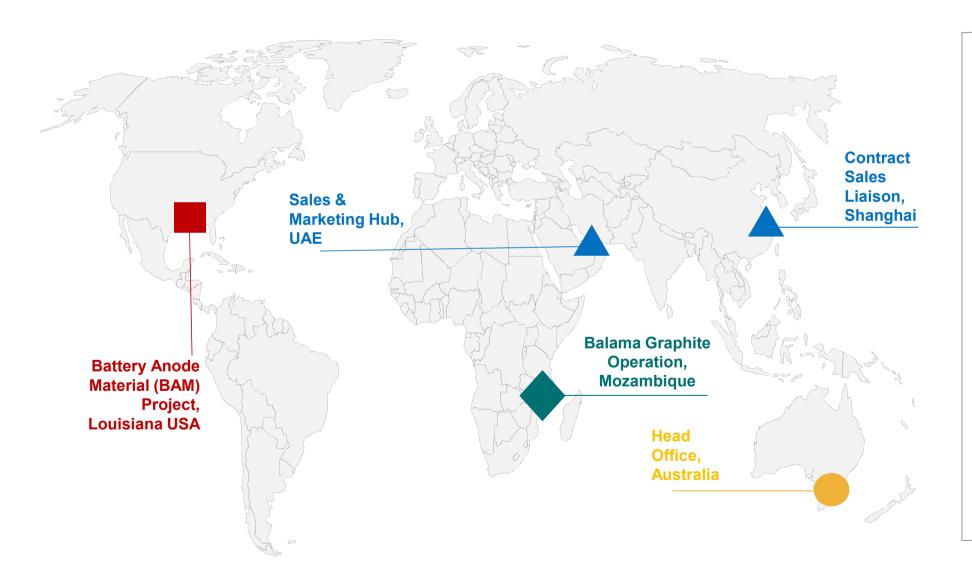


Source: Bloomberg New Energy Finance Long-Term Electric Vehicle Outlook 2018



# Where we participate in the anode supply chain

A global business to service the growing demand for natural graphite - a critical battery raw material





- Ore Reserves<sup>1</sup> 113.3Mt at 16.4% TGC<sup>2</sup> (18.5Mt of contained graphite)
- Simple open pit operation, low stripping ratio, design production capability 350kt flake graphite per annum
- Over 50 year mine life<sup>3</sup>
- Immediate term focus on cost reduction and operating flexibility to meet market demand

#### : Battery Anode Material Project

- Capability to produce purified spherical graphite for product qualification in the lithium ion battery supply chain
- Existing plant/facility expandable to commercial scale
- Production of tolled and internally produced qualification scale final active anode material for qualification planned during 2020

#### **\( \)** : Sales & Marketing

- Global sales and marketing functions led from UAE
- Sales and marketing support provided by contract sales liaison in China
- : Corporate Office
- 1. Refer to ASX announcement 29 March 2019 "Graphite Mineral Resources and Ore Reserves Update". All material assumptions underpinning the production target in this announcement continue to apply, other than as updated in subsequent ASX announcements
- 2. TGC = Total Graphitic Carbon
- 3. Life of mine based on current 113.3Mt Graphite Ore Reserves being depleted at 2Mt throughput per annum.

# **Summary Q4 2019**

### Production moderated and cost restructure undertaken in response to sudden and material reduction in prices in Q3 2019<sup>1</sup>

#### Balama

- Total Recordable Injury Frequency Rate (TRIFR) of 0.6 at Balama at the end of Q4 2019.
- Production of 15kt flake graphite during the quarter (September guarter: 45kt).
- On track to achieve target of 20% to 25% cost reduction (at 15kt per month production rate), cost reductions of approximately 15% implemented and realised from 1 January 2020.

#### Sales and Marketing

- Graphite sold and shipped of 17kt (September quarter: 45kt).
- Finished product inventory 14kt<sup>2</sup>, a significant reduction compared to 31kt a year prior, positioning Balama for prevailing demand to drive production volume.
- Weighted average selling price (CIF) of US\$458/t (September quarter: US\$391/t), increase versus prior quarter predominately due to product mix and geographic mix.

#### **BAM**

• First purified spherical graphite produced from Vidalia, with purity greater than 99.95% achieved.

#### Cash

Metric	Units	FY 2019	Q4 2019 31 Dec 2019	Q3 2019 30 Sep 2019	Q2 2019 30 Jun 2019	Q1 2019 31 Mar 2019
TRIFR		0.6	0.6	0.3	0.3	0.6
Plant Feed	Tonnes ('000)	1,154	115	326	335	378
Plant Feed Grade	TGC⁴	19%	19%	19%	19%	18%
Recovery	%	68%	68%	69%	66%	69%
Graphite Produced	Tonnes ('000)	153	15	45	44	48
Fines/Coarse Mix	-	87/13	91/9	84/16	88/12	86/14
Average Fixed Carbon	%	95%	96%	96%	95%	95%
Graphite Sold and Shipped	Kt	163	17	45	53	48
Sales Revenue	US\$ million	72	8	18	24	23
Weighted Average Price (CIF)	US\$/tonne	443	458	391	457	469

Cash balance at 31 December 2019 US\$81m versus forecast of US\$78m<sup>3</sup>.

<sup>1:</sup> See ASX announcement 10 September 2019

<sup>2:</sup> Includes inventory at Balama, Nacala and USA

<sup>3:</sup> See ASX announcement 18 October 2019

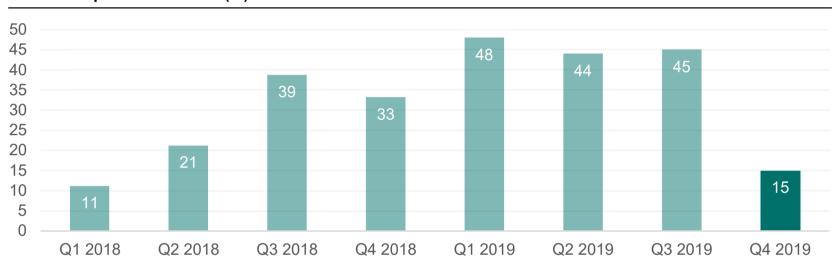
<sup>4:</sup> TGC = Total Graphitic Carbon

# Production moderated, product quality maintained

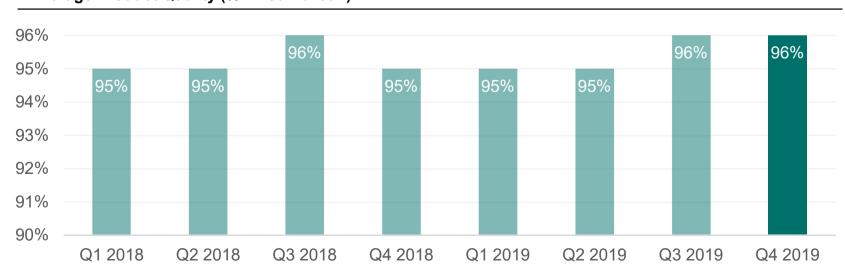
### Prevailing demand will drive Balama production volume through Q1 2020

- Production of 15kt of flake graphite during the quarter (September quarter: 45kt).
- Plant reconfigurations were undertaken during the quarter to minimise variable operating costs during the period of lower production volumes, primarily power cost reductions associated with bypass of process units.
- A foreseen outcome of these plant reconfigurations was higher fines versus flake graphite as a proportion of production. Product mix 91% fines in quarter (September quarter: 84%).
- Average fixed carbon levels of production of 96% maintained during the quarter (September quarter: 96%).
- Cost reduction activities (including plant reconfigurations) and moderation to lower production output, requiring increased number of planned shutdowns, were prioritised over recovery optimisation during the quarter. Recovery performance for the quarter was 68% (September quarter: 69%).
- >80% recoveries achieved during steady state operations, average recovery for December 76%.

#### Flake Graphite Production (kt)



#### **Average Product Quality (% Fixed Carbon)**

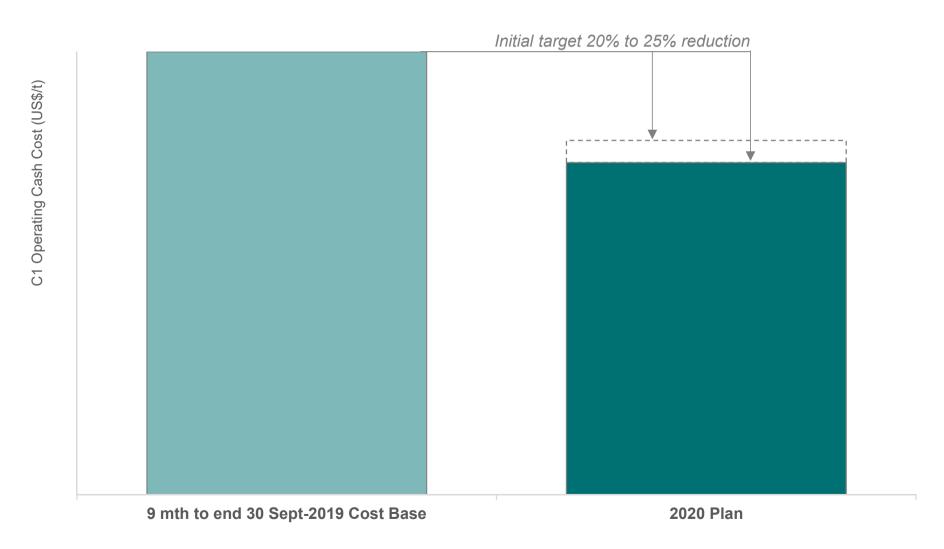


### Company wide cost restructure

On track for 20% to 25% cost reduction (at 15kt per month production rate), approx. 15% cost reduction achieved by end Q4 2019

- Significant progress made on companywide cost restructure announced 18 October 2019.
- The cost restructure is being executed with preservation of existing ESG best practices/capability and optionality to react promptly to improved market demand.
- Review of cost base remains ongoing as the operation stabilises at lower volumes and market balance is assessed into 2020.
- Cost reductions at Balama primarily achieved through:
  - Headcount reduction
  - Contract renegotiations
  - Procurement
  - · Mining and processing reconfigurations
- On track to achieve corporate cost reductions of ~US\$1.5 million (>20% reduction versus 2019)

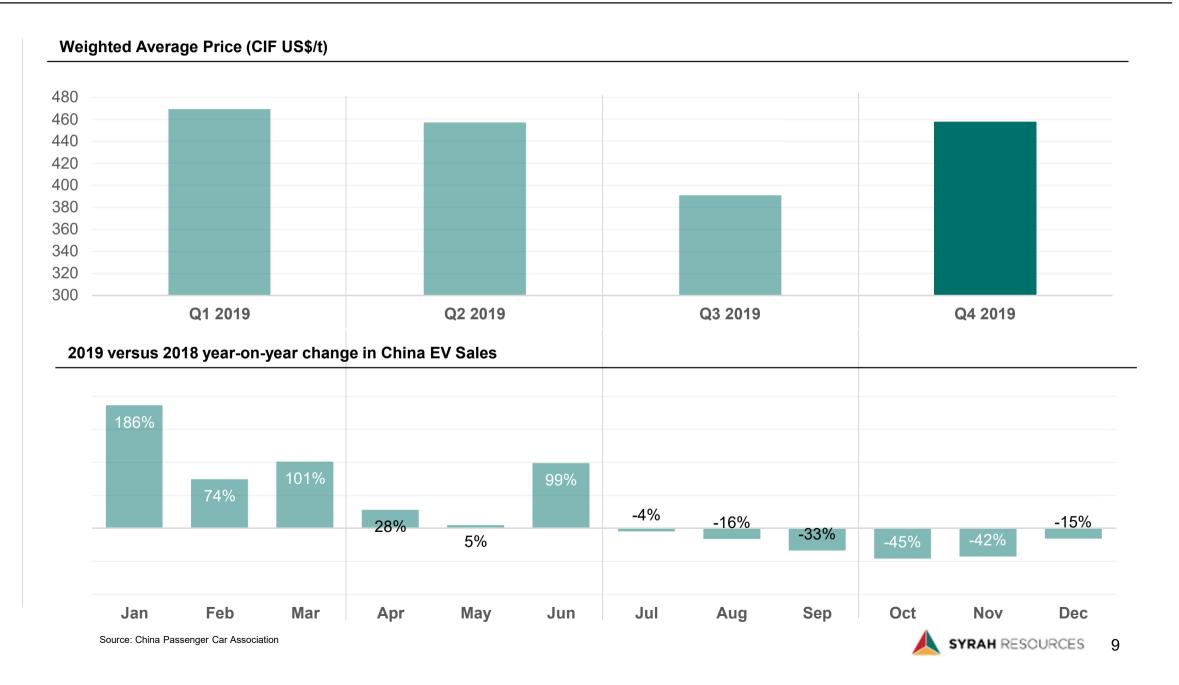
#### Indicative C1 unit costs @ 15 kt production per month



## Natural flake graphite prices

### Signs of price stabilisation observed during the quarter

- Q4 2019 weighted average price was US\$458 per tonne versus Q3 2019 US\$391 per tonne.
- Higher Q4 versus Q3 price predominately due to product mix and geographic mix.
- Inventory availability and weaker year-on-year electric vehicle (EV) production growth suppressed global natural graphite prices during the quarter.
- Signs of inventory drawdown and price stabilisation evident from late in Q4 2019 due to reduced Balama production and seasonal Chinese production closures.



# Long-term market fundamentals remain intact

### Decarbonisation of the transport sector via lithium ion powered electric vehicles (EV) continues to gain momentum

Available trade import/export data shows China moving to a net import position through 2019.

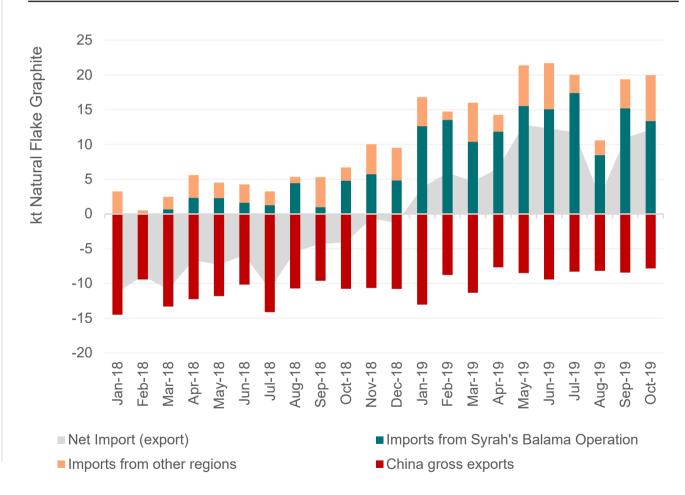
Significant ongoing commitments by EV supply chain participants during the quarter include:

- GM and LG Chem announced a \$2.3bn partnership to develop battery production capacity in Ohio<sup>1</sup>
- Volkswagen announced intentions to become the world market leader in e-mobility, investing
   €33 billion in these efforts throughout the group by 2024²
- BYD and Toyota announced they will establish a new joint venture focused on researching and developing battery electric vehicles<sup>3</sup>
- POSCO Chemical, one of the leading natural graphite-based anode producers, announced that it plans to invest 125.4 billion won to add 22,000 tonnes of anode material production capacity<sup>4</sup>

Governments continue to support EV industry and battery supply chain development:

- An EU Commission press release during the quarter outlined €3.2 billion in funding for research and innovation of battery value chain<sup>5</sup>
- Post quarter end, China announced there will be no cut to subsidies for new energy vehicles (NEV) in July 2020.<sup>6</sup>

### China Natural Flake Graphite Trade Balance<sup>7</sup>





<sup>1:</sup> Source: GM news release, "General Motors and LG Chem Team Up to Advance Toward an All-Electric Future, Add Jobs in Ohio" (5 Dec 2019)

<sup>2:</sup> Source: VW press release, "Volkswagen significantly raises electric car production forecast for 2025" (27 Dec 2019)

<sup>3:</sup> Source: Toyota press release, "BYD, Toyota Agree to Establish Joint Company for Battery Electric Vehicle Research and Development" (7 Nov 2019)

<sup>4:</sup> Source: Business Korea, "POSCO Chemical to Expand Anode Material Production Plant" (12 Nov 2019) - http://www.businesskorea.co.kr/news/articleView.html?idxno=37922

<sup>5:</sup> European Commission - Press release: "State aid: Commission approves €3.2 billion public support by seven Member States for a pan-European research and innovation project in all segments of the battery value chain", Brussels, 9 December 2019

<sup>6:</sup> https://www.bloomberg.com/news/articles/2020-01-13/electric-car-stocks-jump-as-china-signals-lull-in-subsidy-cuts

<sup>7:</sup> Source: Qizheng Information Technology Co., Ltd

# Our Environment, Social and Governance (ESG) credentials

### Ongoing commitment to working at the highest standards of sustainability practices

Focus and scrutiny of the Environmental, Social and Government (ESG) credentials of battery raw material supply chains continue, examples during the quarter include:

- BMW seeking 'sustainable' lithium from Australia with signing of a five-year, €540 million lithium supply contract with Ganfeng Lithium¹; and,
- Global tech companies named in US lawsuit over Congolese child cobalt mining<sup>2</sup>

#### Key ESG achievements through 2019 include:

- Recognised in 2019 as Sector Leader in ESG Reporting by the Australian Council of Superannuation Investors (ACSI);
- ISO:14001 (Environmental Management) and ISO:45001 (Occupational Health & Safety) certification at the Balama;
- AAMEG Africa Awards 2019 Winner Best Innovation in Corporate Social Development for the design, construction and operation of the Balama Professional Training Centre; and,
- International SOS 2019 Duty of Care Awards finalist for leading Malaria Mitigation practices.

Commitment to key local sustainability initiatives has been maintained through cost re-structuring activities undertaken through the quarter. Ongoing community initiatives during the quarter include:

- Ongoing commitment to the Balama Professional Training Centre, with third intake of students commenced;
- Construction of all 80 grain storage facilities planned for 2019 as part of the Livelihood Development and Community
  Health & Safety Programs were complete. With an additional 12 units were constructed to cater for high demand from
  resettled farmers;
- Reforestation campaign commenced under the Rehabilitation Program to develop areas affected by mining-related activities and other external factors such as wildfire (approx. 5 hectares); and,
- Preparation for the construction of Pirira primary school

#### **Balama Training Centre Graduation Ceremony**



<sup>1.</sup> Source: BMW press release, "Securing raw material supplies for battery cells: BMW Group signs supply contract with Ganfeng for sustainable lithium from mines in Australia" (11 Dec 2019) 2. Source: The Guardian, "Apple and Google named in US lawsuit over Congolese child cobalt mining deaths" (16 Dec 2019) - https://www.theguardian.com/global-development/2019/dec/16/apple-and-google-named-in-us-lawsuit-over-congolese-child-cobalt-mining-deaths

# First purified spherical graphite production in Q4 2019

### Long-term commitment to value added processing of flake graphite to active anode material enabled by long mine life at Balama

Mar 2018	May 2018	Aug 2018	Sep 2018	Dec 2018	Q1 2019	Q4 2019
Syrah precursor <sup>1</sup> testing and benchmarking completed	Vidalia site purchase agreement	Vidalia site purchase completed	Phase 1 Commercial scale study completed	First production of unpurified spherical graphite using Balama feed (5kt pa milling capacity installed)	Customer qualification of unpurified spherical graphite commenced	First production of purified spherical graphite using Balama feed. Purity >99.95% achieved

Vidalia purification circuit





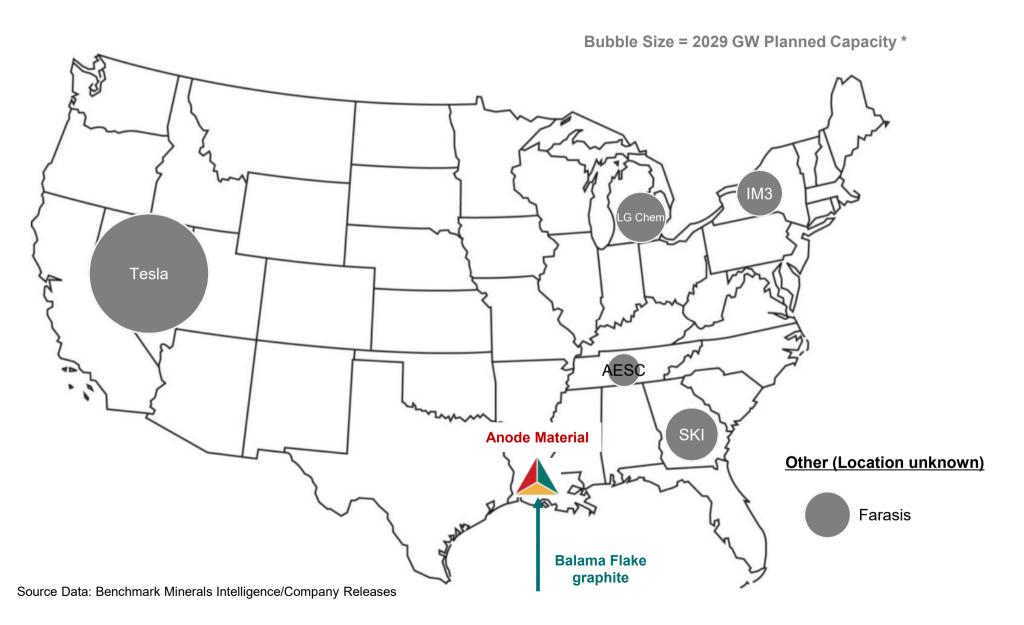
### Ongoing (to end 2020)

- Operate Vidalia, Louisiana plant
  - · Qualification of spherical graphite
  - Ongoing product development and commercialisation through 2020
- Produce active anode material for qualification via installation of pilot scale furnace at Vidalia and tolling
- Complete Bankable Feasibility Study for Vidalia expansion post product qualification
- Assess options for partnering:
  - Strategic
  - Financial
- Develop end customer relationships to underpin investment decision for larger scale Active Anode Material plant at Vidalia

SYRAH RESOURCES

# Co-location with planned USA battery factories

Syrah plans to provide a co-located and ESG verifiable source of anode material supply to the USA battery supply chain



- Graphite listed as one of the 35 minerals deemed critical to the United States economy and security<sup>1</sup>
- Potential to supply domestic and export markets from commercial facility in Vidalia

## **Outlook**

### Prevailing demand will drive Balama production volume through Q1 2020

Balama	Production from Balama will continue to be moderated through Q1 2020 until market conditions support the Balama cost base and increased production volume.  Balama product differentiators of product quality (fixed carbon grade and impurities); capability as a base load supplier of natural flake graphite into the battery raw material supply chain; and Syrah's best practice ESG credentials will continue to be strategically important through 2020.
BAM	The plant at Vidalia as at quarter end (31 December 2019) will be utilised through 2020 for:  understand understand the battery supply chain;  supply chain engagement to inform ongoing feasibility work for larger scale facility capable of commercial production rates; and  for development of strategic and financial partnerships.
Corporate	Forecast Q1 2020 Group net cash outflow is ~US\$16.0 million comprising of:  Balama net operating expenditure and sustaining capital outflows of US\$12.3 million assuming continued production moderation through Q1 2020  BAM cash outflows of US\$2.2 million  cash outflows from general corporate and administration activities net of interest income of US\$1.5 million.  Forecast cash balance as at end of Q1 2020 is ~ US\$65 million.  The cost restructure and production moderation to date has been executed with optionality retained to react promptly to improved market demand. Further cash preservation strategies available if the market imbalance observed in H2 2019 is prolonged