Filling the Gap in Graphite Production:

Australian Supply from Renascor's Battery Anode Material Project

Fastmarkets

Fastmarkets Asian Battery Materials Conference 2023

Singapore, 1 – 3 May

David Christensen

Managing Director

RENASCOR RESOURCES

Powering Clean Energy™

Section 1:

Executive Summary

*Electric Vehicle growth is driving **annual increases of 29%** in demand for PSG for use in lithium-ion battery anodes*

Project Highlights

- ✓ **Vertically integrated** operation to produce uncoated Purified Spherical Graphite (PSG) located **wholly within South Australia.**
- ✓ **World's 2nd largest Proven Graphite Reserve** and **largest Graphite Reserve outside of Africa[1].**
- ✓ The **favourable geology** allows manufacturing of PSG at costs that are competitive with current Chinese production and **advantaged over developments outside of China.**
- ✓ **Proven eco-friendly, HF-free purification process** endorsed by leading global anode companies.
- ✓ Key regulatory approvals (PEPR, Mineral Lease) from South Australian Department of Energy and Mining for graphite mine and concentrator.
- ✓ **Conditional approval received for a A$185 million Loan Facility** from Export Finance Australia via the Federal Governments A$ 2 billion Critical Minerals Facility.

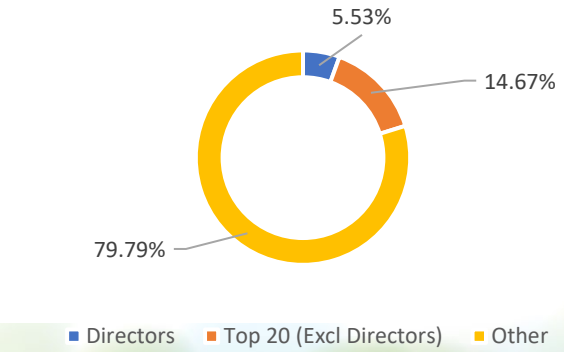
Renascor Resources: Corporate Overview

Share Chart – ASX code: RNU

Capital Structure

Shares on issue (28 April 2023)	2,539M
Share price (28 April 2023)	A$0.21/sh
Market Cap (at A$0.21/sh)	**A$533M**
Cash (31 Mar2023)	A$134M
Debt (31 Mar 2023)	Nil
Enterprise Value	**A$399M**

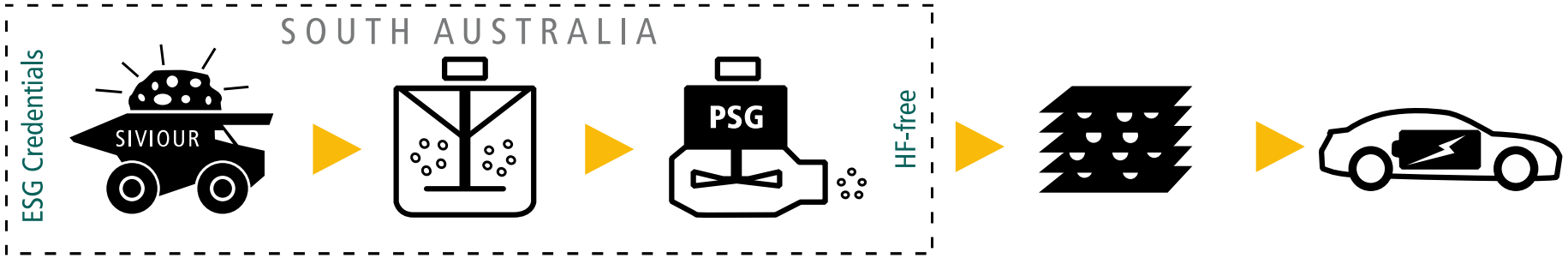
Shareholder Breakdown (28 April 2023)



Renascor's Battery Anode Material Project in the Graphite Supply Chain

Renascor is developing a vertically integrated operation within South Australia consisting of a mine, concentrator and downstream manufacturing facility **to produce Purified Spherical Graphite (PSG)** via eco-friendly chemical purification for **sale to anode makers** and use in Li-ion batteries for **Electric Vehicles.**

Renascor's Integrated Battery Anode Material Manufacturing Operation



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

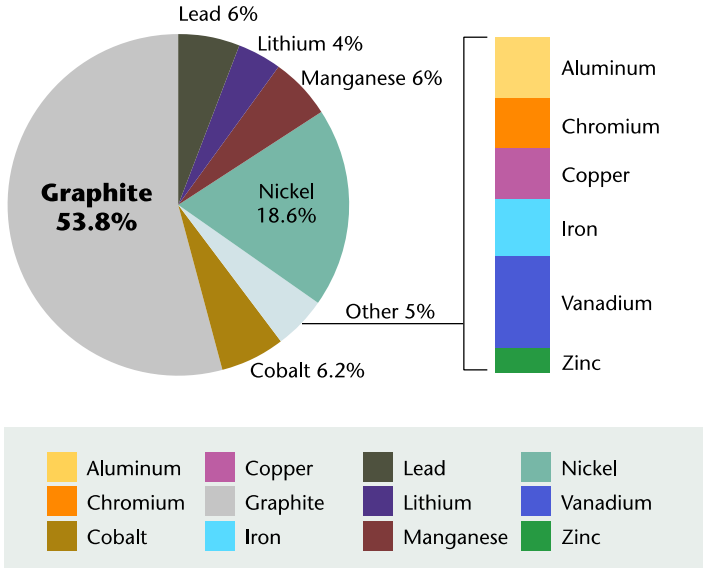
Section 2:

Impact of Lithium-Ion Battery Growth on the Graphite Market

Anode and Graphite Demand are Directly Linked to Battery Growth

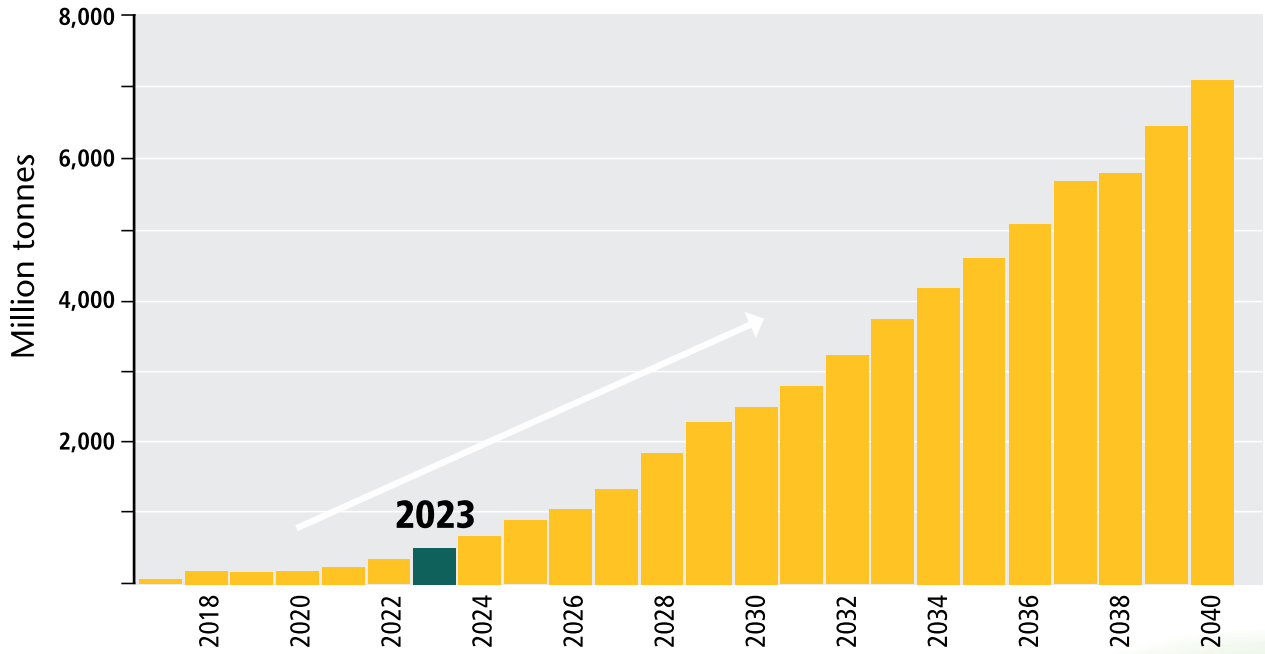
Graphite is the fundamental raw material in lithium-ion battery anodes.

Share of Mineral Demand from Energy Storage

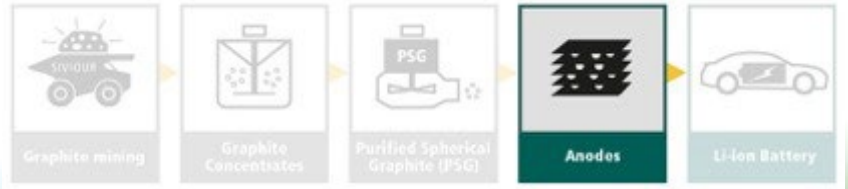


Source: IEA

Anode Demand Forecast 2018 to 2040

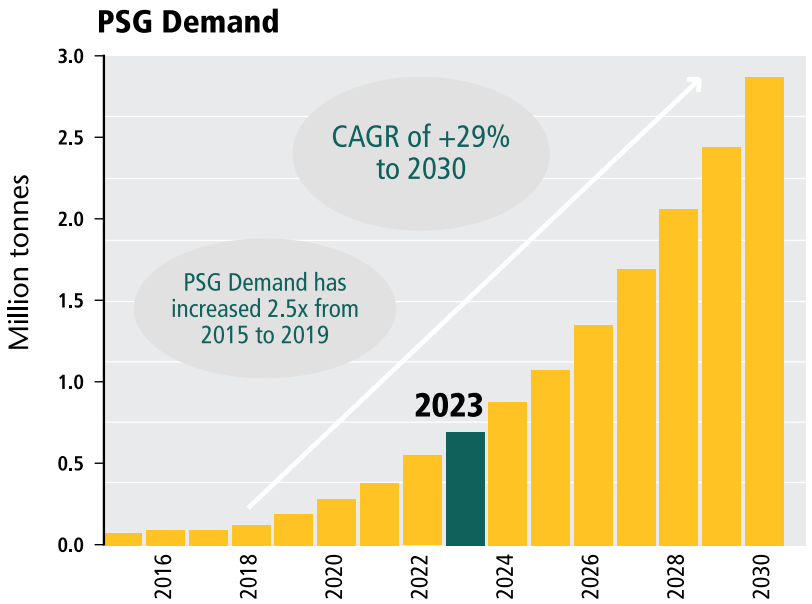


Source: Benchmark Mineral Intelligence



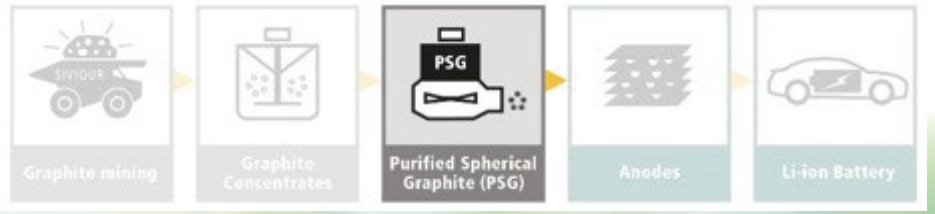
Strong Demand Growth for Purified Spherical Graphite

The projected growth rate in the demand for Purified Spherical Graphite will put graphite mining and graphite refining under increasing pressure to expand supply to meet demand.



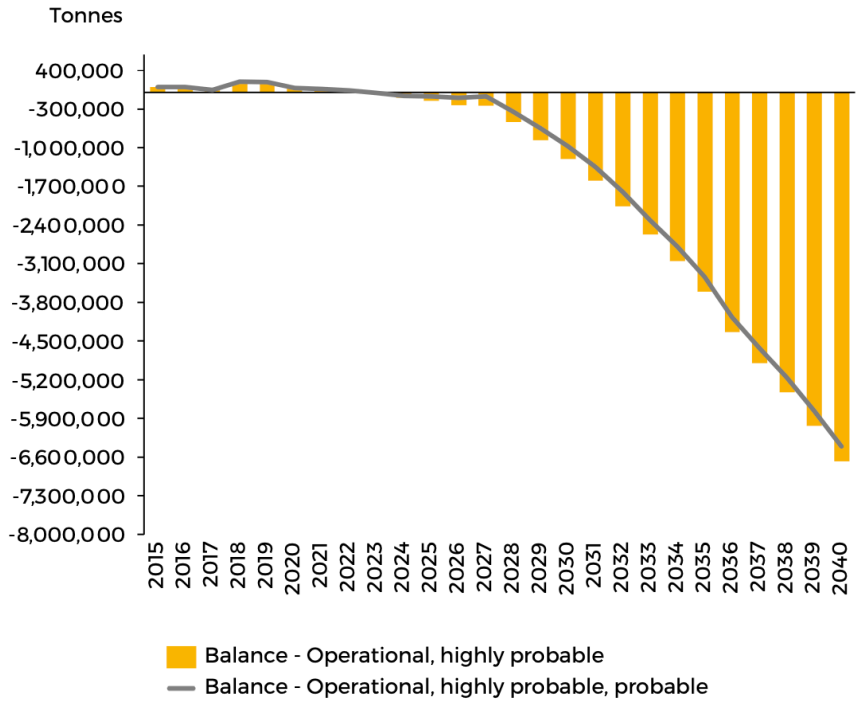
90x Siviour Over 90 new Siviour-sized projects needed over next 10 years

Source: Benchmark Mineral Intelligence



Graphite Flake Market Balance Moving to Undersupply

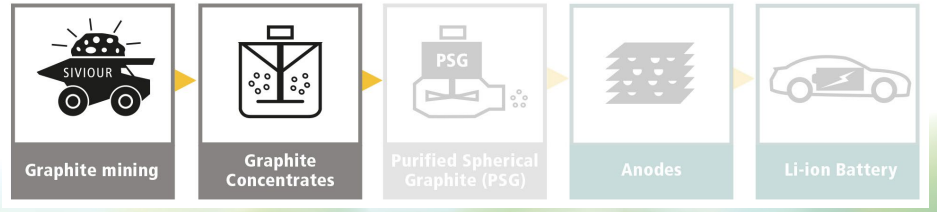
Significant new production is required to meet projected demand for graphite flake concentrates.



Source: Benchmark Mineral Intelligence

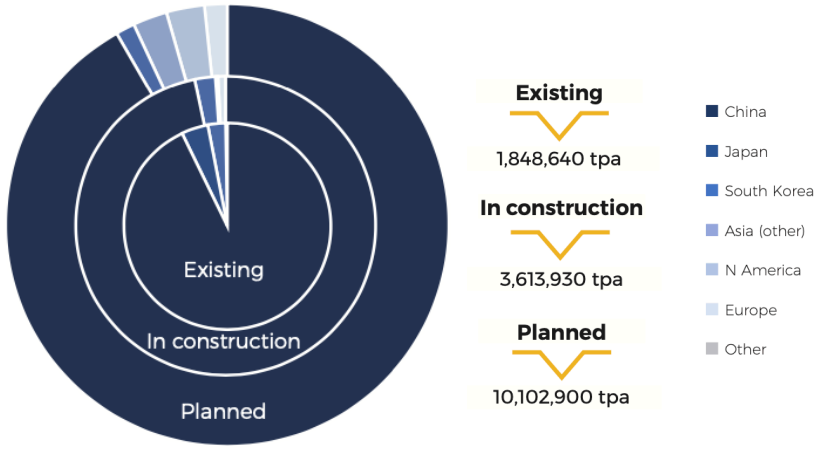
97x new graphite mines needed by 2035

Source: Benchmark Mineral Intelligence (based on an average annual production capacity of 56,000t per mine)

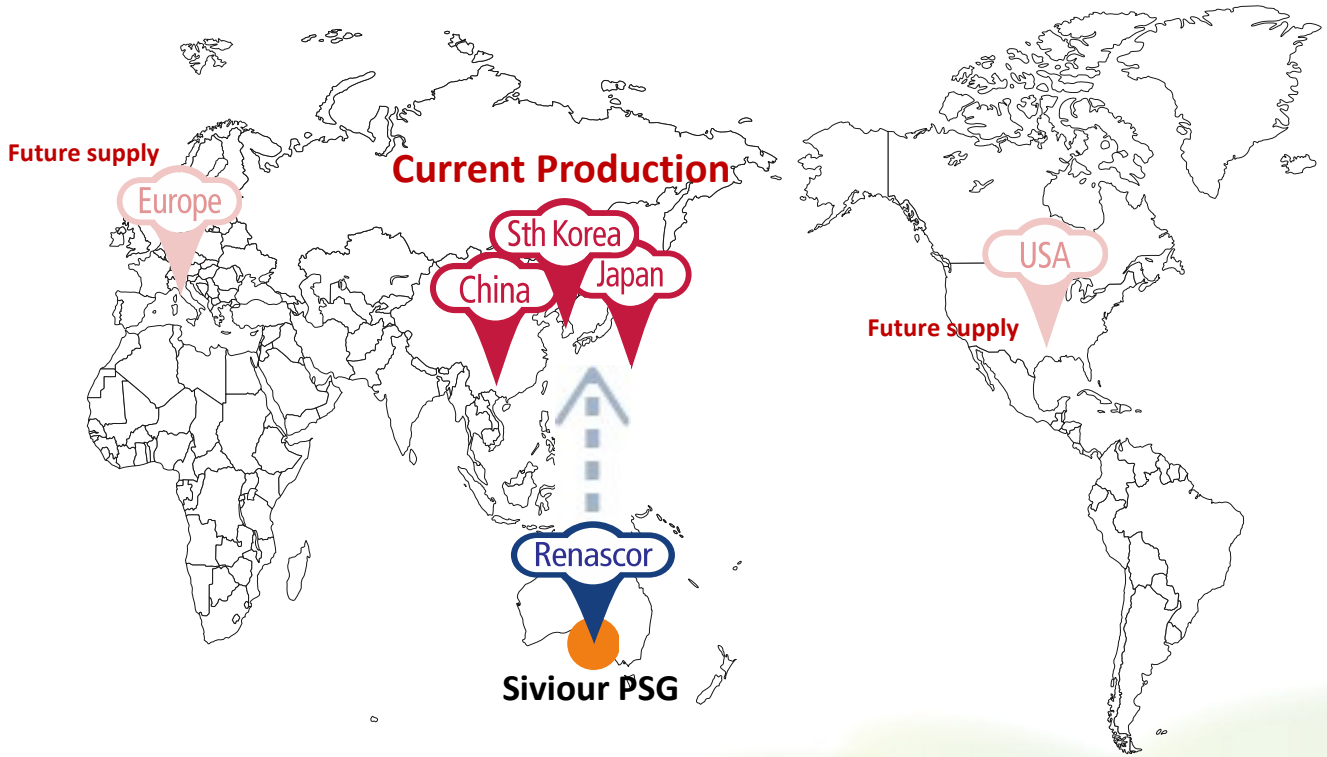


Global Anode Supply is Centered in Northeast Asia

China, Japan and South Korea will remain the center of anode production in the near-term before expanding over time into European, US and other markets.



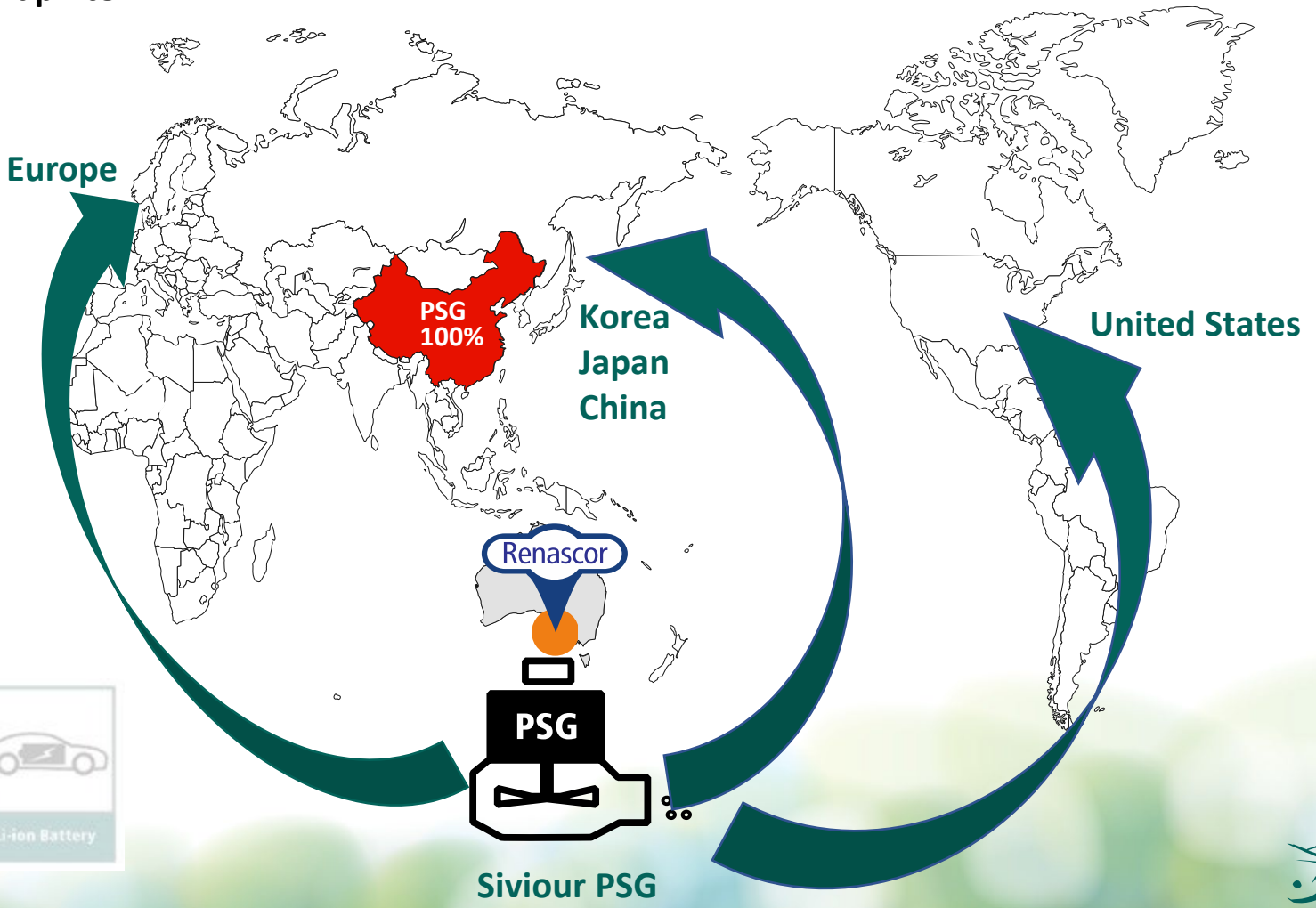
Source: Benchmark Mineral Intelligence

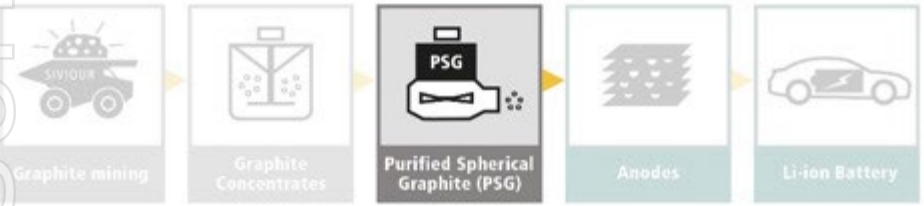


China Currently Controls 100% of the Market for Purified Spherical Graphite

All anode producers (including manufacturers in South Korea and Japan) are currently dependent on China for Purified Spherical Graphite.

Renascor will provide a reliable source of PSG to the global market





Section 3:

The Siviour Battery Anode Material Project

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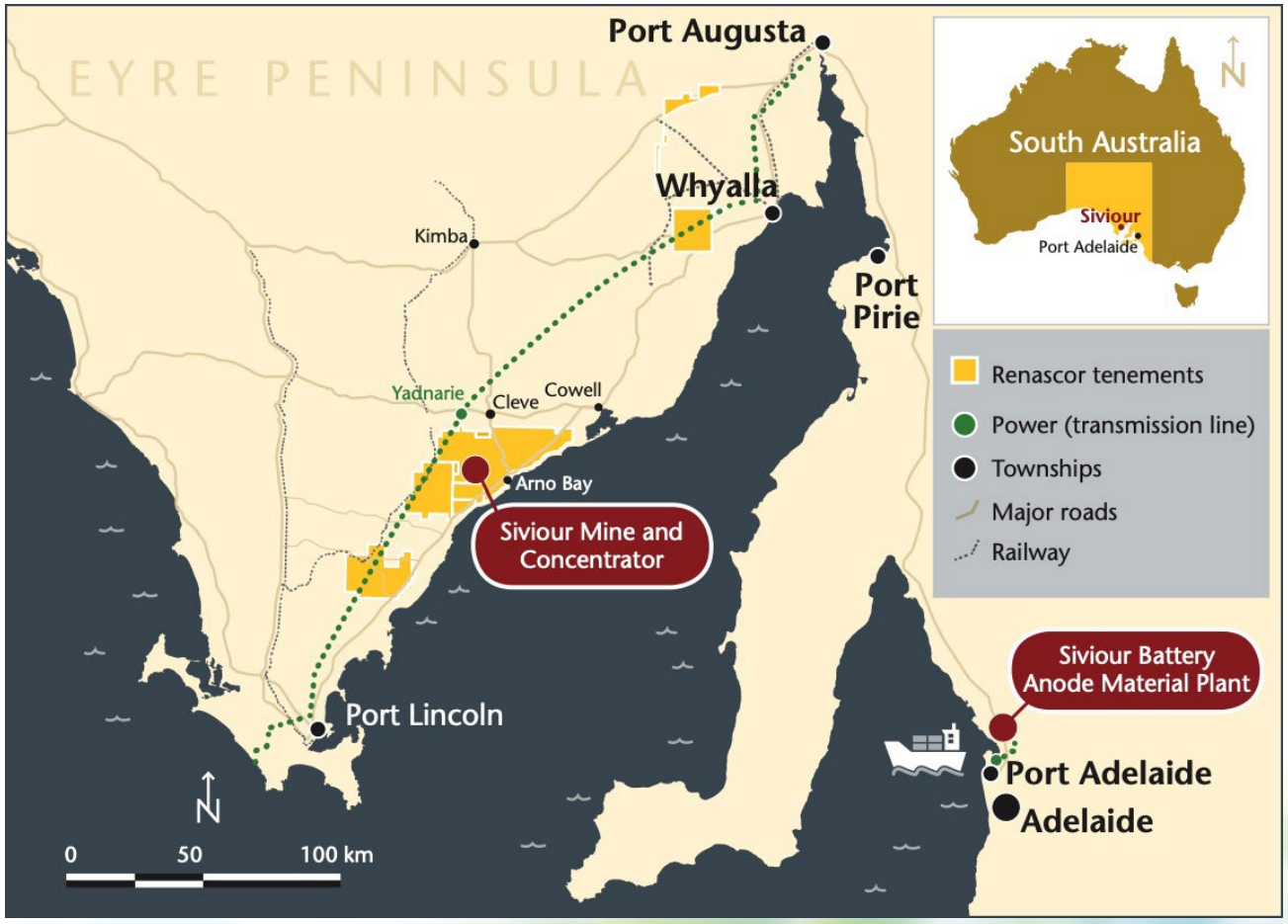
Prime Australian location offers mine to market supply chain security

The Siviour Graphite Deposit is located in coastal South Australia, with nearby access to major highway for delivery to state-of-the-art Battery Anode Material Plant located with 20km of port.



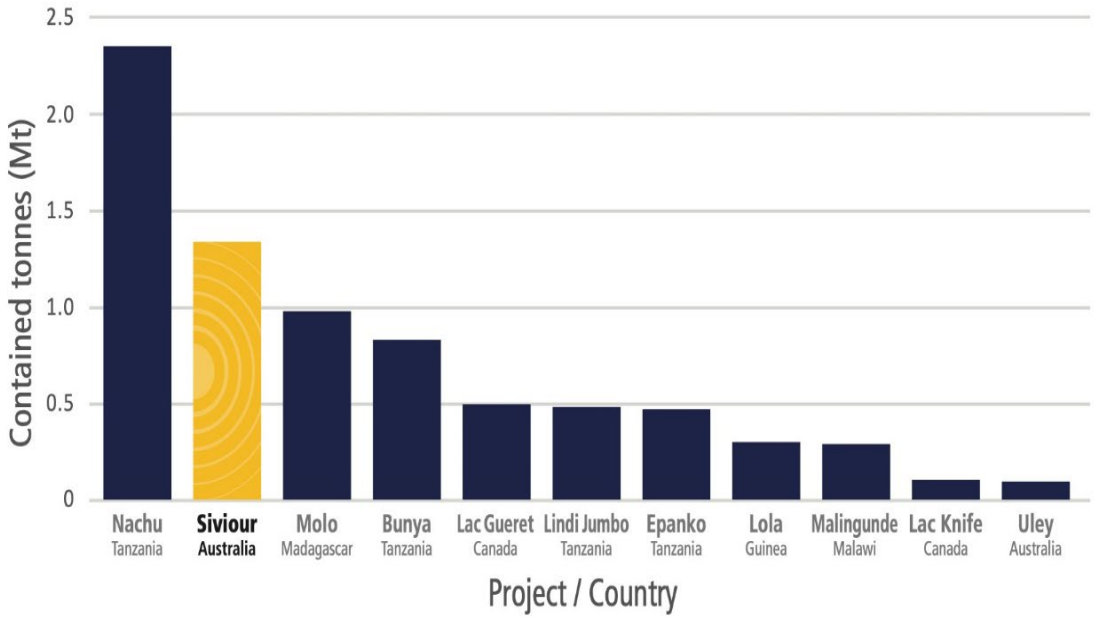
Section 3-A:

Siviour Upstream Mining Operation

The Siviour Graphite Deposit is amongst the world's largest

Siviour is the second largest Proven Reserve of graphite globally and the world's largest reported graphite Reserve outside of Africa.

Global Graphite Proven Reserve



Mineral Resource Estimate (August 2022)[1]

Category	Tonnes (Mt)	Grade (% TGC)	Graphite (Mt)
Measured	16.8	8.6%	1.4
Indicated	46.0	7.1%	3.3
Inferred	30.7	7.0%	2.2
Total	**93.5**	**7.3%**	**6.9**

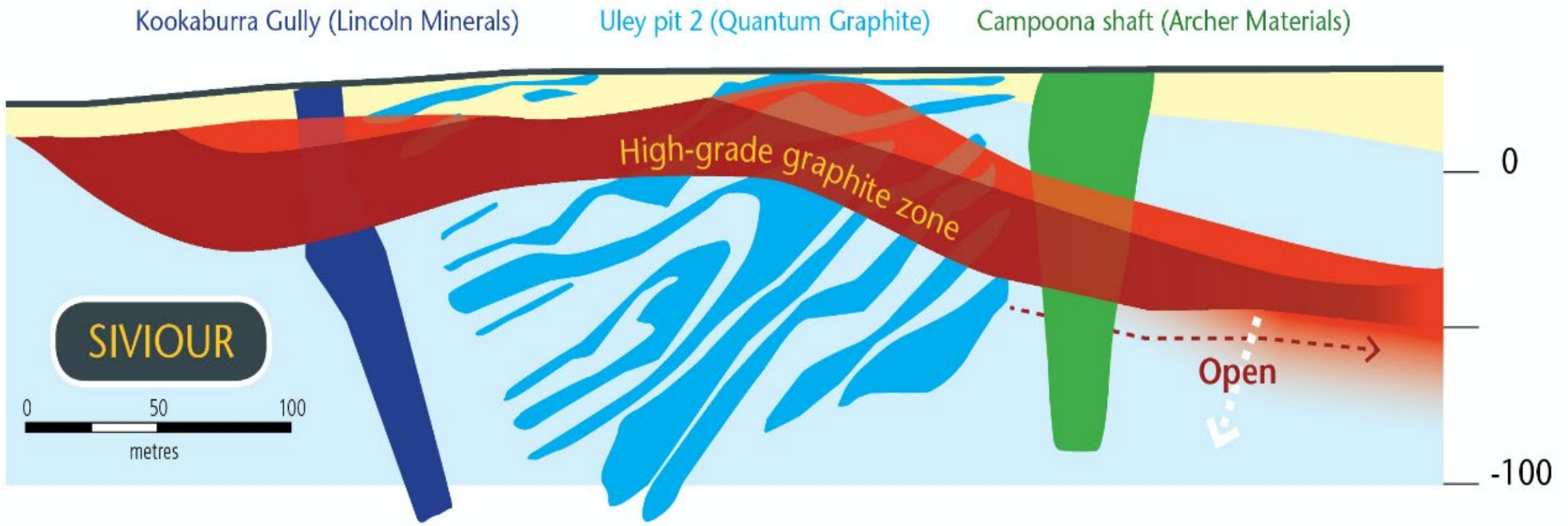
Ore Reserve Estimate (July 2020)[2]

Category	Tonnes (Mt)	Grade (% TGC)	Graphite (Mt)
Proven	15.8	8.4%	1.3
Probable	35.8	6.9%	2.5
Total	**51.5**	**7.4%**	**3.8**

1. ASX release 18 August 2022 "Upgrade Of Siviour Mineral Resource", 2. ASX release 21 July 2020 "Updated Mineral Ore Reserve Estimate"

The Siviour Graphite is unique in both its near-surface, flat-lying orientation

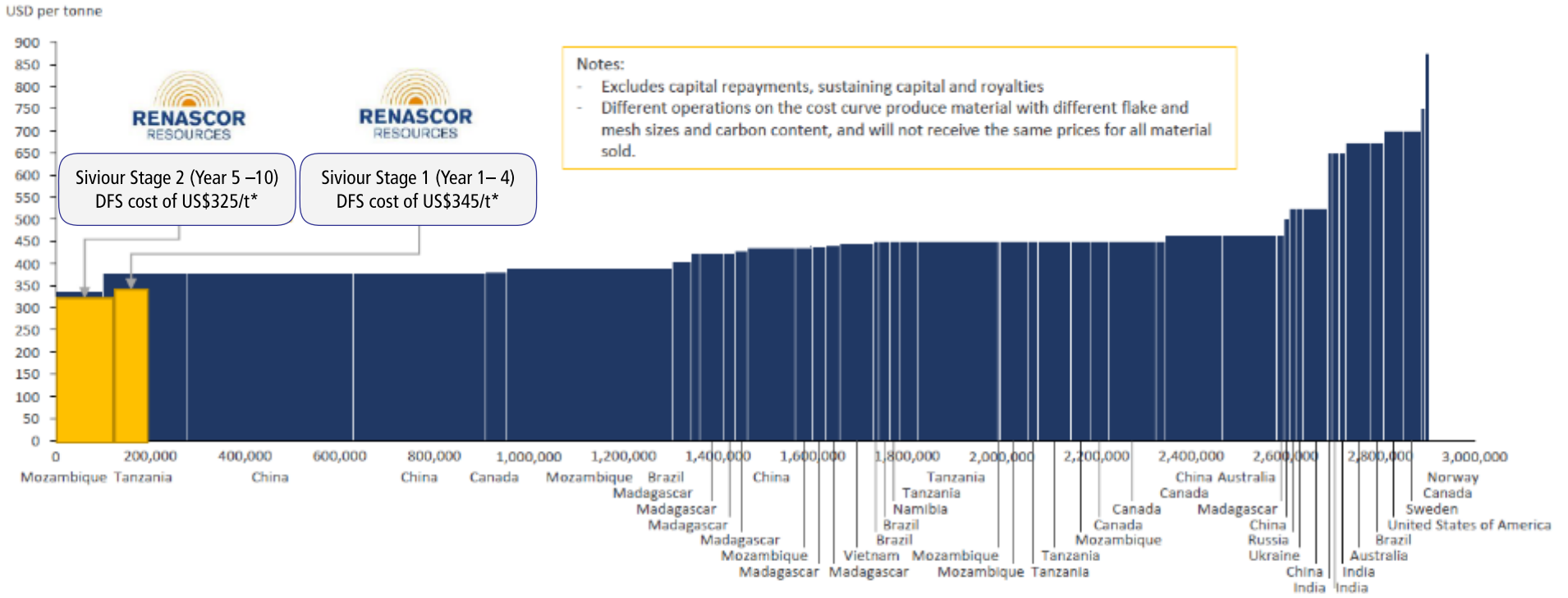
The deposit is flat, shallow and large, resulting in low-cost mining and consequently low-cost production of Graphite Concentrate <u>world's largest reported graphite Reserve outside of Africa.</u>



Cross-section of Siviour Deposit (shown in red) compared to other Australian graphite deposits

Siviour Graphite Concentrate: Among the World's Lowest Cost Production

Graphite Concentrate DFS confirms lowest quartile OPEX, underpinning globally competitive PSG production.



* 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.

Approval of PEPR positions Renascor to respond to potential bottleneck in supply chain caused by rapid anode and battery capacity expansions downstream that have not been matched by comparable mine start-ups

Approval of Program for Environmental Protection and Rehabilitation (PEPR)

- PEPR approval from South Australian Department of Energy and Mining announced[1]
  - Second stage (following previous grant of Mineral Lease[2]) in South Australia's two-step approval process.
  - PEPR allows processing capacity of up to 1.65 million tonnes per annum, which would permit Renascor to produce up to 150,000 tonnes of Graphite Concentrates per year.
  - Approval of PEPR permits Renascor to move forward with the development of the upstream Graphite Mine and Concentrator.
  - PEPR approvals are a key condition precedent to A$185M debt financing[3].

1. *ASX 28 November 2022, "PEPR Approval for Siviour Graphite Mine and Concentrator"*
2. *ASX 8 April 2019, "Mineral Lease Granted for Sivour"*
3. *ASX 2 Feb 2022, "Australian Government conditionally approves A$185 million Loan Facility to Fund the Development of the Siviour Graphite Project"*

Section 3-B:

Siviour Downstream Battery Anode Material Operation

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Downstream site location

Secured from South Australian Government Utility SA Water

The site is ~20km from South Australia's main shipping port at Port Adelaide.

Close to SA Water's Bolivar water treatment and industrial complex.

20 hectares site provides sufficient scale to permit both an increase to the originally planned Stage 1 PSG production capacity of 28,000tpa, as well as additional Stage 2 PSG production capacity.

Production of Purified Spherical Graphite

Purified Spherical Graphite to be produced from Siviour Graphite Concentrates in two-step process.

Step One: Milling

- Micronisation and spheronisation using conventional cascading milling equipment.
- Production of primary spheronised product (D50 = 13µm -20µm) and secondary products (D50 = 6µm -12µm).

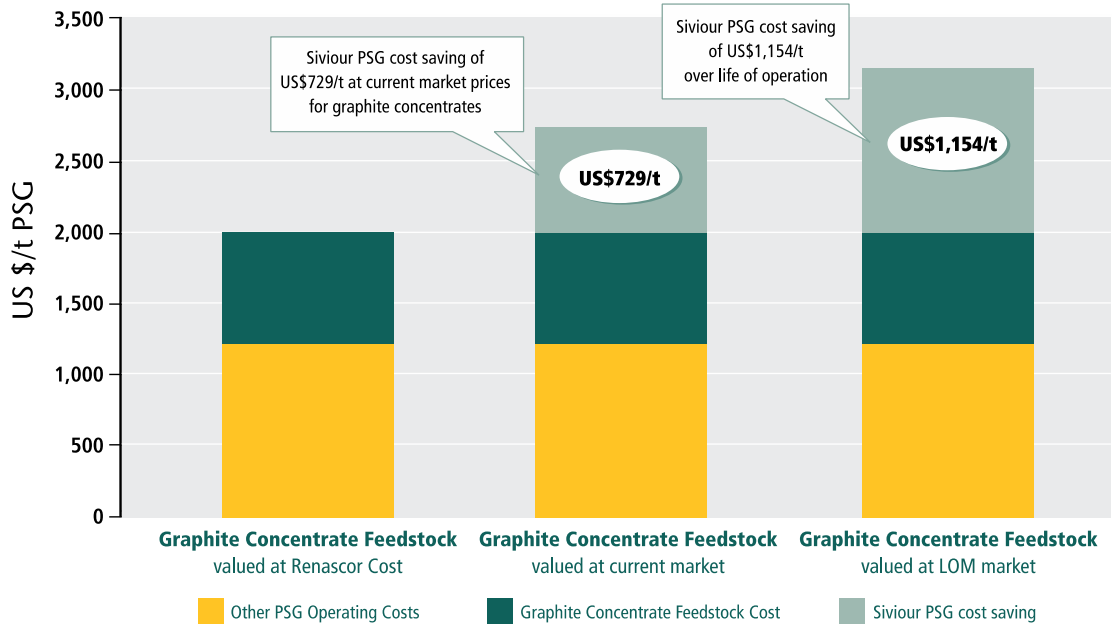
Step Two: Purification

- Caustic low-temperature roast and multi-step leaching process that **avoids use of hydrofluoric-acid**.

Strong Comparative Advantage in PSG Production

Vertical integration underpins low-cost PSG production.

- Graphite Concentrate feedstock is a significant cost input in the PSG manufacturing process
- Renascor's PSG operation benefits from obtaining Siviour Graphite Concentrate feedstock at the cost of production rather than buying the feedstock at market price.
- The difference in feedstock price has an exaggerated impact on PSG operating costs because only a portion of the Graphite Concentrates used as feedstock are spheronised to PSG during the milling process (i.e., PSG production yields of less than 50% are industry norm[1]).
- Renascor's market data suggests an average operating costs of ~US$2,000/t PSG for existing PSG market (100% China).
- Renascor's gross operating cost estimate of US$1,989/t PSG is favourable by comparison[2].



Renascor cost data based on Siviour Battery Anode Material Study (ASX release 1 July 2020 "Renascor Announces Battery Anode Manufacturing Operation"). Graphite price data based on: (i) for current market value: Fastmarkets price for -194 Graphite Concentrates (US$700 per tonne) published in April and (ii) for life of mine market value: graphite price forecast data sourced from Benchmark Mineral Intelligence for Battery Anode Material Study.

1. *For purposes of the previously published Siviour BAM studies (ASX 21 February 2019 and 1 July 2020), Renascor adopted a PSG yield of 50%. Subsequent tests have achieved yields of up to 65%. ASX 10 January 2022.*
2. *Cost estimate is from previous Siviour BAM studies (ASX 21 February 2019 and 1 July 2020). Renascor is currently undertaking an updated, optimised BAM study, which will will provide a revised cost estimate.*

Battery Anode Material Study Results – Stage 1 PSG Production[1]

Low graphite concentrate feedstock costs drives Renascor's low PSG production costs, high margins and strong cash generation.

Item	Value
Average annual LOM production of Graphite Concentrate	105,000t
Average annual LOM production of PSG (Stage 1)	**28,000t**
Life of mine/project	40 years
Start-up capital cost of mine and concentrator	US$79m
Start-up capital cost of battery anode material operation	US$63m
Total start-up capital	**US$142m**
NPV_{10} (after tax) of integrated operation with Stage 1 PSG production	**US$499m**
Cost of Feedstock per tonne PSG production	US$775/t
Cost of Feedstock Conversion to PSG per tonne PSG production	US$1,214/t
Total Cost Project Operating cost per tonne PSG production	**US$1,989/t**
Operating cost (with by-product credit)	US$1,398/t
Projected PSG sales price (first ten years)	US$3,815/t
Net revenue of integrated operation	US$6,686m
EBITDA of integrated operation with Stage 1 PSG production	US$4,387m
Project cashflow of integrated operation with Stage 1 PSG production	**US$2,878m**

Renascor is currently updating previous studies to consider substantial increase in Stage 1 PSG production capacity beyond the currently planned 28,000tpa of PSG, as well as additional staged PSG expansions.

1. ASX release 1 July 2020 "Renascor Announces Battery Anode Manufacturing Operation". Renascor is currently undertaking an updated, optimised BAM study, which will will provide a revised financial projections.

Socially responsible investing aims to better mitigate risks and help shape a more sustainable world

Strong Environment, Social and Governance (ESG) credentials

- South Australia is a Tier-1 jurisdiction with **low sovereign risk** and a **robust and transparent regulatory framework**.
  - Mine and concentrator have received regulatory approval following +6 years of extensive stakeholder engagement, environmental impact studies and consultation with South Australia's Department of Energy and Mining[1]
- Renascor's **purification process is eco-friendly.**
  - Over the last five years, Renascor had developed a purification process that avoids the use of Hydrofluoric ("**HF**") acid, offering a cleaner **HF-free** alternative to prevailing process used in China.
  - Renascor's eco-friendly graphite purification technology achieved outstanding results of 99.99% C purity in recently completed locked cycle testing at leading German independent battery mineral consultancy group Dorfner Anzaplan.
- By vertically integrating the mine and downstream processing operation in South Australia, Renascor **optimises the use of local resources** to lessen costly and inefficient transport of raw materials for intermediate processing and ensures strong ESG oversight of entire supply chain.

1. ASX 28 November2022, "PEPR Approval for Siviour Graphite Mine and Concentrator"

Offtake Strategy: Aligned with Global Leading Battery Anode Manufacturers

Total commitments for up to 200% of current Stage 1 PSG capacity of 28ktpa

- **POSCO**: Non-binding MOU with POSCO for the purchase of 20,000tpa to 30,000tpa of PSG.
  - This potentially represents up to 100% of Renascor's proposed initial production capacity of PSG.
- The MOU provides scope for strategic cooperation between POSCO and Renascor including the potential for equity investment by POSCO International. Discussions with POSCO regarding the nature of the strategic cooperation are ongoing.
- POSCO is one of South Korea's largest conglomerates, and is the largest anode manufacturer outside of China, with existing production capacity of 44,500tpa, and a further 83,500tpa under construction.

Sample qualification and negotiation on binding offtake terms currently underway

Offtake Strategy: Aligned with Global Leading Battery Anode Manufacturers *(cont.)*

Total commitments for up to 200% of current Stage 1 PSG capacity of 28ktpa.

- **Minguang:** First stage product qualification achieved with Chinese anode company Minguang as part of non-binding PSG Offtake MOU covering up to 10ktpa for 10 years.
  - Minguang is a subsidiary of Fujian Metallurgical Holding Co. Ltd. - one of China's largest battery material suppliers (total assets ~ US$13 billion).
- **Zeto**: First stage product qualification achieved with Chinese anode company Zeto as part of non-binding PSG Offtake MOU covering up to 10ktpa for 10 years.
  - Zeto is a top-ten anode producers globally and is a major supplier of anodes to the world's largest battery makers, including Hong Kong listed BYD Co. Ltd, the world's second largest manufacturer and retailer of EVs (market cap ~US$100 billion).
- **Hanwa:** Access to Japanese market through non-binding PSG Offtake MOU covering up to 10ktpa for 10 years.
  - Hanwa is a leading Japanese-based global trading company long history of trading with some of the world's largest metal and chemical producers and operates a dedicated Battery Team focussed on supplying graphite and other metals across the global battery value chain.

Increased offtake demand has led Renascor to expand planned first stage PSG production and incorporate larger subsequent expansion.

A$185 Million Conditional Loan Approval from Australian Government

The Australian Government has conditionally approved a A$185 million loan facility to support the development of the Siviour Graphite Project in South Australia.[1]

- This loan is approved under the Australian Government's **$2 billion Critical Minerals Facility**, which was established to assist the development of Australian critical minerals projects and to secure the vital supplies of resources needed to drive the new energy economy and support the resources jobs of the future.
- The Siviour BAM Project has been **granted Major Project Status by the Federal Government**, in recognition of its potential to contribute to Australia's Critical Mineral Strategy and Resource Technology, and Critical Mineral Processing National Manufacturing Priority Roadmap.
- Renascor aims to become **a world leader in the sustainable production of 100% an Australian-made advanced graphite product** for use in the Li-ion batteries.
- Final Approval of the Loan Facility is subject to conditions customary for project financings of this nature or otherwise required under the Critical Minerals Facility. Export Finance Australia (EFA), the Australian Government's Export Credit Agency, will manage this process.

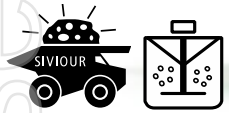
David Christensen representing Renascor at the recent delegation of Australian Critical Minerals industry leaders to the Republic of Korea. *Photo compliments of Austrade, October 2022.*

1. ASX 2 Feb 2022, "Australian Government conditionally approves A$185 million Loan Facility to Fund the Development of the Siviour Graphite Project"

Renascor's Strategy

We aim to become a global leader in the supply of sustainable, 100% Australian-made battery anode material

Stage 1



PSG

Commence PSG Operation

- Initial production of Graphite Concentrates and Purified Spherical Graphite
- Continue to build valuable offtake relationships with leading anode suppliers
- Develop markets for other specialty graphite products
- Increase Resource / Reserve
- Plan future growth

Stage 2

PSG

Expand Manufacturing of PSG

- Expand Purified Spherical Graphite production
- Staged approach to minimise upfront shareholder dilution
- Anode product development with current and next-generation anode suppliers
- Increased sales of specialty graphite products in traditional industrial, battery and emerging graphite end-user sectors

Stage 3

PSG

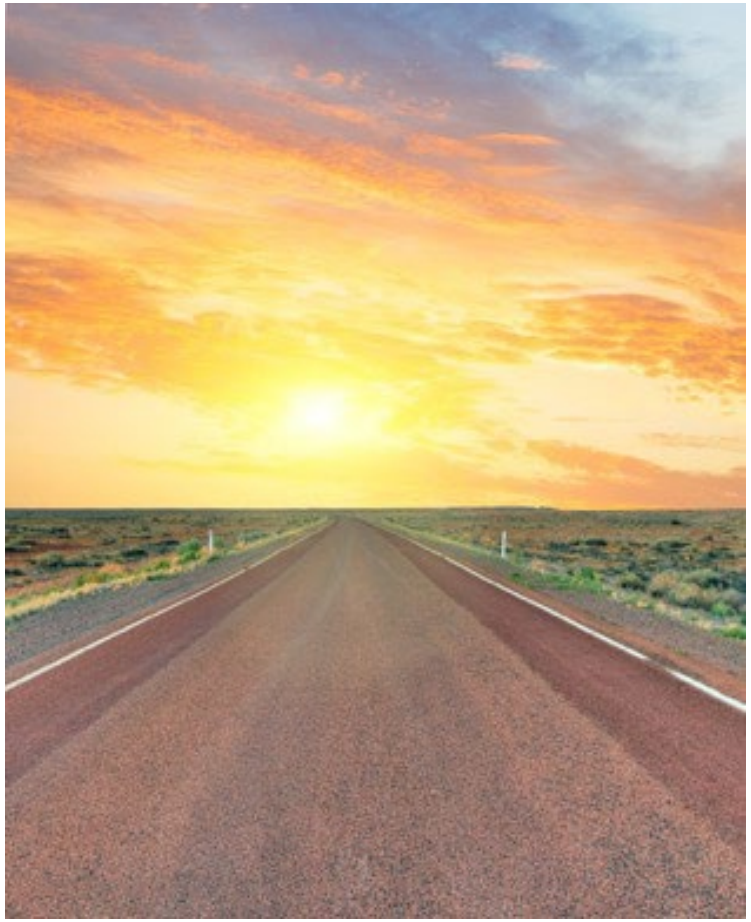
Full Renascor Potential

- Further expansion of mine and Purified Spherical Graphite manufacturing capacity
- Establish further downstream processing expertise (and partnerships, as appropriate) to support development of fully integrated anode production
- Utilise expertise in graphite materials, engineering and applications to become industry leading manufacturer of high value graphite products and solutions

Our goal is to become one of, if not the largest, global suppliers of PSG to the lithium ion battery sector

Renascor Resources: Multiple Near-Term Value Drivers

- **Siviour Battery Anode Material Project:**
  - Optimised feasibility study assessing expanded production.
  - Resource expansion recently completed.
  - Advancing to binding offtakes with existing offtake and potential new offtake partners.
  - Execution of binding credit approved terms sheets
  - Pending satisfactory Final Investment Decision, commencement of stage one production



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Forward Looking Statements

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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.

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