RENASCOR RESOURCES

ASX Release

April 30, 2019

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RNU

Developing Australia's Largest Graphite Deposit



# High-Grade Measured Resource Defined in Upgraded JORC Mineral Resource Estimate

- Independent mining consultants Optiro have upgraded the JORC Mineral Resource estimate for the Siviour Graphite Project, following Renascor's infill drill program completed in 4Q 2018 (see Renascor ASX announcement dated 7 December 2018).
- The inclusion of the recent drilling, which was conducted primarily to improve the confidence in the Siviour Indicated Resource, has resulted in a Measured Resource estimate of 15.8Mt @ 8.8% TGC for approximately 1.4Mt of contained graphite.
- The total (Measured, Indicated and Inferred) Siviour Mineral Resource estimate now consists of 87.4Mt @ 7.5% TGC for 6.6Mt of contained resource (with 64% classified as Measured or Indicated).
- The upgraded Mineral Resource estimate provides sufficient confidence in the size and quality of the Siviour resource to complete the Siviour Definitive Feasibility Study (DFS), with results from the DFS expected near the end of the current quarter.

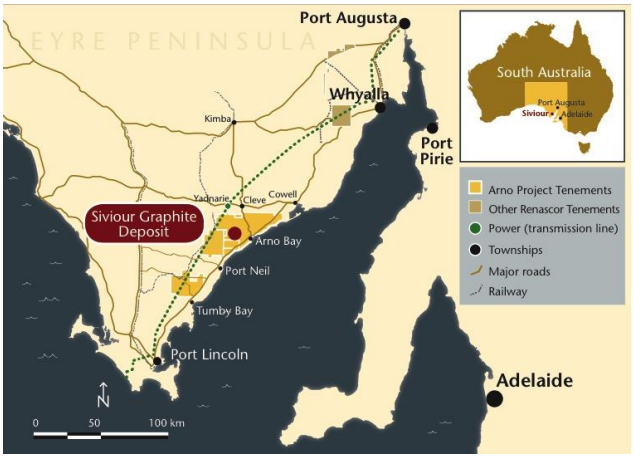


**Figure 1. Siviour Graphite Project**

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

| Resource Category | Tonnes of mineralisation (Mt) | Total Graphitic Carbon (TGC) | Tonnes of contained graphite (Mt) |
|---|---|---|---|
| Measured | 15.8 | 8.8% | 1.4 |
| Indicated | 39.5 | 7.2% | 2.8 |
| Inferred | 32.1 | 7.2% | 2.6 |
| **Total** | **87.4** | **7.5%** | **6.6** |

Note: Cut-off grade of 2.3% total graphitic carbon

**Table 1. Siviour Mineral Resource estimate as of 29 April 2019**

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

*"This resource upgrade is a key milestone for Siviour as it has confirmed to a higher degree of confidence the continuity of widespread, high-grade graphite at Siviour.*

*We are particularly pleased with both the grade and scale of the maiden Measured Resource estimate, as this will assist in further optimisiation of the mining schedule in our Definitive Feasibility Study and move Renascor one step closer to achieving our goal of becoming a long-term producer of high-quality graphite from Australia."*

### Ongoing work

Renascor is continuing the development of the Siviour Graphite Deposit with multiple concurrent work programs underway, including:

- Completion of geotechnical, mining, hydrogeological, tailings, infrastructure and marketing studies, variability and optimisation mineral process testing and detailed process plant engineering for the Siviour DFS.
- Programs focusing on optimising the results of the Spherical Prefeasibility Study (see Renascor ASX announcement dated 21 February 2019), including testing alternative milling and purification technologies and testing of Siviour spherical graphite in lithium-ion battery anodes.
- The commencement of due diligence activities following in principle project finance support from Atradius on behalf of the Dutch State under the Dutch export credit guarantee scheme. See Renascor ASX announcement dated 10 April 2019.
- Continued offtake negotiations focused on graphite concentrates expected to be produced from the first stage of production from Siviour.

### JORC Table 1 Summary

A summary of attached JORC Table 1 (see Appendix 2) is provided below with respect to the Mineral Resources pursuant to the requirements of ASX listing rule 5.8.1.

- Geology – interpretation was undertaken based on a combination of the observed geology and analyses of graphite mineralisation within Mesoproterozoic sedimentary rocks of the Hutchison Group.
- Drilling method – the drilling method used is reverse circulation (RC) using both 120mm and 140mm face sampling hammers and Triple Tube HQ3 diamond core holes.
- Resource Classification – 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. The results

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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 infill drilling (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. Areas with geological continuity of the graphite mineralisation and broader drill spacing are classified as Inferred.

- Sample analysis method – all samples were sent to Bureau Veritas laboratory in Adelaide for preparation and for Total Graphitic Carbon (TGC) analyses. A portion of the sample was dissolved in weak acid to liberate carbonate carbon. The residue was then dried at 420°C driving off organic carbon and then analysed by its sulphur-carbon analyser to give TGC. Duplicate analysis and analysis of Certified Reference Material (standards) was completed and no issues identified with sampling reliability.
- Estimation methodology – resources estimation was undertaken using ordinary kriging. The search ellipse was oriented within the plane of mineralisation.
- Cut-off parameters – the Mineral Resource is reported above a 2.3% TGC cut-off grade.
- Sampling – one-metre drill chip samples were collected throughout the RC drill programme in sequentially numbered bags. Core samples from diamond drill holes were collected based on geology, varying in thickness from 0.05m to 3.6m intervals. Approximately 87% 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.
- Metallurgical factors - no metallurgical assumptions have been built into the resource models. Data from mineralogy and preliminary metallurgical test work has 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.

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***Bibliography***

1. Renascor ASX announcement dated 7 December 2018, "Final DFS Drill Assay Results"
2. Renascor ASX announcement dated 21 February 2019, "Spherical PFS Demonstrates Increased Returns for Siviour"
3. Renascor ASX announcement dated 10 April 2019, "In Principle Project Finance Support from Dutch ECA"

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.

**Competent Person's 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 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's Statement – Exploration Results**

*The results reported herein, insofar as they relate to exploration activities and exploration results, are based on information provided to and reviewed by Mr G.W. McConachy (Fellow of the Australasian Institute of Mining and Metallurgy) who 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 report may contain forward-looking statements. Any forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. It should be noted that a number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward-looking statements.*

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## Appendix 1

## Siviour Mineral Resource Estimate

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

| Resource Category | Tonnes of mineralisation (Mt) | Total Graphitic Carbon (TGC) | Tonnes of contained graphite (Mt) |
|---|---|---|---|
| Measured | 15.8 | 8.8% | 1.4 |
| Indicated | 39.5 | 7.2% | 2.8 |
| Inferred | 32.1 | 7.2% | 2.6 |
| **Total** | **87.4** | **7.5%** | **6.6** |

Note: Cut-off grade of 2.3% total graphitic carbon

**Table 1. Siviour Mineral Resource estimate as of 29 April 2019**

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

### 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 contained tonnes of graphite.

| Cut-off grade TGC % | Million Tonnes | Grade TGC % | Tonnes of contained graphite (Mt) |
|---|---|---|---|
| 2.0 | 94.7 | 7.1 | 6.7 |
| 2.3 | 87.4 | 7.5 | 6.6 |
| 2.5 | 84.8 | 7.6 | 6.4 |
| 3.0 | 81.7 | 7.8 | 6.4 |
| 4.0 | 79.1 | 8.0 | 6.3 |
| 5.0 | 73.2 | 8.2 | 6.0 |
| 6.0 | 65.6 | 8.6 | 5.6 |
| 7.0 | 55.2 | 8.9 | 4.9 |
| 8.0 | 39.5 | 9.5 | 3.8 |

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

The Siviour Mineral Resource is based on 187 reverse circulation drill holes for a total of 10,135m (of which 23 drillholes were started with aircore drilling before switching to reverse circulation drilling at the top of the the mineralised horizon) and 31 diamond holes totalling 1,635.55m.

**Appendix 2**

**JORC Table 1**

The table below summaries 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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | **1. Reverse circulation drilling**<br>• RC drill samples were collected at one-metre intervals.<br>• 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.<br>• Duplicate and standards analysis were completed.<br>• All samples were sent to Bureau Veritas laboratory in Adelaide for preparation and for total graphitic carbon (TGC) analyses.<br>• All samples were pulverised using an LM5 mill, with nominally 90% passing 75µm.<br>• Sampling was guided by Renascor Resources Limited's protocols and QAQC procedures.<br>**2. Diamond drilling**<br>• Drill samples were collected based on geology, varying in thickness from 0.05 m to 3.6 m intervals.<br>• Core samples were quarter split Triple Tube HQ3 core and sent for laboratory geochemical analysis at Bureau Veritas, South Australia.<br>• Duplicate samples in the 2018 programme were collected after each 25 samples and standards were inserted into the sample stream at the end of every hole.<br>• Sampling was guided by Renascor Resources Limited's protocols and 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, RC drilling by Coughlan Drilling used 140 mm face sampling hammers, except for 24 holes drilled by McLeod Drilling using 85mm diameter hammer. For 2018, RC drilling used 4 3/4" (120mm) 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.<br>• Diamond drilling was undertaken by a drilling contractor (Coughlan Drilling in 2016 and MJ Drilling in 2018) with a using triple tube with a HQ3 drill bit (61mm core diameter). Core was orientated down hole using a Reflex digital orientation system. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • One-metre drill chip samples, weighing approximately 3 kg were collected throughout the RC drill programmes 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.<br>• Recovery was assessed by the site geologist and deemed acceptable for resource estimation, given the friable mature of the mineralisation.<br>• Every interval drilled is represented in an industry standard chip tray that provides a check for sample continuity down hole.<br>• Diamond core recovery was routinely recorded and within the reported mineralised zones. The core recovery averaged 88% for entire holes. |
| ***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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *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.<br>• Primary data was captured into spreadsheet format by the supervising geologist, and subsequently loaded into the Renascor Resources Limited's database.<br>• No adjustments have been made to any assay data.<br>• The density data collected by Renascor used the Archimedes Principle water displacement device of core samples on metre intervals down the hole. Check analysis were made by Bureau Veritas, South Australia.<br>• Core was orientated using the Reflex orientation tool, marked into 1 m intervals, core recovery and geotechnical data – Rock Quality Designation were recorded.<br>• Core was photographed, both dry and wet. |
| ***Sub-sampling techniques and sample preparation*** | • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | **1. RC drillholes**<br>• All samples were marked with unique sequential numbering as a check against sample loss or omission.<br>• At the Bureau Veritas laboratory sample preparation involved the original sample being dried at 105° for up to 24 hours on submission to laboratory.<br>• Sample is split to less than 3 kg through linear splitter and excess retained.<br>• Pulverising was completed using LM5, with nominally 90% passing 75 µm in preparation for analysis using the Bureau Veritas network.<br>**2. Diamond drillholes**<br>• HQ3 diameter core is cut in half to preserve the orientation mark.<br>• Graphite intervals are sampled using ¼ HQ3 |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | diameter core.<br>• Every twenty-five samples a duplicate sample is collected using ¼ HQ3 diameter core and submitted for check analysis.<br>• All the samples are marked with unique sequential numbering as a check against sample loss or omission.<br>• 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.*<br>• *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.<br>• 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 Total Graphitic Carbon (TGC).<br>• Bureau Veritas Minerals has adopted the ISO 9001 Quality Management Systems. All Bureau Veritas laboratories work to documented procedures in accordance with this standard.<br>• QAQC procedures for Renascor's 2017 and 2018 drilling programmes included the insertion of standard (certified reference material) samples and field duplicates at the drill site.<br>• No QAQC data was included with the 2014 drilling programme (4% of the total assay data). For the 2016 drilling programme (30% of the total assay data) standards were submitted<br>• QAQC procedures for Renascor's 2017 and 2018 drilling programmes included the insertion of standard (certified reference material) samples and field duplicates at the drill site.<br>• For the 2018 drilling programme blank samples were inserted at the drill site and pulp duplicates were re-submitted to the primary laboratory (Bureau Veritas).<br>• 52 samples that were analysed by Bureau Veritas were also analysed by ALS.<br>• Analysis of the standard samples indicates an acceptable level of accuracy. Analysis of the blank samples indicates low levels of contamination and/or sample mix-ups. The 2017 and 2018 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. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • Primary data was captured into spreadsheet format by the supervising geologist, and subsequently loaded into the Renascor Resources Limited's database.<br>• 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.<br>• No adjustments have been applied to the results. |
| ***Location of data points*** | • *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • All drillholes were pegged using a hand-held GPS. Upon completion, all 2014, 2016 and 2017 RC and DD hole collar locations were picked up using a Trimble DGPS.<br>• The 2018 drillholes were surveyed by a licenced surveyor.<br>• The collar coordinates were entered into the drillhole database.<br>• The degree of accuracy of drillhole collar location and RL is estimated to be within 0.1 m for DGPS and 5 m error level for the hand-held GPS.<br>• 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.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • The drillholes are on a nominal spacing of approximately 50 m by 50 m within the central and southern area of the deposit. Elsewhere the drillholes are on a spacing of 200 to 500 m east-west and are generally 200 m to 400 m north-south with the drillholes at Buckies located 900 m north of the main area of drilling.<br>• Geological interpretation and mineralisation continuity analysis indicates that data spacing is sufficient for definition of a Mineral Resource.<br>• 87% of the samples were taken over a 1 m interval of 1 m.<br>• Diamond drill core sampling was based on geological boundaries with a general maximum limit of 1 m thickness and a minimum of 0.05 m thickness for assay samples. |
| ***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.*<br>• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have* | • 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.<br>• The orientation of drilling is not expected to introduce sampling bias. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *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.<br>• 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.*<br>• *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 (EL5618), held by Ausmin Development Pty Ltd (Ausmin). Renascor, through its wholly-owned subsidiary Eyre Peninsula Minerals Pty Ltd (EPM), acquired 100% of Ausmin Development Pty Ltd (Ausmin) and its tenements in 2018.<br>• The tenements are in good standing.<br>• 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.<br>• During 2014, Eyre Peninsula Minerals Pty Ltd 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 sediments of the Hutchison Group.<br>• The graphite mineralisation 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:* | • Exploration results are not being reported for the Mineral Resources area. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • easting and northing of the drillhole collar<br>• elevation or RL (elevation above sea level in metres) of the drillhole collar<br>• dip and azimuth of the hole<br>• down hole length and interception depth<br>• 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.<br>• 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.*<br>• *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.<br>• 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.* | • 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. |

| 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).* | • Additional drilling may be undertaken to follow-up EM anomalies within areas adjacent to the Siviour deposit. |

*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.*<br>• *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.<br>• Additional data validation, by 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.<br>• Mrs C Standing 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.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • Confidence in the geological interpretation of the deposit is moderate. 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.<br>• Mineralisation hosted within a sequence of micro-gneiss, metasedimentary rocks and schists.<br>• 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.<br>• 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.<br>• There are no alternative detailed interpretations |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | of geology.<br>• 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. |
| ***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 2.6 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.<br>• The Mineral Resource has an average thickness of 22 m (range of 0.45 m to 55 m) and the depth to the top of the mineralised horizon ranges from 4 m to 122 m with an average depth of 43 m.<br>• 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.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>• *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.* | • Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software.<br>• 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.<br>• 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.<br>• Sample data was composited to a 1 m downhole length.<br>• 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.<br>• No assumptions have been made regarding recovery of by-products.<br>• The Mineral Resource was estimated in March 2016, in October 2016 and in March 2017. Classification and validation of the current model against this is consistent with the 2018 infill drilling.<br>• Grade estimation was into parent blocks of 25 mE by 25 mN on 2 m benches. Block size was |

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| | • *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.* | selected based on kriging neighbourhood analysis.<br>• TGC mineralisation continuity was interpreted from variogram analyses to have a horizontal range of 160 m (north-south) by 115 m to 130 m (east-west).<br>• Drillhole spacing at Siviour where Measured Resources have been defined is at a nominal spacing of 50 m by 50 m.<br>• Inferred mineralisation has been interpreted from an EM anomaly and a line of drilling at Buckies, 900 m along strike to the north.<br>• The maximum extrapolation distance is 50 m along strike and 70 m across strike.<br>• 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.<br>• 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 six times the second search, with reduced sample numbers required for estimation.<br>• Within the main mineralised horizon, approximately 82% of the blocks were estimated in the first search pass, approximately 12% in the second pass and the remaining blocks (6%) were estimated in the third search pass. In total, approximately 53% of the blocks within the Mineral Resource were estimated in the first search pass, approximately 22% in the second pass and the remaining blocks (25%) were estimated in the third search pass.<br>• 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.<br>• Inverse distance squared was used to estimate S, Ca, Al, Mg, Na, K, and Fe. The variables were estimated independently. The correlation coefficients for all variables (except Ca and Mg) are poor. The estimation process was controlled by the lithology and for S a hard boundary was used at the base of the oxidation<br>• The estimated block model grades were visually validated against the input drillhole data, global statistics on the top-cut and declustered data |

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| | | were compared to the block model estimates and comparisons were carried out against the drillhole data and by northing, easting and elevation slices.<br>• 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.<br>• Moisture content has not been tested. |
| ***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.<br>• 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.<br>• 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.<br>• The results from metallurgical testwork have been considered for Mineral Resource classification.<br>• 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.<br>• Metallurgical testwork results demonstrate the ability to produce concentrates with conventional metallurgy techniques that result in a marketable graphite product.<br>• 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. |
| ***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* | • No assumptions have been made regarding waste and process residue.<br>• Environmental studies have been undertaken for the Project's environmental approval process with Mineral Lease (ML) 6495 granted |

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| | *for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.* | by South Australian Minister for Energy and Mining 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.*<br>• *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.*<br>• *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.<br>• 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.<br>• 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.<br>• 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.<br>• 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.*<br>• *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).*<br>• *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.<br>• In Optiro's opinion there are reasonable prospects for eventual economic extraction.<br>• Measured Resources have been defined only within the main mineralised horizon where it has been tested with the 2018 infill drilling (50 m by 50 m spacing) and has high confidence in the geological interpretation and higher estimation quality. |

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| | | • 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.<br>• Inferred Mineral Resources have been defined in areas where extension of mineralisation is supported by drilling, geology and interpretation of geophysical data.<br>• 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 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.*<br>• *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.<br>• The confidence levels reflect production volumes on an annual basis. |