

Q2 2017 - Quarterly Activities Report July / August 2017

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We continue to progress towards becoming the world's pre-eminent supplier of natural graphite

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Торіс	Balama Project	Finance & Corporate	Marketing	Downstream Strategy
Update	Construction is over 90% complete. Delayed first production from late August to October due to processing plant completion and commissioning. First year of production planned to be 140kt to 160kt. No change to previous guidance. Mining Agreement presented to Secretariat of the Council of Ministers for approval.	Cash balance at end of quarter of US\$101 M. Progress made with working capital facility - multiple options considered. Facility to provide flexibility to progress, and if desired accelerate, downstream strategy.	Enhanced agreement with Marubeni from 3 years to 5 years and volumes increased from 20ktpa to 30ktpa. Confirmed agreement with Hiller Carbon from minimum 10ktpa to maximum 50ktpa. Confirmed 5-year sales agreement with MINERALS GmbH (COFERMIN group) for 12ktpa to 25ktpa for 5 years. Logistics and sea freight arrangements progressed.	 Option identified to increase QP volume and advance revenue. Development & Services Agreement signed with Cadenza Innovation. Team continues build led by our COO for BAM, Paul Jahn. Engineering contract awarded. Long lead item procurement started. Qualification plant site located. Lease to be finalised once permits awarded.



Construction completion >90% and we remain on track to produce 140ktpa to 160ktpa in year one

Balama Graphite Project Update			
Торіс	Balama Graphite Project	Delay to production commencement from late August to October	
	Construction is over 90% complete.	Delay driven by two issues:	
Update	Commissioning activities commenced. Labour, training and community development agreements in place. Operations teams are being mobilised and trained. All key mining, infrastructure, services and laboratory equipment in place. Run of Mine (ROM) pad stocked for commissioning, water pipeline under construction.	 Process plant completion Slower than planned completion of some structural steel erection, piping installation and electrical work. Causes Productivity, piping shortage and fabrication re-work Remedial Action Additional hours and resourcing, equipment on site. Process plant commissioning sequence 	
	Laboratory scale concentrate production onsite utilising ROM material showing results >95% TGC Distribution and logistics services contract mobilisation underway; port and sea freight arrangements progressed	Causes Reduced power availability due to a truck accident; combined with concurrent sectional completion. Remedial Action Replacement items have arrived and are installed; additional resources allocated to commissioning.	



Our downstream strategy has progressed and we have signed a development agreement with Cadenza

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Battery Anode Material Strategy Opdate			
Торіс	Battery Anode Material (BAM) Strategy	Technology Agreement with Cadenza Innovation Inc	
Purpose	Enter the battery anode material (BAM) market by producing our own BAM in Louisiana, USA.	Testing and product development; intellectual property development related to BAM.	
Update	 Ongoing engagement with potential customers and technology / commercial assessment has identified optimisation opportunity for qualification plant. Potential earlier commercialisation of the plant leading to earlier revenues in H2 2018. Potential capacity of qualification plant to be increased from 2,000tpa to over 10,000tpa. Capital cost update in September. BFS for commercial plant early H1 2018. Qualification plant engineering, permitting, long lead item procurement and site lease in progress 	Testing and product development for advanced Battery Anode Materials Joint Syrah / Cadenza team Knowledge exchange, deep technical partner and customer engagement, and support for the US BAM Plant development Product testing and benchmarking Development of BAM products to maximise value-in-use of Syrah natural graphite in the battery value chain	



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The mining Agreement has reached the final stage and our working capital facility has progressed

Corporate Update

Торіс	Mining Agreement	Funding
Purpose	Mining Agreement collates all positions agreed and developed with individual Ministries. All permits already in place to mine, process or export graphite.	Working capital facility to ensure Syrah can operate under a range of commencement scenarios.
Update	 Mines Department, Technical Committee and all relevant Ministries have endorsed final terms. No material changes have been made. The Agreement has been presented to Secretariat of the Council of Ministers for approval. We continue to regularly and proactively engage the relevant people to finalise the Agreement. 	Intent is to ensure the best financing option is selected. We continue to provide potential financiers with graphite market and Mozambique details and are working through multiple options. We have concurrently commenced work on considering BAM funding options, ensuring that the working capital facility allows flexibility to execute and/or accelerate the downstream strategy.

Source: Syrah Resources

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We have enhanced our existing relationship with Marubeni and finalised two further sales agreements

Marketing	Update
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Customer	Marubeni	Hiller Carbon	MINERALS GmBH
Progress	Expanded Agreement	Converted SSI into Agreement	Converted SSI into Agreement
Details	Extended the agreement from 3 years to 5 years. Increased flake volumes from 20ktpa to 25kt in years 1 & 2 and 30kt in years 3 to 5. This is in addition to the spherical agreement already in place.	Volume is a minimum of 10kt and a maximum of 50kt for 3 years. This includes flake sales from Balama and by-product from BAM. Excludes the battery market and is only for industrial markets.	5 year sales agreement for 12kt in first year and up to 25kt in later years. Agency and Principal agreement For EU and some parts of Middle East.
Sector	Battery and Industrial	Industrial	Industrial
Region			

Our commercial progress continues to inform our ramp up profile and we are on track to produce and sell **140kt to 160kt** in the first 12 months of production.



Summary

Syrah remains on track to produce 140ktpa to 160ktpa in the first year of production.

Minor delay to construction and full commissioning but we will soon develop into the world's largest, low cost, high quality producer of natural graphite.

Progress slower than desired on corporate funding and mining agreement during the quarter, but no impact on Balama commencement and sales. Expect both to be finalised soon.

Significant commercial progress in the last quarter with anchor customers in place for Europe, Asia and North America. Battery sector demand continues to expand.

Downstream strategy has progressed with key personnel in place, engineering and permitting underway, equipment ordered and technology agreement executed. Options to accelerate and expand identified.

Syrah Resources remains the only major new supplier of graphite to world's battery market.





July / August 2017

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Corporate & Balama Project



Syrah Resources – The Future of Graphite

- The only major, fully funded, natural graphite development project in construction globally
- □ Will be the largest natural graphite producer globally, product mix oriented to battery market growth
- □ A world class, tier-1 asset by any measure (cost, scale, life)
- Significant grade advantage, up to four times higher grade than current and potential supply
- Lowest quartile producer on the cost curve and 40% market share in 2020
- Ramp-up plan driven by incremental demand and displacement existing suppliers
- Commercially engaged with major customers across all sectors and geographies
- Battery Anode Material strategy progressing with funding and capacity expansion plans assessed



Syrah will be a first quartile producer both during ramp up and at full capacity



Production ramp up volumes of flake graphite concentrate:

- · Year 1: 140kt to 160kt of production.
- Year 2: Production volumes during ramp-up will be optimised to meet global demand. At this point Syrah expect global demand to support between 250kt and 300kt of production in year 2.
- C1 cash cost target of <US\$400 per tonne from year 1
- Progression to targeted C1 cash cost of US\$300 per tonne as plant ramps up to nameplate production of 350ktpa.

Product	Proportion of SYR Production
- 100 Fines	68%
+100 Medium	12%
+80 Large	12%
+50 Jumbo	8%
Current basket price (before premiums)	100%

Flake Graphite Producer Cost Curve: 2020



Source: Syrah Resources

Notes: Cost curves include current operating graphite mines that accounted for ~95% of global production in 2016. Cost curve is not adjusted for variations in TGC 1: Benchmark Minerals Intelligence data (CIF Europe). Prices for flake graphite 95% Total Graphitic Carbon (TGC%).

Across the graphite value chain, a consistent, high quality supplier can capture attractive margins



- Syrah internal economic assessment refer to ASX announcement dated 18th June 2015 for coated figures (2)
- (3) Based on Benchmark Minerals 2017 price data
- (4) Based on Benchmark Minerals 2017 price data for 15µm (D50) spherical graphite product



Low risk and low cost mining drives a significant competitive advantage

Conventional truck and shovel mining methods

Mining 2 Mtpa at a very low average strip ratio of 0.04:1 projected over the life of mine

> Low grade ore (> 2% to < 9% TGC) will be stockpiled for potential future processing.

Open pit mining to commence at Balama West, followed by Balama East, then Mualia

Sufficient Ore Reserves to support operations for almost 60 years of production and provides opportunity for both mine life extensions and production increases

Syrah's Mining Concession (issued on 6 December 2013) covers a 25 year period and is renewable for a further term of 25 years



Summary of Balama Project features

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\bigcirc	Reserves and Resources ⁽¹⁾	 Reserves: 114.5Mt at 16.6% TGC (18.6Mt contained graphite) Resources: 1,191Mt at 11.0% TGC (128.5Mt of contained graphite)
1) 1)	Mining Method	Simple open pit operation with low strip ratio; operations will commence as free-dig mining using conventional truck and shovel mining
D	Processing method	Conventional process including crushing, grinding, flotation, filtration, drying, screening and bagging
N	Processing rate	2 Mtpa
0 N	Product	95% to >98% TGC natural graphite produced across a range of flake sizes
	Production	Nameplate capacity of 380,000 tonnes of graphite concentrate per annum
	Total cash operating costs	 Initially achieve a C1 production cash cost of <us\$400 first<br="" in="" per="" the="" tonne="">12 months with later progression to less than US\$300 per tonne</us\$400>
	Life of mine	Almost 60 years



Syrah's Balama project has the largest defined reserve and significant grade advantage



Major project metrics highlight the attractiveness the Balama investment



Source: Syrah Resources, Corporate Reports and ASX announcements $\geq \geq \geq$ Note: Syrah Resources benchmarked against the next best ten competitors in each metric. Competitor location based on location of proposed mine, not company headquarters.

Capital structure



Source: Company filings, IRESS



(1) As at 10 July 2017



Our marketing strategy is multi faceted to ensure we are diversified by sector and geography

Sell to customers across all geographic regions

- As the world's biggest producer of graphite we will be active in all regions of the world, and gain access to regular, global information.
- Shipping using commercial container lines to all geographies ensures all key markets are able to be supplied by Syrah Resources.
- Maximise our potential ability to exploit geographic price arbitrages as they occur.

Sell to customers across all sectors of the market

- As the world's biggest producer of graphite we will be active in all sectors of the market, and gain access to regular, global information.
- Having production across all flake sizes gives us the opportunity to sell to a wide range of customer segments.
- Our product profile is well aligned to future market growth sectors.

Key supplier of incremental demand for batteries

- Incremental demand for fines flake graphite expected to grow by 90% in the next 3 years.
- Product mix leaves us well placed for the growing battery anode market with 68% fines production.
- Largest supplier expected to come online before 2020.

Displace existing high cost and others' future supply

- We will be one of the lowest cost, largest and highest quality producers of natural graphite in the world.
- Being low cost will enable us to potentially displace existing higher cost and lower quality suppliers.
- Scope to expand Balama's capacity with scalable optionality.



Syrah's marketing strategy is to be diversified across customers, end user markets and geographies



Our Flake Graphite Marketing Plan

Six major sales Agreement will form the backbone of our ramp up profile over the next three years.

Our internal consumption for BAM production and multiple smaller agreements will enable us to achieve our goal to reach full capacity.

Marketing strategy is to be diversified by:

- Customer

- Geography

- Sector

We aim to achieve this by:

- Absorbing incremental demand tonnes
- Displacing higher cost production
- Displacing lower quality production





Graphite market overview





We believe future flake graphite demand is going to be influenced by four global and structural trends



Increased use of natural graphite in battery anodes



Increased size of batteries used in electric vehicles



China becoming a net importer of -100 mesh flake graphite



Syrah's Balama production ramp up will be driven by the strong global demand growth profile



Source: Syrah Resources

Notes: Steel sector includes refractory bricks, foundries and recarburising products. Other includes lubricants, brakes, friction products and pencils.

Majority of global incremental demand growth is for smaller sized flake used in the battery sector



China's demand for -100 mesh flake graphite is increasing at a time of reducing domestic supply



China's commodity self sufficiency (% of demand produced domestically)

China's self sufficiency of commodities is a factor of its economic development status and the accessibility of its own natural endowment.

As China's economy shifts towards higher value adding manufacturing, such as electric vehicles, its demand for -100 mesh flake graphite used in batteries is increasing.

This is occurring at a time when the supply of this material is declining due to the exhaustion of high quality domestic resources and increased environmental regulations.

Syrah's relationship with China's manufacturing and battery industry is mutually beneficial and both share the same long term strategic goals.



Source: Syrah Resources, Woodmackenzie, CRU, Metal Bulletin

Global graphite market definition and flow



- The total graphite market refers to the sum of natural and synthetic graphite production.
- Synthetic graphite predominately derived from petroleum coke, with a small amount from coal tar pitch
- Majority of world's amorphous and flake supply is from China
- All vein supply is from Sri Lanka.
- Currently, the steel market is the main end use market
- Battery market is the fastest growing sector of the natural flake market moving from 15% to 35% share by 2021



Source: Syrah Resources, Benchmark Minerals

By 2020 Syrah will be the largest individual graphite producer in the world with ~40% market share





Syrah's product profile matches incremental demand growth, large flake size demand growth limited



≥+50 (>large)

Every natural flake graphite size market has its own supply and demand fundamentals.

Although larger flake sizes obtain higher prices, the markets for these sizes are small and growth is limited due to low to no growth in global steel production.

The battery sector uses -100 mesh or smaller sized flake graphite.

The focus on larger flake sizes by others is either due to inflating the potential basket price or a misunderstanding of the graphite and end user markets.

Syrah's product mix captures nearly all of the incremental demand for battery sector sized flake graphite and all of the demand for larger sized flake sizes in the next 5 years.

Any upside to incremental demand will be met by a potential expansion by Syrah >2020.



Each kilogram of natural graphite anode material requires over twice the amount of flake as feedstock



Syrah's product quality and grade will command a premium price

or personal

Flake prices are determined based on a range of value in use variables such as graphite content, flake size and impurity levels.



The market already appreciates this value. An additional +1% of TGC equates to a +4 - +7% value uplift, depending on the flake size.

% price change per % change in TGC



Price historically driven by steel and industrial applications; now and in future by battery demand



Source: USGS, Syrah Resources Notes: for low grade fines

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Non-metallic and metallic properties of flake graphite ensure the largest variety of applications



Technical: Electrodes for steel and aluminium production, expandable, brakes, flame retardants, nuclear reactors. Other: Pencils, lubricants, paints.

We focus on electric vehicles due materiality of graphite use in each unit and the expected growth in the sector



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Global awareness, planning and investment continues to build for electric vehicles



Notes: Selection of headlines between 1 May and 28 June 2017.

Largest car markets have high BEV penetration, China electric bus sales have risen significantly since 2014



Source: Macquarie Bank, International Energy Agency, Syrah Resources Notes: BEV = Battery Electric Vehicle



2015

2016

116

94

Battery Anode Material (BAM) Project



Blending natural and synthetic graphite in anodes enables a balance of performance and cost



Anode capacity and graphite type penetration

Volume



<u>V</u> MO

or dersonal

A higher proportion of natural graphite drives down battery cost, and improves capacity

Natural graphite



Synthetic graphite



Natural graphite anode active material has an average capacity +6% greater than synthetic graphite.

Substituting a higher proportion of natural graphite into the anode reduces battery costs.

This facilitates overall battery prices to decline without placing price pressure on the natural flake and anode producers.

Current industry research is focused on improving the cycle lifetime of natural flake anodes.

Our MOU with Cadenza will allow us to further test and develop battery anode material options.



Syrah's graphite is in demand, and characteristics provide production and cost advantages

Syrah Resources Spherical Graphite



Syrah Resources Flake Graphite Concentrate

Characteristics of Syrah Resources' graphite

1 Optimal flake size

-100 mesh maximises production yield for battery market. +100 mesh material primarily for industrial markets.

2 Crystallisation

Balama graphite has a fully ordered crystalline structure.

3 High production yields

Spherical graphite production yield of 45% - 55%, compared to typical yields of 30% - 40%.

4 Degree of spheroidisation

Well rounded spherules, increased tap density and anode efficiency.

5 Purity level

High ore graphite content eases purification to 99.95%+ that increases anode life and conductivity.

