ASX Release

14 September 2023

Siviour Mineral Resource Increases by 25%

Increase to Siviour Graphite Mineral Resource provides further support for expansions beyond those considered in the recently completed BAM Study

- Independent mining consultants Snowden Optiro have updated the JORC Mineral Resource estimate for Renascor's Siviour Graphite Deposit in South Australia.
- The inclusion of the results from recent resource expansion drilling[1] has resulted in a 25% increase[2] to the total (Measured, Indicated and Inferred) Siviour Mineral Resource estimate to 123.6Mt at 6.9% total graphitic carbon (**TGC**) for 8.5Mt of contained graphite, with 61% classified as Measured or Indicated.
- Siviour is currently the second largest reported Proven Graphite Reserve in the world and the largest Graphite Reserve outside Africa[3], supporting a 40-year mine life with production of Graphite Concentrates up to 150,000 tonne per annum[4].
- Renascor's recently completed Battery Anode Material Study (**BAM Study**), which was based on mining in areas not included in the recent resource extension drilling, estimates the Siviour ore body can deliver a globally competitive gross operating cost for Purified Spherical Graphite of US$1,782 per tonne over the first 10 years and US$1,846 per tonne over LOM, including Graphite Concentrate operating cost of US$405 per tonne over first 10 years and US$472 per tonne over LOM[5].
- The upgraded Mineral Resource estimate is expected to provide support for further extensions and potential optimisation to the current pit design for future capacity expansions beyond those being considered in the BAM Study.

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Renascor Resources Limited (ASX: RNU) (**Renascor**) is pleased to announce an upgrade to the Mineral Resource estimate for its 100%-owned Siviour Graphite Deposit in South Australia, as set out in Table 1 below.

The updated estimate represents a 25% increase to the total (Measured, Indicated and Inferred) Siviour Mineral Resource estimate to 123.6Mt at 6.9% total graphitic carbon (**TGC**) for 8.5Mt of contained graphite, with 61% classified as Measured or Indicated.

Resource Category	Tonnes of mineralisation (Mt)	Total Graphitic Carbon (TGC)	Tonnes of Contained Graphite (Mt)
Measured	16.9	8.6%	1.4
Indicated	56.2	6.7%	3.8
Inferred	50.5	6.5%	3.3
Total	**123.6**	**6.9%**	**8.5**

Note: Cut-off grade 2.3% TGC

Table 1. Siviour Mineral Resource estimate as of September 2023

A nominal cut-off grade of 2.3% TGC has been established for Siviour based on potential mining methods and costs of open-cut mining operations that could be undertaken for this type of mineralisation.

Commenting on the upgraded Mineral Resource estimate, Renascor Managing Director David Christensen stated:

> *"The Resource upgrade offers continued evidence of the world-class quality of the Siviour Graphite Deposit and demonstrates the viability of an abundance of near-surface, high-grade graphite in a single ore body.*
>
> *As the demand for graphite grows, long-life, high quality sources of new supply like Siviour are becoming increasingly important to the developing lithium-ion battery supply chain.*
>
> *We expect the increase in the size of the Siviour Resource will not only assist with future capacity extensions beyond those being considered in the recently completed Battery Anode Material Study but will also further establish Siviour as amongst the most significant new sources of graphite globally."*

Siviour Mineral Resource breakdown by cut-off grades

Table 2 below shows the Siviour total Mineral Resource at varying cut-off grades and the corresponding grade and total tonnes of contained graphite.

Cut-off grade (TGC)	Million Tonnes	Grade (TGC)	Tonnes of Contained Graphite
2.0%	135.2	6.5%	8.8Mt
2.3%	**123.6**	**6.9%**	**8.5Mt**
3.0%	112.9	7.3%	8.3Mt
4.0%	106.3	7.6%	8.0Mt
5.0%	92.9	8.0%	7.4Mt
6.0%	79.8	8.4%	6.7Mt

Table 2. Siviour total Mineral Resource estimate reported above a range of cut-off grades

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Siviour Mineral Resource breakdown by Resource classification

A plan view of the Siviour Mineral Resource showing the zones of the three resource classifications is included below in Figure 1.

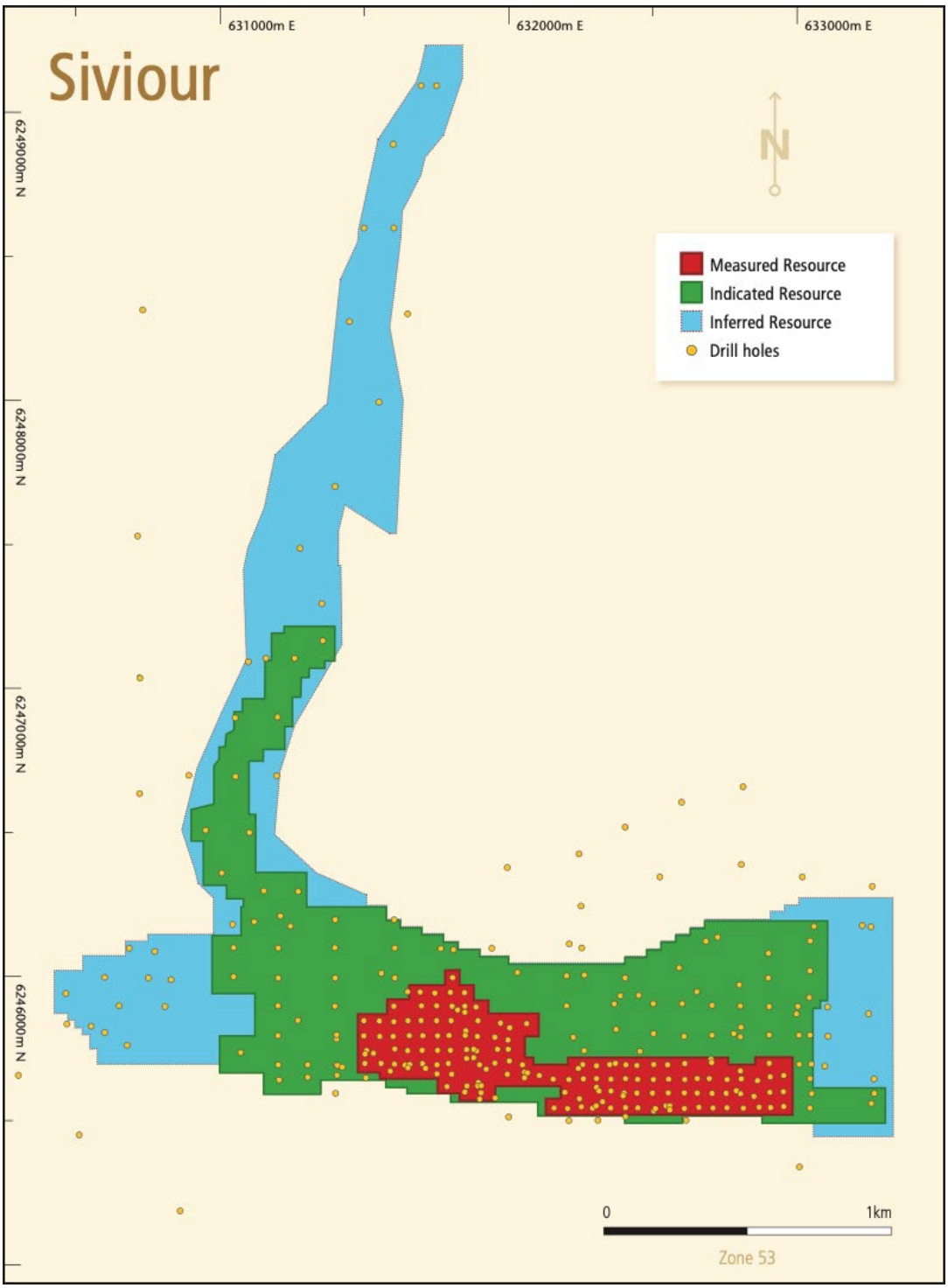

Figure 1. Drill holes within the Mineral Resource classification areas

The Siviour Mineral Resource estimate is based on 256 reverse circulation drill holes for a total of 13,188 metres (of which 23 drill holes were started with aircore before switching to reverse circulation at the top of the mineralised horizon) and 59 diamond holes totalling 4,746 metres.

The Siviour Mineral Resource model was prepared by Snowden Optiro (Optiro Pty Ltd), an independent and internationally recognised mining consultancy group.

A comparison of the revised Mineral Resource estimate compared with the previous Mineral Resource estimate is shown below in Table 2.

Resource Category	August 2022 Mineral Resource			September 2023 Mineral Resource		
	Tonnes of mineralisation (Mt)	Total Graphitic Carbon (TGC)	Tonnes of Contained Graphite (Mt)	Tonnes of mineralisation (Mt)	Total Graphitic Carbon (TGC)	Tonnes of Contained Graphite (Mt)
Measured	16.8	8.6%	1.4	16.9	8.6%	1.4
Indicated	46.0	7.1%	3.3	56.2	6.7%	3.8
Inferred	30.7	7.0%	2.2	50.5	6.5%	3.3
Total	**93.5**	**7.3%**	**6.9**	**123.6**	**6.9%**	**8.5**

Note: Cut-off grade 2.3% TGC

Table 2. Siviour Mineral Resource estimate as of September 2023 compared to August 2022[6]

JORC Table 1 Summary

A summary of attached JORC Table 1 (see Appendix 1) is provided below with respect to the Mineral Resources pursuant to the requirements of ASX listing rule 5.8.1.

- **Geology**. The graphite mineralisation at Siviour is hosted within Meso-Proterozoic metasedimentary rocks of the Hutchison Group. The mineralisation is within a nominally 30 m-thick band of pelitic schist that occurs within a thick calc-silicate sequence. Mineralisation is hosted within a sequence of micro-gneiss, metasedimentary rocks and schists. The mineralisation is generally tabular, oriented east-west and forms an undulating surface that dips shallowly to the southwest, in the southern area, and more steeply to the north in the northern area. In the west the strike of the mineralisation has been interpreted, from geophysical data, to swing sharply towards the north and is partially dislocated by a fault zone. Confidence in the geological interpretation of the deposit is good within the area of infill drilling and moderate in areas with wider spaced drilling. The spatial extent and geometry of the graphitic horizon is supported by geophysical interpretation (electromagnetic). The geological confidence has been considered for classification of the resource. Geological interpretation was completed on a sectional basis, from which geological surfaces were interpolated for the dominant lithologies and the top and base of the mineralised horizons. These interpretations were used to constrain the grade estimation. There are no alternative detailed interpretations of geology. The main mineralisation domains were defined using dominant lithology and grade constraints in conjunction with geophysical data. A nominal cut-off grade of 3% TGC was used to define boundaries between the higher-grade mineralised horizons and the weakly-mineralised or un-mineralised horizons within the micro-gneiss, metasedimentary rocks and schists.
- **Drilling method**. The drill database used for estimation of the resource comprises 256 reverse circulation (RC) drillholes for a total of 13,188 m and 59 diamond drillholes for a total of 4,745.52 m, with a total of 8,627 TGC assays. For 2014 to 2017, RC drilling by Coughlan Drilling used 140 mm face sampling hammers, except for 24 holes drilled by McLeod Drilling using 85 mm diameter hammer. For 2018 and 2022, RC drilling used 4¾" (120 mm) RC hammer and was undertaken by Bullion Drilling. Some holes were started with aircore and switched to RC at the top of the mineralised horizon. Diamond drilling was undertaken by a drilling contractor (Coughlan Drilling in 2016, MJ Drilling in 2018 and Tier 1 in 2022–2023) with a using triple tube

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with a HQ3 drill bit (61 mm core diameter). Core was orientated downhole using a Reflex digital orientation system.

- **Resource Classification**. The Mineral Resources have been classified on the basis of confidence in geological and grade continuity and taking into account data quality (including QAQC data and sampling methods), data density, confidence in estimation of the Total Graphitic Carbon (TGC) content (using the modelled grade continuity, conditional bias measures and seach pass as criteria) and the continuity of quality from the results and location of mineralogy and metallurgical testwork samples. The results from metallurgical test work at Siviour have been considered for Mineral Resource classification. Measured Resources have been defined only within the main mineralised horizon where it has been tested with the 2018 and 2020 infill drilling (50m by 50m spacing) and has high confidence in the geological interpretation and higher estimation quality. Indicated Mineral Resources have been defined in areas where drill spacing is 200m by 100m or less and where grade variance is moderate. Areas with interpreted geological continuity of the graphite mineralisation and broader drill spacing are classified as Inferred.
- **Sample analysis method**. RC drill samples were collected at one-metre intervals. All visually graphitic intervals were submitted for analysis. Approximately 50% of samples were not submitted for assay due to the visual non-mineralised nature of the material collected. Duplicate and standards analysis were completed. All samples were sent to Bureau Veritas laboratory in Adelaide for preparation and for TGC analyses. All samples were pulverised using an LM5 mill, with nominally 90% passing 75µm. Sampling was guided by Renascor Resources Limited's protocols and QAQC procedures. Drill samples were collected based on geology, varying in thickness from 0.03m to 3.6m intervals. Core samples were quarter split Triple Tube HQ3 core and sent for laboratory geochemical analysis at Bureau Veritas laboratory, South Australia. Duplicate analysis and analysis of Certified Reference Material (standards) was completed and no issues identified with sampling reliability.
- **Estimation methodology**. Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. Drillhole sample data was flagged from interpretations of the top and base of the mineralised horizons and the sequence of micro-gneiss, metasedimentary rocks and schists that contains the graphitic mineralisation. The main mineralisation domains were defined using grade constraints in conjunction with geological data. A nominal cut-off grade of 3% TGC was used to define boundaries between the higher-grade mineralised horizons and the and weakly-mineralised or un-mineralised horizons. Sample data was composited to a 1 m downhole length. Data has a low coefficient of variation. A few high-grade outliers are present and a top-cut grade of 28% TGC was applied to the data within the main mineralised horizon. The top-cut grade was selected by examining histograms, log probability plots, population disintegration. No assumptions have been made regarding recovery of by-products. Grade estimation was into parent blocks of 25 mE x 25 mN on 2 m benches. Block size was selected based on kriging neighbourhood analysis. TGC mineralisation continuity was interpreted from variogram analyses to have a horizontal range of 125 m to 140 m (approximately north-south) by 85 m to 90 m (approximately east-west). The maximum extrapolation distance is 100 m. Estimation for TGC was carried out using ordinary kriging at the parent block scale. The search ellipses were oriented within the plane of the mineralisation. Three estimation passes were used; the first search was based upon the variogram ranges in the three principal directions; the second search was two times the initial search, and the third search used reduced sample numbers and was expanded to complete the grades estimation. Within the main mineralised horizon (DOMAIN 10), approximately 76% of the blocks were estimated in the first search pass, approximately 22% in the second pass and the remaining blocks (2%) were estimated in the third search pass. In total, approximately 62% of the blocks within the mineralised domains were estimated in the first search pass,

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approximately 28% in the second pass and the remaining blocks (10%) were estimated in the third search pass. Post-processing using localised uniform conditioning was applied to investigate potential selectivity based on a selective mining unit of 5 mE x 5 mN on 1 m benches. This is assumed to represent the greatest selectivity that could be achieved from the anticipated mining unit of 10 m x 10 m on 2 m benches. The estimated block model grades were visually validated against the input drillhole data, global statistics on the top-cut and declustered data were compared to the block model estimates and comparisons were carried out against the drillhole data and by northing, easting and elevation slices. The Mineral Resource was previously reported in 2022. The 2022–2023 diamond drilling extended the Mineral Resource to the north. There has been an increase in the overall tonnage of 32%, a reduction in the TGC grade (from 7.3% TGC in 2022 to 6.9% TGC in 2023) and an increase in contained graphite of 25%. No reconciliation data is available.

- **Cut-off parameters**. The Mineral Resource is reported above a 2.3% TGC cut-off grade. This cut-off grade was determined from technical and economic assessment of the mineralisation.
- **Sampling**. One-metre drill chip samples were collected throughout the RC drill program in sequentially numbered bags. Core samples from diamond drill holes were collected based on geology, varying in thickness from 0.03m to 3.6m intervals. Approximately 85% of the samples were taken over intervals of 1m.
- **Sub-sampling**. Analysis was undertaken at Bureau Veritas laboratory with the sample split to less than 3kg through linear splitter. Pulverising was completed using LM5, 90% passing 75µm in preparation for analysis.
- **Mining modifying parameters**. Planned extraction is by open pit mining and mining factors such as dilution and ore loss have not been applied to the Mineral Resource estimate.
- **Metallurgical factors**. No metallurgical assumptions have been built into the resource model. Data from mineralogy and metallurgical test work have been considered for Mineral Resource classification. Mineralogical examination of samples indicates that the majority (~85%) of the graphite at Siviour is interstitial and is expected to be relatively easily liberated during processing to create a graphite concentrate. Metallurgical testwork results demonstrate the ability to produce concentrates with conventional metallurgy techniques that result in a marketable graphite product. Testwork demonstrates low variability of recovery and concentrate grades within the Measured Resource for over a strike length of 1.2 km and an across strike length of 180m. During 2021, Renascor completed commercial-scale downstream milling equipment trials on bulk samples of 250 kg. The results of the testwork confirmed yields in excess of 65%, consisting of both a primary Spherical Graphite that meets a standard size specification (d50 = 16 µm), as well as finer secondary Spherical Graphite products (d50 ≤ 10 µm). Spherical Graphite that meets required physical product specifications can be purified to battery-grade and sold as Purified Spherical Graphite (PSG). Metallurgical testing indicates that graphite concentrates of marketable size and purity may be extracted from the Siviour Deposit and this supports the classification of the Mineral Resource as an industrial mineral according to Clause 49 of the JORC Code.

Disclaimer

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.

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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.

Competent Person Statement – Mineral Resource

The information in this report which relates to Mineral Resources is based upon information compiled by Mrs Christine Standing who is a Member of the Australian Institute of Geoscientists and a Member of the Australasian Institute of Mining and Metallurgy. Mrs Standing is an employee of Snowden Optiro (Optiro Pty Ltd) and has sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mrs Standing consents to the inclusion in the report of a summary based upon her information in the form and context in which it appears.

Competent Person Statement – Exploration Results

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.

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 7 July 2023.
[2] See Renascor ASX announcement dated 18 August 2022 and Appendix 1 of this announcement.
[3] See Renascor ASX announcement dated 21 July 2020.
[4] See Renascor ASX announcement dated 11 November 2020.
[5] See Renascor ASX announcement dated 8 August 2023.
[6] See Renascor ASX announcement dated 18 August 2022.

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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[7];
- **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.

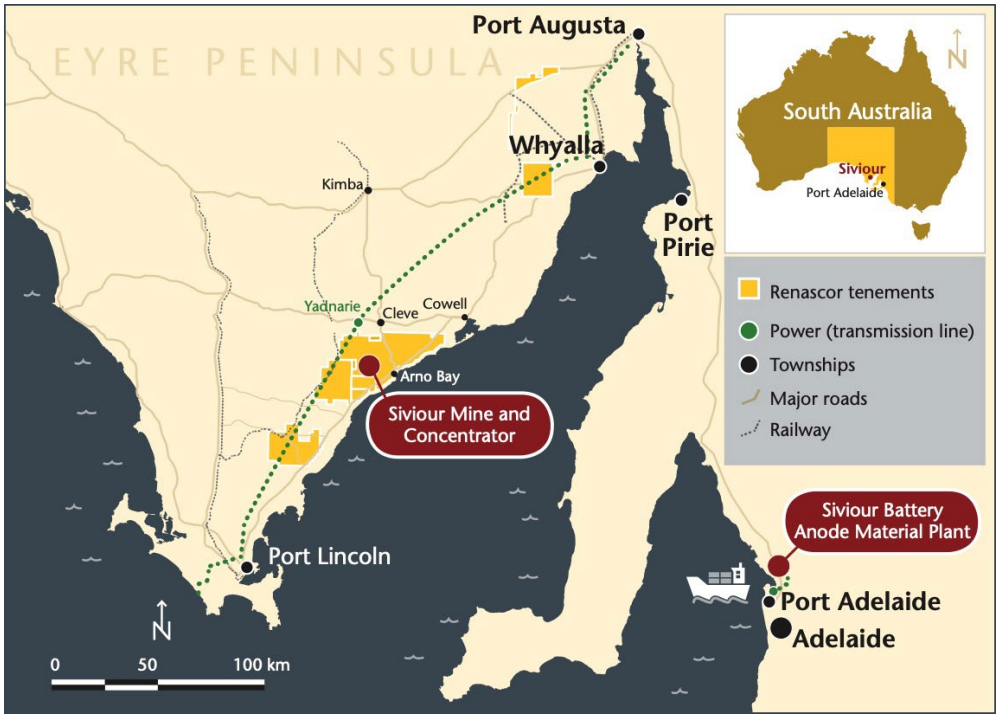

Figure 1. Siviour Battery Anode Material Project location.

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.

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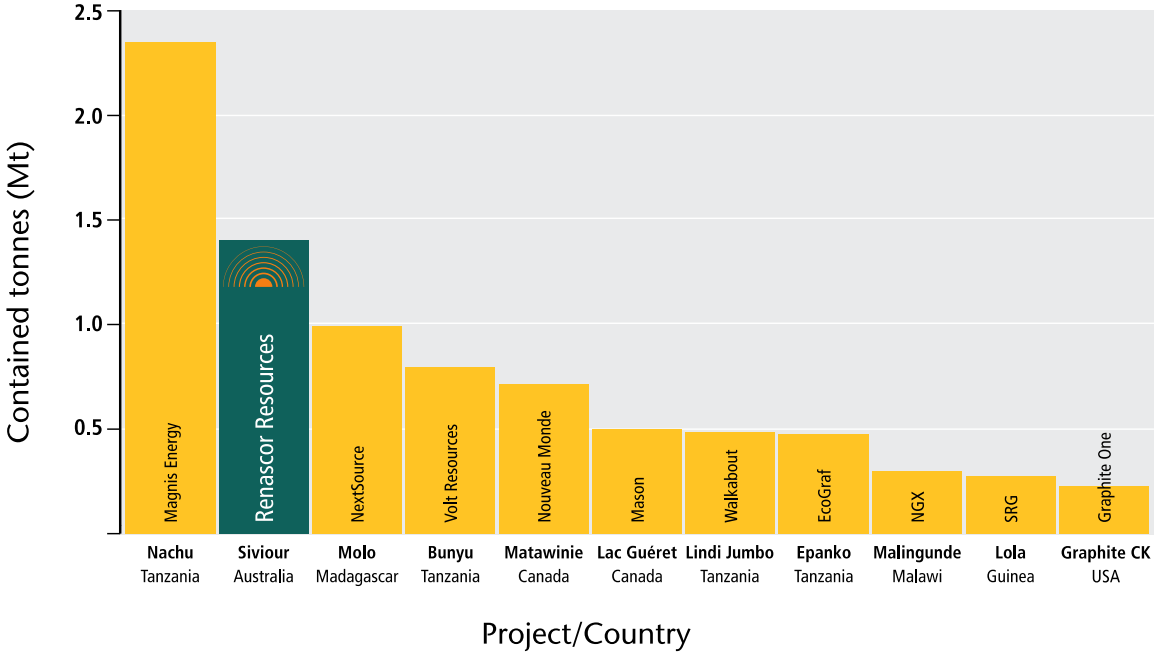

Figure 2. Globally Reported Proven Ore Reserve estimates (September 2023)[8]

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.

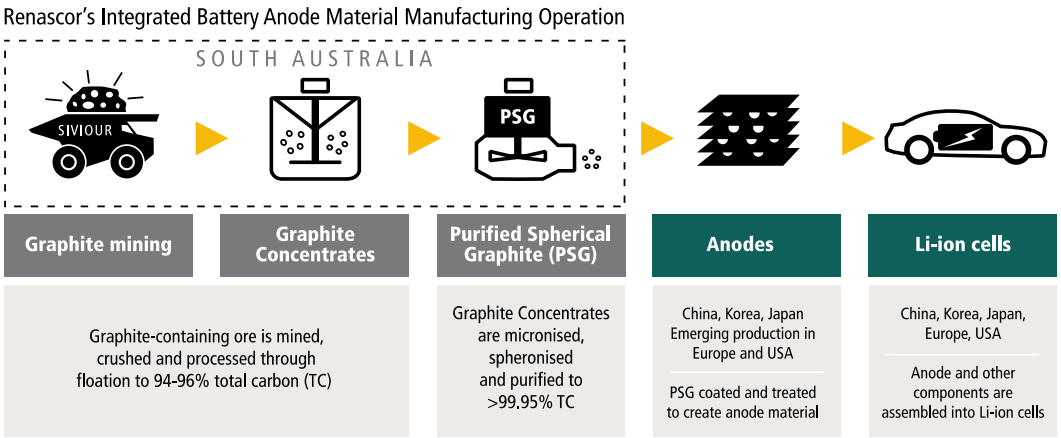

Figure 3. Renascor's vertically integrated Mine and Concentrator and Downstream PSG production facility within the Electric Vehicle supply chain.

[7] Renascor ASX release 21 July 2020.
[8] 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.

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Appendix 1

JORC table 1

The table below summarises the assessment and reporting criteria used for the Siviour Mineral Resource estimate and reflects the guidelines in Table 1 of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling.* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	**Reverse circulation drilling** RC drill samples were collected at 1 m intervals. All visually graphitic intervals were submitted for analysis. Approximately 50% of samples were not submitted for assay due to the visual non-mineralised nature of the material collected. Duplicate and standards analysis were completed. All samples were sent to Bureau Veritas laboratory in Adelaide for preparation and for total graphitic carbon (TGC) analyses. All samples were pulverised using an LM5 mill, with nominally 90% passing 75 µm. Sampling was guided by Renascor Resources Limited's (Renascor's) protocols and QAQC procedures. **Diamond drilling** Drill samples were collected based on geology, varying in thickness from 0.03 m to 3.6 m intervals. Core samples were quarter split Triple Tube HQ3 core and sent for laboratory geochemical analysis at Bureau Veritas, South Australia. Duplicate samples in the 2018 program were collected after each 25 samples and standards were inserted into the sample stream at the end of every hole. Duplicate (1 in 24), standard (1 in 38) and blank 1 in 28) samples were inserted into the sample stream for the 2022–2023 diamond drill samples. Sampling was guided by Renascor's protocols and quality assurance/quality control (QAQC) procedures.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	For 2014 to 2017, reverse circulation (RC) drilling by Coughlan Drilling used 140 mm face sampling hammers, except for 24 holes drilled by McLeod Drilling using 85 mm diameter hammer. For 2018 and 2022, RC drilling used 4¾" (120 mm) RC hammer and was undertaken by Bullion Drilling. Some holes were started with aircore and switched to RC at the top of the mineralised horizon.

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Criteria	JORC Code explanation	Commentary
		Diamond drilling was undertaken by a drilling contractor (Coughlan Drilling in 2016, MJ Drilling in 2018 and Tier 1 in 2022–2023) with a using triple tube with a HQ3 drill bit (61 mm core diameter). Core was orientated downhole using a Reflex digital orientation system.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.* *Measures taken to maximise sample recovery and ensure representative nature of the samples.* *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	Recovery was assessed by the site geologist and deemed acceptable for resource estimation, given the friable nature of the mineralisation. 1 m drill chip samples, weighing approximately 3 kg were collected throughout the RC drill programs in sequentially numbered bags. Samples were generally collected from the 12.5% rifle splitter attached to the drill rig, however, in some instances, samples were collected by spear technique. Every interval drilled is represented in an industry standard chip tray that provides a check for sample continuity downhole. Diamond core recovery was routinely recorded and within the reported mineralised zones. The core recovery for the 2016 and 2018 diamond holes averaged 88% for entire holes. For the 2022–2023 diamond drillholes the core recovery averaged 87%, however, 22 intersections (over a total of 20.1 m) reported missing samples. No relationship was found to exist between the recovery and the TGC grade.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* *The total length and percentage of the relevant intersections logged.*	All drill samples (100%) were geologically logged by experienced geologists at the drill rig. The geological logs were checked by re-logging of the chip trays and drill core in Adelaide. Primary data (including weathering, lithology, grainsize, sample recovery and colour) was captured into spreadsheet format by the supervising geologist, and subsequently loaded into the Renascor's database. No adjustments have been made to any assay data. The density data collected by Renascor used the Archimedes Principle water displacement method on representative core samples from 1 m intervals down the hole. Check analyses were made by Bureau Veritas, South Australia. Core was orientated using the Reflex orientation tool, marked into 1 m intervals, core recovery and geotechnical data – Rock Quality Designation were recorded. Core was photographed, both dry and wet.
Subsampling techniques and sample preparation	*If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all subsampling stages to maximise representivity of samples.*	**RC drillholes** All samples were marked with unique sequential numbering as a check against sample loss or omission. At the Bureau Veritas laboratory sample preparation involved the original sample being dried at 105°C for up to 24 hours on submission to laboratory. Sample is split to less than 3 kg through linear splitter and excess retained.

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Criteria	JORC Code explanation	Commentary
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Pulverising was completed using an LM5, with nominally 90% passing 75 µm in preparation for analysis using the Bureau Veritas network. **Diamond drillholes** HQ3 diameter core is cut in half to preserve the orientation mark. Graphite intervals were sampled using quarter HQ3 diameter core. Duplicate sample was collected using quarter HQ3 diameter core and submitted for check analysis. All the samples are marked with unique sequential numbering as a check against sample loss or omission. Samples were crushed and pulverised using LM5, with nominally 90% passing 75 µm in preparation for analysis using the Bureau Veritas network.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	All samples were sent to Bureau Veritas laboratory in Adelaide for preparation and for TGC analyses and the diamond drillhole core for additional multi-element analysis using a mixed acid digest. For TGC analysis a portion of the sample is dissolved in weak acid to liberate carbonate carbon. The residue is then dried at 420°C driving off organic carbon and then analysed by its sulphur-carbon analyser to give TGC. Bureau Veritas Minerals has adopted the ISO 9001 Quality Management Systems. All Bureau Veritas laboratories work to documented procedures in accordance with this standard. QAQC procedures for Renascor's 2017, 2018, 2022 and 2022–2023 drilling programs included the insertion of standard (certified reference material) samples and field duplicates at the drill site. No QAQC data was included with the 2014 drilling program (3.6% of the total assay data). For the 2016 drilling program (27% of the total assay data), standards were submitted. QAQC procedures for Renascor's 2017 and 2018 drilling programs included the insertion of standard (certified reference material) samples and field duplicates at the drill site. For the 2018 drilling program, blank samples were inserted at the drill site and pulp duplicates were re-submitted to the primary laboratory (Bureau Veritas). For the 2022 RC and the 2022–2023 diamond drilling programs, samples of unmineralised calc-silicate were included in the sampling stream as blank samples. 52 samples that were analysed by Bureau Veritas were also analysed by ALS.

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Criteria	JORC Code explanation	Commentary
		Analysis of the standard samples indicates an overall acceptable level of accuracy. Analysis of the blank samples indicates low levels of contamination and/or sample mix-ups. The 2017, 2018, 2022 and 2022–2023 data is considered to have acceptable accuracy and precision for the Mineral Resource estimate. Measured Resources were defined only within areas that were infill drilled during 2018 and 2022.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	Primary data was captured into spreadsheet format by the supervising geologist, and subsequently loaded into the Renascor's database. There are four diamond drillholes that twinned earlier RC holes. One set (where the samples are less than 1 m apart) were used for duplicate sample analysis. Analysis of the drilling methods indicates that there is no consistent bias between the grade and thickness of mineralisation. No adjustments have been applied to the results.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	All drillholes were pegged using a handheld global positioning system (GPS). Upon completion, all 2014, 2016 and 2017 RC and diamond hole collar locations were picked up using a Trimble differential GPS. The 2018, 2022 and 2023 drillholes were surveyed by a licenced surveyor. The degree of accuracy of drillhole collar location and RL is estimated to be within 0.1 m for differential GPS and 5 m error level for the handheld GPS. The grid system for the project was Geocentric Datum of Australia (GDA) 94, Zone 53.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	The drillholes are on a nominal spacing of approximately 50 m x 50 m within the central and southern area of the deposit. Elsewhere the drillholes are on a spacing of 100 m to 400 m. Geological interpretation and mineralisation continuity analysis indicates that data spacing is sufficient for definition of a Mineral Resource. Diamond drill core sampling was based on geological boundaries with a general maximum limit of 1 m thickness and a minimum of 0.03 m thickness for assay samples. Around 85% of the samples within the interpreted mineralised domains have a length of 1 m, 14% have a length of less than 1 m and less than 2% have a length of over 1 m. The assay data was composited to downhole intervals of 1 m within the mineralised domains.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	The mineralisation is within a gently undulating sheet. The drillholes were oriented to intersect the mineralisation at orientations that are close to perpendicular or at a high angle to the mineralised horizon. The orientation of drilling is not expected to introduce sampling bias.

Criteria	JORC Code explanation	Commentary
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample security	*The measures taken to ensure sample security.*	Unique sample number was retained during the whole process. Samples were transported by a reputable transport company and sample bags and dispatch notice checked upon receipt at the laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	All data collected was subject to internal review.

Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Siviour deposit is located within Mineral Lease ML6495 which was granted on 5 April 2019, expiring 4 April 2040, and Exploration Licence EL6469, held by Ausmin Development Pty Ltd (Ausmin). Renascor, through its wholly-owned subsidiary Eyre Peninsula Minerals Pty Ltd (EPM), acquired 100% of Ausmin and its tenements in 2018. The tenements are in good standing. The drilling was carried out on agricultural freehold land.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Several companies have carried out historical exploration over many years, but without any focus on graphite prospectivity. Cameco Ltd (Cameco), as part of a uranium exploration program, acquired electromagnetic data across the tenement in 2006 and 2007. Cameco drilled hole CRD0090, without testing for graphite. During 2014, EPM carried graphite-focused exploration and drilled a further six RC holes and one diamond core hole reporting graphite intersections in all holes.
Geology	*Deposit type, geological setting and style of mineralisation.*	The graphite mineralisation at Siviour is hosted within Meso-Proterozoic metasedimentary rocks of the Hutchison Group. The mineralisation is within a nominally 30 m-thick band of pelitic schist that occurs within a thick calc-silicate sequence. The mineralisation is within a gently undulating sheet that is orientated east-west. The strike has been interpreted, from geophysical data, to swing sharply towards the north and is dislocated in the east by a fault zone.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar*	Exploration results are not being reported for the Mineral Resources area.

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Criteria	JORC Code explanation	Commentary
	• *elevation or RL (elevation above sea level in metres) of the drillhole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.*	
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Exploration results are not being reported for the Mineral Resources area. Metal equivalent values have not been used.
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect.*	Renascor considered the undulating nature of the mineralisation and all drillholes intersected mineralisation at near perpendicular to the dip orientation of the host lithologies and mineralisation. Exploration results are not being reported for the Mineral Resources area.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	Relevant diagrams have been included within the main body of text. Exploration results are not being reported for the Mineral Resources area.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Exploration results are not being reported for the Mineral Resources area.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Exploration results are not being reported for the Mineral Resources area.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Additional drilling is planned, which will include drilling holes to replace those that were abandoned in 2022 due to drilling difficulties. Additional drilling may be undertaken to follow-up electromagnetic anomalies within areas adjacent to the Siviour deposit. Metallurgical testwork is planned for samples from two of the 2022–2023 diamond drillholes.

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Section 3: Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* *Data validation procedures used.*	Primary data was captured into spreadsheet format by the supervising geologist, and subsequently loaded into the Renascor's database. Additional data validation, by Snowden Optiro, included checking for out-of-range assay data and overlapping or missing intervals.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	A site visit to the Siviour deposit was undertaken by Optiro (Mr J. Froud) during November 2016 to inspect the diamond drilling, sampling and logging and to inspect the drill core. Mrs C. Standing (Snowden Optiro) visited the drill sample storage facility in Adelaide in November 2018 to inspect the diamond core and RC chip samples, and to review this with respect to the assay data, geological logging and cross-section interpretations. RC chips and diamond core from three cross-sections was examined.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	Confidence in the geological interpretation of the deposit is good within the area of infill drilling and moderate in areas with wider spaced drilling. The spatial extent and geometry of the graphitic horizon is supported by geophysical interpretation (electromagnetic). The geological confidence has been considered for classification of the resource. Mineralisation hosted within a sequence of micro-gneiss, metasedimentary rocks and schists. The mineralisation is generally tabular, oriented east-west and forms an undulating surface that dips shallowly to the southwest, in the southern area, and more steeply to the north in the northern area. In the west the strike of the mineralisation has been interpreted, from geophysical data, to swing sharply towards the north and is partially dislocated by a fault zone. Geological interpretation was completed on a sectional basis, from which geological surfaces were interpolated for the dominant lithologies and the top and base of the mineralised horizons. These interpretations were used to constrain the grade estimation. There are no alternative detailed interpretations of geology. The main mineralisation domains were defined using grade constraints in conjunction with geophysical data. A nominal cut-off grade of 3% TGC was used to define boundaries between the higher-grade mineralised horizons and the and weakly-mineralised or un-mineralised horizons within the micro-gneiss, metasedimentary rocks and schists.

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Criteria	JORC Code explanation	Commentary
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The main zone of mineralisation at Siviour extends over 2.9 km east-west and 1.6 km north-south. The horizontal width is around 550 m within the central area, at the Siviour Prospect and ranges from 200 m in the west to 750 m in the west. The mineralisation is folded and a mineralised zone is interpreted to extend for a further 3 km to the north with widths ranging from 125 m to 440 m. The depth to the top of the mineralised horizon ranges from 1 m to 100 m, with an average depth of 30 m. The Mineral Resource ranges in thickness from 0.45 m to 68 m, with an average thickness of 24 m. Drilling has closed the deposit to the south: it remains open to the east, west and north.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* *Any assumptions behind modelling of selective mining units.* *Any assumptions about correlation between variables.* *Description of how the geological interpretation was used to control the resource estimates.* *Discussion of basis for using or not using grade cutting or capping.* *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. Drillhole sample data was flagged from interpretations of the top and base of the mineralised horizons and the sequence of micro-gneiss, metasedimentary rocks and schists that contains the graphitic mineralisation. The main mineralisation domains were defined using grade constraints in conjunction with geological data. A nominal cut-off grade of 3% TGC was used to define boundaries between the higher-grade mineralised horizons and the and weakly-mineralised or un-mineralised horizons. Sample data was composited to a 1 m downhole length. Data has a low coefficient of variation. A few high-grade outliers are present and a top-cut grade of 28% TGC was applied to the data within the main mineralised horizon. The top cut grade was selected by examining histograms, log probability plots, population disintegration. No assumptions have been made regarding recovery of by-products. Grade estimation was into parent blocks of 25 mE x 25 mN on 2 m benches. Block size was selected based on kriging neighbourhood analysis. TGC mineralisation continuity was interpreted from variogram analyses to have a horizontal range of 125 m to 140 m (approximately north-south) by 85 m to 90 m (approximately east-west). The maximum extrapolation distance is 100 m. Estimation for TGC was carried out using ordinary kriging at the parent block scale. The search ellipses were oriented within the plane of the mineralisation. Three estimation passes were used; the first search was based upon the variogram ranges in the three principal directions; the second search was two times the initial search, and the third search used reduced sample numbers and was expanded to complete the grades estimation.

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Criteria	JORC Code explanation	Commentary
		Within the main mineralised horizon (DOMAIN 10), approximately 76% of the blocks were estimated in the first search pass, approximately 22% in the second pass and the remaining blocks (2%) were estimated in the third search pass. In total, approximately 62% of the blocks within the mineralised domains were estimated in the first search pass, approximately 28% in the second pass and the remaining blocks (10%) were estimated in the third search pass. Post-processing using localised uniform conditioning was applied to investigate potential selectivity based on a selective mining unit of 5 mE x 5 mN on 1 m benches. This is assumed to represent the greatest selectivity that could be achieved from the anticipated mining unit of 10 m x 10 m on 2 m benches. The estimated block model grades were visually validated against the input drillhole data, global statistics on the top cut and declustered data were compared to the block model estimates and comparisons were carried out against the drillhole data and by northing, easting and elevation slices. The Mineral Resource was previously reported in 2022. The 2022–2023 diamond drilling extended the Mineral Resource to the north. There has been an increase in the overall tonnage of 32%, a reduction in the TGC grade (from 7.3% TGC in 2022 to 6.9% TGC in 2023) and an increase in contained graphite of 25%. No reconciliation data is available.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnes have been estimated on a dry basis. Moisture content has not been determined.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	The Mineral Resource is reported above a 2.3% TGC cut-off grade to reflect current commodity prices and open pit mining methods. This cut-off grade was determined from technical and economic assessment of the mineralisation by Optima Consulting Pty Ltd.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous.*	Planned extraction is by open pit mining. Mining factors such as dilution and ore loss have not been applied.

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Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous.*	No metallurgical assumptions have been built into the resource models. The results from metallurgical testwork have been considered for Mineral Resource classification. Mineralogical examination of samples from Siviour indicates that the majority (~85%) of the graphite is interstitial and is expected to be relatively easily liberated during processing to create a graphite concentrate. Metallurgical testwork results demonstrate the ability to produce concentrates with conventional metallurgy techniques that result in a marketable graphite product. Testwork demonstrates low variability of recovery and concentrate grades within the Measured Resource for over a strike length of 1.2 km and an across strike length of 180 m. During 2021, Renascor completed commercial-scale downstream milling equipment trials on bulk samples of 250 kg. The results of the testwork confirmed yields in excess of 65%, consisting of both a primary Spherical Graphite that meets a standard size specification (d50 = 16 µm), as well as finer secondary Spherical Graphite products (d50 ≤ 10 µm). Spherical Graphite that meets required physical product specifications can be purified to battery-grade and sold as Purified Spherical Graphite (PSG).
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.*	No assumptions have been made regarding waste and process residue. Environmental studies have been undertaken for the Project's environmental approval process with Mineral Lease ML6495 granted by South Australian Minister for Energy and Mining in April 2019.
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	Core samples from diamond holes were used to obtain 1,344 bulk density measurements. The measurements are from nine different methodologies (including waxed, wrapped and unwrapped core samples) and/or laboratories and some core samples were measured by several different methods. Renascor measured the density of 28 of the core samples, using both waxed and un-waxed methods, and these samples were then sent to Bureau Veritas to check the density data. The final database used for density estimation included results from 1,233 samples. Analysis of this data indicated that there is no relationship with TGC grade or depth.

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Criteria	JORC Code explanation	Commentary
		A combination of lithology, mineralisation and oxidation were used to assign the density to each block within the resource model. Within the highly weathered material, density was assigned based on the mineralisation domains and dominant rock types. Within the less weathered material density was assigned by lithology as estimated for each block using a nearest neighbour methodology. Density values assigned to the resource model range from 1.80 t/m^3 to 2.46 t/m^3, with an average density of 2.17 t/m^3 within the defined resource.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The Mineral Resources have been classified on the basis of confidence in geological and grade continuity and taking into account data quality (including QAQC data and sampling methods), data density, confidence in estimation of the TGC content (using the modelled grade continuity and conditional bias measures, slope of the regression and kriging efficiency, as criteria) and the continuity of quality from the results and location of mineralogy and metallurgical testwork samples. In Snowden Optiro's opinion there are reasonable prospects for eventual economic extraction. Measured Resources have been defined only within the main mineralised horizon where it has been tested with drilling on a 50 m x 50 m spacing and has high confidence in the geological interpretation and higher estimation quality. Indicated Mineral Resources have been defined in areas where the majority of blocks were estimated in the first search pass. In these areas, the drill spacing is generally 200 m x 100 m or less. Inferred Mineral Resources have been defined in areas where extension of mineralisation is supported by drilling, geology and interpretation of geophysical data. The classification considers all available data and quality of the estimate and reflects the Competent Person's view of the deposit.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	The resource estimate has been peer reviewed by Snowden Optiro staff.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person.* *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation.*	The assigned classification of Measured, Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimate. The confidence levels reflect production volumes on an annual basis.

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Appendix 2

Peer Comparison Data

Project name	Code	Company	Country	Report name	Date	Link
Bunyu	VRC	Volt Resources Ltd	Tanzania	Pre-Feasibility Study Completed	15 December 2016	https://announcements.asx.com.au/asxpdf/20161215/pdf/43drlhpvdwbhxp.pdf
Epanko	EGR	Ecograf Ltd	Tanzania	Updated 60ktpa Bankable Feasibility Study	21 June 2017	https://announcements.asx.com.au/asxpdf/20170621/pdf/43k2d21wvk2sv1.pdf
Graphite Creek	GPH	Graphite One Inc	USA	Preliminary Feasibility Study Technical Report Graphite One Project	14 October 2022	https://www.graphiteoneinc.com/wp-content/uploads/2022/10/JDS-Graphite-One-NI-43-101-PFS-20221013-compressed.pdf
Lac Guéret	LLG	Mason Graphite Inc	Canada	Feasibility Study Update of the Lac Guéret Graphite Project	12 December 2018	https://masongraphite.com/wp-content/uploads/2021/06/a53b7c_22115be39ccf4d85b9579f359680997c.pdf
Lindi Jumbo	WKT	Walkabout Resources Ltd	Tanzania	Updated Ore Reserve delivers 17.9% graphite grade	28 February 2019	https://announcements.asx.com.au/asxpdf/20190228/pdf/44321stl8dlk5f.pdf
Lola	SRG	SRG Mining Inc.	Guinea	Lola Graphite Project NI 43-101 Technical Report – Updated Feasibility Study	12 April 2023	https://srgmining.com/wp-content/uploads/2023/04/J6626-SRG_Lola_UFS_Rev_0_Fin_2023-0407.pdf
Malingunde	NGX	NGX Ltd	Malawi	Replacement Prospectus	14 June 2023	https://announcements.asx.com.au/asxpdf/20230614/pdf/05qn89bfqrhwx8.pdf
Matawinie	NOU	Nouveau Monde Graphite	Canada	NI 43-101 Technical Feasibility Study Report for The Matawinie Mine and the Becancour Battery Material Plant Integrated Graphite Projects	10 August 2022	https://nmg.com/wp-content/uploads/2022/08/Feasibility-Study-NMGs-Integrated-Phase-2-Projects.pdf
Molo	NEXT	NextSource Materials Inc	Madagascar	Molo Phase 2 Preliminary Economic Assessment NI 43-101 Technical Report	27 April 2022	https://www.nextsourcematerials.com/wp-content/uploads/2023/01/2022_04_27_molo_phase_2_pea_technical_report_dated_april_27__2022__final.pdf
Nachu	MNS	Magnis Energy Technologies Ltd	Tanzania	Bankable Feasibility Study Update Confirms Strong Financial and Technical Viability for the Nachu Graphite Project	27 September 2022	https://announcements.asx.com.au/asxpdf/20220927/pdf/45fhzx2nsgrmjb.pdf
				Supplementary Information Regarding Nachu BFS Update Released 27.9.2022	30 September 2022	https://announcements.asx.com.au/asxpdf/20220930/pdf/45fqs3q6h3hpw4.pdf