ASX Release

24 August 2023

Updated Mineral Ore Reserve Estimate for Siviour

Siviour confirmed as the largest Ore Reserve of graphite outside of Africa and the second largest Proven Reserve of graphite in the world

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Highlights:

- Updated Ore Reserve for Renascor's 100%-owned Siviour Graphite Project in South Australia confirms Siviour as the largest reported total Ore Reserve of graphite outside of Africa and the second largest reported Proven Reserve of graphite in the world[1].
- The updated Ore Reserve estimate for the Siviour Project includes:
  - Proven Reserves of 16.8Mt at 8.2% total graphitic carbon (**TGC**) for 1.4Mt of contained graphite.
  - Probable Reserves of 45.0Mt at 6.6% TGC for 3.0Mt of contained graphite.
  - Total Reserves of 61.8Mt at 7.0% TGC for 4.3Mt of contained graphite.
- The expanded Ore Reserve estimate includes a 13% increase in total Reserves and an 8% increase in Proven Reserves[2] and provides additional confidence in the size and quality of the Siviour deposit as a consistent source of high-quality graphite supporting a life of mine (**LOM**) of 40+ years.
- Renascor's recently completed Battery Anode Material Study (**BAM Study**), which was used as the basis for the updated Ore Reserve, 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[3].

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Renascor Resources (ASX: RNU) is pleased to announce an upgraded JORC Ore Reserve estimate for its 100%-owned Siviour Graphite Project in South Australia.

The expanded Ore Reserve estimate includes a Proven Reserve of 16.8Mt at 8.2% TGC for 1.4Mt of contained graphite, the largest reported estimate of total Ore Reserve of graphite outside of Africa, and the second largest Proven Reserve of graphite in the world[4].

Commenting on the Ore Reserve estimate, Managing Director David Christensen stated:

> *"These results confirm Siviour's status as amongst the most significant graphite deposits in the world, as underscored by our recently completed Battery Anode Material Study that delivered a globally competitive estimated operating cost for producing Purified Spherical Graphite from Siviour.*
>
> *The Siviour project has already attracted conditional funding support from the Australian Government and non-binding commitments from leading anode manufacturers.*
>
> *The upgraded Ore Reserve announced today, and, in particular, the significant Proven Reserve, adds further confidence to Siviour. We look forward to using these results to assist in securing binding offtake and funding and advancing into construction and operation of an important new supply line for the lithium-ion battery industry."*

Ore Reserve

The Siviour Ore Reserve was prepared by independent mining consultancy Optima Consulting & Contracting Pty Ltd based on a Mineral Resource that was announced in August 2022. Renascor's Battery Anode Material Study[5] (**BAM Study**) has been used as the basis to estimate Ore Reserves for the project in accordance with the JORC Code 2012.

The Ore Reserve estimate for Siviour is summarised below in Table 1.

Reserve Category	Ore (Mt)	TGC (%)	Contained Graphite (Mt)
Proven	16.8	8.2%	1.4
Probable	45.0	6.6%	3.0
Total	**61.8**	**7.0%**	**4.3**

Table 1. *Siviour Ore Reserve as of August 2023*[6]

The Mineral Resource estimate was prepared by independent mining consultants Optiro Pty Ltd in accordance with the 2012 JORC Code and is summarised below in Table 2[7].

Resource Category	Ore (Mt)	TGC (%)	Contained Graphite (Mt)
Measured	16.8	8.6%	1.4
Indicated	46.0	7.1%	3.3
Inferred	30.7	7.0%	2.1
Total	**93.5**	**7.3%**	**6.8**

Table 2. *Siviour Mineral Resource estimate as of August 2022 reported at a cut-off grade of 2.3% TGC*[8]

Additional details of the material assumptions are set out below and in Appendix 1 (JORC Table 1).

The Ore Reserve was estimated from the Mineral Resource after consideration of the level of confidence in the Mineral Resource and taking into account material and relevant modifying factors. The Ore Reserve is as based on Measured and Indicated Resources only. No Inferred Mineral Resources have been included in the Ore Reserve.

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Siviour in comparison to other graphite Ore Reserves

As shown below in Figure 1 and Table 3 (Proven Reserve estimates) and Table 4 (Total Ore Reserve estimates), Siviour has an Ore Reserve estimate that is the largest outside of Africa, with a Proven Ore Reserve estimate that is the second largest globally.

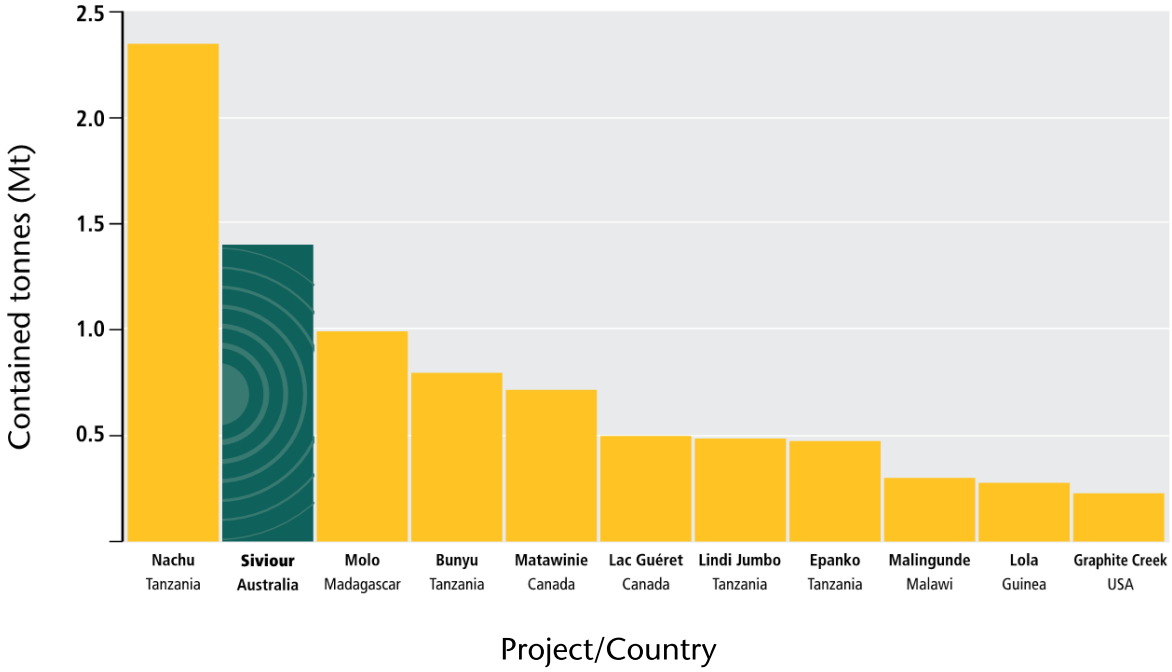

Figure 1. *Globally Reported Proven Ore Reserve estimates (August 2023)*[9]

Proven Reserve estimates				
Project	**Country**	**Tonnes (Mt)**	**TGC[10] Grade (%)**	**Contained Tonnes (Mt)**
Nachu	Tanzania	50.5	4.6	2.35
Siviour	**Australia**	**16.8**	**8.2**	**1.38**
Molo	Madagascar	14.2	7.0	0.99
Bunyu	Tanzania	19.3	4.3	0.83
Matawinie	Canada	17.3	4.2	0.72
Lac Guéret	Canada	2.0	25.1	0.50
Lindi Jumbo	Tanzania	2.5	19.3	0.49
Epanko	Tanzania	5.7	8.4	0.48
Malingunde	Malawi	3.1	9.5	0.30
Lola	Guinea	6.4	4.4	0.28
Graphite Creek	USA	3.8	6.0	0.23

Table 3. *Globally Reported Proven Graphite Reserve estimates (August 2023)* [11]

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Total Ore Reserve estimates				
Project	**Country**	**Tonnes (Mt)**	**TGC[12] Grade (%)**	**Contained Tonnes (Mt)**
Balama	Mozambique	110.3	16.4	18.09
Mahenge	Tanzania	70.5	8.5	5.99
Bunyu	Tanzania	127.4	4.4	5.55
Siviour	**Australia**	**61.8**	**7.0**	**4.33**
Montepuez	Mozambique	42.2	9.3	3.92
Nachu	Tanzania	76.3	4.8	3.66
Matawinie	Canada	61.7	4.2	2.61
Balama Central	Mozambique	19.7	11.1	2.17
Lola	Guinea	40.9	4.1	1.69
Molo	Madagascar	22.4	7.0	1.58
Ancuabe	Mozambique	24.9	6.2	1.54

Table 4. *Globally Reported Total Ore Reserve estimates (August 2023)* [13]

ASX Listing Rule 5.9.1

Pursuant to ASX Listing Rule 5.9.1, and in addition to the information contained elsewhere in this release and in Appendix 1, Renascor provides the following summary:

Material assumptions. The Ore Reserves are based on key modifying factors that include analysis, designs, schedules and cost estimates of the BAM Study that describes the development of the Siviour Graphite Project over a 40-year mine life. Material assumptions of the BAM Study include:

- Metallurgical testwork has been completed by reputable and experienced laboratories. This testwork is described in this document and supports modifying factors applied in the Ore Reserve estimate.
- The mining process has been based on Measured and Indicated Mineral Resources reported in accordance with the JORC code, detailed mine designs, specifications from a geotechnical study and mining equipment determined from experienced engineers.
- The processing plant design has been developed by experienced design engineers to support the flowsheet and the predicted recovery, throughput and production estimates.
- The infrastructure requirements have been defined by specialist engineers.
- The detailed designs discussed above have been used as the basis for capital and operating cost estimates derived from first principles, estimates and vendor quotes.

Classification criteria. The Ore Reserves estimate comprises Measured and Indicated Mineral Resources only. The BAM Study is based upon some Inferred Resources[14] which are mined incidentally with the Measured and Indicated Resources. Over the 22-year mining period, approximately 26% of the material mined is within the Measured Resource category, approximately 69% is within the Indicated Resource category, and approximately 5% is within the Inferred Resources category.

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Mining method. The mining method used is conventional truck and excavator mining with drill and blast for fresh, partially weathered rock and all ore. Alluvium and weathered rock is assumed to be free dig with some minor ripping expected in weathered rock. This is supported by drill core samples and the geotechnical rock strength analysis in the DFS. This mining method suits the thick flat lying shallow nature of mineralization and results in a low stripping ratio of around 1.7 over the life of mine. Other bulk mining methods were assessed with truck and excavator conventional mining determined to be the most suitable mining method. Overall ore loss is approximately 2% and mining dilution is approximately 6%.

Processing method. The metallurgical process is to crush, grind and float, which is common for this style of mineralization. Test work on composite samples and ore variability samples indicate acceptable grade and recovery of graphite in final concentrate with no deleterious elements.

Quality parameters. Cut-off grades were estimated for each Metcode (quality of ore) with a marginal cut-off grade applied to determine ore or waste. Ore was classified as either low grade (**LG**) or run-of-mine (**ROM**) with the cut-off grade for ROM set at 7.3% TGC for all Metcodes. Cut-off grade values are summarised in Table 5.

Metcode	1 (high quality)	2 (average quality)	3 and 0 (low quality)
ROM cut-off grade	7.3% TGC	7.3% TGC	7.3% TGC
Low Grade cut-off grade	2.7% TGC	2.8% TGC	3.2% TGC
Breakeven cut-off grade	1.8% TGC	2.0% TGC	2.2% TGC

Table 5. *Cut-off grades*

Estimation methodology. Revenue is calculated as the PSG product price less royalties, less fixed and variable costs to produce and transport the product to the point of sale. Process plant feed from the mining schedule provided a head grade that was modelled through the processing plant and PSG facility and used to model costs and revenue over the life of the project. The forecast 2024 PSG baseline price was used to calculate base revenue and was provided by Fastmarkets.

Material modifying factors. The Siviour Graphite Project is located within the mining license granted by the South Australian Department of Premier and Cabinet. Background studies to date have not indicated any material impediments to the proposed development of the Project. The PEPR and the BAM Study proposes an Integrated Waste Landform (IWL) which contains mined overburden, Potentially Acid Forming (PAF) material and tailings. There are currently three other graphite projects with approved mining leases in the region.

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

Competent Person Statements

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.

The information in this document that relates to Ore Reserves is based on information compiled and reviewed by Mr Ben Brown, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Brown is an employee of Optima Consulting & Contracting Pty Ltd and a consultant to the Company. Mr Brown has sufficient experience relevant to the type of deposit under consideration 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 Brown consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

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Disclaimer

The information in this document that relates to Mineral Resources has been extracted from Renascor's ASX announcements dated 18 August 2022. Renascor has commissioned a Competent Person to prepare a revised Mineral Resources estimate following additional drilling to the north of the existing Mineral Resource. See Renascor ASX announcement dated 7 July 2023. Except as referenced above, Renascor confirms that is not aware of any new information or data that materially affects the data included in the original market announcements referenced above and all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changes. Renascor confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.

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.

[1] See Figure 1 and Tables 3 and 4.
[2] Renascor's previous Ore Reserve statement from July 2020 estimated Proven Reserves as 15.8Mt at 8.4% TGC for 1.3Mt of contained graphite and Total Reserves as 51.5M at 7.4% TGC for 3.8Mt of contained graphite. See Renascor ASX announcement dated 21 July 2020.
[3] See Renascor ASX announcement dated 8 August 2023.
[4] See Figure 1 and Tables 3 and 4.
[5] See Renascor ASX announcement dated 8 August 2023.
[6] Columns may not total exactly due to rounding.
[7] Renascor has commissioned a Competent Person to prepare a revised Mineral Resources estimate following additional drilling to the north of the current Mineral Resource. See Renascor ASX announcement dated 7 July 2023.
[8] Columns may not total exactly due to rounding.
[9] 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.
[10] Grades are reported at TGC, except for Molo, Matawinie, Lac Guéret, Lola and Graphite Creek, which report carbon.
[11] 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.

[12] Grades are reported at TGC, except for Molo, Matawinie, and Lola, which report carbon.
[13] 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.
[14] There is a low level of geological confidence associated with Inferred Mineral Resources, and there is no certainty that further exploration work will result in the upgrading of an Inferred Resource to an Indicated Resource or that a portion of the production target that includes Inferred Resources will be realised.

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Appendix 1

JORC Table 1

Section 1 Sampling Techniques and Data

SECTION 1: SAMPLING TECHNIQUES AND DATA (criteria in this section apply to all succeeding sections)		
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.*	• All drilling and sampling was undertaken in an industry standard manner. HQ3 size Diamond Drill core was collected in standard core trays. DD drill core was logged by the onsite geologist. • Duplicate drill samples represent 4% of total samples collected i.e., one duplicate for every 25 samples. • Standards are inserted every 40 samples. • Independent contractor cuts ¼ core samples for submission to laboratory. • The independent laboratory pulverises the entire sample for analysis as described below. The independent laboratory then takes the samples which are dried, split, crushed and pulverized prior to analysis as described below. • Samples are a standard 1 metre unless lithology or visual grade changes require shorter or longer intervals. Minimum sample size is 0.3 metre and longest 1.2 metres. Sample sizes are considered appropriate for the material sampled. • The samples are considered representative and appropriate for this type of drilling.
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).*	• Diamond drilling was undertaken by a drilling contractor (Tier1 Drilling) using triple tube with a HQ3 drill bit (61mm core diameter). Core was orientated down hole using a Reflex digital orientation system. • No sample bias was observed.
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.*	• Samples are 1 metre unless lithology or visual grade changes require shorter or longer intervals. Minimum sample size is 0.3 metre and maximum size is 1.2 metres. • Industry standard triple tube diamond drilling used to maximize core recovery. • All core drilled is represented in an industry standard core tray that provides a check for sample continuity down hole. • Core recovery averaged 87% for entire holes.

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SECTION 1: SAMPLING TECHNIQUES AND DATA (criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
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.*	• Primary data was captured into spreadsheet format, and subsequently loaded into the Renascor's database. • Core is geologically logged, core loss and recoveries recorded for each drill run and structural and RQD information collected. • Logging is qualitative with all core logged and photographed. • All core is quantitatively logged with core loss and recovery recorded and structural and RQD information recorded.
Sub-sampling 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 sub-sampling stages to maximise representivity of samples.* • *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.*	• HQ3 diameter core is cut in half to preserve the orientation mark. • Graphite intervals are sampled using ¼ HQ3 diameter core. • All samples were marked with unique sequential numbering as a check against sample loss or omission. • Every twenty-five samples a duplicate sample is collected using ¼ HQ3 diameter core and submitted for check analysis. • Standards inserted every 40 samples. • Samples selected by the logging geologist based on visual grade and lithology changes. • Sampling for analysis extended two metres above and below mineralized zones.
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 Total Graphitic Carbon (TGC) analyses and the DDH 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. • Laboratory standards inserted at 1 per 25 samples. • Laboratory blanks inserted at 1 per 90 samples. • Laboratory repeats/duplicates inserted at 1 per 50 samples.

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SECTION 1: SAMPLING TECHNIQUES AND DATA (criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
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.*	• No adjustments have been made to the assay data. • Results are reported on a length weighted basis. • Duplicate drill sampling was undertaken at the time of drilling and inserted at a rate of 4%. • There were no twinned holes. • The field crew collected GPS location data and survey points.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The grid system for the project is Geocentric Datum of Australia (GDA) 94, Zone 53. • All drillhole collars were pegged to the plan collar location using a handheld GPS. These collar coordinates are entered into the drillhole database. • The degree of accuracy of drillhole collar location and RL was estimated to be within a 5m error level. • Diagrams and location table are provided in the report
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.*	• Drilling was initial exploration only, with holes at approximately 50m to 60m spacing on twelve 200m and up to 300m separated sections. • Samples were taken over a 1m interval except where grade or lithology changes required different intervals.
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.* • *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.*	• Interpretation of the relationship between the drilling orientation and the orientation of key mineralised structures indicates that mineralisation is likely to be perpendicular to strike continuity. • The orientation of drilling is not expected to introduce sampling bias.
Sample security	• *The measures taken to ensure sample security.*	• All core was delivered direct to Renascor then via tracked freight consignment to the independent cutting contractor and tracked consignment to laboratory.

SECTION 1: SAMPLING TECHNIQUES AND DATA (criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
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

SECTION 2: REPORTING OF EXPLORATION RESULTS (criteria listed in the preceding section apply also to this section)		
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 (ML) 6495 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 historic exploration over many years, but without any focus on graphite prospectivity. Cameco Ltd, as part of a uranium exploration program, acquired EM 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 mineralization at Siviour is hosted within Meso-Proterozoic metasedimentary rocks sediments of the Hutchison Group. • The graphite mineralization is within a nominally 30 m-thick band of pelitic schist that occurs within a thick calc-silicate sequence.
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*	• Drill hole collar and directional information is reported in Appendix 1.

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SECTION 2: REPORTING OF EXPLORATION RESULTS (criteria listed in the preceding section apply also to this section)		
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 laboratory assay results have been reported using weighted average techniques and a 3% TGC grade cut-off.
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.*	• The drill holes are interpreted to be approximately perpendicular to the strike of mineralisation. • Drilling may not always perpendicular to the dip of mineralisation and true widths are then less than downhole widths. Estimates of true widths will only be possible when all results are received, and final geological interpretations have been completed.
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 drill hole collar locations and appropriate sectional views.*	• See figures in this release.
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.*	• The reporting is balanced. • All drill collar locations are shown in figures and all significant results are provided in this report.
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.* •	• Nothing material to report. • Drilling is currently widely spaced and further details will be reported in future releases when data is available.

SECTION 2: REPORTING OF EXPLORATION RESULTS (criteria listed in the preceding section apply also to this section)		
Criteria	**JORC Code explanation**	**Commentary**
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).*	• Mineral Resource update to follow.

Section 3 Estimation and Reporting of Mineral Resources

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 Resources Limited'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 in-fill 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.

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**JORC Code explanation**	**Commentary**
		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 in the east is partially dislocated by a fault zone although, again from geophysical data, is anticipated to extend further to the east to Siviour East and Paxtons. 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.
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 extends over 2.9 km east-west and 1.6 km north-south. The horizontal width ranges from 550 m within the central area, at the Siviour Prospect, to 125 m south of Buckies. The Mineral Resource has an average thickness of 21 m (range of 0.45 m to 52 m) and the depth to the top of the mineralised horizons ranges from 1 m to 108 m with an average depth of 40 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.*	Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. Drill hole 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.

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**JORC Code explanation**	**Commentary**
	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 drill hole data, and use of reconciliation data if available.*	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 by 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 130 m to 140 m (approximately north-south) by 85 m to 120 m (approximately east-west). Drill hole spacing at Siviour where Measured Resources have been defined is at a nominal spacing of 50 m by 50 m. Inferred mineralisation has been interpreted from an EM anomaly and a line of drilling at Buckies, 900 m along strike to the north. The maximum extrapolation distance is 80 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 was four to seven times the second search, with reduced sample numbers required for estimation.

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**JORC Code explanation**	**Commentary**
		Within the main mineralised horizon, approximately 80% of the blocks were estimated in the first search pass, approximately 15% in the second pass and the remaining blocks (5%) were estimated in the third search pass. In total, approximately 58% of the blocks within the Mineral Resource were estimated in the first search pass, approximately 27% in the second pass and the remaining blocks (15%) 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 by 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 by 10 m on 2 m benches. The estimated block model grades were visually validated against the input drill hole data, global statistics on the top-cut and declustered data were compared to the block model estimates and comparisons were carried out against the drill hole data and by northing, easting and elevation slices. The Mineral Resource was previously reported in 2019. There has been an increase in tonnage (of 7%) and a small reduction in the TGC grade (from 7.5% TGC in 2019 to 7.3% TGC in 2022), with an overall increase in contained graphite of 5%. The infill drilling in the west increased tonnage of the Measured Resources (by 7%) and the average grade decreased slightly from 8.8% to 8.6% TGC. The drilling within the west upgraded some of the 2019 Inferred Resources to an Indicated classification. The Indicated tonnage increased by 17% and there was a small decrease in average grade (from 7.2% to 7.1% TGC). This also resulted in a decrease in the Inferred Resource, which was partly offset by the 2022 drilling that extended the resource to the west. 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.

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**JORC Code explanation**	**Commentary**
		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.
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 programme 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).

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**JORC Code explanation**	**Commentary**
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 (ML) 6495 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. 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. 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 2.16 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.

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SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES		
Criteria	**JORC Code explanation**	**Commentary**
		Measured Resources have been defined only within the main mineralised horizon where it has been tested with the 2018 and 2022 drilling on a 50 m by 50 m 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 200 m by 100 m or less and where grade variance is moderate. 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.

Section 4 Estimation and Reporting of Ore Reserves

SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• Measured and Indicated Mineral Resources from the resource model contained in mine designs and schedules as part of the Battery Anode Material Study (BAM Study) and detailed in the Siviour Graphite Project Mining Feasibility Study undertaken in 2023, was converted to Proven and Probable Reserves respectively. • Mineral Resources are reported inclusive of the Ore Reserves.

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person, Ben Brown, visited site in December 2018, and has viewed drilling core.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• Renascor produced a definitive feasibility study (BAM Study) in 2023 that assesses integrating a graphite concentrate mining operation with a downstream processing operation to Purified Spherical Graphite (PSG). • The mine plan includes modifying factors and only economically viable mining blocks with a cut-off grade applied are to be processed as ore and included in the Ore Reserves estimate.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Cut-off grades were estimated for each Metcode (quality of ore) with a marginal cut-off grade applied to determine Ore or waste with the input parameters given in the second table below. Two bins were created LG and ROM with the cut-off grade for ROM set at 7.3% total graphitic carbon (TGC) for all Metcodes based on an iterative approach. Cut-off grade values are summarised in the table below: • Updated costs and revenue were provided from the BAM Study based on the value generated from selling PSG or graphite concentrates. For PSG, the marginal cutoff grade was assessed as could be lowered to 1.1%, with a marginal cut-off for the sale of graphite concentrates assessed as 2.7%. The more conservative cut-off grade of 2.7% was applied in the BAM Study to represent a more conservative approach if an upstream (flake only) concentrate is produced for a period of time instead of the PSG. **Cut-Off (% TGC)** / **Case B All Metcodes** Breakeven: 1.80% Marginal: 2.70% ROM: 7.30%

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Criteria	**JORC Code explanation**	**Commentary**
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Detailed mine design was used to convert Mineral Resources to Ore Reserves contained in the mine designs. • Conventional truck and shovel mining is the selected mining method with drill and blast in all lithologies except for alluvial material which is free dig. This method was selected as the result of a materials handling study which was part of the previously completed pre-feasibility study. • Pit walls were constrained to recommended values based on a Geotechnical assessment by AMC Consultants. Mining assumes that the ground water level is pumped below the bottom level of mining and that pit wall conditions are dry. UCS and metallurgical test data was used to establish drill and blast requirements. • For the Whittle pit limits optimisation, mining dilution was applied as a dilution skin of 1m below and above the blocks flagged as processing plant feed and blended into these blocks. This results in grade dilution factor of round 97% of the block graphite grade. • As part of the dilution process mentioned above, recovery is around 100% of the planned blocks to be mined since mining plans to over-cut into blocks that typically carry grade albeit below the cut-off grade. • No minimum mining widths was necessary since the footwall contact is that of a tabular generally flat lying orebody that does not “pinch out” into narrow peaks and troughs.

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Criteria	**JORC Code explanation**	**Commentary**
		• Inferred Mineral Resources are included in the mining study and make up less than 1% of the processing plant feed in the first 10 years and do not make up greater than 10% of processing plant feed until year 17 of processing and over average 17% (16% inferred + 1% unclassified waste). With a discount rate of 10%, any economic influence is factored away and does not influence NPV of the project. In order to create practical mine designs inferred material is incidentally mined. This inferred material in the professional opinion of OCC could be updated to indicated with as little as 3 RC drill holes to confirm grade and the thickness of mineralisation • The selected mining methods requires the construction of a workshop, wash down bay, crib rooms and offices. Current utilities at the lease boundary are sufficient to support mining associated infrastructure.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The metallurgical process is to crush, grind and float which is common for this style of mineralisation to produce the flake graphite concentrate. The downstream PSG facility has been designed to avoid the use hydrofluoric acid in the process which has significant handling and environmental issues and has been replaced with less environmentally harmful reagents. • The metallurgical process for producing flake graphite concentrate is commonly used in mine sites throughout the world.

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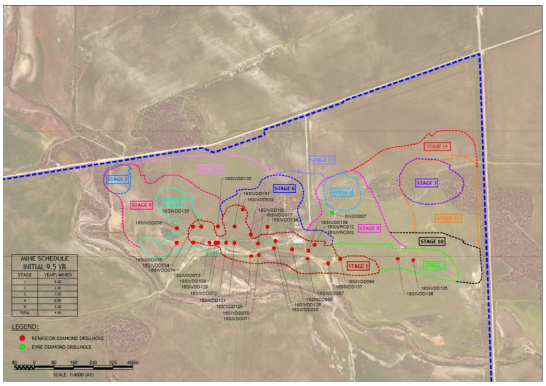
SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
		• A wide range of metallurgical testwork has been conducted on the Siviour Graphite deposit over the past seven years to establish the processing plant design parameters from crushing all the way through to tailings deposition. Bench test work has taken place on diamond core samples on holes with the location of drill hole collars with respect to the final pit design given in the diagram below. This diagram shows test work is representative of the deposit with concentrated test work in zones of the first 10 years of mining. This allowed domaining (Metcode field) of metallurgical properties to be established which is linked to lithology and applied to the resource model. Overall recovery of graphite is flat at around 91% (TGC) with a concentrate grade of 95% (TGC) achieved using laboratory simulation of the processing plant configuration conducted in Australia. This enabled a flat recovery of 91% TGC to be used with a constant concentrate grade of 95% TGC which was achieved through a range of varying head grades.  • No deleterious elements are present in the graphite concentrate. • Several pilot test work programmes were conducted in China and Australia on RC chips and auger samples in hole locations shown in the diagram below. These holes cover most of the mineralisation and hence are representative of the orebody, in particular, the orebody mined for the BAM Study.

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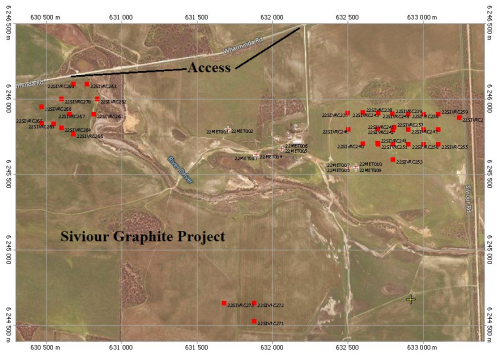
Criteria	**JORC Code explanation**	**Commentary**
		 • Specification test work by independent, expert graphite consultants in Germany and China concluded the graphite concentrate produced was of good quality and suitable for a wide range of graphite applications, including that for PSG, and other value added products and has no characteristics which would exclude its use from current applications of graphite.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Environmental assessment for the Siviour Graphite Project's was conducted as part of the compliance and permitting process to establish baseline characteristics and the Project's impact on the environment. This activity supported Mineral Lease (ML) 6495 being granted by the Department of Energy and Mining (DEM) of South Australia. In addition, details of the existing cultural, social, economic and natural environment were provided, with all information designed to assist Government agencies and other stakeholders to make an informed assessment about the risks and benefits associated with the Project. The company has adopted an integrated planning approach, feeding results from stakeholder engagement and environmental studies into the Project's development to minimise impact on the surrounding environment and community, as well as reducing the regulatory risk. • Studies to date have not indicated any material impediments to the proposed development of the Project.

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Criteria	**JORC Code explanation**	**Commentary**
		• The second stage of the Project's permitting process is the approval of a Program for Environment Protection and Rehabilitation (PEPR) which is required after granting of the ML to enable operations to commence. The PEPR approval was given by the South Australian Government (DEM) in the fourth quarter 2022. • Proposed in the PEPR and designed in the BAM Study is an integrated waste landform (IWL) which contains mined overburden, potentially acid forming (PAF) material cells and tailings. • Waste rock waste is characterised firstly by lithology and then geochemically tested for acid forming potential. Metcode 0 material was found to have an acid neutralising potential 900 times greater than Metcode 1-3's acid forming potential (estimated and currently being tested) or negative 900kg H2SO4/tonne versus positive 1kg H2SO4/tonne respectively. PAF cells in the IWL are currently designed for the worst case scenario with further long term test work to understand the risk of the PAF material being conducted with the expectation that the amount of PAF cells can be significantly reduced.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• While the project has power and water supplied to the current mining lease boundary, the capacity of these services is currently insufficient to sustain the mining operations, and will need to be upgraded to be suitable to sustain construction, commissioning and operations. • It is likely that accommodation facilities are required to be constructed for the project. • Eyre Peninsula's main north-south highway, the Lincoln Highway, passes 8 km to the east of the project area which means that the project is easily accessed and provides a logistics gateway to Adelaide, major regional centres and international ports for exporting graphite or PSG from Renascor's planned PSG facility in Bolivar, South Australia. • The project site is close to the coastline with only a 12km pipeline required to connect the mine site to the proposed desalination plant.

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Experienced contractors and consultants provided capital costs from vendor quotes, actual costs from similar projects and cost databases. • Operating costs were built up from first principles, from service providers and benchmarked where possible for validation. These services were provided in-house, by experienced contractors and consultants. • There are no deleterious elements expected to be carried into the graphite product. • Major capital items have short lead times limiting exposure to exchange rate fluctuations for components sourced internationally. • Transportation charges were derived by freight logistics services and port services provider quotes. • Spot prices are used for graphite prices with treatment and refining charges not applicable. • A state government mine gate sales revenue royalty of 2% for the first five years and 3.5% then after has been applied in financial modelling. A mine gate sales revenue royalty of 1% royalty payable to Milton Park Trust has also been applied in financial modelling.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Revenue is calculated as the PSG product price less royalties, less fixed and variable costs to produce and transport the product to the point of sale. Process plant feed from the mining schedule provided a head grade that was modelled through the processing plant and PSG facility and used to model costs and revenue over the life of the project. • Forecast 2024 PSG baseline price of US$4,150 was used to base revenue and was provided by Fastmarkets.

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Criteria	**JORC Code explanation**	**Commentary**
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Benchmark Mineral Intelligence and Fastmarkets have provided reports on the graphite market with forecasting for natural and synthetic graphite. Renascor's strategy is to obtain direct exposure to the high growth lithium-ion battery (LIB) by producing purified spherical graphite (PSG) from the integrated Battery Anode Material (BAM) Project (the Project). By producing PSG, rather than graphite concentrate only, Renascor expects to realise a greater profit margin when compared to the production and sale of flake graphite concentrate only. Renascor also considers that it can develop a strong marketing position as a reliable and competitive ex-China producer of PSG to the lithium-ion sector and therefore obtain favourable long-term offtake terms. Hence, Renascor's primary product target is PSG, with flake graphite concentrate production limited to periods when the downstream facility is unavailable. The primary materials traded within the graphite market are flake concentrate, PSG and coated spherical purified graphite (CSPG). Graphite products are mainly used in the industrial and battery markets, with most of the increase in graphite demand coming from the demand for graphite anodes found in lithium-ion batteries within electric vehicles (EVs), which is currently largely geographically centred in north-east Asia. • Supply: The Chinese market remains the sole material supplier of PSG, with the ROW yet to develop new projects. PSG supply is expected to grow from 380,000 tonnes supply capacity in 2022 to 1.2 million tonnes in 2030 (Benchmark).

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
		• Demand: During 2022, demand for graphite products from the industrial sector weakened while demand for downstream products from the EV and anode sectors continued to grow resulting in a net increase in demand for PSG. EV production figures reached 755,000 month ending September 2022, up 9.3% month-on-month (m-o-m), within China while global EV demand exceeded 1,040,000 vehicles in September 2022, representing a 19.8% m-o-m growth (Benchmark). Total anode demand in the global pipeline has risen to 20,268,000 tonnes (Benchmark) as market participants attempt to grow in line with downstream demand from the EV industry. • Pricing: Long term PSG pricing was sourced from Fastmarkets for the Renascor DFS. Pricing was received in terms of FOB China and CIF Europe with a base, low, and high case, with the base case pricing FOB China, adopted for the DFS. The base and high price cases are forecast to rise compared to 2022 while the low scenario remains roughly flat. The difference between the pricing scenarios accounts for different levels of macro-economic strength, net-zero goals, and EV purchases. The price reporting sourced from Fastmarkets refers to a 15 µm product, which is roughly equivalent to the size of the majority of UPSG that Renascor intends to produce. In addition, Renascor plans to produce smaller-sized PSG. Whilst such smaller sized PSG has traditionally sold a premium to standard (15 µm) sized PSG, for purposes of the DFS, Renascor has adopted the standard (15 µm) price for all PSG sized products. • Using PSG prices as opposed to flake prices in previous studies would mean the cut-off grade can be lowered. Test work at lower head grades could provide a further opportunity to lower the cut-off grade.

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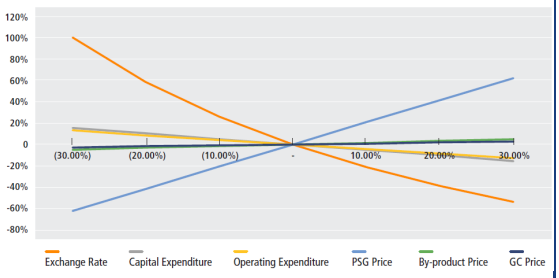
Criteria	**JORC Code explanation**	**Commentary**
		• Specification test work by independent, expert graphite consultants in Germany and China concluded the graphite concentrate produced was of good quality and suitable for a wide range of graphite applications, including that for PSG, and other value-added products and has no characteristics which would exclude its use from current applications of graphite. Samples have also been provided from PSG customers (i.e., battery anode manufacturers) with positive feedback received.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The project was economically evaluated (NPV) under the following price, exchange rate and inflation assumptions which are derived from general market consensus on long term prices: ○ 10% discount rate. ○ Graphite pricing (UPSG, Graphite Concentrate) as supplied by Fastmarkets ○ Exchange rate of $0.70 AUD:USD exchange rate ○ Inflation rate of 0% ○ Tax rate of 30% • A sensitivity analysis was completed on PSG and Graphite Concentrate pricing to assess the impact of a range of key parameters to the NPV using a 10% discount rate, after-tax, and expressed in Australian Dollars. These parameters include operating expenditure, capital expenditure, Australian/US exchange rate and fines by-product price. The results are provided in the graph below: 

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Landowner compensation and access agreements have been completed with the key landowners. Social licence to operate is part of the PEPR process that was approved in 2022. Renascor has a Community and Stakeholder Plan for the ongoing engagement of project stakeholders.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• No significant material naturally occurring risks have been identified either physically or chemically. • To date, Renascor has concluded several memoranda of understanding for non-binding offtake agreements. Please see Renascor's website and ASX releases for the most up to date information on material legal agreements. • Ausmin Development Pty Ltd is the authorised holder of ML 6495 on which the Ore Reserves are located. Ausmin Development Pty Ltd is a fully owned subsidiary of Renascor Resources Ltd. • The project is fully permitted to start mining with both the Mining Lease and PEPR approved by (DEM) in South Australia.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Measured Resources inside the mine plan were converted to Proven Ore Reserves while Indicated Resources inside the mine plan were converted to Probable Ore Reserves. Direct conversion was applied due to the feasibility study level of confidence of ±15% with no technical reason to disqualify the contained Mineral Resources from conversion to Ore Reserves. • The result appropriately reflects the Competent Person's view of the deposit, which is a flat lying, tabular, gently folding, thick deposit suitable for small to medium scale mining.

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SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
		• No Probable Ore Reserves have been derived from Measured Mineral Resources.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• An independent mining consultant conducted a review of the Ore Reserve estimates between July and November 2019. Another peer review was conducted in 2022.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *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. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Following the completion of the BAM Study, the competent person considers that there is a high degree of confidence in the Ore Reserves with a relative accuracy of ±15%.

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Appendix 2

Peer Comparison Data

Project name	Code	Company	Country	Report name	Date	Link to announcement
Ancuabe	TON	Triton Minerals Ltd	Mozambique	Triton Re-commits to Large Scale Development of Ancuabe Project – Amended	2 December 2022	https://announcements.asx.com.au/asxpdf/20221202/pdf/45jdpsf6jfjxfc.pdf
Balama	SYR	Syrah Resources Ltd	Mozambique	Updated Balama Ore Reserve and Mineral Resource	30 March 2023	https://announcements.asx.com.au/asxpdf/20230330/pdf/45n5fvwbmmc0r4.pdf
Balama Central	TGR	Tirupati Graphite Plc	Mozambique	Feasibility Study shows Balama graphite project will generate outstanding financial returns for capex of just US$70m	4 December 2018	https://announcements.asx.com.au/asxpdf/20181212/pdf/4414q2j1vlb40b.pdf
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
Mahenge	BKT	Black Rock Mining Ltd	Tanzania	Black Rock Completes Front End Engineering Design, Reconfirming Mahenge as Tier 1 scale project with	10 October 2022	https://announcements.asx.com.au/asxpdf/20221010/pdf/45g2sy7wny8078.pdf

				compelling projected returns		
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
Montepuez	TGR	Tirupati Graphite Plc	Mozambique	Increase in Montepuez Graphite Reserve	12 December 2018	https://announcements.asx.com.au/asxpdf/20181204/pdf/440xs34zx753tm.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

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