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RENASCOR RESOURCES

ASX: RNU

ASX Release

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Commercial-Scale Milling Trials Deliver Increased Yields

Highlights:

- Recently completed commercial-scale downstream milling trials have achieved spherical graphite yields from Renascor's Siviour Graphite Deposit in South Australia in excess of 65% (versus the 50% yield adopted in Renascor's Battery Anode Material Study[1]).
- These higher yields from the milling process offer the potential for Renascor to produce more Purified Spherical Graphite (**PSG**) and improve profit margins as a result of this increased proportion of PSG material being produced per unit of Graphite Concentrate feed.
- The higher yields, achieved with an industry leading equipment manufacturer, confirm the ability to process Siviour Graphite Concentrates into spherical graphite products consisting of a primary spherical product for use in high-volume lithium-ion battery anode applications, as well as finer spherical products for use in high performance and other speciality applications.
- Spherical graphite produced from the milling trials met or exceeded physical customer specifications for both Renascor's existing offtake partners and anode industry requirements generally.
- Data generated from the equipment trials will be used for engineering design works and final equipment selection for Renascor's planned manufacturing facility in South Australia.

Commenting on the recently completed trials, Renascor's Managing Director David Christensen stated:

> *"The completion of the downstream equipment trials is another important step in advancing and de-risking the Siviour Project, with the potential for improved yields offering further upside in our plans to become a global leader in the production of high-quality, sustainable Purified Spherical Graphite products for lithium-ion battery anode makers worldwide.*
>
> *We look forward to using data generated from these trials to complete engineering design works and for final equipment selection for our manufacturing facility in South Australia."*

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Renascor Resources Limited (ASX: RNU) (**Renascor**) is pleased to announce the completion of commercial-scale downstream milling equipment trials for Renascor's planned vertically integrated graphite mine and battery anode material manufacturing operation in South Australia (the **Siviour Project**). The trials have confirmed spherical graphite yields in excess of 65% (versus the 50% yield adopted in Renascor's Battery Anode Material Study[2]).

Milling Trials

The production of Purified Spherical Graphite (**PSG**) requires that Graphite Concentrates are first mechanically shaped into a micronised spherical form before being purified for use in lithium-ion battery anodes. Customers generally require that a number of physical specification parameters, including product size, particle size distribution, tap density and surface area, must be achieved after the milling process for use in high quality anode material.

To prepare for engineering design works for its planned PSG manufacturing facility in South Australia, Renascor recently completed milling trials on commercial-scale milling equipment designed to micronise and spheronise Siviour Graphite Concentrates[3].

The trials tested multiple milling and spheronisation technologies, with trials undertaken in Asia, the United States and Europe at both equipment manufacturers and laboratories with milling test facilities. The trials were supervised by Renascor's external engineering advisors Wave International.

A key objective of these mill trials was to maximise the amount of graphite that can be processed from Siviour Graphite Concentrates into a spherical form (**Spherical Graphite**) that meets the physical product specifications of Renascor's existing and potential additional offtake partners[4].

Spherical Graphite that meets these physical product specifications can be purified to battery-grade and sold as PSG. Achieving higher yields from the milling process results in the production of higher amounts of PSG and greater profitability with more high value material being produced per unit of concentrate feed.

For purposes of the Battery Anode Material Study, completed in July 2020[5], Renascor relied upon preliminary equipment trials using up to 60kg samples of Siviour Graphite Concentrates and a projected yield of 50%, which is in line with global industry norms.

The recent trials were conducted on a larger-scale of up to 750kg of Siviour Graphite Concentrates per trial, using Siviour Graphite Concentrates produced from Renascor's recently completed large-scale pilot flotation program[6].

The results of the program confirmed yields in excess of 65%, consisting of both a primary Spherical Graphite that meets a standard size specification (d50 = 16 microns), as well as finer secondary Spherical Graphite products (d50 ≤ 10 microns). In both cases, the physical product specifications have been achieved.

Renascor expects that the primary PSG product (d50 = 16 microns) will account for the majority of PSG manufactured from Siviour, with the product expected to be used in high-volume lithium-ion battery anode applications (e.g., electric vehicles).

Finer PSG products (d50 ≤ 10 microns), which have traditionally been used for high performance and other speciality lithium-ion battery anode applications, are expected to account for the balance of PSG manufactured from Siviour, with the balance between the products to be determined after more detailed negotiations with Renascor's existing and future potential offtake partners.

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Significance

Achieving these higher yields from the milling process offers the potential for Renascor to produce more PSG and improve profit margins due to the increased proportion of PSG material being produced per unit of Graphite Concentrate feed.

Next steps

Data generated from the equipment trials will be used for engineering design works and final equipment selection for Renascor's planned PSG facility in South Australia.

This ASX announcement has been approved by Renascor's Board of Directors and authorised for release by Renascor's Managing Director David Christensen.

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[1] See Renascor ASX announcement dated 1 July 2020.
[2] See Renascor ASX announcement dated 1 July 2020.
[3] See Renascor ASX announcement dated 26 November 2021 for preliminary results from the downstream milling equipment trials.
[4] Renascor has entered into four non-binding memoranda of understanding for up to 60,000tpa of PSG, comprised of up to 30,000tpa to South Korean conglomerate POSCO and up to 10,000tpa to each of Japan-based trading company Hanwa Co. Ltd. and Chinese anode companies Shanxi Minguang New Material Technology Co. Ltd and Jiangxi Zhengtuo New Energy Technology Co. Ltd. See Renascor ASX announcements dated 25 August 2021, 25 March 2021, 11 February 2021 and 29 September 2021.
[5] See Renascor ASX announcement dated 1 July 2020.
[6] See Renascor ASX announcement dated 31 August 2021.

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About Renascor

Renascor is committed to powering the clean energy transition through the development, in Australia, of a vertically integrated graphite mine and manufacturing operation to produce sustainable and ethically-sourced battery anode material for the lithium-ion battery market.

Renascor's operation will combine:

- The Siviour Graphite Deposit in South Australia, the largest reported graphite Reserve outside of Africa[7], and
- A state-of-the-art processing facility in South Australia to manufacture purified spherical graphite through Renascor's eco-friendly purification process.

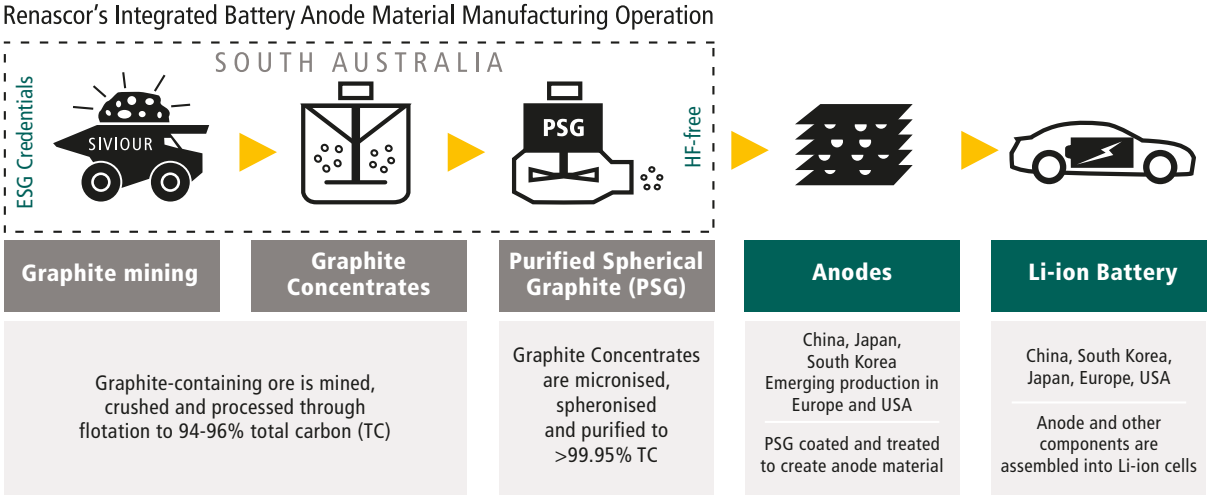

Figure 1: Renascor's vertically integrated Mine and Concentrator and Downstream PSG production facility within the Electric Vehicle supply chain

Renascor's aim is to become a leading supplier of 100% Australian-made and low-cost purified spherical graphite for lithium-ion battery anode makers worldwide.

Competent Person Statement

The information in this document that relates to exploration activities and exploration results is based on information compiled and reviewed by Mr G.W. McConachy who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr McConachy 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.

Renascor confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements 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.

Sample material used for the test work discussed in this announcement was sourced from Renascor's Siviour Graphite Deposit that was processed into Graphite Concentrates as part of pilot flotation trial. See Renascor ASX announcement dated 31 August 2021, which outlines drill hole data and sample section criteria.

Disclaimer

This report may contain forward-looking statements. Any forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. It should be noted that a number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward-looking statements.

[7] See Renascor ASX release dated 21 July 2020.

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