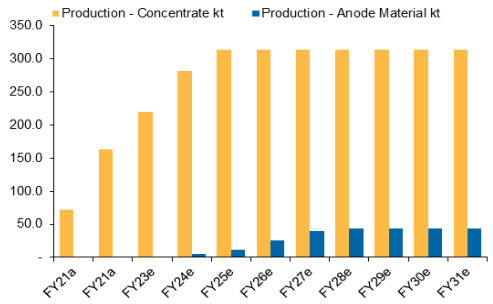
EQUITIES

Graphite concentrate and AMM production



Source: SYR, Macquarie Research, March 2023

SYR AU	Outperform
Price (at 06:29, 23 Mar 2023 GMT)	A$1.48

Valuation - DCF (WACC 12.6%)	A$	2.35
12-month target	A$	2.30
12-month TSR	%	+55.4
Volatility Index		Very High
GICS sector		Materials
Market cap	A$m	995
30-day avg turnover	A$m	6.2
Number shares on issue	m	672.5

Investment fundamentals

Year end 31 Dec		2022A	2023E	2024E	2025E
Revenue	m	107.6	191.7	267.5	347.9
EBITDA	m	-10.4	91.7	147.9	206.9
EBIT	m	-24.0	62.8	100.2	184.8
Reported profit	m	-26.1	40.4	65.8	112.8
Gross cashflow	m	-13.9	72.5	118.7	143.9
CFPS	¢	-2.1	9.8	14.6	17.7
CFPS growth	%	76.8	nmf	48.8	21.2
PGCFPS	x	nmf	10.1	6.8	5.6
EPS adj	¢	-3.9	5.5	8.1	13.9
PER adj	x	nmf	18.1	12.2	7.1
Total DPS	¢	0.0	0.0	0.0	0.0
ROA	%	-4.8	8.2	8.6	12.9
ROE	%	-7.3	7.3	9.3	14.2
EV/EBITDA	x	-61.8	8.6	5.3	3.8
Net debt/equity	%	-4.3	-19.0	-27.0	-7.8

Source: FactSet, Macquarie Research, March 2023
(all figures in USD unless noted, TP in AUD)

Syrah Resources (SYR AU)
The graphite behemoth

Key points

- Balama, the world's largest graphite mine, is currently being ramp-up, enabling SYR to move downstream in the US.
- US government support and funding; the offtake from Tesla and general battery demand supports Vidalia growth to 45ktpa and beyond.
- Initial production from Vidalia and the expansion studies are near-term catalysts and we initiate coverage with an Outperform rating.

Vertically integrated with a global touch

SYR is the only vertically integrated natural graphite active anode material supplier and producer outside of China at present. The Balama mine is significant on a global scale, with a 350ktpa nameplate capacity and has been in operation since 2017. The downstream Vidalia plant is targeting production of 11.25ktpa of Active Anode Material (AAM), with a study underway to lift volumes to 45ktpa.

SYR is already in production; has product qualified with tier-1 customers and is leveraging its downstream facility in the USA, with the latter positioning it well for US battery and auto manufacturers.

Key catalysts in the near term include the ramp-up of production and decrease in costs at Balama; first production from Vidalia; the Vidalia expansion study; confirmation of the US DOE grant; and execution of offtake agreements. We initiate coverage with an Outperform rating and set a A$2.30 price target based on a 50/50 NPV and 5x Ebitda multiple, in line with our bulk commodity and battery minerals producer coverage.

Vidalia to grow from 11.25ktpa to 45ktpa and beyond

Commissioning of the 11.25ktpa stage 1 at Vidalia is guided by SYR to occur in 3QCY23 followed by an 18-month ramp-up. We have also included the expansion to 45ktpa in our base case forecasts, with construction to occur in parallel to the stage 1 ramp-up. We have forecast a ramp-up to full production in CY26/27.

SYR has highlighted potential to increase the production capacity at Vidalia, as well as looking at the potential to develop a AAM facility similar to Vidalia in Europe. SYR has flagged that this could potentially increase AMM volumes to above 100ktpa, with Balama's scale supportive of downstream growth.

Funding channels in the USA

As at the end of December 2022, SYR had a cash balance of US$90m and will draw on the US$102m DOE loan to fund the initial 11.25ktpa Vidalia expansion. SYR is also progressing negotiations with the DOE for a US$220m grant, which in addition to cash flow from Balama and our assumed US$200m capital raising could fund the additional Vidalia expansion to 45ktpa.

Tesla a key client, underpinning downstream growth

SYR has executed an offtake agreement with Tesla to supply 8ktpa of AAM which would increase to 25ktpa as the Vidalia expansion is approved and ramped to 45ktpa. AMM is the key product that makes up the anode of lithium-ion batteries. An average EV battery has ~50kg of graphite (split 50/50 natural and synthetic) in the anode, thus 45ktpa of AAM product can be used to produce ~450,000 Electric Vehicles (Tesla produced 1.3m EVs in 2022).

Inside

Globally significant integrated graphite producer 5
Offtake signed with tier-1 customers 10
Solid group financials 11
Graphite with a global touch 12
Balama, the beast 13
Vidalia key to the supply chain 17
Board and Management 19
ESG Considerations 21

Syrah Resources (SYR)

Company profile

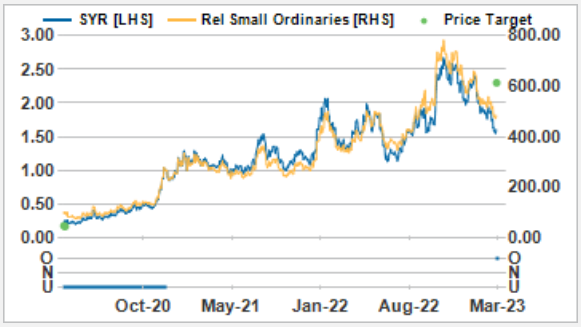
- Syrah Resources (SYR) is an ASX-listed graphite and active anode material (AAM) producer, leveraging demand growth within the battery and EV value chain. Its flagship operations are the Balama Graphite Operation in Mozambique and a downstream active anode material facility in the United States (Vidalia).
- SYR is the only vertically integrated natural graphite active anode material supplier and producer outside of China at present. The Balama mine is significant on a global scale, with a 350ktpa nameplate capacity and has been in operation since 2017. The downstream Vidalia plant is targeted to produce 11.25ktpa of AAM, with a study underway to increase AAM production capacity to 45ktpa.
- SYR boasts a significant Ore Reserve of 107mt at 16% Total Graphitic Carbon (TGC) for 16.9mt of contained graphite and a Resource of 1.4bt at 10% TGC for 146.7mt of contained graphite, which underpins the estimated ~50-year mine life. 80% of the product is fine flake (-100mesh) which is used in the battery anode market.
- SYR has had first movers' advantage in the qualification process for its graphite and AAM, has commercial agreements with tier-1 customers and has benefited from US government funding initiatives.

Fig 1 SYR's global, vertically integrated operations



Source: SYR, March 2023

Fig 2 SYR AU rel Small Ordinaries performance, & rec history

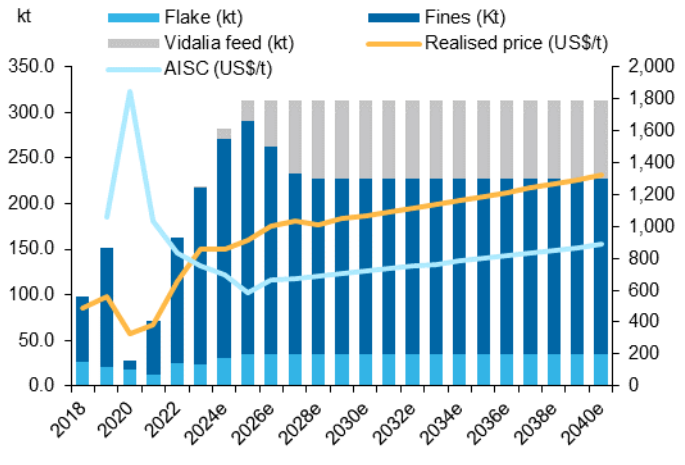


Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, March 2023

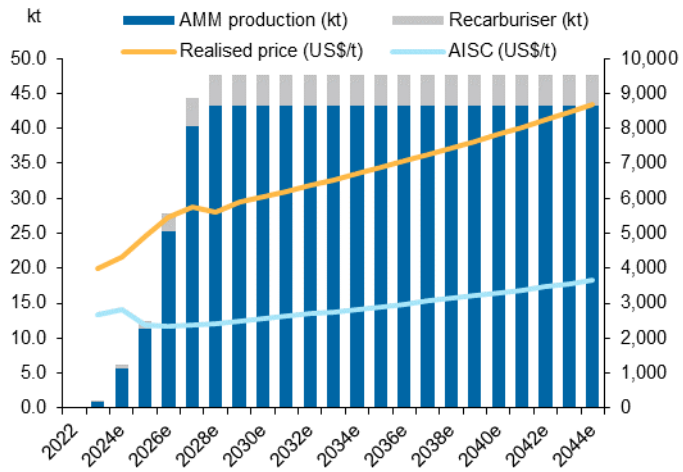
(all figures in USD unless noted, TP in AUD)

Fig 3 Balama graphite production, price and costs



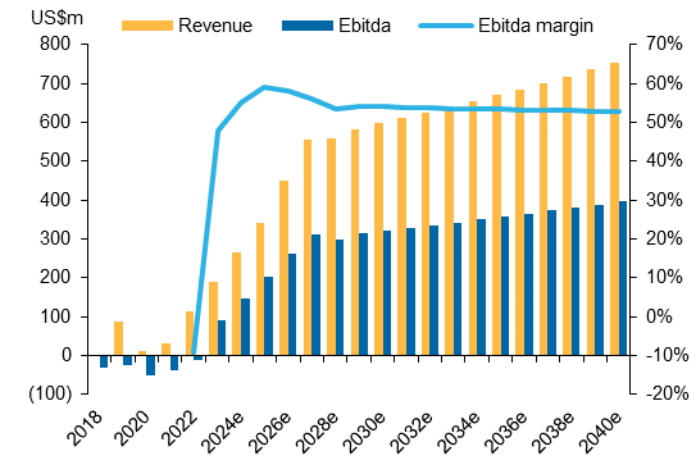
Source: SYR, Macquarie Research, March 2023

Fig 4 Vidalia AAM production, price and costs



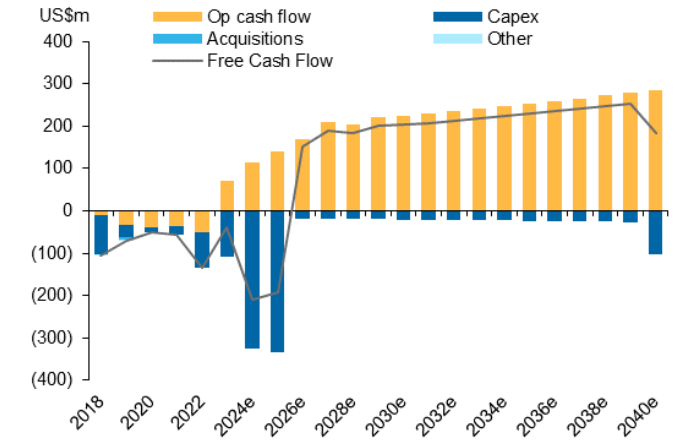
Source: SYR, Macquarie Research, March 2023

Fig 5 SYR Revenue, Ebitda and margins



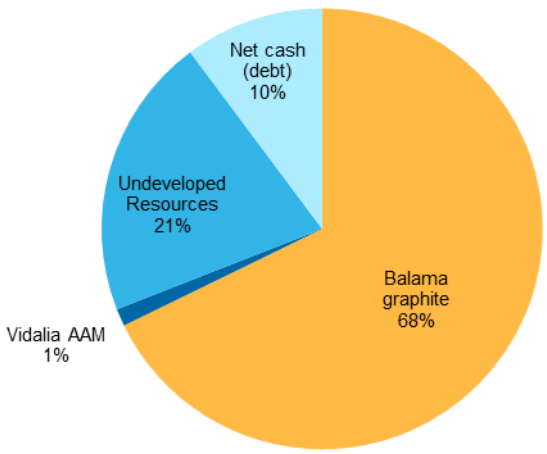
Source: SYR, Macquarie Research, March 2023

Fig 6 SYR Free cash flow profile



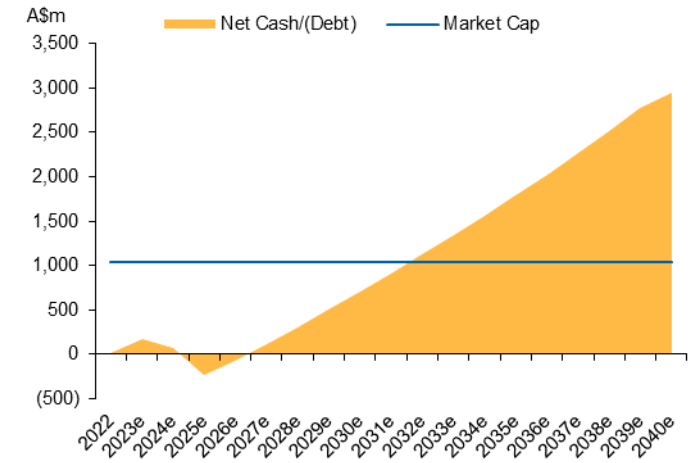
Source: SYR, Macquarie Research, March 2023

Fig 7 NPV breakdown



Source: SYR, Macquarie Research, March 2023

Fig 8 SYR Net cash vs Market cap



Source: SYR, Macquarie Research, March 2023

Fig 9 Syrah Resources summary forecasts and valuation

Syrah Resources

ASX: SYR	**Price: (A$ps)**	1.48	**Year end:**	Dec	**Rating:**	**Outperform**	**Up/dn**
	Mkt cap: (A$m)	991	**Diluted shares (m)**	669.3	**Target:**	**2.30**	**55%**
	Mkt cap: (US$m)	666					

ASSUMPTIONS		CY22a	CY23e	CY24e	CY25e	CY26e	CY27e
Exchange Rate	A$/US$	0.69	0.67	0.69	0.70	0.70	0.70
Graphite Flake, 94-97% C, +50 mesh	US$/lt	1,498	1,486	1,484	1,675	1,850	2,050
Graphite, Flake, 94-97% C	US$/lt	632	824	813	875	975	1,038
Spherical graphite (uncoated)	US$/lt	3,426	3,597	3,861	4,375	4,875	5,188
Recarburiser	US$/lt	343	360	386	438	488	519

RATIO ANALYSIS		CY22a	CY23e	CY24e	CY25e	CY26e	CY27e
Diluted share capital	m	669.3	669.3	812.2	812.2	812.2	812.2
EPS (diluted and pre sig. items)	US¢	-3.9	5.7	8.1	13.9	17.2	21.8
P/E	**x**	**-54.6x**	**38.3x**	**26.3x**	**15.2x**	**12.3x**	**9.7x**
CFPS	A¢	(7.6)	10.4	15.4	18.6	22.7	28.3
P/CF	x	-19.4x	14.3x	9.6x	8.0x	6.5x	5.2x
DPS	A¢	0.0	0.0	0.0	0.0	0.0	0.0
Dividend yield	**%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Franking Level	%	0%	0%	0%	0%	0%	0%
Book value per share	x	0.64	1.02	0.86	0.91	1.08	1.30
P/Book value	x	2.3x	1.5x	1.7x	1.6x	1.4x	1.1x
R.O.E. (pre sig items)	%	-6%	6%	9%	15%	16%	17%
R.O.A. (pre sig items)	%	-4%	6%	8%	14%	17%	17%
Interest Cover	x	-7.4x	-49.9x	-23.6x	32.5x	25.5x	40.1x
EBITDA per share	A$ps	-0.02	0.20	0.26	0.36	0.48	0.58
EV/EBITDA	**x**	**-65.7x**	**6.3x**	**4.4x**	**3.4x**	**2.5x**	**1.6x**
Free cash flow yield	%	(20%)	(14%)	11%	(20%)	25%	32%

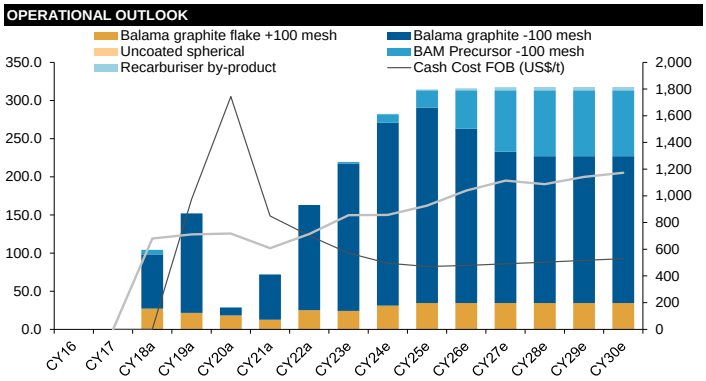
EARNINGS		CY22a	CY23e	CY24e	CY25e	CY26e	CY27e
Sales Revenue	US$m	108	192	268	348	463	576
Other Revenue	US$m	8	0	0	0	0	0
Total Revenue	**US$m**	**116**	**192**	**268**	**348**	**463**	**576**
Operating Costs	US$m	(109)	(92)	(111)	(132)	(181)	(236)
Operational EBITDA	**US$m**	**7**	**100**	**156**	**215**	**282**	**340**
Exploration Expense/Write-offs	US$m	0	0	0	0	0	0
Corporate & Other Costs	US$m	(17)	(8)	(8)	(9)	(9)	(9)
EBITDA	**US$m**	**(10)**	**92**	**148**	**207**	**274**	**331**
D&A	US$m	(14)	(29)	(48)	(22)	(43)	(43)
EBIT	**US$m**	**(24)**	**63**	**100**	**185**	**230**	**288**
Net Interest	US$m	(3)	1	4	(6)	(9)	(7)
Profit Before Tax	**US$m**	**(27)**	**64**	**104**	**179**	**221**	**281**
Tax Expense	US$m	(0)	(21)	(33)	(57)	(71)	(90)
Minorities	US$m	1	(3)	(5)	(9)	(11)	(14)
Adjusted NPAT	**US$m**	**(26)**	**40**	**66**	**113**	**139**	**177**
Significant Items (post tax)	US$m	0	0	0	0	0	0
Reported NPAT	**US$m**	**(26)**	**40**	**66**	**113**	**139**	**177**

CASHFLOW		CY22a	CY23e	CY24e	CY25e	CY26e	CY27e
Net Profit	**US$m**	**(26)**	**40**	**66**	**113**	**139**	**177**
Interest/Tax/D&A	US$m	14	38	66	46	55	56
Working Capital/other	**US$m**	(38)	(9)	(7)	(8)	(10)	(3)
Net Operating Cashflow	**US$m**	**(51)**	**69**	**125**	**151**	**184**	**229**
Capex	US$m	(84)	(160)	(273)	(285)	(19)	(19)
Investments	US$m	0	0	0	0	0	0
Sale of PPE and Other	US$m	0	0	220	0	0	0
Free cash flow	**US$m**	**(135)**	**(91)**	**72**	**(134)**	**166**	**210**
Dividends Paid	US$m	0	0	0	0	0	0
Debt	US$m	(5)	114	15	(49)	0	0
Equity Issuance	US$m	176	200	0	0	0	0
Other	US$m	0	0	0	0	0	0
Net Financing Cashflow	**US$m**	**171**	**314**	**15**	**(49)**	**0**	**0**
Net change in cash	**US$m**	**36**	**223**	**87**	**(182)**	**166**	**210**

BALANCE SHEET		CY22a	CY23e	CY24e	CY25e	CY26e	CY27e
Cash	US$m	90	314	459	400	384	594
PP&E & Mine Development	US$m	379	510	622	736	711	687
Exploration	US$m	0	0	0	0	0	0
Total Assets	**US$m**	**556**	**977**	**1,287**	**1,359**	**1,392**	**1,651**
Debt	US$m	85	179	193	201	152	152
Total Liabilities	**US$m**	**127**	**296**	**586**	**621**	**514**	**596**
Total Net Assets / esuity	**US$m**	**430**	**681**	**700**	**738**	**878**	**1,054**
Net Debt / (Cash)	US$m	(6)	(135)	(266)	(200)	(232)	(442)
Gearing (net debt/(nd + esuity))	%	(1%)	(25%)	(61%)	(37%)	(36%)	(72%)
Gearing (net debt/esuity)	%	(1%)	(20%)	(38%)	(27%)	(26%)	(42%)

ATTRIBUTABLE MINE OUTPUT		CY22a	CY23e	CY24e	CY25e	CY26e	CY27e
Mine Graphite Production (equity)							
Total concentrate produced	kt	163.0	219.4	282.1	313.4	313.4	313.4
Balama graphite flake +100 mesh	kt	25.2	24.1	31.0	34.5	34.5	34.5
Balama graphite -100 mesh	kt	137.8	193.4	239.8	256.3	228.4	198.4
BAM Precursor -100 mesh	kt	0.0	1.9	11.3	22.6	50.5	80.5
Graphite sales (kt)	**kt**	**163.0**	**217.5**	**270.8**	**290.8**	**262.9**	**232.9**
W Ave basket price	US$t	715	855	857	927	1,039	1,114
Cash Cost FOB (US$/t)	**US$/t**	**703**	**571**	**495**	**471**	**479**	**492**
Notional Cash Margin	US$/t	12	285	362	456	560	623
BAM Production (equity)							
Uncoated spherical	kt	0.0	0.0	0.0	0.0	0.0	0.0
Coated spherical	kt	0.0	0.9	5.6	11.3	25.3	40.3
Recarburiser by-product	kt	0.0	0.1	0.6	1.1	2.5	4.0
Spherical AIC	**US$/t**	**na**	**2,686**	**2,820**	**2,398**	**2,364**	**2,390**
Operational EBIT Contribution							
Balama	A$m	(10)	37	61	124	126	133
Downstream	A$m	0	0	4	21	63	113

OPERATIONAL OUTLOOK



RESERVES AND RESOURCES (ATTRIBUTABLE)

Graphite Reserves

Project	Mt	% TGC	TGC (mt)
Balama West	59.8	16.9%	10.1
Balama East	47.0	14.4%	6.8
Stockpiles	0.9	9.3%	0.1
Total graphite reserves (mt)	**108**	**15.7%**	**16.9**

Graphite Resources

Project	Mt	% TGC	TGC (mt)
Balama West	638.0	10.0%	63.5
Balama East	783.0	10.6%	83.1
Total graphite resources (mt)	**1,421**	**10.3%**	**146.7**

Vanadium Resources

Project	Mt	% V2O5	V2O5 (kt)
Balama West	638.0	0.20%	1,276
Balama East	783.0	0.20%	1,566
Total low grade reserves (kt)	**1,421**	**0.20%**	**2,842**

EQUITY DCF VALUATION

Projects	A$m	A$ps
Balama graphite	1,232	1.66
Vidalia AAM	23	0.03
Undeveloped Resources	377	0.51
Other Projects	0	0.00
Unpaid capital	0	0.00
Corporate/forwards	(78)	(0.11)
Net cash (debt)	185	0.25
Net equity Value (@ 12.6% WACC)	**1,740**	**2.35**
Price Target (50/50 NPV/5x Ebitda)		**2.30**

Source: SYR, Macquarie Research, March 2023

Globally significant integrated graphite producer

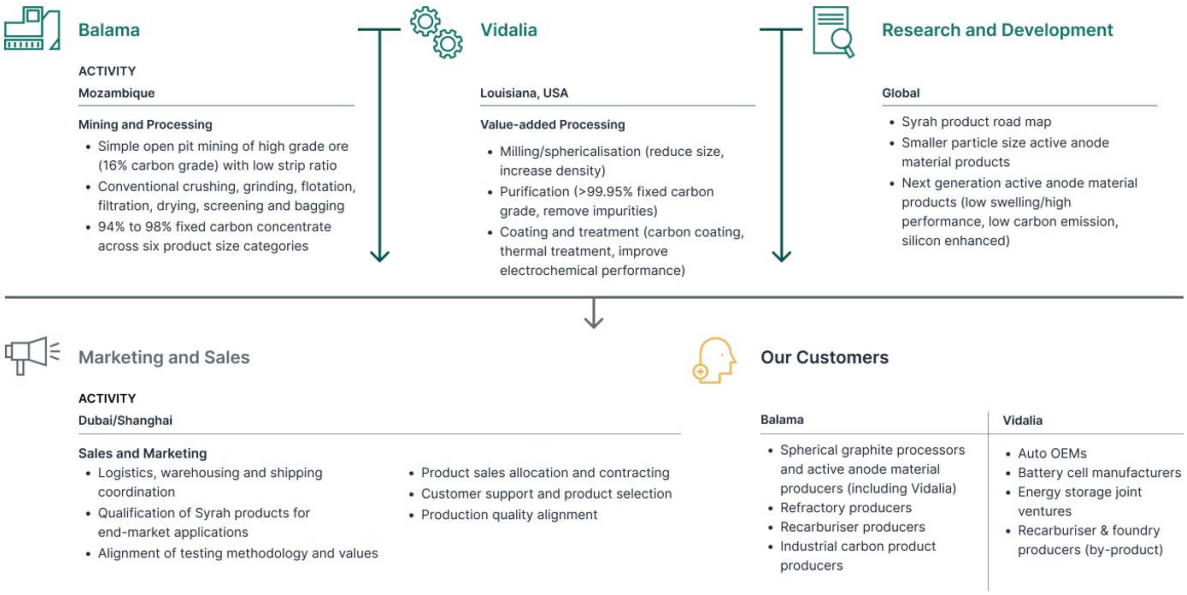
Initiating coverage with an Outperform rating

SYR has a globally significant, fully integrated Active Anode Material operation

SYR owns the Balama graphite project in Mozambique and the Vidalia Active Anode Material Facility in Louisiana, USA. Balama boasts a globally significant Reserve of 107mt at 16% TGC for 16.9mt of contained graphite and a Resource of 1.4bt at 10% TGC for 146.7mt of contained graphite, which underpins the estimated ~50-year mine life. 80% of the product is fine flake (-100mesh), which is used in the battery anode market.

Balama has been operating since 2017 and has a nameplate capacity of 350ktpa; a level it is still ramping up to. The downstream Active Anode Material facility is on track to be expanded to a capacity of 11.25ktpa, with a study underway to expand production capacity to 45ktpa.

Fig 10 Vertically integrated, with a large mine in Mozambique and downstream upside in the USA

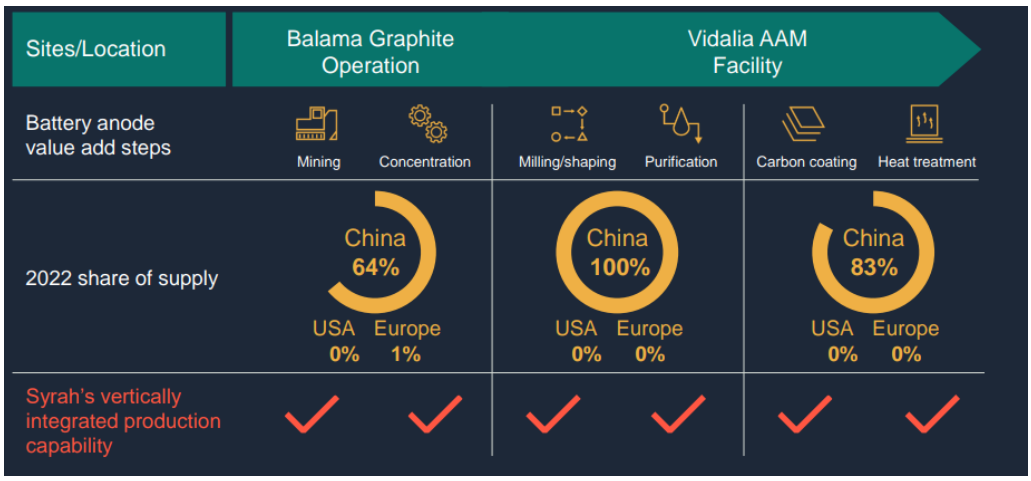


Source: SYR, March 2023

Downstream in Louisiana provided a competitive advantage to leverage US auto supply chain

The key differentiator for SYR is being already in production (via the globally significant Balama mine), having product qualified and with Tier-1 customers and its downstream positioning in the USA. We believe the latter is a key positive, bypassing the need for product to go to traditional downstream markets of China/Korea/Japan; positioning SYR well for US battery and auto manufacturers, given local supply. Access to US government incentive funding is also positive.

Fig 11 Vertically integrated production capacity



Source: SYR, March 2023

Robust LOM metrics, driven by ramp-up at Balama and Vidalia

50-year LOM with an average graphite production of 310ktpa and AMM production of 40ktpa

We have assumed a ramp-up in Balama graphite production, with our peak volume forecast being ~310kt, while our average LOM forecast is 290ktpa. We have also forecast ~43ktpa of peak AAM volume from Vidalia, with the average LOM forecast being ~40ktpa; both over a 50+ year LOM.

We have forecast LOM revenue for the group at US$19.2b (~US$384m pa), LOM Ebitda of US$9.9b (~US$198m pa) and LOM free cash flow of US$4.2b (US$84m pa). We value the integrated operation at US$955m, with value transferring towards the downstream over time.

Fig 12 Key Balama and Vidalia forecasts

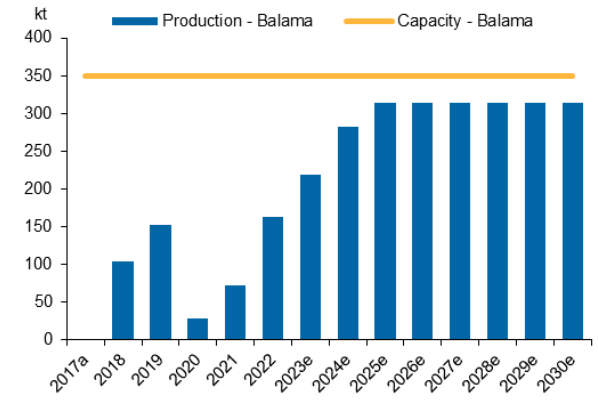
		Macq
Average LOM graphite production	ktpa	289.9
Average LOM AAM production	ktpa	40.0
Life of Mine (LOM)	years	50
NPV	US$m	954.9
Average Operating costs (Balama)	US$/t	694
Average Processing costs (Vidalia)	US$/t	2,512
Revenue from integrated operation	US$m	19,182
Ebitda from integrated operation	US$m	9,905
Cashflow from integrated operation	US$m	4,201

Source: SYR, Macquarie Research, March 2023

Ramp-up of operations key to cost performance

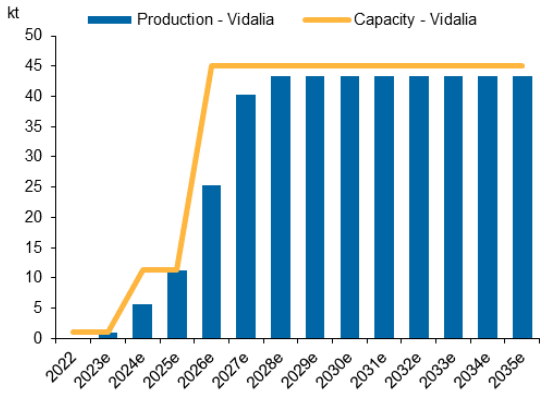
Balama volumes are forecast to ramp-up following the period of care and maintenance in 2020, lifting to ~310ktpa. We note that given volumes and inflationary headwinds, Balama was running at a loss over the last 3 years which should unwind on the ramp-up. We have forecast average LOM costs at Balama of US$694/t (although sub US$500/t for FY24-27) and US$2,512/t at Vidalia.

Fig 13 Balama production ramp-up to 310ktpa



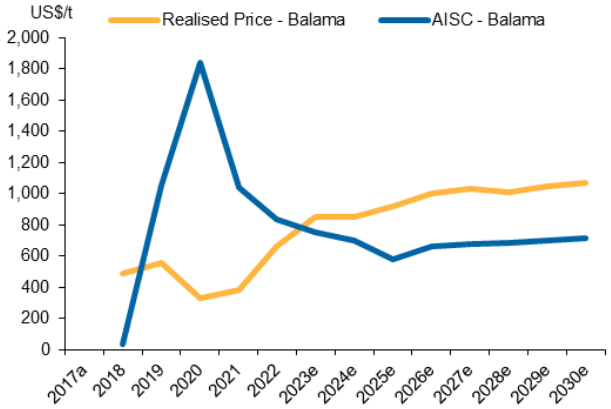
Source: SYR, Macquarie Research, March 2023

Fig 14 Vidalia forecast to ramp-up to expansion target



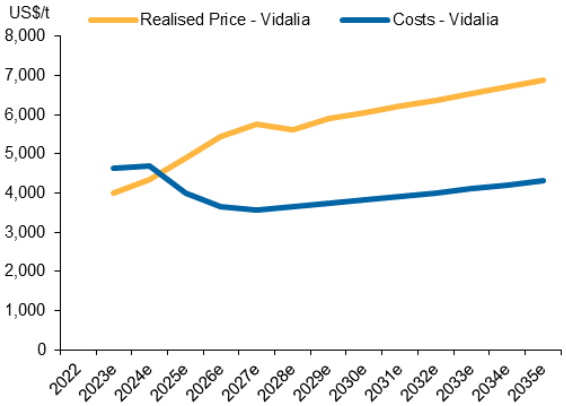
Source: SYR, Macquarie Research, March 2023

Fig 15 Balama was loss making in recent years



Source: SYR, Macquarie Research, March 2023

Fig 16 Strong margins forecasts for AAM



Source: SYR, Macquarie Research, March 2023

Vidalia ramp-up to 11.25ktpa a key near-term catalyst

Increasing production at Balama, closer to nameplate capacity, and commissioning and expanding Vidalia to the initial 11.25ktpa capacity are key near-term catalysts. We note that there is a secondary expansion of Vidalia to 45ktpa currently under study, with the outcome expected in CY23. We have included the 45ktpa expansion in our base case forecasts.

The FID on the initial expansion of Vidalia was executed in February 2022, with construction starting in the 4QCY22. SYR expects construction to be completed and commissioning to commence in 3QCY23, followed by an 18-month ramp-up to 11.25ktpa.

Fig 17 Commissioning and production start of Vidalia (at 11.25ktpa) in 3QCY23



Source: SYR, March 2023

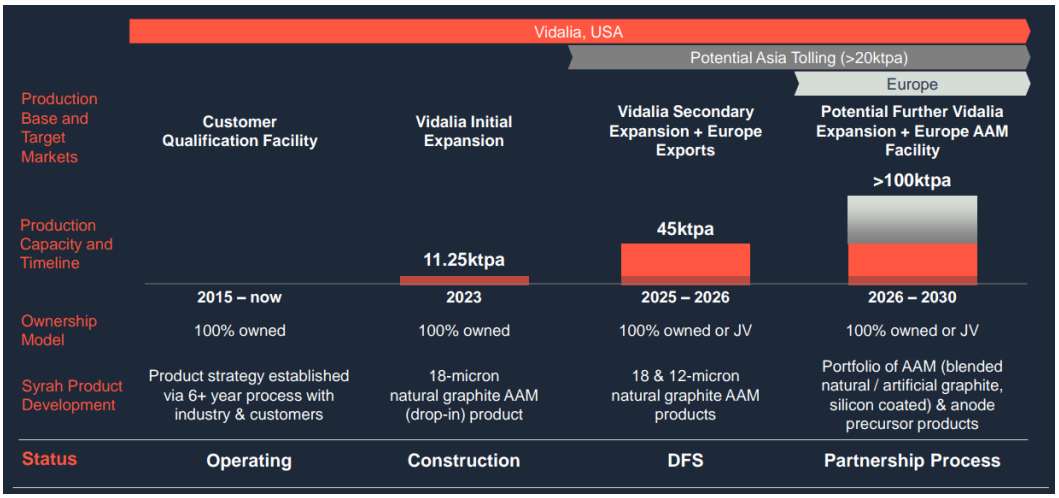
45ktpa expansion within our base case forecasts

We expect a construction start of the expansion to 45tkpa to run in conjunction with the initial expansion ramp-up, forecasting full production in ~CY27/28. On our current forecasts, Vidalia uses ~28% of Balama production in the 45tkpa scenario as feed thus there is upside to the facility beyond the current 45ktpa expansion.

Potential to increase AMM volumes to above 100ktpa

SYR has highlighted potential to increase the production capacity at Vidalia, as well as looking at the potential to develop a AAM facility similar to Vidalia in Europe. SYR has flagged that this could potentially increase AMM volumes to above 100ktpa. We note that there would be sufficient feed from Balama for the expansion beyond 100ktpa.

Fig 18 Vidalia growth potential to beyond 100ktpa



Source: SYR, March 2023

Price target equivalent to our NPV

Price target based on 50/50 NPV and 5x Ebitda multiple

Our A$2.30 price target for SYR is based on a 50/50 NPV and 5x Ebitda multiple; this is in line with the approach used for our bulk commodity and battery minerals producer coverage. Our valuation method differs from the other graphite developers as SYR is already in production. Our valuation is currently largely ascribed to Balama, which is already in production. Our valuation also includes a modest value for resources not in our production plan, which is related to the globally significant resource at Balama.

Fig 19 Sum-of-the-parts NPV for SYR

Projects	A$m	A$ps
Balama Graphite	1,232	1.66
Vidalia AAM	23	0.03
Undeveloped Resources	377	0.51
Other Projects	0	0.00
Unpaid capital	0	0.00
Corporate/forwards	(78)	(0.11)
Net cash (debt)	185	0.25
Net equity Value (@ 12.6% WACC)	**1,740**	**2.35**
Price Target (50/50 NPV/5x Ebitda)		2.30

Source: SYR, Macquarie Research, March 2023

Funded for the initial expansion

SYR has access to a DOE loan of US$102m and potentially a Grant of US$220m

As at the end of December 2022, SYR had a cash balance of US$90m and has flagged that it has closed on the US$102m loan from the US Department of Energy (to be drawn in 1HCY23) to fund a significant portion of the initial 11.25ktpa Vidalia expansion. SYR is also progressing negotiations with the DOE for a US$220m grant which would fund a large portion of the additional Vidalia expansion to 45ktpa.

We forecast a US$200m capital raising

To assist in the funding of the Vidalia expansion to 45ktpa, and general working capital while ramping up both Balama and Vidalia, we forecast a US$200m capital raising (timed for 2HCY23) at a price of A$1.50/sh.

We thus forecast total funding capacity of US$762m, which we believe is sufficient (in addition to interim Balama cashflow) to fund the larger expansion to 45ktpa. We forecast Capex of US$715m for the expanded Vidalia project to be spent over the next 3 years.

Fig 20 Equity raising and DOE grant to fund the Vidalia expansion to 45ktpa

Funds	US$m
Cash (31 December 2022)	90.4
DOE Loan	102.0
DOE grant	220.0
Equity raising	200.0
Project debt	150.0
Total funding	**762.4**

Source: Company data, Macquarie Research, March 2023

Anode material pricing and FX key risks to our base case earnings and valuation

Highly leveraged to Graphite and Anode material prices and FX

We note that a 10% shift in the AMM price would drive a 6% change in our valuation of SYR and a ~5-10% shift in earnings, similarly a 10% shift in graphite concentrate prices would drive a 12% change in our valuation and a ~14-19% shift in earnings. A 10% shift in the AUD/USD exchange rate would drive a 3% shift in NPV.

Fig 21 Impact on our earnings forecasts of a 10% move in prices and FX

Y/E June	FY23e	FY24e	FY25e	FY26e	FY27e	NPV
Graphite concentrate price	19%	17%	14%	14%	14%	12%
Anode material price	0%	1%	5%	6%	10%	6%
AUD/USD	0%	0%	0%	0%	0%	3%

Source: Macquarie Research, March 2023

Risks

Commodity prices: There are numerous risks to our price forecasts for both spherical and flake products. The market is complex and influenced by many factors. Technical requirements of customers are highly specific and we see the potential for acceptance barriers to new products. The price negotiated in the offtakes may also have material variances to our current forecasts.

Flooding the market: SYR is targeting substantial production from Balama increasing annual global production of graphite. While we believe there will be strong demand growth, driven by EV and Battery growth, timing of the Balama ramp-up is critical to maintaining an orderly market with supportive pricing.

FX: SYR is highly sensitive to movements in the US dollar. Graphite and anode material pricing is in USD however the company operates in Mozambique for upstream production.

Capex and costs: There are inflationary risks on both operating costs and capital expenditure requirements for the Vidalia expansion. We note that the study is due in CY23, which should address some of these risks.

Development timeline: Variances in the timeline to development, first production and the time between stages versus our forecasts is a key risk to cash flow and our outlook.

Regulation and qualification: Given the use of graphite in batteries and its thermal volatility, further qualification and regulatory hurdles could impact the anode material product and timelines. We note that SYR is currently qualified with key customers and has samples and MOUs with numerous others; however risk of "additional" qualification on plant expansion is a risk.

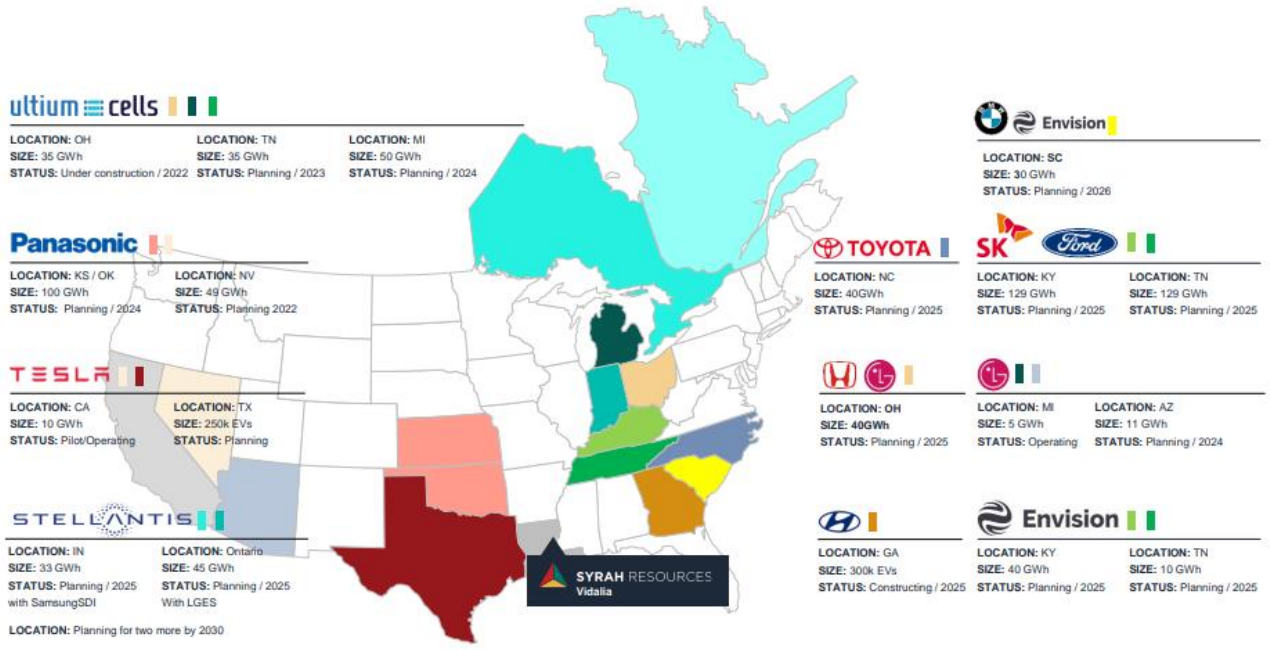
Opportunity to leverage off ex-China supply chain

Positioned well to benefit from demand growth for ex-China supply

We expect China, Japan and South Korea to remain the dominant player in anode production over the near-term, however an increase in cell manufacturing and the introduction of anode developers in the EU and USA could see expanding global demand over the medium-term.

Currently nearly all of Purified Spherical Graphite (PSG) and a majority of the mid-stream processing is done in China, thus we see potential for an ex-China supply chain to be well positioned particularly for those anode and battery manufacturers in the EU and USA. The US meanwhile imports 100% of its natural graphite and anode material. Given geopolitics, we believe SYR is attractively positioned vs peers to become the first non-China integrated supplier of natural graphite active anode material to battery manufacturers and EV OEMs.

Fig 22 USA proximity to customer demand



Source: SYR, March 2023

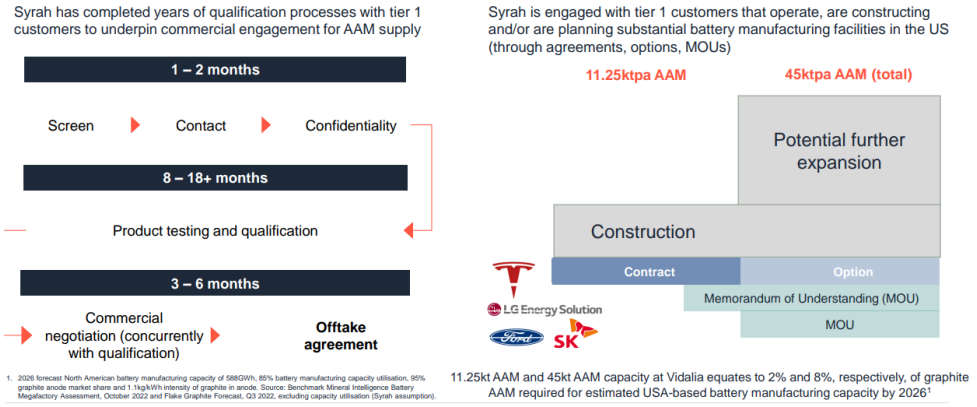
Offtake signed with tier-1 customers

Product well qualified and offtake agreed with key customer (Tesla)

A full qualification process for active materials in batteries takes as long as two years from start of engagement to a binding offtake arrangement. SYR has agreed multi-year commercial sales agreements with tier 1 customers which is a first in the battery anode industry.

We note that SYR has an advantage over peers in the qualification, given Balama is in production and has built and run a sizeable anode material pilot plant/qualification facility (thus can send final spec graphite concentrate product and Active Anode Material to customers for testing and qualification).

Fig 23 SYR has the advantage in terms of qualification and offtakes



Source: SYR, March 2023

8ktpa initial offtake with Tesla, which could expand to 25ktpa

SYR has previously executed an offtake agreement with Tesla (TSLA US, Not Rated) to supply 8ktpa of natural graphite AAM from the 11.25ktpa AAM Vidalia facility for an initial term of 4 years. Tesla has an option to exercise for an additional 17ktpa AAM, for a total 25ktpa AAM, from a 45ktpa AAM Vidalia facility. We believe this underpins the development of the expanded Vidalia.

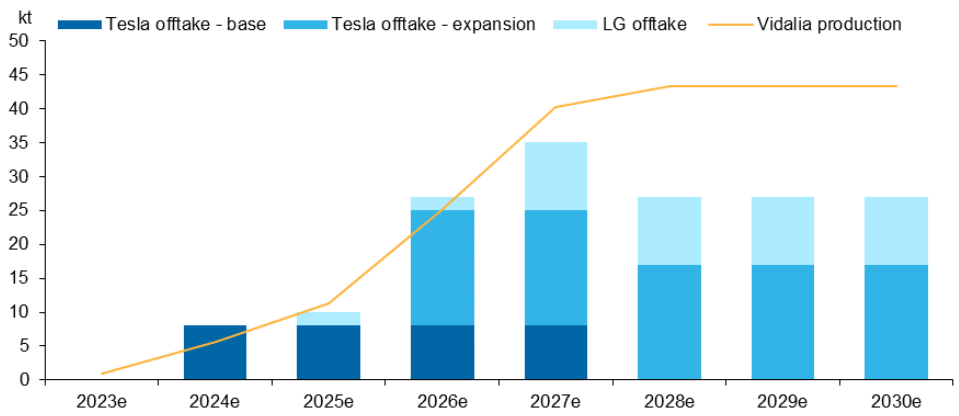
SYR also signed a non-binding MOU with Ford and SKon, to evaluate the supply of AAM to the BlueOval SK JV. Under the MOU, SYR, Ford and SK On will continue testing and qualifying Vidalia AAM. An outcome of negotiations would be a key catalyst.

MOU with LG for 2ktpa, growing to 10ktpa on Vidalia expansion

SYR also announced a non-binding MOU with LG Energy Solution to evaluate AAM supply. This could result in a binding offtake agreement for 2ktpa AAM from Vidalia commencing from 2025 and increasing to at least 10ktpa AAM upon Vidalia's expansion to a 45ktpa AAM.

SYR also finalised a binding offtake with Hiller Carbon LLC ("Hiller Carbon") to supply all by-product micronized spherical graphite fines from the 11.25ktpa AAM Vidalia facility for an initial five-year term plus extension options.

Fig 24 Key offtake with Tesla, underpins Vidalia expansion to 45ktpa



Source: SYR, Macquarie Research, March 2023

Solid group financials

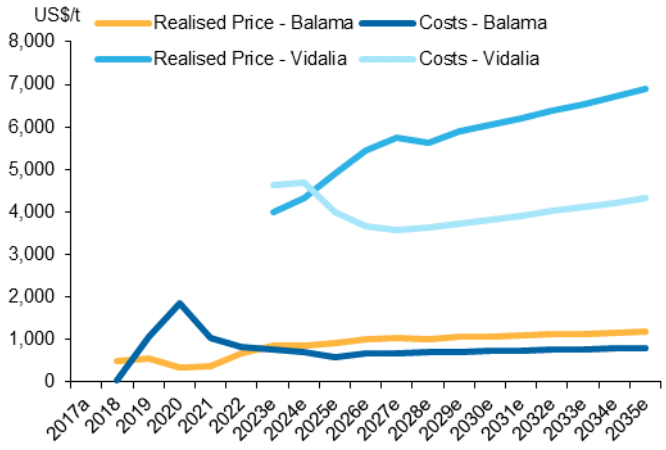
LOM revenue of US$19.2b and Ebitda of US$9.9b

We forecast peak graphite production from Balama of 310ktpa and AMM production from Vidalia of 43ktpa which are both below nameplate capacity. We expect a strong uptick in realised pricing from the graphite concentrate to the AAM product from Vidalia, with the latter averaging ~US$5,165/t realised price versus costs of US$3,315/t.

Ebitda margin of ~50%

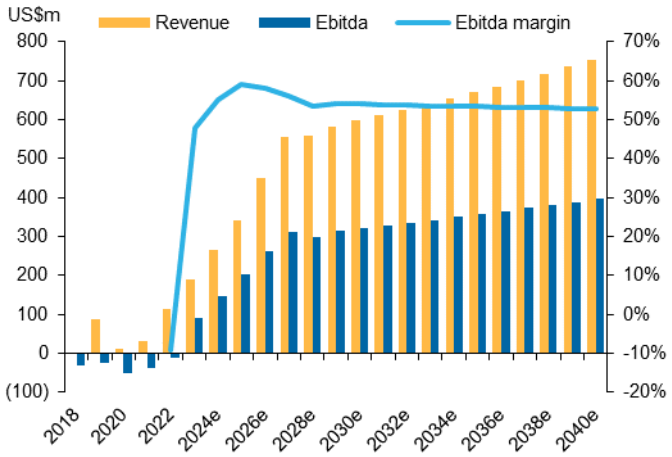
This drives LOM revenue of US$19.2b or an average of ~A$384m per annum and LOM Ebitda of US$9.9b or an average of A$198m per annum. This translates to an Ebitda margin of ~50%, which is highly attractive.

Fig 25 Realized pricing and costs



Source: SYR, Macquarie Research, March 2023

Fig 26 Revenue, Ebitda and margins



Source: SYR, Macquarie Research, March 2023

We forecast capex of ~US$800m over the next 4 years

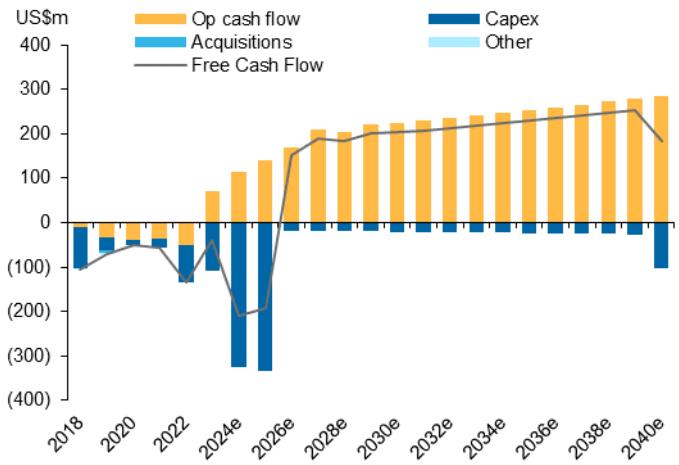
Our capex forecasts of ~US$800m over the next few years including the ramp-up of Balama, the initial Vidalia expansion and the additional Vidalia expansion to 45ktpa. With the expansion study due in CY23, we believe growth will be funded from the DOE loan and grant, cash flow and a US$200m equity raising.

Cumulative cashflow of US$4.2b over the 50-year LOM

We forecast significant free cash outflow over the development period of CY23-25 before SYR swings into a cash generator in CY26. We forecast free cashflow to average US$85m per annum over the LOM, and cumulative cash flow to be ~US$4.2b over the LOM.

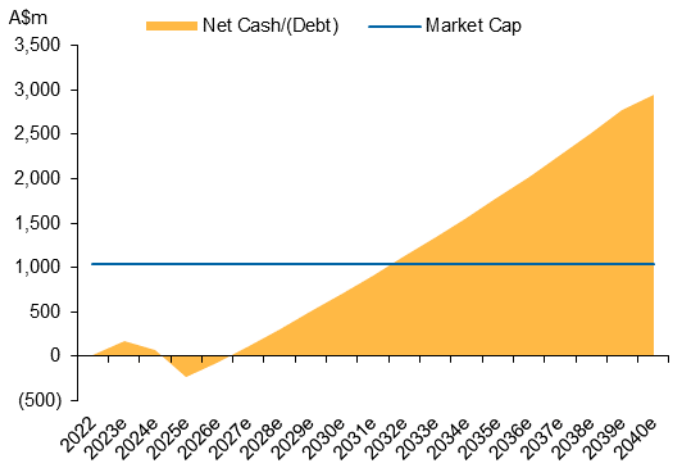
We note that we do not currently forecast an expansion of Vidalia to beyond 45ktpa but note that the Balama mine production could support AAM production of more than 100ktpa. Thus, there is upside to our forecasts, with the Vidalia expansion study a key near-term catalyst.

Fig 27 Strong cash flow post capex



Source: SYR, Macquarie Research, March 2023

Fig 28 LOM cash flow build is strength



Source: SYR, Macquarie Research, March 2023

Graphite with a global touch

Graphite concentrate in Mozambique, processing to AAM in the USA

Producing in Mozambique and downstream in USA, with options in the EU

SYR has developed the Balama mine, which is of significance on a global scale; being the largest ex-China producer of graphite. The company is also progressing the construction of the Vidalia Active Anode Material plant in the USA. SYR has the potential to increase its downstream production to beyond 100ktpa via expansion of Vidalia and/or developing a AAM facility in Europe.

Fig 29 Graphite concentrate production in Mozambique, with downstream capability in the USA



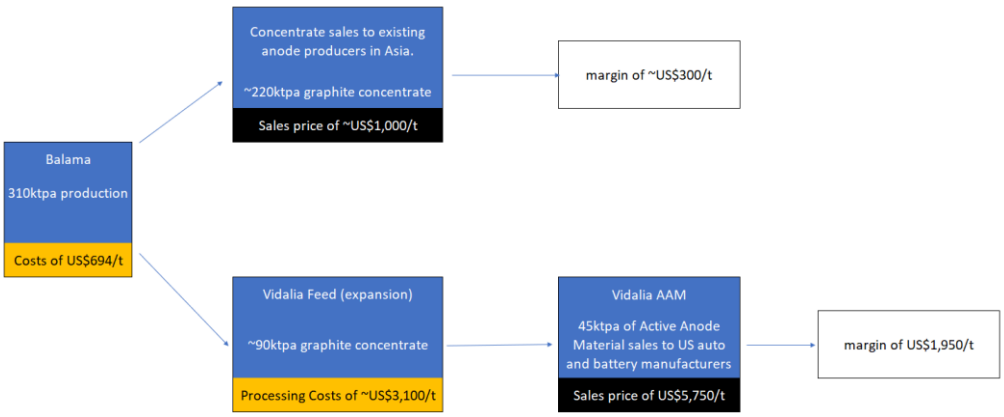
Source: SYR, March 2023

Margin of ~US$300/t for concentrate, which increases materially to US$1,950/t for AAM

A rapidly growing use of graphite is for active anode material for lithium-ion batteries used in electric vehicles, grid-scale and behind the meter energy storage systems and consumer electronics. Fines flake graphite is the preferred raw material feedstock for natural graphite active anode material.

We forecast ~70% of production to be sold to traditional downstream anode and anode material manufactures in Asia while 30% of Balama production is used as feedstock to produce Active Anode Material, which is in turn sold to US auto and battery manufacturers. We estimate a margin of ~US$300/t for concentrate, which increases materially to US$1,950/t for AAM.

Fig 30 Step up in margin for AMM versus graphite concentrate



Source: SYR, Macquarie Research, March 2023

Balama, the beast

Balama is located Mozambique

Largest graphite mine globally

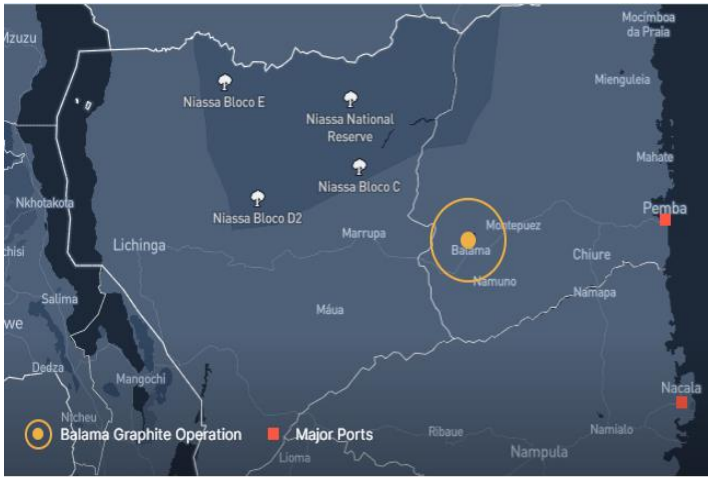
The Balama graphite mine is located in the Southern Cabo Delgado Province of Mozambique. It boasts a large 1.4bt at 10% TGC resource and the 107mt @ 16% TGC underpins a 50-year LOM.

Large graphite mine globally, with a 50-year LOM

The feasibility study for the mine was completed in May 2015, and first production and shipments occurred at the end of CY17. We note that Blama operations were temporarily suspended in May 2020, due to graphite prices and COVID, and production recommenced in May 2021.

Key infrastructure is in place, with SYR shipping concentrate via Nacala port (containers) and Pemba port (breakbulk cargoes). A hybrid solar and battery system was developed to replace ~35% of diesel power generation from 1QCY23

Fig 31 Balama is located in Mozambique



Source: SYR, March 2023

Fig 32 Infrastructure in place for 350ktpa nameplate



Source: SYR, March 2023

Conventional open pit mining and processing for ~350ktpa graphite concentrate nameplate capacity

- Balama has a 50-year LOM, with 2mtpa ore throughput capacity yielding ~350ktpa of graphite concentrate. Mining is simple conventional open pit, targeting the higher-grade zones earlier in the LOM. We note it has a very low strip ratio of 0.4.
- Processing is conventional, with ore being crushed and grind before undergoing flotation and filtration. The product is then dried, screened and bagged. SYR produces 94%-98% fixed carbon concentrates across six product size categories. Product is then sold and shipped to customers in Southeast Asia or to the Vidalia plant in the USA as feedstock for the AAM.

Fig 33 Simple open pit mining and processing



Source: SYR, March 2023

Industrial action and security concerns impacted production recently

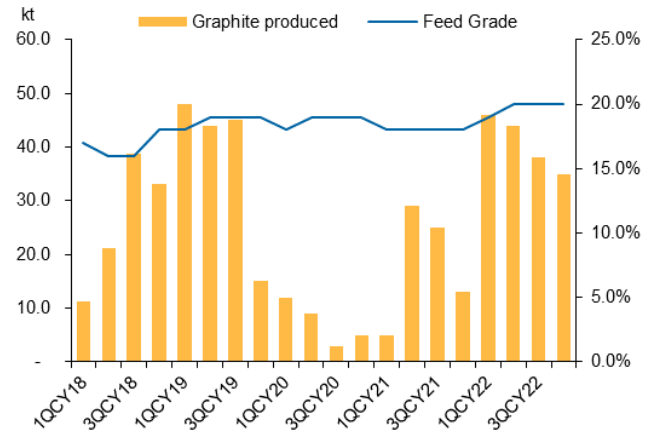
We note that recent production has been impacted by industrial action and security concerns. Balama operations were interrupted by illegal industrial action with production suspended for 26 days from the start of October and the company's workforce temporarily moved from the site for part of this period. Operations have subsequently returned to normal and no subsequent industrial action at Balama has occurred. In November 2022, security concerns saw production impacted for 2 days, and SYR has noted that "*there has been no subsequent security issue affecting operations, employees or contractors at Balama, and the Company continues to work proactively with Government and security authorities to ensure operational continuity*".

We note that SYR produced 35kt of graphite in 4QCY22 (for a total of 166kt in CY22)

Graphite production ramped up from early CY19 to ~25kt per quarter by end CY19 before production was put in suspension. The ramp-up post restart has been conservative, although volumes have increased in CY22, peaking at 46kt in 1QCY22. We note that SYR produced 35kt of graphite in 4QCY22 (for a total of 166kt in CY22).

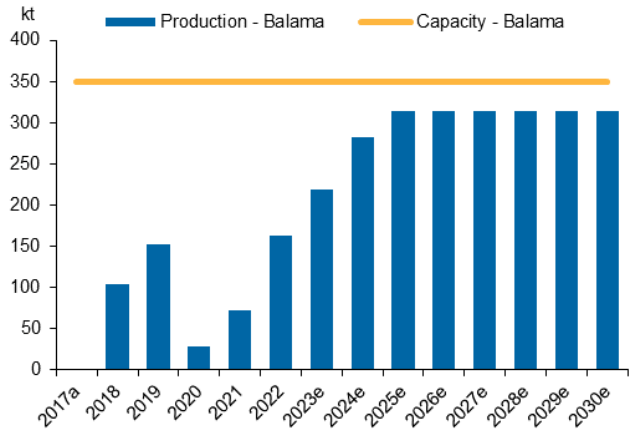
Feed grade has increased, averaging almost 20% in CY22, up from 18% in CY21. We forecast an average 19% feed grade for the next 5 years, before gradually declining to the reserve grade of 16.9% (although we assume higher throughput at this grade). Recoveries have increased from sub 70% pre CY21 to high 70s for CY21 and CY22. We have forecast recoveries of 80% for the LOM.

Fig 34 Quarterly production has been subdued



Source: SYR, Macquarie Research, March 2023

Fig 35 Production forecast to ramp-up materially

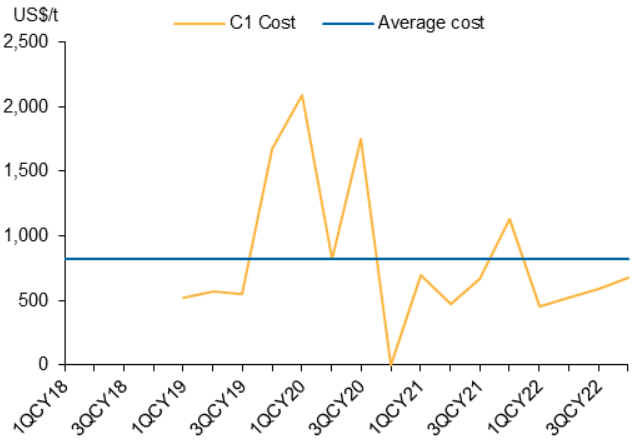


Source: SYR, Macquarie Research, March 2023

Elevated cash costs, expected to decrease as volumes lift

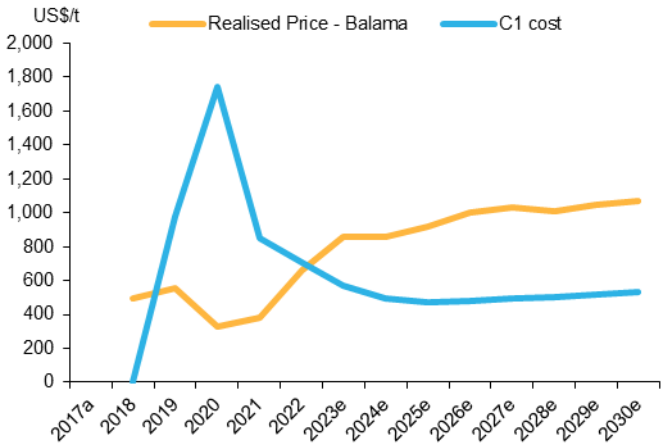
Costs have been elevated, largely due to operational interruptions and volumes being well below nameplate capacity. We note that C1 cash costs in 4QCY22 were US$709/t; although SYR has guided to costs decreasing to US$430-480/t at the 20kt per month production rate. We forecast C1 cash costs (FOB Nacala/Pemba) to average US$500/t over the next 5 years.

Fig 36 Elevated cash costs on low volumes



Source: SYR, Macquarie Research, March 2023

Fig 37 We forecast costs to decrease to US$500/t



Source: SYR, Macquarie Research, March 2023

Size and grade positives in Reserves and Resources

107.7mt at 15.7% TGC reserve underpins the 50-year LOM

Balama has a JORC compliance Reserve of 107.7mt at 15.7% TGC for total contained graphite of 16.9mt, making it the largest total reserve globally. The reserve is made up of Balama West at 59.8mt at 16.9% TGC for 10.1mt of total contained graphite and Balama East which has 47.0mt at 14.4% TGC for total contained graphite of 6.8mt. As at 31 December 2021, Balama also had 0.9mt at 9.3% TGC for 0.1mt of contained graphite in stockpiles.

Fig 38 Balama Reserves of 107.7mt at 15.7% TGC for 16.9mt of contained graphite

		Reserves		
Prospect	**Ownership**	**volume (mt)**	**%TGC**	**Contained (mt)**
Balama West	Proved	-	-	-
	Probable	59.8	16.9%	10.1
	Total	**59.8**	**16.9%**	**10.1**
	Inferred	-	0.0%	-
Balama East	Proved	-	-	-
	Probable	47.0	14.4%	6.8
	Total	**47.0**	**14.4%**	**6.8**
	Inferred		0.0%	-
Stockpiles	Proved	-	-	-
	Probable	0.9	9.3%	0.1
	Total	**0.9**	**9.3%**	**0.1**
	Inferred		0.0%	-
Total Reserves		**107.7**	**15.7%**	**16.9**

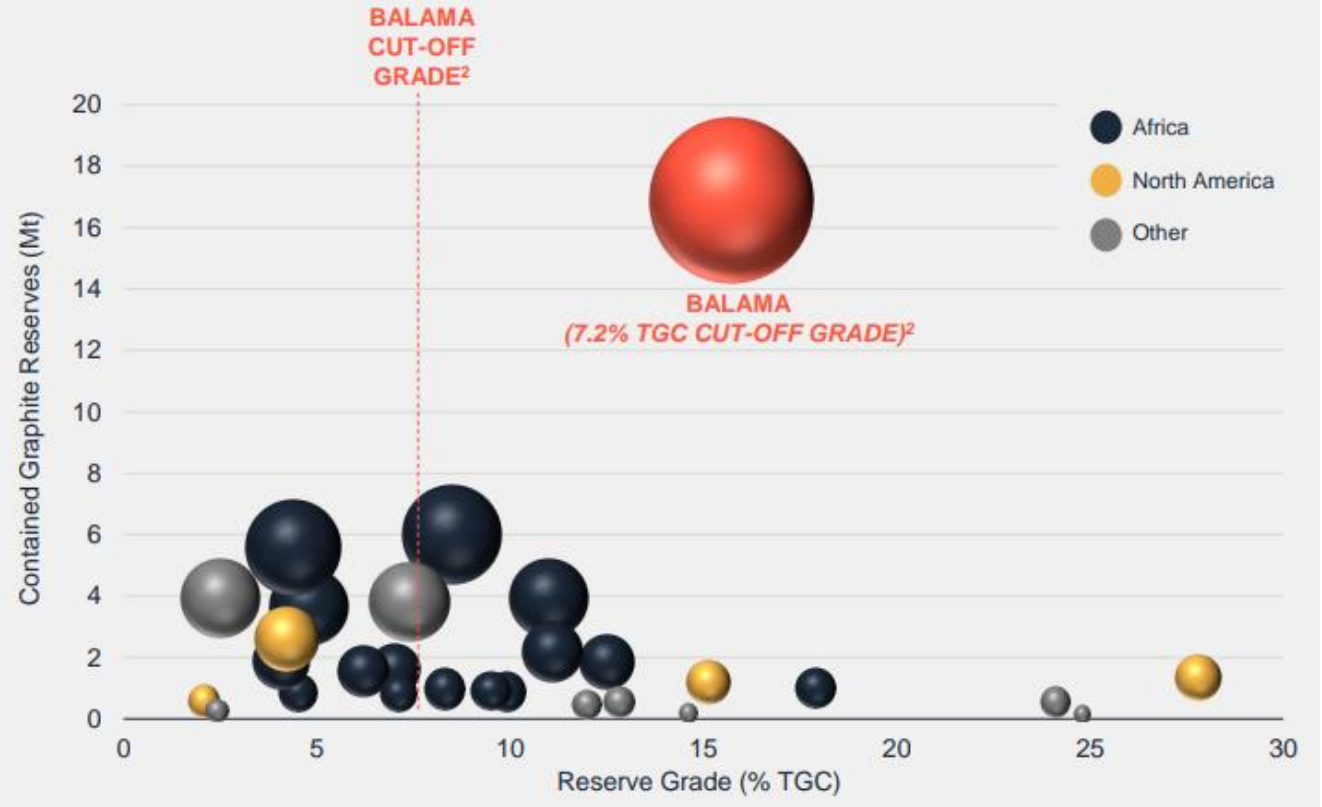
Source: SYR, Macquarie Research, March 2023

Balama is significantly larger than any other ex-China project

Balama is endowed with a large resource and a high grade. Thus, the total contained graphite in reserve at Balama of 16.9mt is significantly larger than any other ex-China project. We note that the Balama cut-off grade is also higher than a large number of graphite project reserves.

The 16.9mt of contained graphite underpins the 50-year LOM.

Fig 39 Balama contained graphite reserve is materially larger than any other ex-China reserve



Source: SYR, March 2023

Balama has a significant resource of 1.4bt at 10.3% TGC

Balama has a significant resource of 1.4bt at 10.3% TGC for total contained graphite of 146.7mt. This is made up of Balama West, which has a resource of 638mt at 10.0% TGC for 63.5mt of constrained graphite and Balama East which has a resource of 783mt at 10.6% TGC for 83.1mt of contained graphite.

Only 2% of the resource is classified as Measured, however ~27% is within the Indicated category. The remaining 71% of the resource is in the Inferred category.

Fig 40 Balama Resource of 1.4bt at 10.3% TGC for 146.7mt of contained graphite

		Resource		
Prospect	**Ownership**	**volume (mt)**	**%TGC**	**Contained (mt)**
Balama West	Measured	23.0	17.5%	4.0
	Indicated	255.0	10.2%	26.0
	Inferred	360.0	9.3%	33.5
	Total	**638.0**	**10.0%**	**63.5**
Balama East	Measured			-
	Indicated	123.0	13.4%	16.5
	Inferred	660.0	10.1%	66.7
	Total	**783.0**	**10.6%**	**83.1**
Balama total	**TOTAL**	**1,421.0**	**10.3%**	**146.7**

Source: SYR, Macquarie Research, March 2023

Fines flake graphite is the preferred raw material feedstock for natural graphite active anode material

A significant proportion of natural graphite is currently consumed in steel-related industries, where graphite is principally used as refractories in foundries or crucibles due to its exceptionally high melting point. However, its use as the active anode material for lithium-ion batteries in EV and grid storage is rapidly driving demand.

Fines flake graphite is the preferred raw material feedstock for natural graphite active anode material. Given Balama product mix (80% fines, 15% flake and 5% jumbo flake), it is well positioned to leverage on the lift in battery and therefor graphite fines demand.

Fig 41 80% of the product mix is fines (key use as anodes in lithium-ion batteries)



Source: SYR, March 2023

Vidalia key to the supply chain

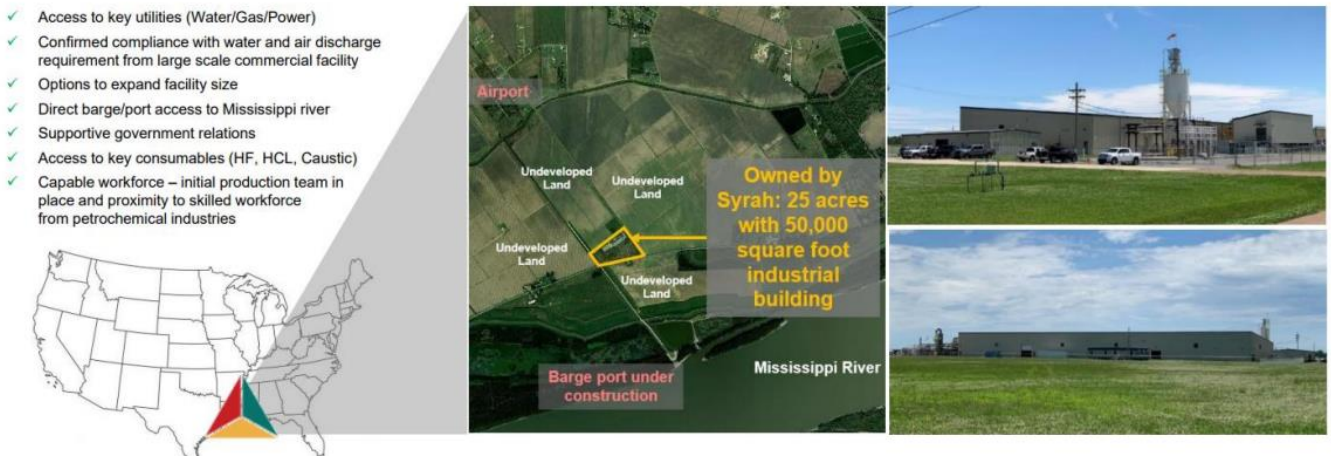
Growing from 11.25ktpa to 45ktpa and beyond

Completion and commissioning expected in 3QCY23 followed by an 18-month ramp-up

SYR is constructing a large scale Active Anode material (AAM) facility in Louisiana, USA, with initial production capacity of 11.25ktpa for a cost of US$176m. The facility is currently being constructed, with completion and commissioning expected in 3QCY23 followed by an 18-month ramp-up.

SYR is also currently studying an expansion of Vidalia, which will increase AAM production to 45ktpa. We expect the outcome of the study in CY23. Given the scale of the site, abundance of feed stock from Balama and anode demand growth in the USA; we believe there is potential for growth beyond 45ktpa; with SYR flagging potential to increase to >100ktpa in the longer term.

Fig 42 Vidalia is located on 38 acres in Louisiana, USA

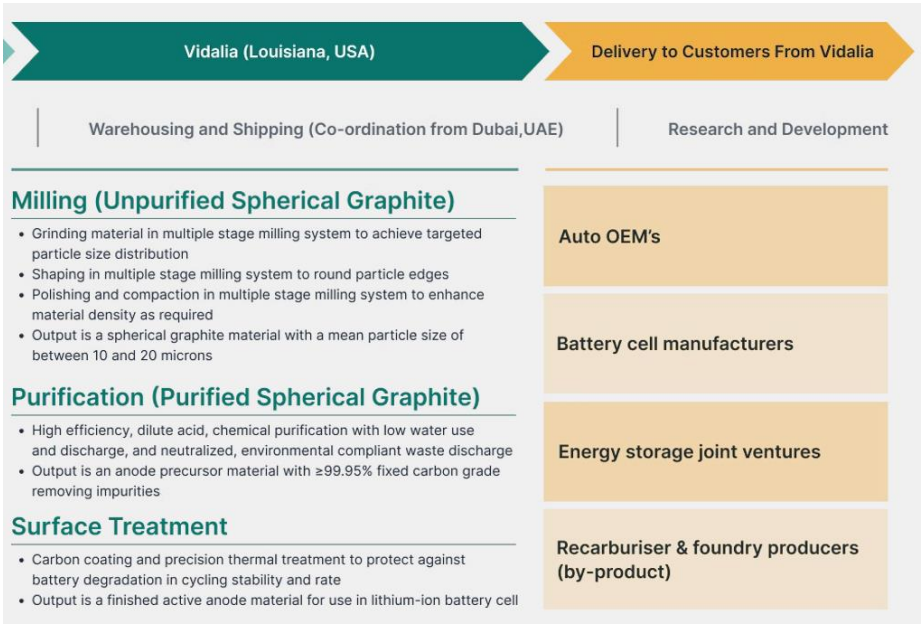


Source: SYR, March 2023

Graphite is milled, purified and coated to create Active Anode Material

Graphite concentrate from Balama will be used as feedstock for Vidalia, where it will be milled to achieve the targeted particle size (10-20 micron) before being chemically purified (to a 99.95% carbon grade). The product is then carbon coated and thermally treated creating an Active Anode Material (AMM) which is used by battery cell manufacturers.

Fig 43 Graphite is milled, purified and coated to create Active Anode Material



Source: SYR, March 2023

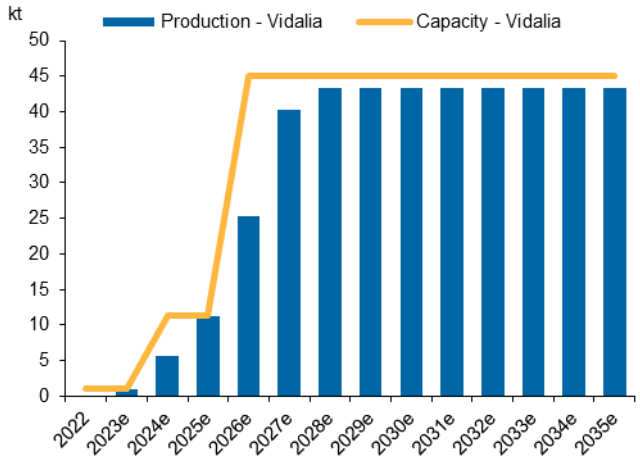
Ramp-up to 43ktpa in CY26/27

We expect commissioning of the 11.25ktpa stage 1 at Vidalia to occur in 3QCY23 followed by an 18-month ramp-up. We have also included the expansion to 45ktpa in our base case forecasts, with construction to occur in parallel to the stage 1 ramp-up. We forecast a ramp-up to full production in CY26/27, although we note our peak volume forecast of 43ktpa is below the 45ktpa Active Anode Material targeted.

Average costs of US$4,022/t forecast

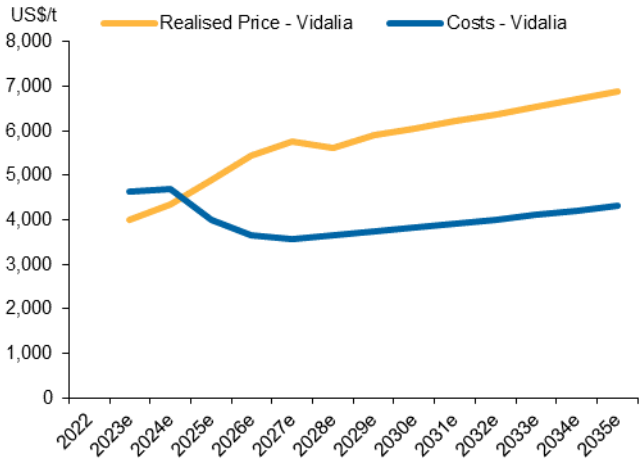
We forecast average realised prices of ~US$5,750/t over the first 10 years of production and average costs of US$4,022/t (which includes feed and processing), although we do note that we expect elevated costs during the ramp-up to the 45ktpa nameplate capacity.

Fig 44 We forecast Vidalia production of 43ktpa



Source: SYR, Macquarie Research, March 2023

Fig 45 Vidalia realised price and cost



Source: SYR, Macquarie Research, March 2023

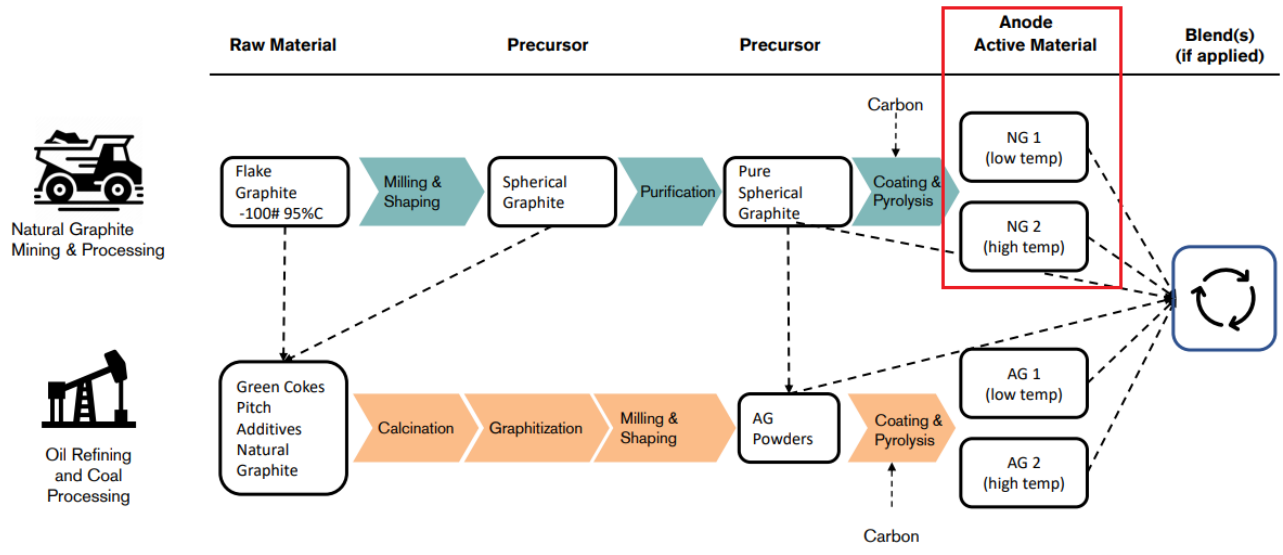
45ktpa of AAM product can be used to produce ~900,000 Electric Vehicles

18-micron and 12-micron coated purified spherical graphite are the key products produced from Vidalia, which are classified as Active Anode material. We note this product makes up the anode of lithium-ion batteries. An average EV battery has ~50kg of graphite (split 50/50 natural and synthetic) in the anode, thus 45ktpa of AAM product can be used to produce ~900,000 Electric Vehicles (Tesla produced 1.3m EV's in 2022 and there were 10.6m EVs sold globally in 2022).

offtake agreement with Tesla to supply 8ktpa of natural graphite AAM

SYR has executed an offtake agreement with Tesla to supply 8ktpa of natural graphite AAM from the 11.25ktpa AAM Vidalia facility for an initial term of 4 years. Tesla has an option to exercise for an additional 17ktpa AAM, for a total 25ktpa AAM, from a 45ktpa AAM Vidalia facility. We believe this underpins the development of the expanded Vidalia.

Fig 46 Active Anode material has the highest value for anode materials



Source: SYR, March 2023

Board and Management

Board of Directors

Jim Askew – Non-Executive Chairman

Jim is a mining engineer with over 45 years international experience, some 35 of them as a Board member and/or Chief Executive Officer for a wide range of Australian and international publicly listed mining, mining finance and other mining related companies. He has had a continuous involvement with the African mining industry since 1985.

Jim has been a CEO of public resource companies for over 20 years and served on Boards internationally since 1983. Jim currently holds non-executive director positions at Evolution Mining (ASX) and Endeavour Mining (TSX). Other past listed company directorships include Rayrock Limited (TSX), PMI Gold (Chairman), Sino Gold (Chairman), Asian Mineral Resources (Chairman), Eldorado Gold (Non-Executive Director), Yamana Gold (Non-Executive Director), Golden Shamrock Mines and Golden Star. He was awarded the Presidents Medal of the AusIMM for services to the global mining industry in 2018, additional to other industry awards.

Jim was appointed to the Syrah Board as Chair in 2014. He is the Chair of the Sustainability Committee and is a member of the Remuneration, Nomination and Governance Committee

Shaun Verner – Managing Director and Chief Executive Officer

Shaun joined the Company in October 2016 and was appointed CEO & MD in February 2017. Prior to joining Syrah, Shaun was at BHP for 20 years in a variety of executive roles, with extensive international commercial and operational experience across a range of commodities including copper and base metals, uranium and thermal and metallurgical coal.

Shaun has extensive general management and cross-functional leadership experience, focussed on the integration of commercial, operations, and supply chain excellence, with a particular interest on China’s growth and impact on the evolution of commodity and industrial markets..

Lisa Bahash – Non-Executive Director

Lisa is an executive leader with 30 years experience in the automotive OEM, Tier 1 supplier and aftermarket sectors. Her most recent role was Senior Vice President, Automotive and Transportation with Jabil Inc. (Jabil), one of the world’s leading electronics manufacturing services companies. Prior to Jabil, Lisa was Group Vice President and General Manager of Johnson Control’s Power Solutions business, one of the world’s largest automotive battery manufacturers leading the OEM and technology strategies including advanced energy storage and lithium-Ion technologies.

Lisa was also President and CEO of Ride Control LLC (Gabriel) which operates in both the aftermarket and OEM segments and was responsible for leading the company’s accelerated plan for profitable growth. Lisa began her career at Ford Motor Company where she worked for 10 years in a variety of positions. In 2015, Lisa was recognised by Automotive News as a "Top 100 Leading Women in the Automotive Industry".

Lisa was appointed to the Syrah Board in July 2018. She is the Chair of the Remuneration Committee and is a member of both the Nomination and Governance Committee and the Sustainability Committee.

John Beevers – Non-Executive Director

John is a Mining Engineer with over 30 years experience in the Mining Resources and Services industries. He has broad international experience with extensive functional, operational and leadership experience at both the General Management and Executive Level, especially in building and marketing innovative technology that creates value for customers. He holds a Masters Degree in Business.

John currently serves on the Board of Orica, and amongst others formerly served on the Boards of QUT Bluebox and BIS Industries. Former Executive roles include Chief Executive Officer for Orica Mining Services and, MD & CEO for GroundProbe.

John was appointed to the Syrah Board in May 2020. He is a member of both the Remuneration, Nomination and Governance Committee and the Audit and Risk Committee..

Jose Caldeira – Non-Executive Director

Jose is a highly experienced legal and regulatory professional with over 25 years experience in the legal industry. He is one of the prominent lawyers in Mozambique. He is a senior partner at Sal Caldeira Advogados, Lda in Mozambique, one of the leading law firms in Mozambique.

Jose brings extensive experience in providing legal and regulatory consulting services in the fields of natural resources, foreign investment, infrastructure, civil, administrative, commercial and labour law, as well as litigation.

Jose was appointed to the Syrah Board in July 2014. He is a member of both the Audit and Risk Committee and the Sustainability Committee.

Sara Watts – Non-Executive Director

Sara is a non-executive director and an audit and risk committee chair with over 10 years' participation across the technology, logistics, arts and disability sectors. In addition, Sara brings more than 30 years of financial, operational, international and technology transformation experience. Sara's former executive roles include Head of Internal Audit for IBM Asia Pacific, Chief Financial Officer of IBM Australia/New Zealand, and Vice-Principal (Operations) at the University of Sydney.

In 2013, Sara was awarded a Women in Information Technology achievement award for her leadership skills and commitment to advancing women in the Australian ICT Industry. Sara is a Fellow of the Australian Institute of Company Directors and of CPA Australia. Sara was appointed to the Syrah Board in June 2019. She chairs the Audit and Risk Committee.

Senior Management

Shaun Verner – Managing Director and Chief Executive Officer

See above

Julio Costa –Chief Operating Officer

Julio has over 30 years' mining, operations and technical experience gained from senior leadership roles for Alcoa Corporation, Rio Tinto Limited and Vale S.A, in Australia, Brazil, Mozambique and North America.

Julio brings significant expertise in mining operation design, commissioning and optimisation. He has a strong track record in community and stakeholder management and developing strong operating teams through people, process and technology.

Julio holds a Bachelor of Chemistry from the Federal University of Minas Gerais, Brazil..

Stephen Wells – Chief Financial Officer

Stephen joined the company in August 2019. He is an experienced finance executive with almost 25 years of broad financial expertise gained from a range of industries including institutional and investment banking, resources, and international financial services, working in London, Singapore and New York as well as Australia. Stephen was previously Chief Financial Officer and Chief Operating Officer of nlc Pty Ltd, and was also CFO for a range of businesses within National Australia Bank's Wholesale Banking division including the global specialised finance business covering infrastructure, clean energy, natural resources, asset financing and utilities.

Stephen holds undergraduate and post-graduate degrees in economics, and an MBA from Melbourne Business School.

Melanie Leydin – Company Secretary

Melanie Leydin has over 25 years' experience in the accounting profession and over 15 years' experience holding Board positions including Company Secretary of ASX listed entities. She has extensive experience in relation to public company responsibilities, including ASX and ASIC compliance, control and implementation of corporate governance, statutory financial reporting, reorganisation of companies, initial public offerings, secondary raisings and shareholder relations.

Melanie is Vistra Australia's Managing Director. Vistra is a prominent provider of specialised consulting and administrative services to clients in the Fund, Corporate, Capital Markets, and Private Wealth sectors. She was the principal of Leydin Freyer for over 20 years before the business was acquired by Vistra in November 2021.

ESG Considerations

ESG commentary provided by Macquarie's ESG analyst, Anita Stanley (Anita.Stanley@macquarie.com)

Governance

Board

The SYR Board is comprised of 5 non-executive directors and 1 executive director (Managing Director/CEO). There are two women on the SYR board.

Fig 47 Board Overview

Company	Board member details	Number of Directors (including CEO)	% of Independent Directors (excluding CEO & CFO)	% of Women on the Board	Average Tenure (in years)	No. of directors that hold other directorships in listed companies
Syrah Resources	SYR Board	6	100%	33.3%	6.17	3

Source: Company data, Macquarie Research, March 2023

Remuneration

SYR's remuneration structure consists of Total Fixed Remuneration (TFR), STIs, LTIs and 5-year performance rights.

Fig 48 Remuneration structure as of 31 December 2021

Component	Instrument	Performance Period	Vesting conditions	Value
Fixed base salary	Cash payment	Annual basis	n/a	Positioned between 25th and 50th percentile of a comparative group of companies.
STI	Cash bonus (50%) and shares (50%)	Annual basis	Combination of corporate and personal performance measures weighted 50:50. Corporate performance metric for 2022 incl: 9% sustainability/compliance and governance, 14% Balama production & cost, 20% Vidalia initial expansion, 4% marketing and 3% strategic.	STI and LTI are 75% of TFR for Managing Director and for other executives 50% of TFR. For 2021 CEO received 97.8% of target opportunity
LTI	Performance rights, options, and shares	Three years	Based on 2 measures: • 50% based on TSR performance over relevant vesting period relative to ASX300 Materials companies. • 50% based on absolute shareholder return performances over relevant vesting period against threshold and maximum targets set by Board. Threshold TSR performance set by Board to 8.6% compound annual growth rate and maximum TSR performance of 18.8% for CY22.	STI and LTI are 75% of TFR for Managing Director and for other executives 50% of TFR.
Five-year performance & retention incentive (5YPRI)	One-off issue of Performance rights	Five years, with annual performance period	KPI's set at the start of each of the five years. The first two years KPI's based on operating performance, next three years based on overall relative corporate performance.	Implemented in 2020 following 2019 restructure

Source: Company data, Macquarie Research, March 2023

Systemic Risk

SYR states its operations could be affected by political instability, particularly within Mozambique. The northern region has been subject to unrest, terrorism, displacement of people occurring 300km from its Balama Graphite Operation. Whilst such activity has for now remained localised, SYR acknowledges this may not always be the case and as such has implemented security measures and protocols accordingly if a situation were to arise. Anti-bribery and Corruption Policy and processes have been implemented to ensure business integrity.

Social

Human Capital Management – Diversity and Safety

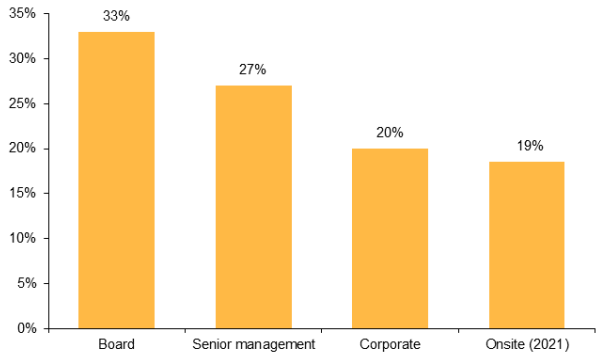
SYR had 20% female representation across all operations in FY22: 33% in the Board, 27% in senior leadership, 20% across corporate divisions (Australia and Dubai) and an average of 18.5% onsite (FY21). The company has adopted a diversity policy and committed to gender balance, Targets have been set within the different business areas (Board, Senior Leadership, Corporate and Operations).

Low TRIFR of 0.5 for Balama Graphite Operation and 10.5 for Vidalia by end of FY22. Health, Safety and Environmental management systems are implemented across its activities.

Community engagement

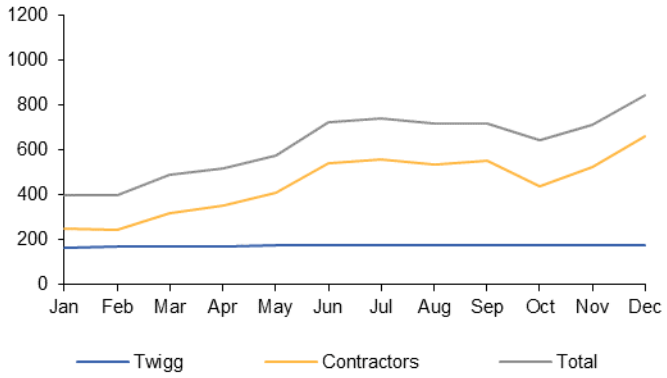
SYR have made strong commitments to recruiting, and continuing to recruit, locally: currently 1,449 Mozambicans employed for its Balama operations representing 96% of Balama employees.

Fig 49 Proportion of Women across Operations 2022



Source: Company data, Macquarie Research, March 2023

Fig 50 Local Employment for 2022 at Balama operations



Source: Company data, Macquarie Research, March 2023

SYR has also signed a Community Development Agreement with local key stakeholders to ensure ongoing engagement to optimise impacts from its operations. Since 2017 total of USD$4M invested into community development including: improved infrastructure, new schools, improved health centres, local development programs and training programmes.

Modern slavery & Ethical Supply Chains

SYR have completed a Modern Slavery statement voluntarily (Revenue is under $100m so no mandatory completion requirement). Due to SYR's geographical spread of operations and prevailing socio-political landscape, modern slavery risks exist across their supply chain. Collaborative work with local government and other key stakeholders has been implemented to mitigate against modern slavery associated risks.

SYR notes that products will be auditable back to source with Vidalia products having a single chain of custody back to the source.

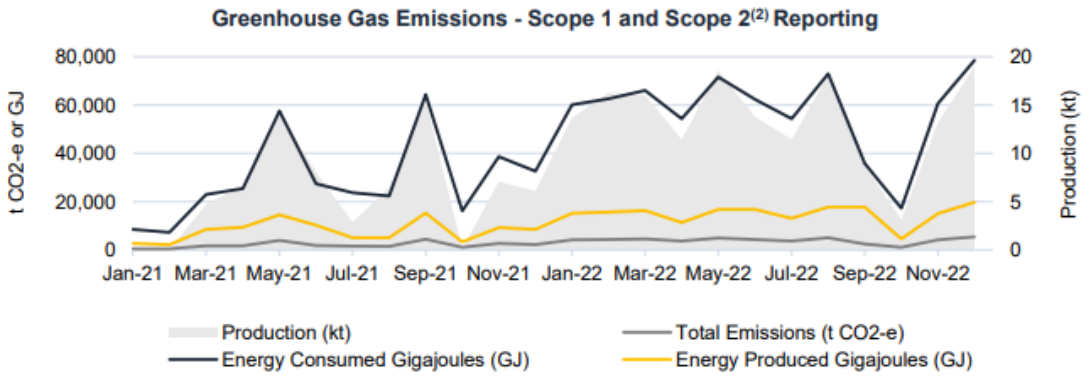
Environmental

GHG emissions and energy usage

SYR records its Scope 1 GHG emissions - refer to Figure 5. A life cycle assessment was completed with results showing lower carbon emissions of natural vs synthetic graphite and lower emissions compared to Chinese supply routes. SYR have also stated implementation of further initiatives to lower its carbon footprint.

SYR maintains a rigorous air quality management program at Balama. Also committed to setting achievable targets for emission reduction.

Fig 51 Greenhouse Gas Emissions as of FY22 Q4



Note: There are no Scope 2 emissions at Balama operations as there is no use of purchased electricity, steam, heat or cooling.
Source: Company presentation, March 2023

Ongoing investment into renewables including a hybrid solar project and battery system at Balama.

Waste management

Current initiatives at Balama operations include:

- ⇒ Composting of organic material then used in onsite plant nursery.
- ⇒ Hazardous Waste Management Programme to ensure safe disposal of hazardous materials and avoid contamination with organic or general waste.
- ⇒ Monitoring of volumes of non-hazardous and hazardous waste.
- ⇒ Focus on recycling of waste via donations of wood or scraps to communities. In Q4 FY22, 30 tonnes of waste material was reused.
- ⇒ Education and continued trainings to encourage reducing waste generation, improving disposal and promoting recycling.

Water management and consumption

Ongoing focus on recycling tailing water and managing water usage from raw sources. For Balama operations, water is sourced from Chipembe Dam with a licence to withdraw 2 million m^3 annually. SYR works with local governments and communities to maintain the sustainability of the dam.

Water recycling process and purification system has been installed at Balama operations ensuring access to clean drinking water.

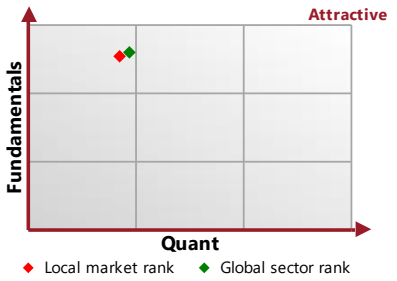
Macquarie Quant Alpha Model Views

The quant model currently holds a marginally negative view on Syrah Resources. The strongest style exposure is Growth, indicating this stock has good historic and/or forecast growth. Growth metrics focus on both top and bottom line items. The weakest style exposure is Valuations, indicating this stock is over-priced in the market relative to its peers.

461/669

Global rank in Metals & Mining

% of BUY recommendations	50% (1/2)
Number of Price Target downgrades	0
Number of Price Target upgrades	0

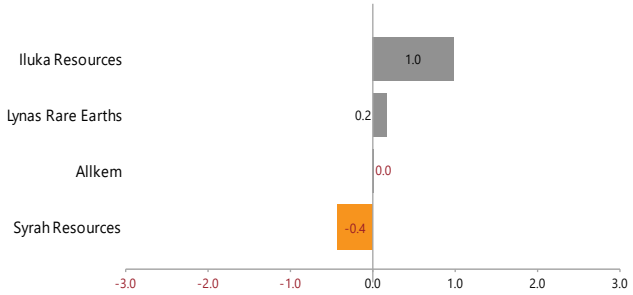


Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Australia & NZ) and Global sector (Metals & Mining)

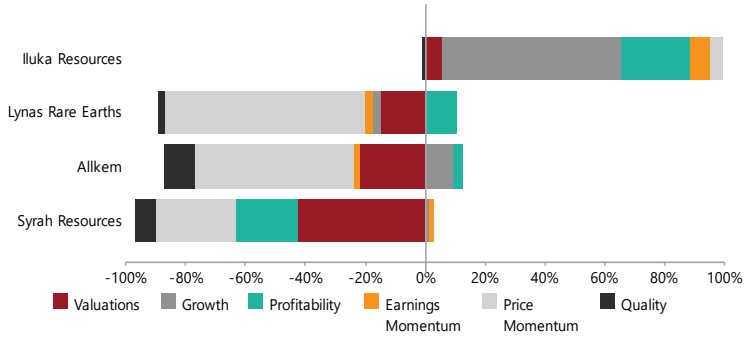
Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



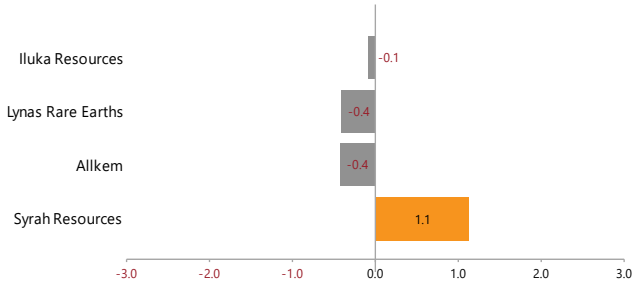
Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



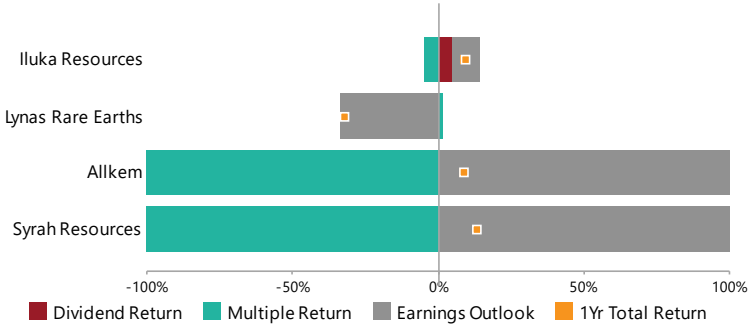
Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



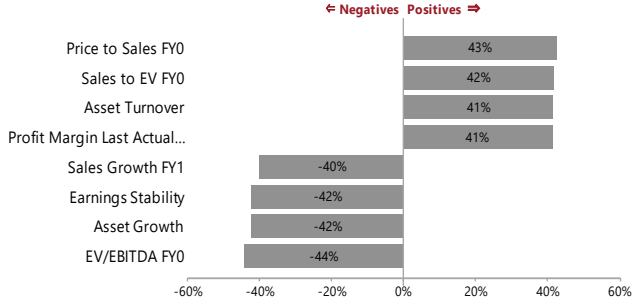
Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



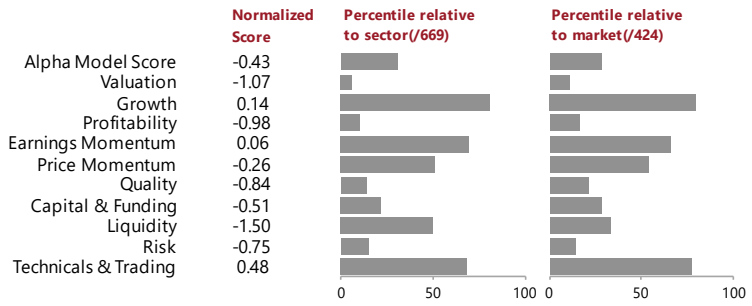
What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.



How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.



Source (all charts): FactSet, Thomson Reuters, and Macquarie Quant.

Important disclosures:

Recommendation definitions

Macquarie – Asia and USA
Outperform – expected return >10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie – Australia/New Zealand
Outperform – expected return >10%
Neutral – expected return from 0% to 10%
Underperform – expected return <0%

Note: expected return is reflective of a Medium Volatility stock and should be assumed to adjust proportionately with volatility risk

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to select stocks in Asia/Australia/NZ

Recommendations – 12 months
Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa*
ROA = adjusted ebit / average total assets
ROA Banks/Insurance = adjusted net profit /average total assets
ROE = adjusted net profit / average shareholders funds
Gross cashflow = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 31 Dec 2022

	AU/NZ	Asia	USA	
Outperform	55.17%	62.10%	68.04%	(for global coverage by Macquarie, 2.41% of stocks followed are investment banking clients)
Neutral	37.59%	25.07%	28.87%	(for global coverage by Macquarie, 2.52% of stocks followed are investment banking clients)
Underperform	7.24%	12.82%	3.09%	(for global coverage by Macquarie, 0.00% of stocks followed are investment banking clients)

SYR AU vs Small Ordinaries, & rec history



(all figures in AUD currency unless noted)

Note: Recommendation timeline – if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Research, March 2023

12-month target price methodology

SYR AU: A$2.30 based on a 50/50 NPV/6x EV-Ebitda methodology

Company-specific disclosures:
SYR AU: Macquarie Group Limited together with its affiliates owns a net long of 0.5% or more of the equity securities of Syrah Resources Ltd. Macquarie Group Limited together with its affiliates owns a net long of 0.5% or more of the equity securities of Syrah Resources Ltd Macquarie Group Limited together with its affiliates beneficially owns 1% or more of the equity securities of Syrah Resources Ltd.

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Date	Stock Code (BBG code)	Recommendation	Target Price
27-Mar-2020	SYR AU	Underperform	A$.17
24-Mar-2020	SYR AU	Underperform	A$.18

Target price risk disclosures:
SYR AU: Any inability to compete successfully in their markets may harm the business. This could be a result of many factors which may include geographic mix and introduction of improved products or service offerings by competitors. The results of operations may be materially affected by global economic conditions generally, including conditions in financial markets. The company is exposed to market risks, such as changes in interest rates, foreign exchange rates and input prices. From time to time, the company will enter into transactions, including transactions in derivative instruments, to manage certain of these exposures.

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