





## **ASX Release**

21 August 2024

# Downstream equipment trials achieve lithium-ion battery anode grade across all targeted product specifications

#### Purification equipment trials validate Renascor's eco-friendly, HF free purification process and provide design specifications for Australian Government co-funded PSG demonstration facility

- Equipment trials for Renascor's planned Purified Spherical Graphite (**PSG**) manufacturing facility further validates Renascor's eco-friendly, hydrofluoric (**HF**) free purification process<sup>1</sup>.
- The recently completed trials build upon previously completed lab-scale and locked-cycle tests by incorporating commercially available equipment into the proposed purification circuit.
- The trials successfully produced lithium-ion battery grade graphite across all targeted product specifications, with results of up to 99.99% carbon (**C**) (versus anode industry standard of 99.95% C).
- Equipment specifications from the trials are being incorporated into the engineering design for Renascor's planned PSG demonstration facility, which is intended to validate the commercial viability of Renascor's PSG process.
- As announced on 11 July 2024, Renascor was recently awarded a \$5 million grant under the Australian Government's International Partnerships in Critical Minerals Program for the PSG demonstration facility<sup>2</sup>.
- Renascor has commenced engineering for the PSG demonstration facility and is on schedule to commence commissioning of the demonstration plant in Q2 2025.



Renascor Resources Limited ABN 90 135 531 341 Level 5, 149 Flinders Street Adelaide SA 5000 Australia Phone: + 61 8 8363 6989 Email: info@renascor.com.au www.renascor.com.au Renascor Resources Limited (ASX: RNU) (**Renascor**) is pleased to announce the successful completion of equipment trials for its planned Purified Spherical Graphite (**PSG**) manufacturing facility in South Australia.

The trials successfully produced lithium-ion battery grade graphite across all targeted product specifications, further validating Renascor's eco-friendly, hydrofluoric (**HF**) free purification process and providing detailed equipment specifications for the planned PSG demonstration facility.

Commenting on equipment trials, Renascor Managing Director David Christensen stated:

"Renascor's eco-friendly, HF-free purification technology has the potential to deliver a globally competitive PSG operation and advance Renascor towards its goal of becoming a long-term producer of high-quality graphite products to the lithium-ion battery sector.

With these positive results from the recently completed equipment trials, we have achieved an important milestone in the delivery of our Australian Government co-funded PSG demonstration facility. "

#### Discussion

Renascor is developing a vertically integrated Battery Anode Material (**BAM**) operation in South Australia. The BAM project comprises: (i) an upstream graphite mining and processing operation, and (ii) and a downstream BAM facility in which graphite concentrates will be converted into PSG before being exported to lithium-ion battery anode manufacturers (see Figure 1).



Figure 1. Renascor's BAM project, showing the locations of the planned mine and concentrator and the BAM facility



The BAM project is in the advanced planning stages, with Renascor intending to accelerate the development of the upstream mining operation to reduce the time to first production of graphite to coincide with projected near-term supply shortfalls.

Renascor is currently undertaking an Early Contractor Involvement (**ECI**) process to mature engineering design of the upstream minerals processing plant and non-processing infrastructure<sup>3</sup>. The ECI process is intended to culminate with an executable EPC contract for the upstream operation, comprising a fully priced offer, agreed commercial terms, finalised project works scope, technical specifications and performance parameters<sup>4</sup>.

Concurrent with the development of the upstream mining operation, Renascor is continuing to advance the downstream PSG facility.

As announced last month, Renascor was awarded a \$5 million grant under the Australian Government's International Partnerships in Critical Minerals Program to construct a PSG demonstration facility<sup>5</sup>. The demonstration facility will convert graphite concentrates from Renascor's Siviour Graphite Deposit into PSG through a continuous production process, enabling Renascor to test, demonstrate and optimise its purification flowsheet prior to detailed design and construction of the full-scale commercial facility<sup>6</sup>.

In preparation for construction of the PSG demonstration facility, Renascor recently undertook equipment trials designed to evaluate commercially available equipment.

The equipment trials built on previously completed batch-scale and lock-cycle tests by testing the Renascor purification flowsheet with commercially available equipment at comparable scale to the planned PSG demonstration facility.

The trials successfully produced lithium-ion battery grade graphite across all targeted product specifications, with results of up to 99.99% carbon (**C**) (versus anode industry standard of 99.95% C). The trials similarly met industry requirement for impurities, with all tests below industry impurity standards.

Renascor has commenced engineering for the PSG demonstration facility, incorporating equipment specifications from the recently completed trials. The PSG demonstration facility is on schedule to commence commissioning in Q2 2025.

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

#### For further information, please contact:

Company Contact David Christensen Managing Director +61 8 8363 6989 info@renascor.com.au

Media Enquiries Contact James Moses Mandate Corporate +61 (0) 420 991 574 james@mandatecorporate.com.au







### Appendix 1 About Renascor

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<sup>7</sup>;
- **the 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.



Figure 1. Renascor's Battery Anode Material Project location

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.









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



#### Appendix 2

#### **Peer Comparison Data**

Project name	Code	Company	Country	Report name	Date	Link
Bunyu	VRC	Volt Resources	Tanzania	Pre-Feasibility Study	15 December	https://announcements.asx.
		Ltd		Completed	2016	com.au/asxpdf/20161215/pd
						f/43drlhpvdwbhxp.pdf
Epanko	EGR	Ecograf Ltd	Tanzania	Updated Epanko Ore	25 July 2024	https://announcements.asx.
				Reserve		com.au/asxpdf/20240725/pd
	0.011				44.0.1	t/065xhvjr/4hlh2.pdf
Graphite	GPH	Graphite One	USA	Preliminary Feasibility	14 October	https://www.graphiteoneinc.
Creek		Inc		Study Technical Report	2022	<u>com/wp-</u>
				Graphite One Project		content/uploads/2022/10/JD
						<u>5-Graphile-One-NI-43-101-</u>
						<u>PFS-20221013-</u>
Lac Guárat	116	Macon Granhita	Canada	Egasibility Study Undate of	12 December	bttps://masongraphito.com/
Lac Gueret	110	Inc	Callaua	the Lac Guéret Graphite	12 December 2019	inteps.//masongraphite.com/
		inc		Project	2018	content/uploads/2021/06/a5
				Toject		3b7c 22115be39ccf4d85b95
						79f359680997c pdf
Lindi lumbo	WKT.	Walkabout	Tanzania	Lindated Ore Reserve	28 February	https://appouncements.asy
Lindi Juliibo	VVIXI	Resources Ltd	Tunzuniu	delivers 17.9% graphite	2019	com au/asyndf/20190228/nd
		hesources Eta		grade	2015	f/44321stl8dlk5f.pdf
Lola	SRG	SRG Mining Inc.	Guinea	Lola Graphite Project NI	12 April 2023	https://srgmining.com/wp-
				43-101 Technical Report –		content/uploads/2023/04/J6
				Updated Feasibility Study		626-
						SRG Lola UFS Rev 0 Fin 2
						023-0407.pdf
Malingunde	NGX	NGX Ltd	Malawi	Replacement Prospectus	14 June 2023	https://announcements.asx.
						com.au/asxpdf/20230614/pd
						f/05qn89bfqrhwx8.pdf
Matawinie	NOU	Nouveau	Canada	NI 43-101 Technical	10 August	https://nmg.com/wp-
		Monde		Feasibility Study Report for	2022	content/uploads/2022/08/Fe
		Graphite		The Matawinie Mine and		asibility-Study-NMGs-
				the Becancour Battery		Integrated-Phase-2-
				Material Plant Integrated		Projects.pdf
				Graphite Projects		
Molo	NEXT	NextSource	Madagascar	Molo Phase 2 Preliminary	12 December	P9239 Molo Graphite Phase
		Materials Inc		Economic Assessment NI	2023	2 NI43-101 Technical Report
				43-101 Technical Report		(nextsourcematerials.com)
Nachu	MNS	Magnis Energy	Tanzania	Bankable Feasibility Study	27 September	https://announcements.asx.
		Technologies		Update Confirms Strong	2022	com.au/asxpdf/20220927/pd
		Ltd		Financial and Technical		f/45fhzx2nsgrmjb.pdf
				Viability for the Nachu		
				Graphite Project		1
				Supplementary	30 September	https://announcements.asx.
				Information Regarding	2022	com.au/asxpdf/20220930/pd
				Nachu BFS Update		<u>1/45Tqs3q6n3npw4.pdf</u>

<sup>&</sup>lt;sup>1</sup> See Renascor ASX announcement dated 10 August 2023.



<sup>&</sup>lt;sup>2</sup> See Renascor ASX announcement dated 11 July 2024.

<sup>&</sup>lt;sup>3</sup> See Renasocr ASX announcement dated 24 June 2024.

<sup>&</sup>lt;sup>4</sup> See Renasocr ASX announcement dated 24 June 2024.

 $<sup>^{\</sup>scriptscriptstyle 5}$  See Renascor ASX announcement dated 11 July 2024.

<sup>&</sup>lt;sup>6</sup> See Renascor ASX announcement dated 11 July 2024.

 $<sup>^{\</sup>rm 7}$  See Renascor ASX release dated 21 July 2020.

<sup>&</sup>lt;sup>8</sup> Source: public company reports. Does not include graphite deposits that do not publicly report data on main stock exchanges in Australia, Canada, the United Kingdom and the United States. See Appendix 2 for further details on sourcing.