Renascor Resources

Siviour Graphite Project: Battery Anode Material Study Presentation





2 July 2020 David Christensen, Managing Director

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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.

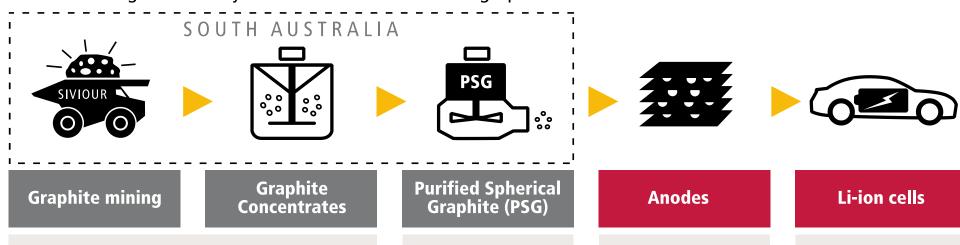
- 1. Renascor ASX announcement dated 25 January 2018, "Battery Grade Spherical Graphite Produced from Siviour"
- 2. Renascor ASX announcement dated 14 March 2018, "Siviour Prefeasibility Study and Maiden Ore Reserve"
- 3. Renascor ASX announcement dated 30 April 2019, "High-Grade Measured Resource in Upgraded JORC Resource"
- 4. Renascor ASX announcement dated 12 August 2019, "Positive Results from Spherical Graphite Tests"
- 5. Renascor ASX announcement dated 11 November 2019, "Siviour Definitive Feasibility Study"
- 6. Renaccor ASX announcement dated 1 July 2020, "Renascor Announces Battery Anode Manufacturing Operation"



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-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



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

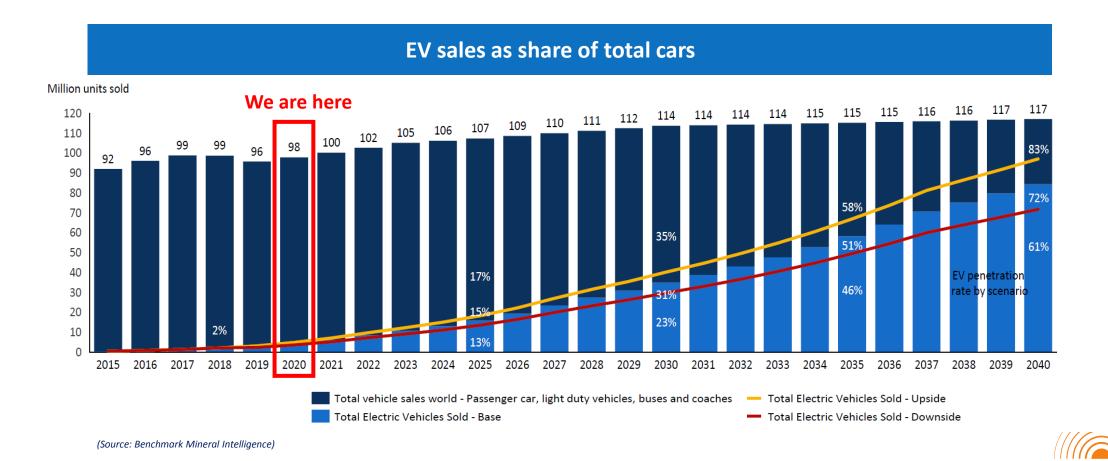
Eco-friendly chemical purification satisfies sustainability requirements of end-users and prospective financiers.





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



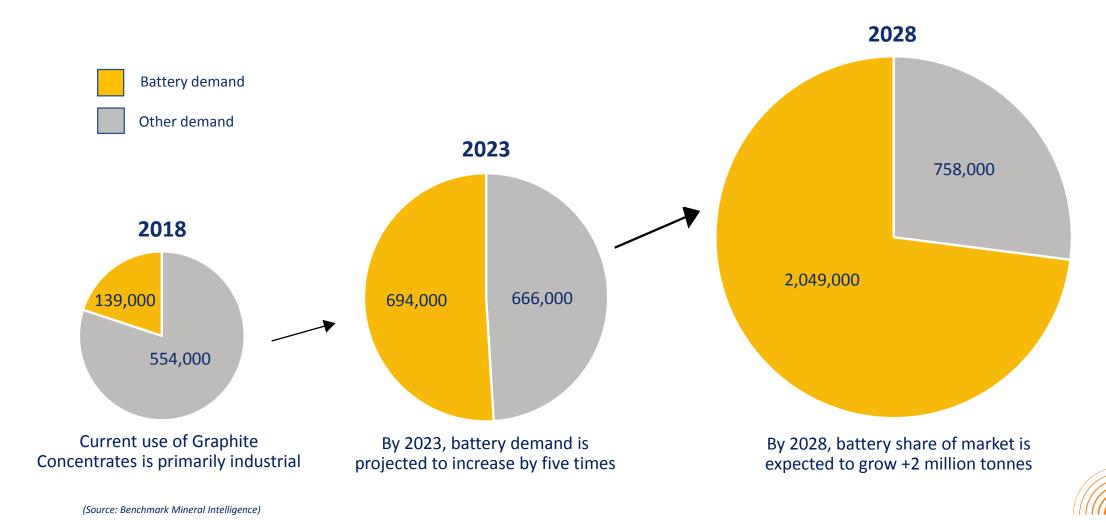
Graphite is an essential part of the transition to lithium-ion batteries

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



Graphite Concentrates are only starting to become a battery mineral

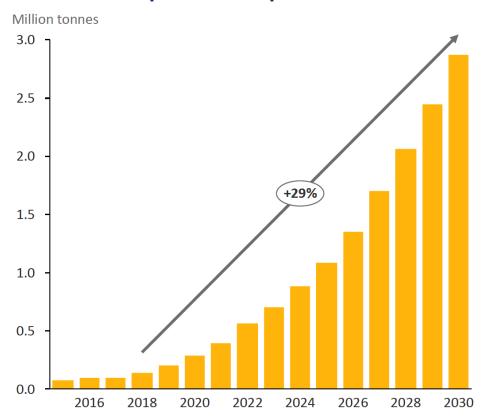
Battery demand is growing at 19% annually (versus 2% for other uses)



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



SOUTH AUSTRALIA SIVIOUR PSG SIVIOUR SIVIOUR

90x Siviour

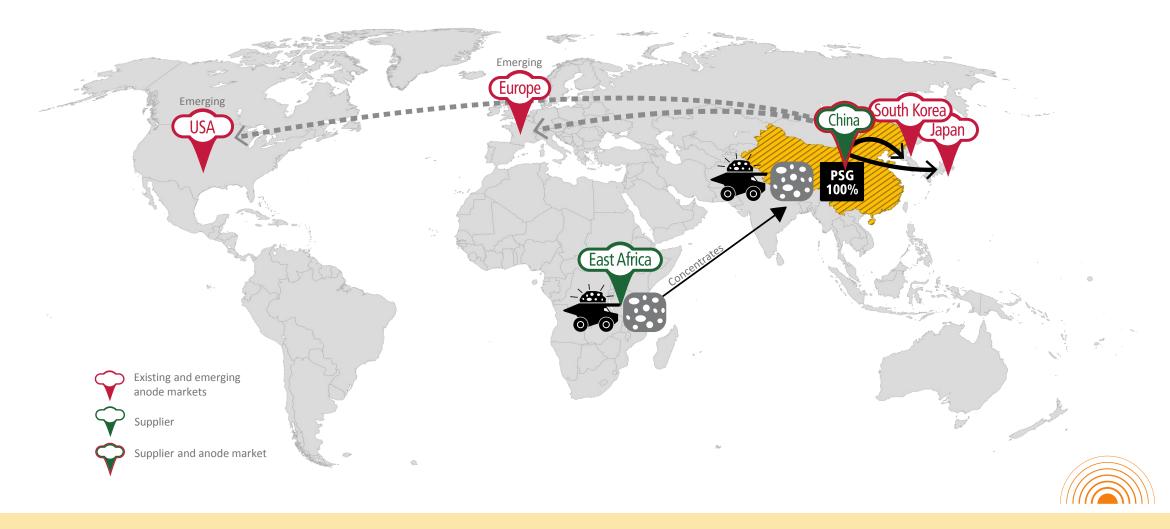
Over 90 new Siviour-sized projects needed over next 10 years



(Source: Benchmark Mineral Intelligence)

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

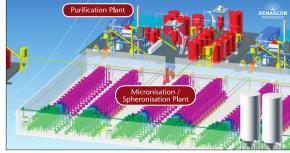




Renascor's integrated battery anode material manufacturing operation

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







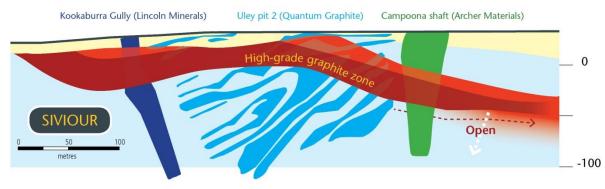




PSG sourced from Renascor's Siviour Graphite Deposit

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 29 April 2019, see Renascor ASX announcement dated 30 April 2019, p 1).

Ore Reserve Estimate

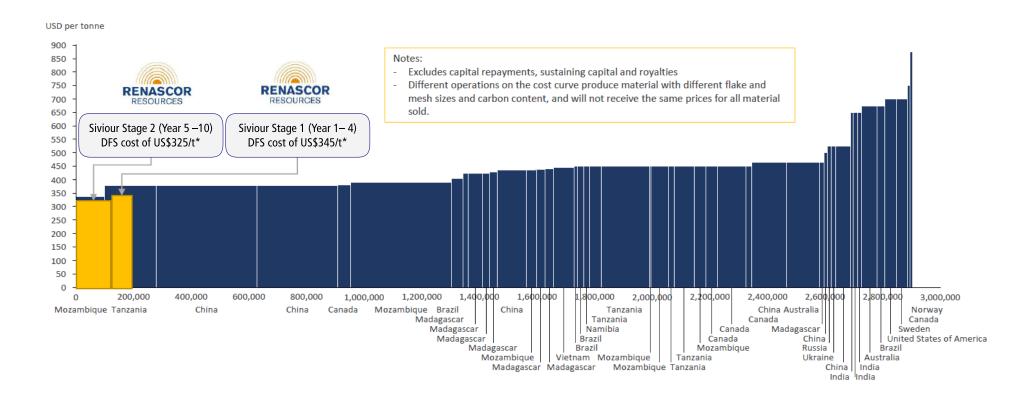
Category	Reserves (Mt)	TGC (%)	Contained Graphite (Mt)
Proven	-	-	-
Probable	45.2	7.9%	3.6
Total	45.2	7.9%	3.6

(Source: Siviour Ore Reserve as of 14 March 2018, See Renascor ASX announcement dated 14 March 2018, p 4.)



Graphite Concentrate feedstock at industry leading costs

Graphite Concentrate DFS confirms lowest quartile OPEX



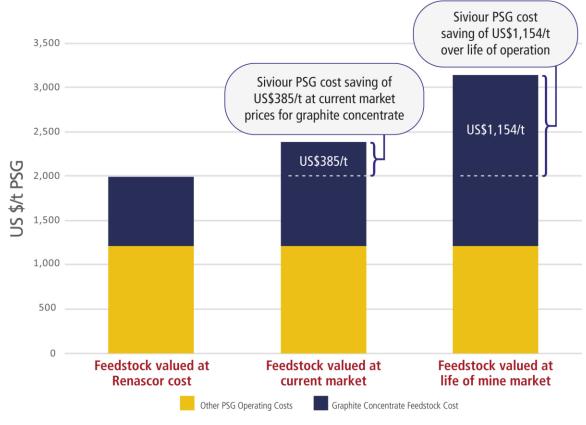
^{*} Costs provided by Renascor from the Siviour DFS document. The cost assessment from the Siviour DFS may not use the same methodology as the Benchmark Minerals cost model.

(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.





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 y	ears			
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 y	ears			
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)



Eco-friendly manufacturing process

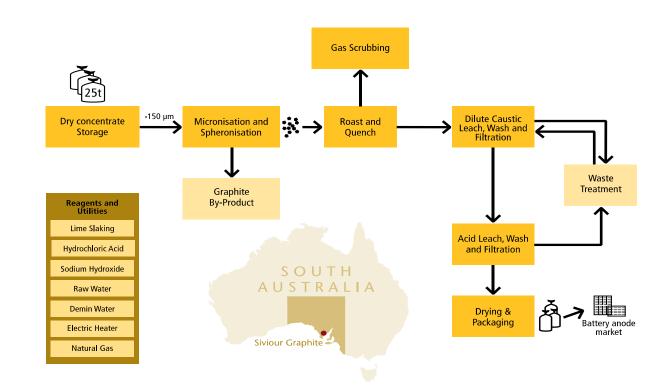
Two-step milling and purification process, using Siviour Graphite Concentrate as raw material feedstock

Milling. Micronisation and spheronisation using conventional cascading milling equipment.

Purification. China generally uses hydrofluoric acid. Renascor has adopted a more cost-effective and cleaner caustic roast purification that has consistently achieved battery-grade purity level with Siviour graphite.

Sample ID	Total Carbon (TC)
TC-3534	99.959%
TC-3535	99.958%
TC-3536	99.966%
TC-3537	99.980%
TC-3538	99.978%
TC-3539	99.957%
TC-3540	99.943%
TC-3541	99.980%
Average	99.965%

Caustic roast purification test results. Renascor ASX announcement dated 12 August 2019, p 4.





Commitment to technical development

Three years of intensive testing and process design in Australia, China and Germany to develop sustainable and commercially viable process

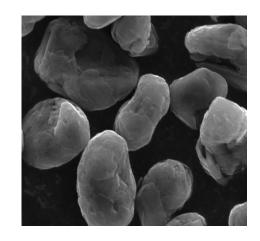
Pilot plant micronisation and spheronisation at cascading mill manufacturer to achieve target yields of 50% and marketable sizing ($12\mu m$ to $20\mu m$)

Next generation milling tests with Japanese and German manufacturers

Purification to +99.95% TC using caustic roasting, hydrofluoric acid and Urbix proprietary techniques

Battery performance tests meet industry parameters for formation behaviour, charge/discharge and durability

Sample Siviour PSG produced using eco-friendly caustic roasting purification; evaluation by potential customers of-going



Parameter	Test 1	Test 2			
Feed size	75 μm	150 μm			
D10 size fraction (-10% finer than this size)	9.1 μm	9.2 μm			
D50 size fraction (-50% finer than this size)	15.4 μm	16.0 μm			
D90 size fraction (-90% finer than this size)	23.5 μm	25.1 μm			
Ratio D10 to D90 sizes	2.6	2.7			
Tap density (measure of density of spherical graphite powder settled in test cylinder)	0.95 g/cm ³	0.96 g/cm ³			

Micronisation and spheronisation test results. Renascor ASX announcement dated 25 January 2018, p 2.



Government funding support

Strong government support expected to assist with on-going offtake discussions

Letter of Support received for ECA cover from Export Finance Australia, Australia's official ECA, for integrated mine and PSG operation

Additional support for ECA cover from Dutch Export Credit Agency Atradius, the Government of the Netherlands official ECA, for mine and concentrate operation

ECA support typically supports favourable debt financing terms, including competitive margin and increased loan tenor

Leading European investment bank ABG Sundal Collier appointed to assist with debt financing







Timeline to production

Offtake commitment is key variable necessary to advance to a final investment decision. Results of the Battery Anode Material Study, together with customer sample material, are expected to assist on-going offtake discussions

	Q2′20	Q3′20	Q4'20	Q1′21	Q2′21	Q3′21	Q4'21	Q1′22	Q2′22	Q3′22	Q4'22
Marketing and Offtake											
PSG Optimisation Tests and Product Testing											
PSG Engineering											
Early Works											
Long Lead time Procurement											
Project Financing and Due Diligence											
Final Regulatory Approvals											
Final Investment Decision											
Detailed Design and Procurement											
Construction											
Commissioning											
Production Ramp Up											
Full Production											



Next steps

Strong news flow expected for second half of 2020

Offtake and finance discussions with potential end-users of Siviour graphite products (including both PSG and Graphite Concentrates)

Preparation of additional customer samples of Siviour PSG

Advanced mineral processing tests, including optimisation of Renascor's purification circuit for producing PSG and production of other high value-added products

Advanced battery testing using Siviour PSG samples

Completion of permitting and approvals required to commence production at Siviour





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