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RENASCOR RESOURCES

ASX: RNU

ASX Release

28 November 2022

PEPR Approval for Siviour Graphite Mine and Concentrator

Receipt of key approval paves the way for development of the Siviour Battery Anode Material Project Upstream operation

Highlights:

- Renascor is pleased to announce that it has received approval from the South Australian Department of Energy and Mining (**DEM**) for the Program for Environment Protection and Rehabilitation (**PEPR**) for its proposed Siviour Mine and Concentrator in South Australia[1].
- The PEPR approval permits Renascor to process up to 1.65 million tonnes per annum, which would allow Renascor to produce up to 150,000 tonnes of Graphite Concentrates per year[2].
- Approval of the PEPR, which is the second step (following the previous grant of the Siviour Mineral Lease[3]) in South Australia's two-stage assessment process, permits Renascor to move forward with the development of the upstream Graphite Mine and Concentrator portion of the Siviour Battery Anode Material Project – a vertically integrated battery anode material manufacturing operation located wholly within South Australia.
- PEPR approval follows a process of extensive stakeholder engagement, independent expert audits and comprehensive studies undertaken to incorporate designs and management plans to comply with conditions outlined in the Siviour Mineral Lease granted in 2019[4].
- The conditions of the approved PEPR are in line with Renascor's expectations after a period of consultation with DEM since submission of the PEPR in September 2021[5].
- PEPR approval satisfies a fundamental condition of the Australian Government's A$185 million loan facility to fund Renascor's integrated Siviour Battery Anode Material Project[6].

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Overview

Renascor Resources Limited (ASX: RNU) (**Renascor**) is pleased to announce the approval of the Program for Environment Protection and Rehabilitation (**PEPR**) for the proposed Siviour Graphite Mine and Concentrator, the upstream component of Renascor's vertically integrated Siviour Battery Anode Material Project (**BAM Project**), located wholly in South Australia.

Commenting on the PEPR approval, Renascor Managing Director David Christensen stated:

> *"Obtaining PEPR approval brings Renascor another key step closer to becoming a producer of 100% Australian-made Purified Spherical Graphite. This approval is the culmination of extensive technical, environmental and social investigation over the last 6 years, and satisfies a fundamental condition precedent of the Australian Government's A$185 million loan facility to fund Renascor's integrated Siviour Battery Anode Material Project.*
>
> *We are very proud that our Siviour Project has satisfied the comprehensive conditions required by the South Australian Department for Energy and Mining and we look forward to continued engagement with the local community and the State Government as we work towards the commencement of mining and graphite production at Siviour with minimal environmental impacts and maximum social and economic benefits to the local and wider community.*
>
> *The timing of the PEPR approval is especially opportune for the Siviour Project, as there is growing potential for substantial upstream bottlenecks in the graphite-anode-battery supply chain due in large part to the lengthier approval process associated with new graphite mining operations relative to rapidly growing anode capacity. With this important regulatory milestone now achieved, Renascor is well poised to rapidly advance through the final development stages, into construction and operation of an important new supply line for the lithium-ion battery industry."*

Figure 1. Location of the proposed Graphite Mine and Concentrator

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Discussion

South Australian legislation consists of a two-part assessment and approval process for mining operations, first requiring the granting of a Mineral Lease, and, secondly, the approval of a PEPR, before mining and processing operations may commence.

The South Australian Minister for Energy and Mining granted a Mineral Lease for the proposed Siviour Graphite Mine and Concentrator in April 2019[7]. The grant of the Mineral Lease followed comprehensive environmental impact studies and stakeholder engagement commencing in 2016 and detailed the conditions that were to be addressed in the PEPR.

Renascor subsequently undertook further stakeholder engagement and comprehensive studies to incorporate designs and management plans to comply with conditions outlined in the Siviour Mineral Lease and submitted a proposed PEPR to the Department of Energy and Mining (**DEM**) in September 2021[8]. The PEPR preparation process was managed internally by Renascor and environmental consultancy JBS&G, with input from external consultants, including independent expert audits to confirm that Renascor's proposed management and operational strategies are effective to comply with the Mineral Lease conditions.

Following the completion of its internal review, DEM has now approved the PEPR for Renascor's proposed Siviour Graphite Mine and Concentrator. The conditions of the approved PEPR are in line with Renascor's expectations after a period of consultation with the DEM since submission of the PEPR in September 2021[9].

Under the terms of the PEPR, Renascor may process up to 1.65 million tonnes per annum, which would permit Renascor to produce up to 150,000 tonnes of Graphite Concentrates per year[10].

Next steps

Renascor intends to integrate the Siviour Graphite Mine and Concentrator operation with a downstream Battery Anode Material (**BAM**) manufacturing facility that will use Graphite Concentrates from the Siviour mining and concentrator operation to produce Purified Spherical Graphite (**PSG**) for use in lithium-ion battery anodes.

In connection with the BAM project, Renascor is currently undertaking multiple concurrent workstreams, including:

- **Optimised BAM study.** Renascor is currently undertaking an updated, optimised BAM study building on previous detailed feasibility work for the planned vertically integrated BAM project[11]. The optimised BAM study is assessing an increase to the previously planned PSG production capacity of 28,000tpa, as well as a staged expansion to meet projected increasing demand for PSG. The BAM study is being designed to utilise the maximum processing capacity of 1.65 million tonnes approved in the PEPR.
- **Resource expansion drilling.** Renascor is currently undertaking resource expansion drilling within the Siviour project area. The current drilling is focussing on areas outside of the proposed mining plan for the production stages being considered in the optimised BAM study. Drilling is these areas is expected to support future capacity expansions beyond those considered in the optimised BAM Study.
- **Offtake.** Renascor is progressing negotiations on binding PSG offtake agreements with Renascor's existing offtake partners, including active discussion on PSG price and other material contract terms[12]. Renascor continues to have discussions with other leading anode, battery and electric vehicle manufacturers in Northeast Asia, Europe and the United States concerning potential PSG offtake. Renascor has provided PSG samples to support customer qualification and commenced offtake discussions with these parties concerning potential offtake from the initial or subsequent stages of production.

- **Finance.** The Australian Government, through Export Finance Australia (**EFA**), has conditionally approved a loan facility of A$185 million (**Loan Facility**) to fund the development of the Siviour BAM Project[13]. The Loan Facility was approved through Export Finance Australia under the Australian Government's $2 billion Critical Minerals Facility. The PEPR approval satisfies a fundamental condition of this loan facility[14].

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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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.

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Appendix

The World-Class Siviour Graphite Project

Renascor Resources Limited (**ASX: RNU**) ("**Renascor**") is a project developer and minerals explorer now operating in the Clean Energy following the discovery of the world-class Siviour Graphite Deposit in South Australia.

Renascor presents an opportunity for Australia to leverage a Tier One graphite resource and plug-in to the global electric vehicle ("**EV**") revolution via downstream manufacturing of high-value Purified Spherical Graphite for use in EV batteries.

Renascor is developing a vertically integrated Battery Anode Material Manufacturing Operation ("**the Project**") in South Australia. The Project comprises:

- **the Siviour Graphite Deposit** - the world's second largest Proven Reserve of Graphite and the largest Graphite Reserve outside of Africa[15];
- **the Siviour Graphite Mine and Concentrator** - a conventional open-pit mine and crush, grind, float processing circuit delivering world-class operating costs in large part due to the favourable geology and geometry of Renascor's Siviour Graphite Deposit; and
- **a Battery Anode Material Production Facility** - where Graphite concentrate will be converted to PSG using an eco-friendly processing method before being exported to lithium-ion battery anode manufacturers.

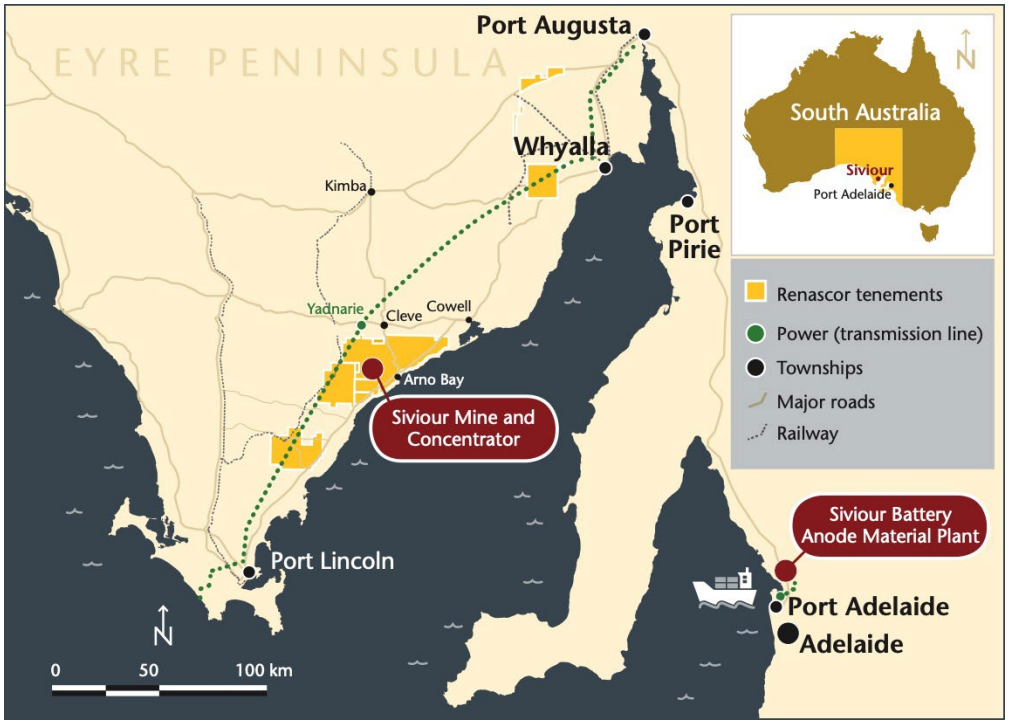

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Figure 2. Project location.

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The 100% Renascor owned Siviour Graphite deposit is unique in both its near-surface, flat-lying orientation and its scale as one of the world's largest graphite Reserves. The favourable geology and size of the deposit will allow Renascor to produce Graphite Concentrate at a low-cost over a 40-year mine life.

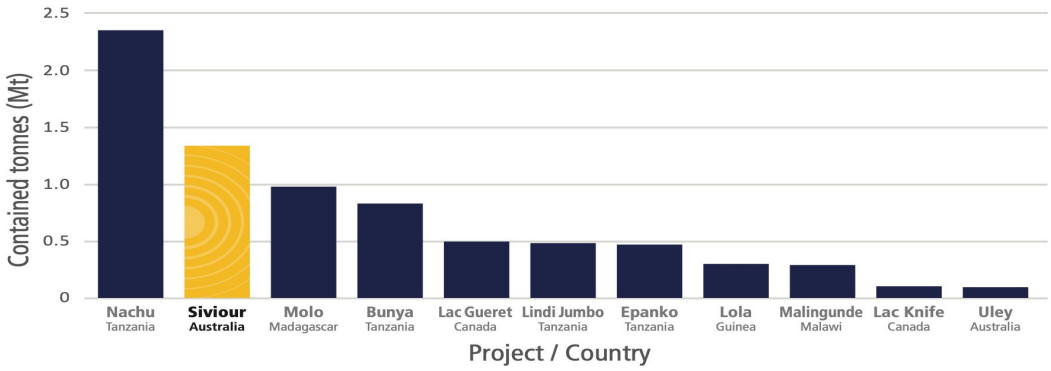

Figure 3. Global graphite Proven Reserves

Renascor intends to leverage this inherent advantage and develop a vertically integrated operation to manufacture high value PSG from a low-cost graphite concentrate feedstock and provide a secure cost-competitive supply of battery anode raw material into the rapidly growing lithium-ion battery market.

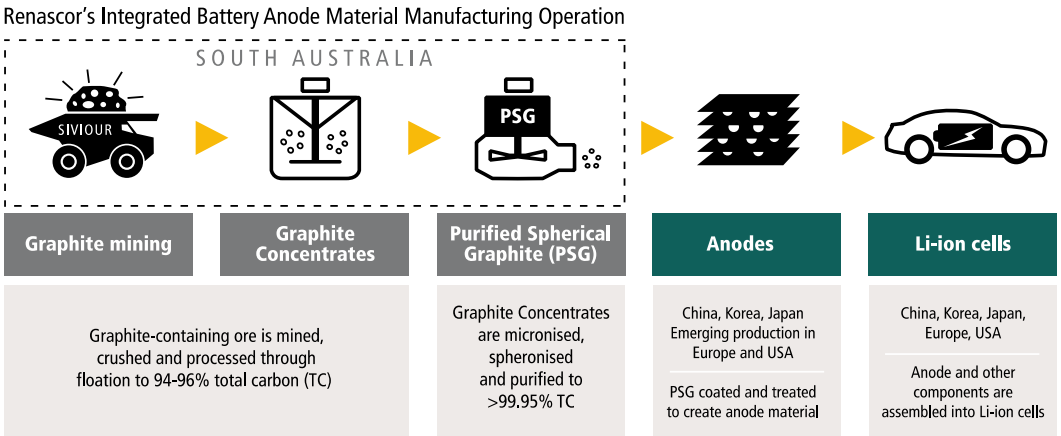

Figure 4. Renascor's vertically integrated Mine, Concentrator and Downstream PSG production facility within the Electric Vehicle supply chain.

[1] The PEPR was lodged by Renascor's wholly-owned subsidiary Ausmin Development Pty Ltd, the registered holder of the Mineral Lease for Siviour.

[2] The 1.65 million tonne per annum approval sought pursuant to the PEPR relates to the volume of ore processed from the proposed Siviour mine through the adjacent processing plant. Pursuant to Renascor's proposed mining plan, this would result in up to 150,000 tonnes per annum of Graphite Concentrate production at full capacity. See Renascor ASX release dated 11 November 2019, page 40. Renascor has previously announced plans for a staged start-up at Siviour, starting with an ore processing capacity of 825,000 tonnes per annum and Graphite Concentrate production of up to 78,000 tonnes per annum in the first of a two-stage expansion to 1.65 million tonnes per annum of processing capacity. See Renascor ASX release dated 11 November 2019. During this first stage, 60,000 tonnes per annum of Graphite Concentrate would be used as raw material feedstock for Renascor's planned downstream battery anode material manufacturing operation to produce approximately 28,000 tonnes of Purified Spherical Graphite per annum. See Renascor ASX release date 1 July 2021. As a result of increasing interest in Siviour Purified Spherical Graphite from existing and potential offtake partners, Renascor is currently evaluating an expansion to the initial, Stage One production of Purified Spherical Graphite and an additional Stage Two production capacity of Purified Spherical Graphite. See Renascor ASX release dated 1 April 2021.

[3] See Renascor ASX release dated 8 April 2019.

[4] See Renascor ASX release dated 8 April 2019.

[5] See Renascor ASX release dated 27 September 2021.

[6] See Renascor ASX release dated 2 February 2022.

[7] See Renascor ASX release dated 8 April 2019.
[8] See Renascor ASX release dated 27 September 2021.
[9] See Renascor ASX release dated 27 September 2021.
[10] See note 2.
[11] See Renascor ASX replaces dated 212 February 2019, 11 November 2019 and 1 July 2020.
[12] 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 replaces dated 25 August 2021, 25 March 2021, 11 February 2021 and 29 September 2021.
[13] See Renascor ASX replace dated 2 February 2022.
[14] See Renascor ASX release dated 2 February 2022.
[15] Renascor ASX replace 21 July 2020.

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