Renascor Resources

Leveraging off a Tier 1 ***South Australian*** Mining Asset to Develop a Downstream Battery Anode Material Business

MINING SOUTH AUSTRALIA JULY 2020

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28 July 2020
David Christensen, Managing Director

RENASCOR RESOURCES

ASX: RNU

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Competent Persons Statement

The results reported herein, insofar as they relate to exploration activities and exploration results, are based on information provided to and reviewed by Mr G.W. McConachy (Fellow of the Australasian Institute of Mining and Metallurgy) who is a director of the Company. Mr McConachy has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr McConachy consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

Bibliography

Renascor confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements noted below and referenced in this presentation and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Renascor confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

1. Renascor ASX announcement dated 25 January 2018, "Battery Grade Spherical Graphite Produced from Siviour"
2. Renascor ASX announcement dated 30 April 2019, "High-Grade Measured Resource in Upgraded JORC Resource"
3. Renascor ASX announcement dated 12 August 2019, "Positive Results from Spherical Graphite Tests"
4. Renascor ASX announcement dated 11 November 2019, "Siviour Definitive Feasibility Study"
5. Renascor ASX announcement dated 1 July 2020, "Renascor Announces Battery Anode Manufacturing Operation"
6. Renascor ASX announcement dated 21 July 2020, "Updated Mineral Ore Reserve Estimate"

South Australian graphite

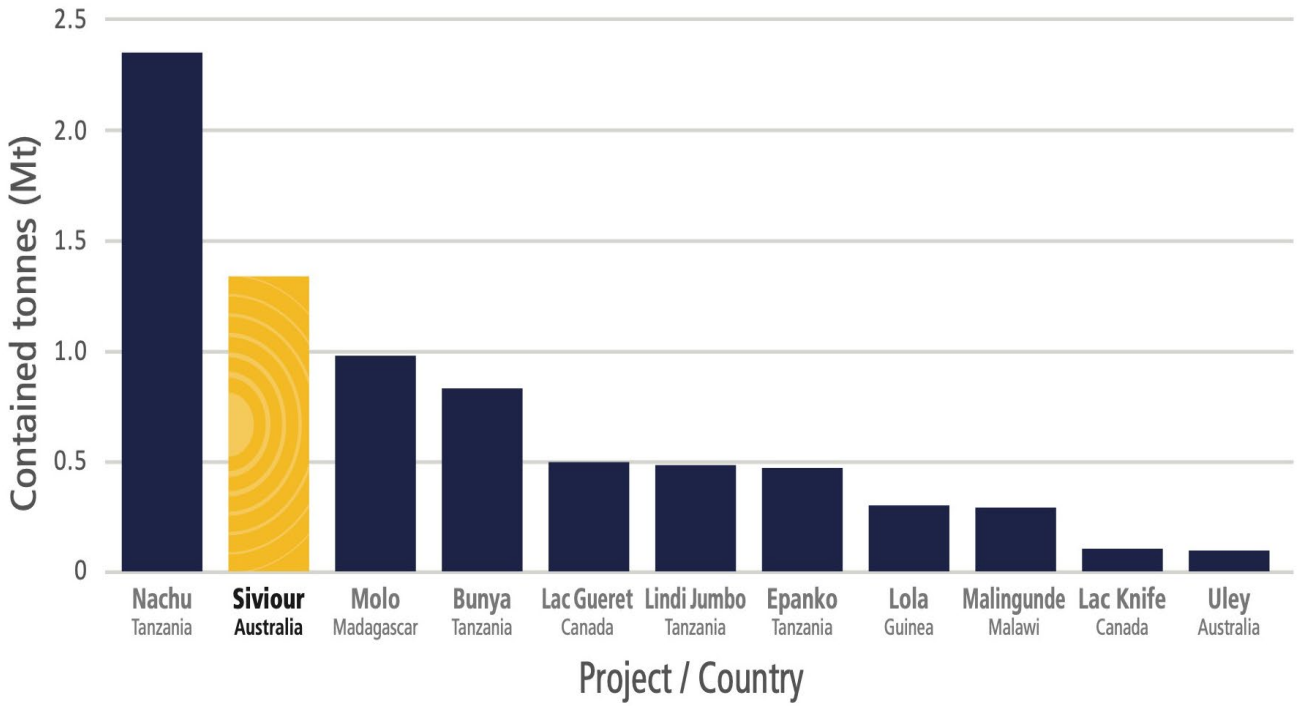
The growth in the electric vehicle market and the need for secure supply chains has the potential to unlock the rich graphite endowment of South Australia's Eyre Peninsula

South Australian Graphite Mineral Resources[1]

Name	Resources (Mt)	TGC (%)	Contained Graphite (Mt)
Siviour	**87.40**	**7.5%**	**6.55**
Uley	6.30	10.9%	0.69
Wilclo South	6.38	8.8%	0.32
Oakdale	6.70	5.8%	0.18
Kookaburra Gully	2.03	15.6%	0.39
Koppio	1.90	9.5%	0.05
Campoona Shaft	1.65	9.2%	0.15
Central Campoona	0.52	11.1%	0.06
Oakdale East	3.20	1.6%	0.56

[1] *Source: company reports.*

Global Graphite Proven Reserves [1]



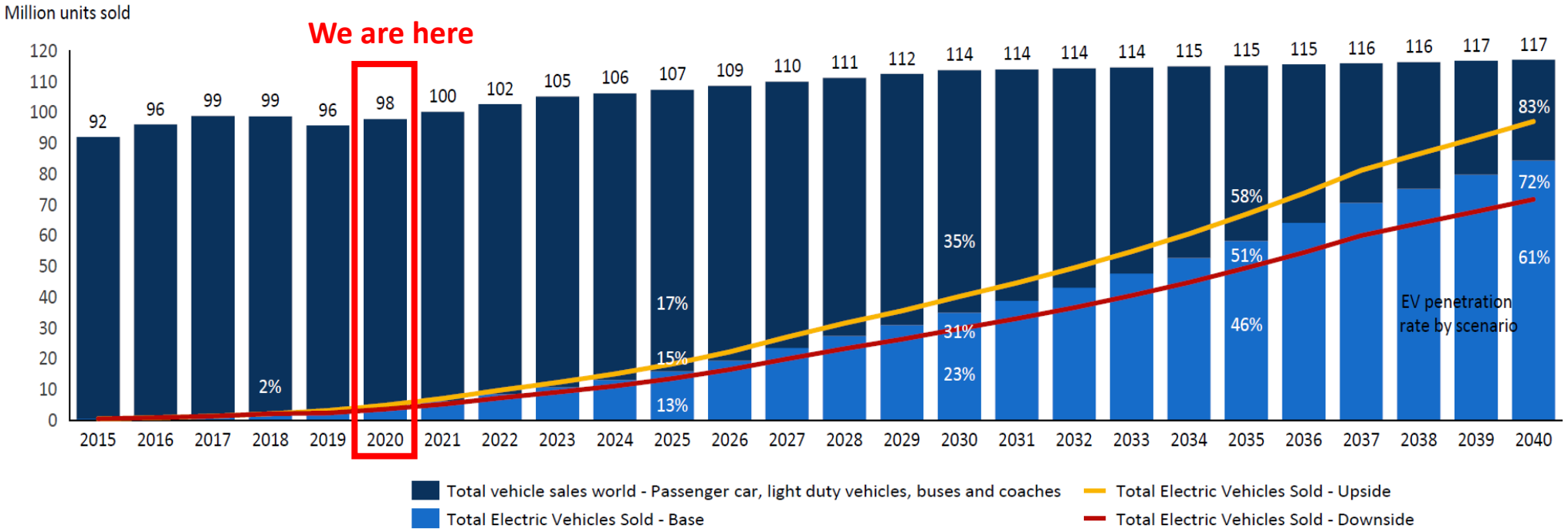
Section 1:

Graphite Market

Global EV growth is creating a paradigm-shifting event for battery minerals

Start of a global mega trend that will drive demand for minerals needed for lithium-ion batteries

EV sales as share of total cars

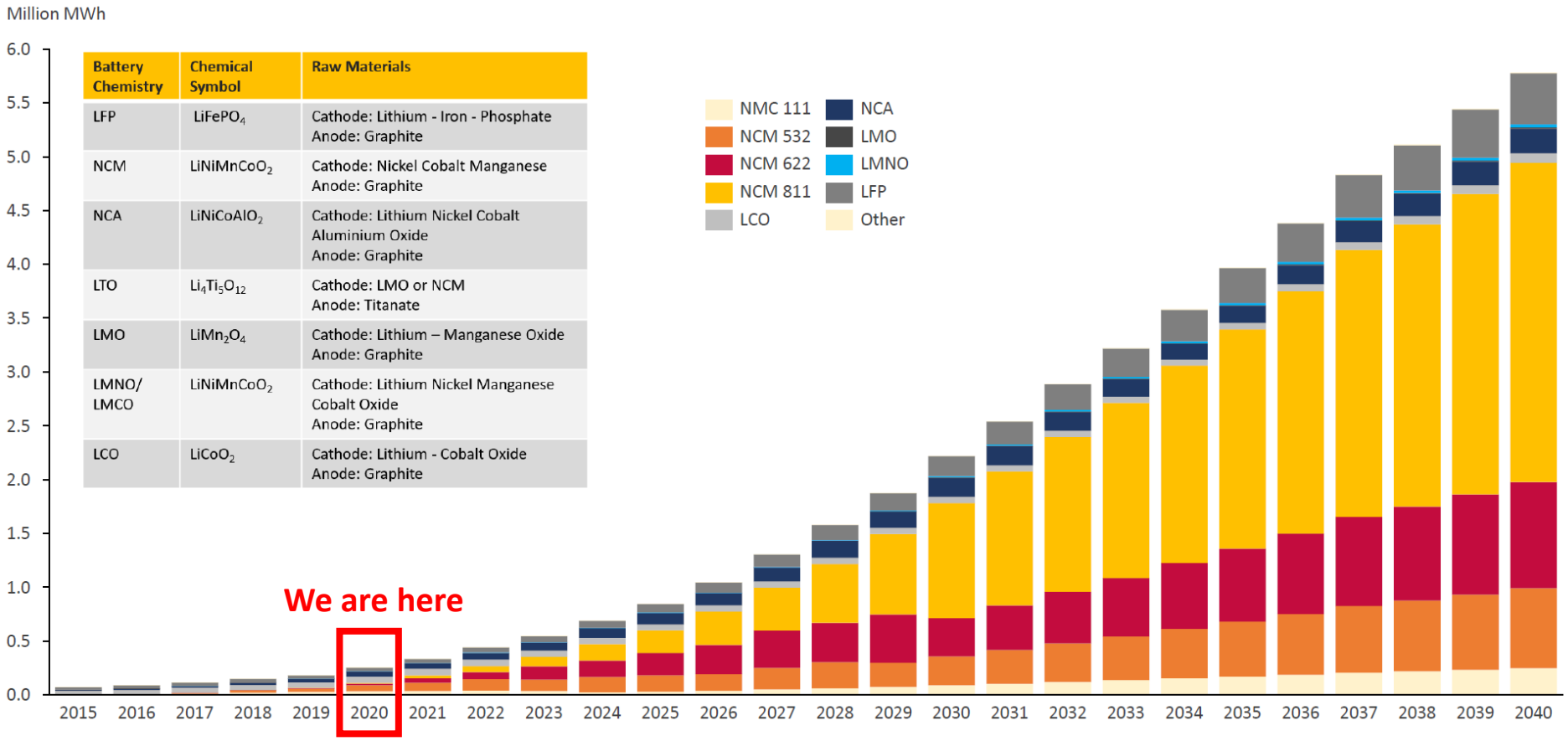


(Source: Benchmark Mineral Intelligence)

Graphite is an essential part of the transition to lithium-ion batteries

Increasing amounts of natural graphite will be needed to meet projected lithium-ion battery growth

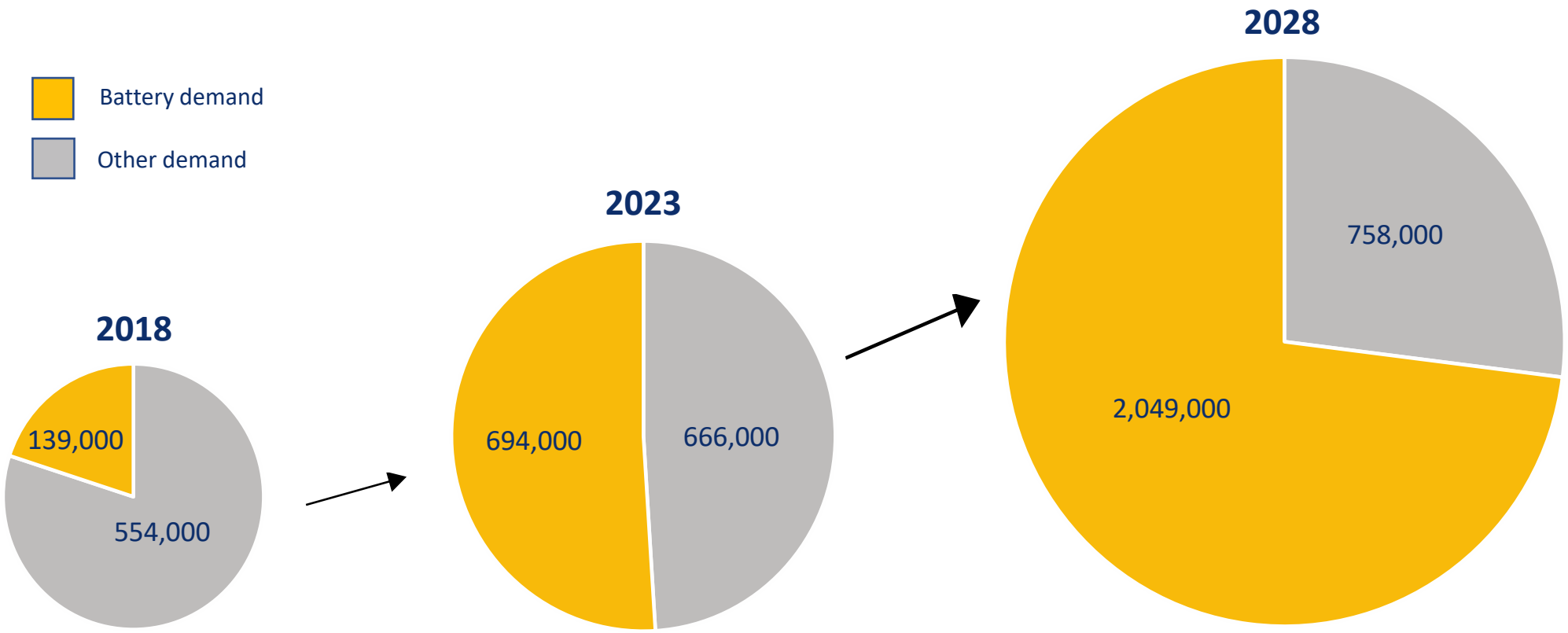
Battery Chemistry	Chemical Symbol	Raw Materials
LFP	$LiFePO_4$	Cathode: Lithium - Iron - Phosphate Anode: Graphite
NCM	$LiNiMnCoO_2$	Cathode: Nickel Cobalt Manganese Anode: Graphite
NCA	$LiNiCoAlO_2$	Cathode: Lithium Nickel Cobalt Aluminium Oxide Anode: Graphite
LTO	$Li_4Ti_5O_{12}$	Cathode: LMO or NCM Anode: Titanate
LMO	$LiMn_2O_4$	Cathode: Lithium – Manganese Oxide Anode: Graphite
LMNO/ LMCO	$LiNiMnCoO_2$	Cathode: Lithium Nickel Manganese Cobalt Oxide Anode: Graphite
LCO	$LiCoO_2$	Cathode: Lithium - Cobalt Oxide Anode: Graphite



(Source: Benchmark Mineral Intelligence)

Graphite Concentrates are only starting to become a battery mineral

Battery demand is growing at 19% annually (versus 2% for other uses)



Current use of Graphite Concentrates is primarily industrial

By 2023, battery demand is projected to increase by five times

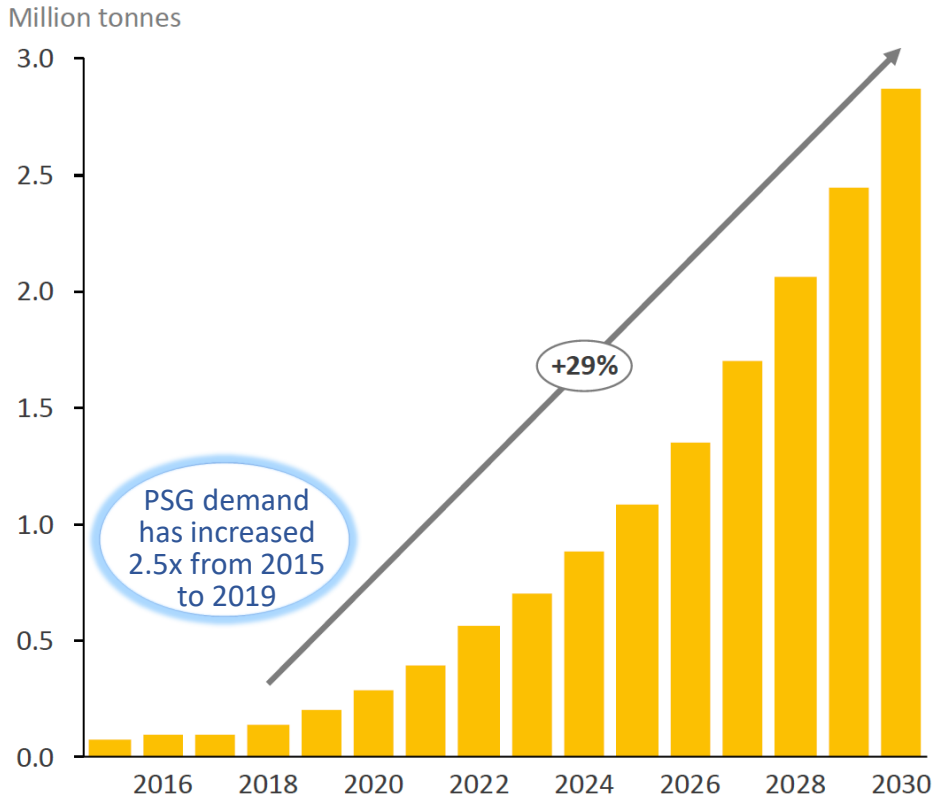
By 2028, battery share of market is expected to grow +2 million tonnes

(Source: Benchmark Mineral Intelligence)

EV momentum is stronger in market for Purified Spherical Graphite

PSG is used exclusively in lithium-ion battery applications and thus provides more direct exposure to growth in the EV sector

Purified Spherical Graphite Demand



(Source: Benchmark Mineral Intelligence)

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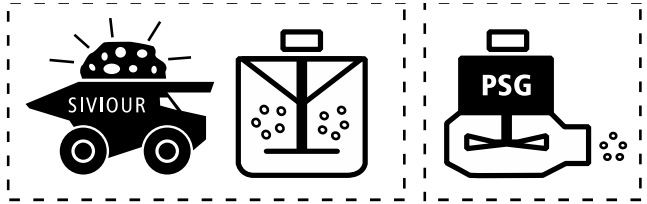


90x Siviour

Over 90 new Siviour-sized projects needed over next 10 years

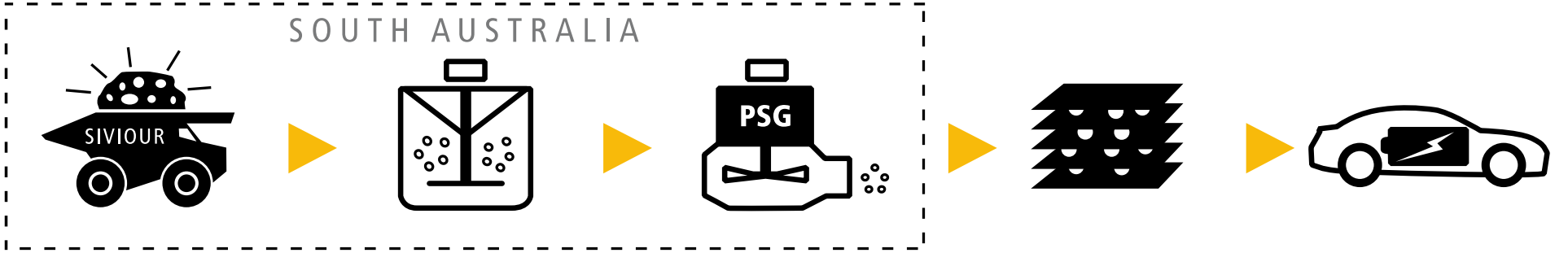
Section 2:

Battery Anode Material Study

Renascor's battery anode material project in the graphite supply chain

Renascor is developing a vertically integrated operation consisting of a mine and concentrator plus a downstream operation to produce Purified Spherical Graphite (PSG) for sale to anode manufacturers

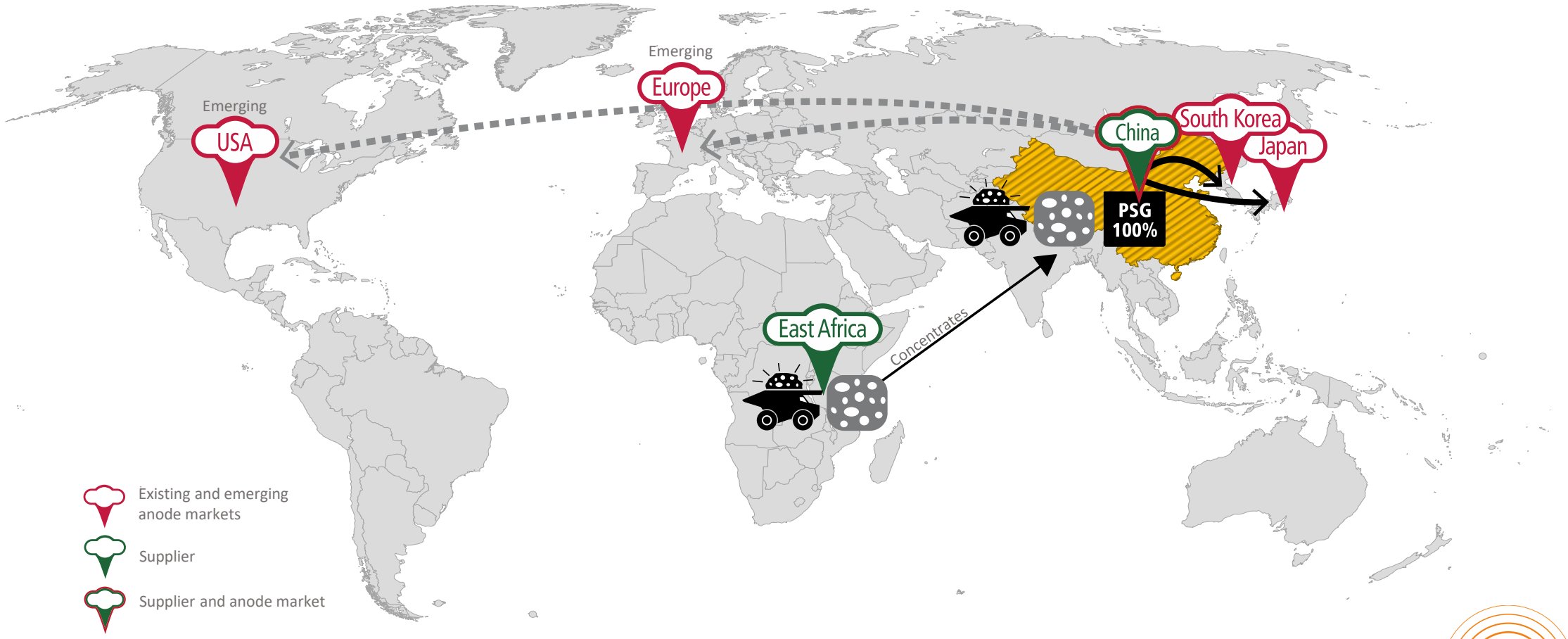
Renascor's Integrated Battery Anode Material Manufacturing Operation



Graphite mining	Graphite Concentrates	Purified Spherical Graphite (PSG)	Anodes	Li-ion cells
Graphite-containing ore is mined, crushed and processed through floation to 94-96% total carbon (TC)		Graphite Concentrates are micronised, spheronised and purified to >99.95% TC	China, Korea, Japan Emerging production in Europe and USA PSG coated and treated to create anode material	China, Korea, Japan, Europe, USA Anode and other components are assembled into Li-ion cells

China currently produces 100% of natural Purified Spherical Graphite

Graphite Concentrate feedstock obtained both domestically and internationally before being converted to PSG and used in China or exported to Japan and South Korea



Renascor is a secure alternative source of PSG for anode makers

Renascor offers a viable alternative to Chinese PSG supply through the first in-country mine and PSG operation outside of China

Renascor to mine and process Graphite Concentrates before converting into PSG for export to global anode markets

Renascor's integrated battery anode material manufacturing operation

Renascor is planning to be the first integrated, in-country mine and PSG operation outside of China

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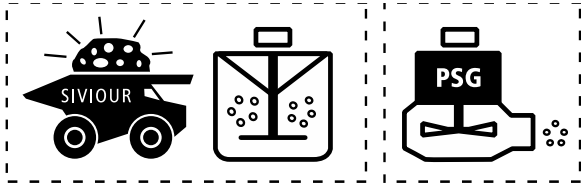
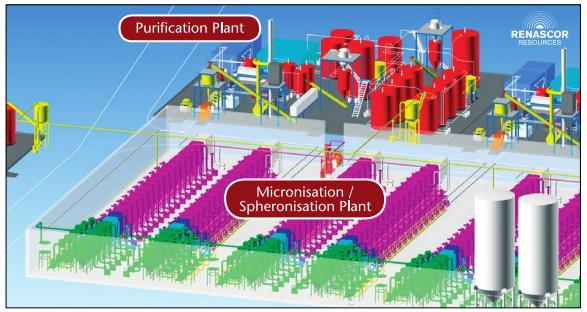
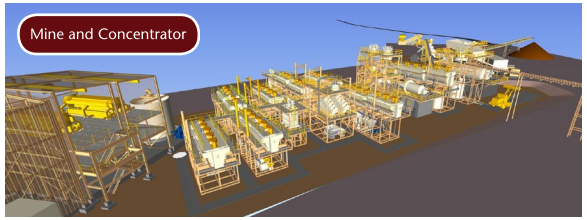
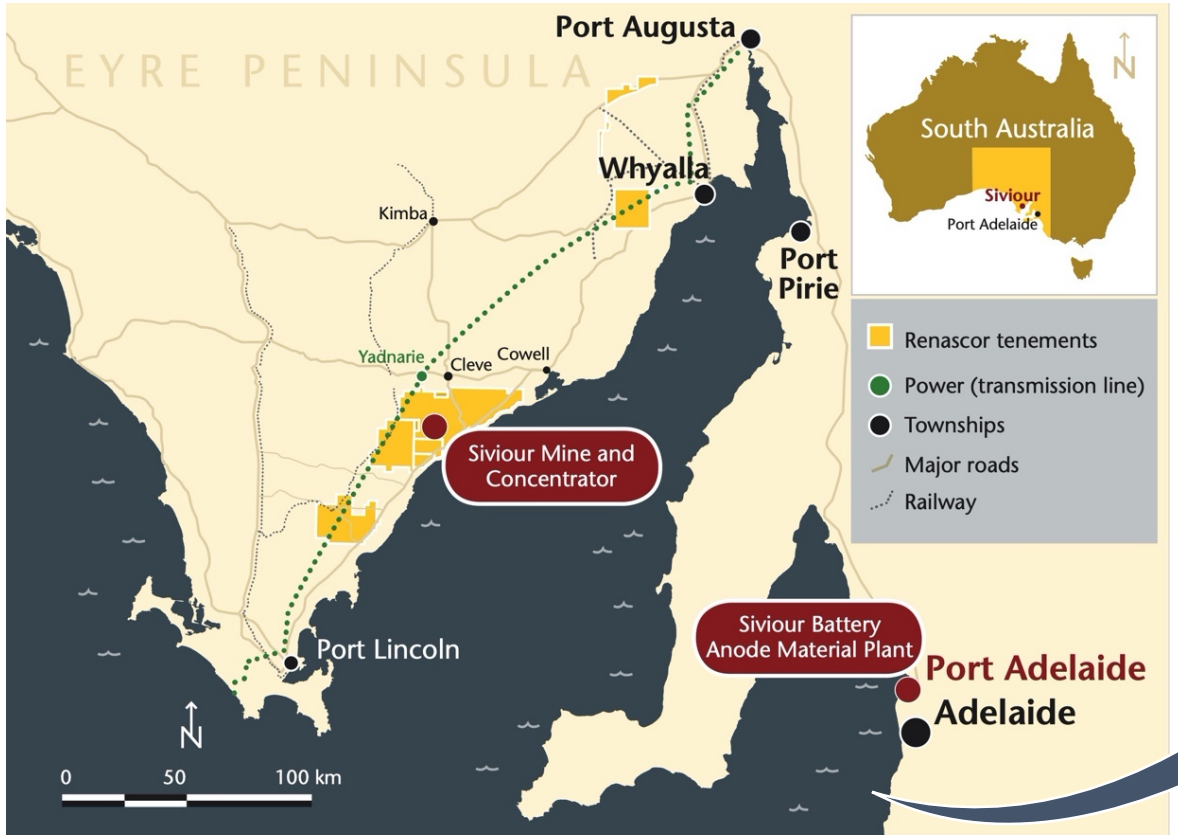






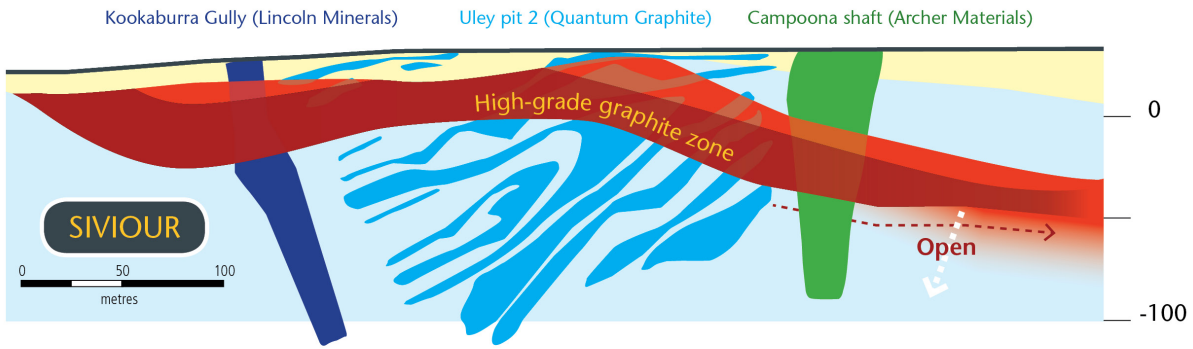


Anode customers

PSG sourced from Renascor's Siviour Graphite Deposit

Siviour is unique in both its near-surface, flat-lying orientation and its scale as one of the world's largest graphite Resources

Siviour's shallow, horizontal orientation and massive size facilitates comparatively low mining costs



Cross-section of Siviour (in red) in comparison to other graphite deposits

Mineral Resource Estimate

Category	Resources (Mt)	TGC (%)	Contained Graphite (Mt)
Measured	15.8	8.8%	1.4
Indicated	39.5	7.2%	2.8
Inferred	32.1	7.2%	2.6
Total	**87.4**	**7.5%**	**6.6**

(Source: Siviour Mineral Resource estimate as of April 2019, see Renascor ASX announcement dated 30 April 2019, p 1).

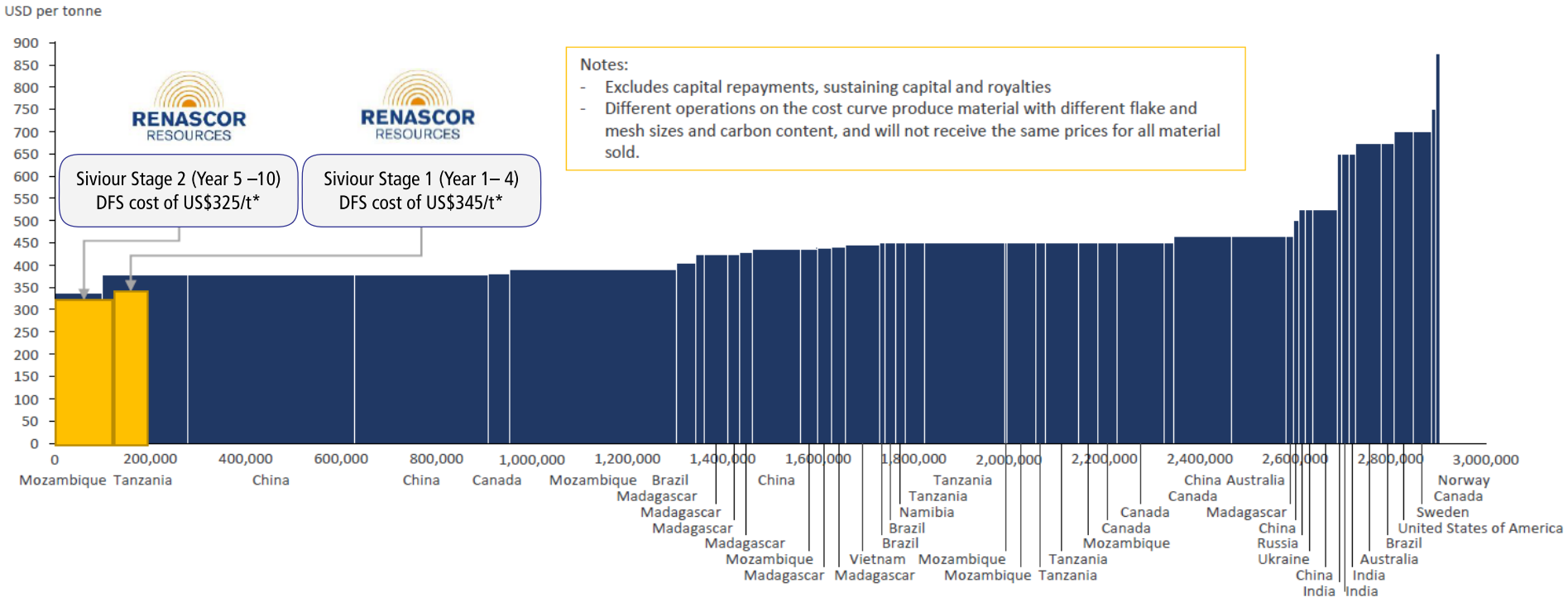
Ore Reserve Estimate

Category	Reserves (Mt)	TGC (%)	Contained Graphite (Mt)
Proven	15.8	8.4%	1.3
Probable	35.8	6.9%	2.5
Total	**15.5**	**7.4%**	**3.8**

(Source: Siviour Ore Reserve as of July 2020, see Renascor ASX announcement dated 21 July 2020, p. 2)

Graphite Concentrate feedstock at industry leading costs

Graphite Concentrate DFS confirms lowest quartile OPEX

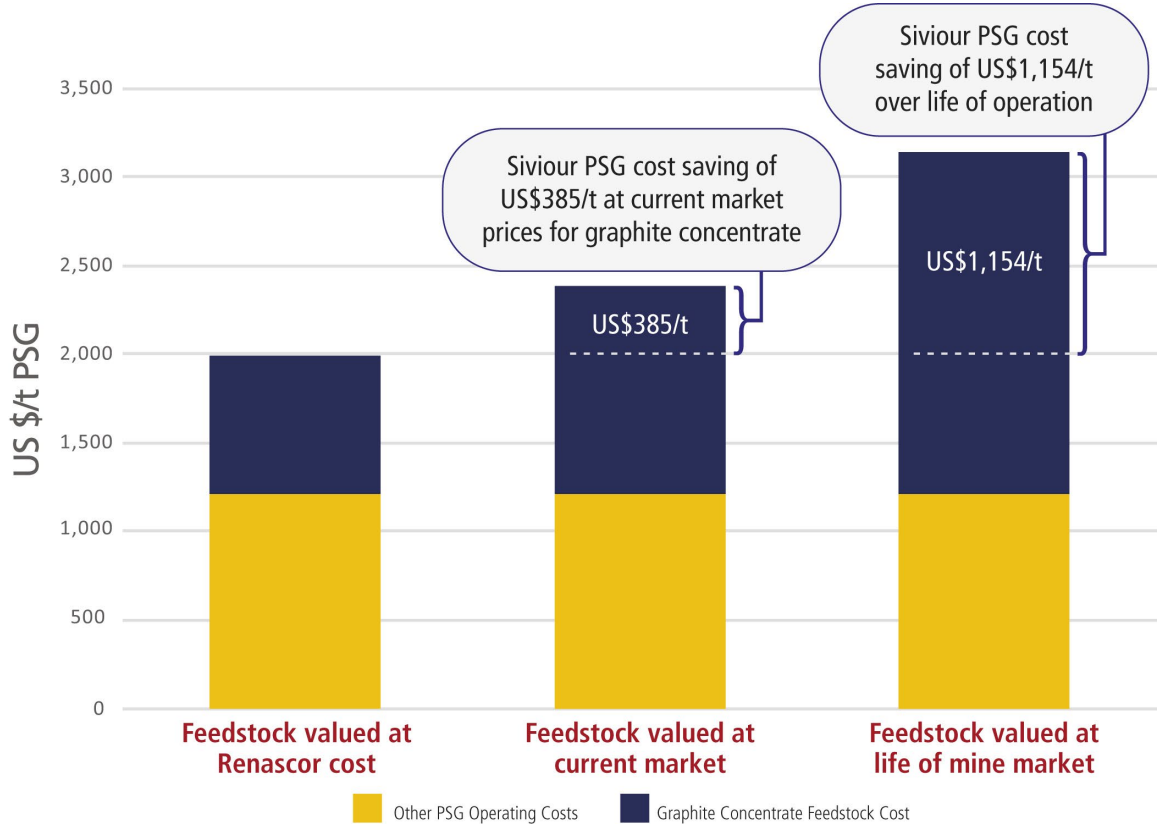


* Costs provided by Renascor from the Siviour DFS document. The cost assessment from the Siviour DFS may not use the same methodology as the Benchmark Minerals cost model.

(Source: Benchmark Mineral Intelligence. See Renascor ASX announcement dated 11 November 2017, p 27)

Comparative advantage in PSG production

Renascor's PSG production benefits from obtaining Siviour Graphite Concentrate feedstock at cost of production, rather than market price. This price difference has an exaggerated impact on PSG operating costs because only half of the Graphite Concentrates used as feedstock are spheronised to PSG during the milling process.



(See Renascor ASX announcement dated 1 July 2020, p 4.)

Battery Anode Material Study financial results

Low OPEX drives high margins and strong cash generation

Average annual LOM production of PSG	28,000t	
Life of mine/project	40 years	
Start-up capital cost of mine and concentrator	A$114m	US$79m
Start-up capital cost of battery anode material operation	A$90m	US$63m
Total start-up capital (integrated operation)[1]	A$204m	US$142m
Payback of total start-up capital	4.5 years	
NPV_{10} (after tax) of integrated operation	A$713m	US$499m
IRR (after tax) of integrated operation	33%	
Average cost of Graphite Concentrate feedstock per tonne PSG	A$1,107/t	US$775/t
Average cost of converting Graphite Concentrates to PSG	A$1,735/t	US$1,214/t
Average gross PSG cash operating cost	A$2,842/t	US$1,989/t
Average net PSG cash operating cost (with by-product credit[2])	A$1,998/t	US$1,398/t
Projected PSG sales price	A$6,160/t	US$4,312/t
Net revenue of integrated operation	A$9,552m	US$6,686m
EBITDA of integrated operation	A$6,267m	US$4,387m
Project cashflow of integrated operation	A$4,112m	US$2,878m

(Source: Renascor ASX announcement dated 1 July 2020, p 3)

Highlights

Integration of battery anode material manufacturing operation with Renascor's Siviour Graphite Project provides path to capitalise on electric vehicle (EV) growth

Paradigm-shifting event is starting to impact graphite
Strong influence on downstream market for PSG.

Siviour is uniquely positioned to benefit from EV growth
Located in Australia, Siviour hosts one of the world's largest graphite Resources[1], with recent DFS confirming lowest quartile projected OPEX[2].

Competitive advantage in production of PSG
Low OPEX from mining operation creates a competitive advantage in the manufacture of PSG[3].

Alignment with offtake partners
Renascor's fully integrated Australian sourced and produced PSG provides commercially viable alternative to Chinese supply.

Sustainable operation
Eco-friendly chemical purification satisfies sustainability requirements of end-users and prospective financiers.

[1] Renascor ASX announcement dated 30 April 2019, p 1, and Renascor ASX announcement dated 21 July 2020, p 2.
[2] Renascor ASX announcement dated 11 November 2019, p 27.
[3] Renascor ASX announcement dated 1 July 2020, p 4.

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