

#### ASX Release

May 3, 2019

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### Developing Australia's Largest Graphite Deposit



## Optimised Development Plan for the Siviour Graphite Project

- Renascor significantly expands its stage-one production plan following in principle support from the Dutch export credit agency (**ECA**), Atradius (see Renascor ASX announcement dated 10 April 2019).
- Up to approximately 60% of projected capital expenditure for stage-one of the optimised development plan is expected to qualify for Dutch ECA cover.
- This Optimised Development Plan increases the production profile of the stage-one processing capacity described in the Siviour Prefeasibility Study (**PFS**) by approximately four times. It also provides for the construction of a similar-sized processing plant in stage-two.
- This two-staged approach, which underpins Renascor's project finance strategy, minimises upfront capital requirements by funding the stage-two plant through projected cashflow from stage-one, while still maintaining low projected operating costs.
- To permit an evaluation of the updated development as part of Renascor's on-going project finance and offtake negotiations, Renascor presents in this announcement an overview of the Optimised Development Plan, assessed to scoping study level standards.
- Renascor is concurrently completing a Definitive Feasibility Study (**DFS**) based on the Optimised Development Plan. The schedule for the DFS has been updated to permit a pre-completion review as part of ongoing financial due diligence, with results from the DFS expected to be available in July.

### Scoping Study Parameters – Cautionary Statements

*Consideration of the optimised development plan discussed herein (**Optimised Development Plan**) has been undertaken to determine the potential viability of a staged mine and graphite production plant constructed adjacent to the Siviour Graphite Deposit and to reach a decision to complete a more definitive feasibility study on this revised approach.*

*The Optimised Development Plan is a preliminary technical and economic study of the potential viability of a revised, staged development of the Siviour Graphite Deposit. It is based on Ore Reserves estimated in the Siviour Prefeasibility Study (**PFS**) and builds on mine design and engineering assessments of both single large scale and staged mining operations described in the PFS. The operating parameters of the Optimised Development Plan differ materially from the plan and assessments described in the PFS and are based on low level technical and economic assessments. Further evaluation work and appropriate studies are required before Renascor will be in a position to provide reliable estimates of cost and rates of return or to provide any assurance of an economic development based on this Optimised Development Plan.*

*The Production Target underpinning financial forecasts included in the Optimised Development Plan includes 25% Measured Resources, 58% Indicated Resources and 17% Inferred Resources.*

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*There is a low level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Resources or that the Production Target itself will be realized. There are no Inferred Resources included in the first 2 years of the processing schedule.*

*The Optimised Development Plan is based on the material assumptions outlined elsewhere in this announcement. These include assumptions about the availability of funding. While Renascor considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Optimised Development Plan will be achieved.*

*To achieve the range of outcomes indicated in the Optimised Development Plan, additional funding will likely be required. Investors should note that there is no certainty that Renascor will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Renascor's existing shares. It is also possible that Renascor could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce Renascor's proportionate ownership of the project.*

*This announcement contains forward-looking statements. Renascor has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement and believes it has reasonable basis to expect it will be able to fund development of the project. However, a number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward-looking statements.*

*Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Optimised Development Plan.*

Renascor Resources Limited (ASX: RNU) (**Renascor**) is pleased to announce that it has adopted an optimised development plan (the **Optimised Development Plan**) for its 100%-owned Siviour Graphite Project in South Australia. The Optimised Development Plan increases the production profile of the stage-one processing capacity described in the Siviour Prefeasibility Study (**PFS**) by approximately four times (See Renascor ASX announcement dated 14 March 2018).

The updated plan, which underpins Renascor's project finance strategy, follows Renascor securing in principle support from Atradius Dutch State Business (**Atradius**), the official Dutch ECA. See Renascor ASX announcement dated 10 April 2019.

Renascor has estimated that up to 60% of the projected total capital expenditure for stage-one is expected to qualify for the Atradius ECA cover. This revised plan is based on a two-stage approach to achieve production of up to 145,000t per annum through the staged construction of two substantially similar-sized processing plants. This two-staged approach builds on the production cases considered in the PFS and attempts to minimise upfront capital requirements by funding the second plant through projected cashflow from the first stage, while still maintaining a low projected operating cost and adopting a procurement strategy focused on high quality equipment to ensure reliability of performance, reduced maintenance expenditures and higher confidence in the production processes.

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To permit an evaluation of the new plan and as part of Renascor's on-going project finance and offtake negotiations, Renascor presents in this announcement a preliminary assessment of the Optimised Development Plan.

Renascor is currently completing work on the DFS, which has adopted the operating parameters used in the Optimised Development Plan. Work on the DFS is advanced, with all major work programs, including resource modelling and mining, tailings, engineering and logistic studies at or near completion. The DFS schedule has been updated to permit a pre-completion review as part of on-going financial due diligence, with results from the DFS expected to be available in July.

A summary of the key results of the Optimised Development Plan is described below in Table 1. Additional information, including material assumptions, are included elsewhere in this announcement. To the extent that the Optimised Development Plan differs from the production cases presented in the PFS, the economic and engineering parameters of the Optimised Development Plan have only been assessed to scoping study level standards and the cautionary statements set out above apply to the summary results presented in this announcement.

Parameter	Stage-one		Stage-two	
	years 1 to 3		years 4 to 40	
	AU\$	US\$	AU\$	US\$
Annual production (graphite concentrate)	83,400t		145,000t (years 4 -10)	
	110,300t (LOM)			
Plant throughput (run of mine ore)	825,000		1,650,000	
Average feed grade (of run of mine ore) (TGC)	11.0%		9.1% (years 4 -10)	
	7.4% (LOM)			
Cash cost per tonne (graphite concentrate)	AU\$477	US\$344	AU\$511 (years 4-10)	US\$367 (years 4-10)
	AU\$526 or US\$379 (LOM)			
Basket sales price	AU\$1,366	US\$984	AU\$1,366	US\$984
Life of mine	40 Years			
Development capital	AU\$108m	US\$78m	AU\$77m	US\$56
Payback period	3.7 years <sup>1</sup>		Not applicable	
NPV <sub>10</sub> (after tax)	AU\$435m or US\$313m			
IRR (after tax)	40%			

**Table 1. Summary of key results of Optimised Development Plan**

<sup>1</sup> Reflects period of time to payback development capital for stage-one as calculated from first production, assuming cashflow from stage-one is not used to pay stage-two development capital.

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Commenting on the Optimised Development Plan, Renascor Managing Director David Christensen stated:

*“The potential to fund up to 60% of the stage-one capital costs on favourable finance terms through a guarantee from Atradius is a major breakthrough.*

*As we continue to advance the development of Siviour through more advanced project finance and offtake negotiations, we are pleased with the potential of the new development plan to attract project financing and create opportunities to deliver stronger returns to shareholders sooner.”*

**Overview of the Optimised Development Plan**

Wave International, an independent resource consulting group, acted as the study manager and supervising engineer of this study. In its capacity as study manager, Wave International oversaw the compilation of the technical study work, preliminary assumptions and conceptual financial models using information provided by Renascor and the specialist consultants noted below, who have consented to the information used in the context in which it appears in this announcement.

Details of consultants who contributed to material components of this study are provided below in Table 2.

Consultant	Scope of Work
Optiro Pty Ltd.	Mineral Resource estimate
Goudie Hall Consulting Pty Ltd.	Metallurgical test work
Optima Consulting and Contracting Pty Ltd	Mining and mine design
Wave International	Process Infrastructure
Groundwater Science Pty Ltd.	Hydrogeology
JBS&G Australia Pty Ltd	Environmental permitting
George Wilby	Logistics
Arup Pty Ltd.	Desalination plant and infrastructure
BurnVoir Corporate Finance Limited	Financial analysis

**Table 2. Consultants contributing to the Optimised Development Plan**

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### Next stage of planned work programs

Renascor is currently undertaking work programs on the DFS, which is based on the production parameters considered in the Optimised Development Plan. The DFS is expected to be made available in July.

Concurrently, Renascor is continuing other work programs related to Siviour Graphite, including:

- 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.

### Bibliography

1. Renascor ASX announcement dated 31 March 2017, "High Purity Coarse Flake Graphite from Metallurgical Tests"
2. Renascor ASX announcement dated 14 March 2018, "Siviour Prefeasibility Study and Maiden Ore Reserve"
3. Renascor ASX announcement dated 31 August 2018, "Successful Locked-Cycle Tests & Bulk Concentrate Production"
4. Renascor ASX announcement dated 16 October 2018, "DFS Drilling Update"
5. Renascor ASX announcement dated 28 November 2018, Breakthrough to Drive Lower Spherical Graphite OPEX"
6. Renascor ASX announcement dated 28 February 2019, "Spherical PFS Demonstrates Increased Returns for Siviour"
7. Renascor ASX announcement dated 8 April 2019, "Mineral Lease Granted for Siviour"
8. Renascor ASX announcement dated 10 April 2019, "In Principle Project Finance Support from Dutch ECA"
9. Renascor ASX announcement dated 30 April 2019, "High-Grade Measured Resource in Upgraded JORC Resource"

Renascor confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Renascor confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

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## Competent Persons Statements

### Mineral Resource

*The information in this document that relates to Mineral Resources is based upon information compiled by Mrs Christine Standing who is a Member of the Australasian Institute of Mining and a Member of the Australian Institute of Geoscientists. 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 (the JORC Code 2012 edition). 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.*

### Exploration Results

*The information in this document that relates to exploration activities and exploration results is based on information compiled and reviewed by Mr G.W. McConachy who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr McConachy is a director of the Company. Mr McConachy has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr McConachy consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.*

### Ore Reserve

*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 and 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.*

### Metallurgical Results

*The information in this document that relates to metallurgical test work results is based on information compiled and reviewed by Mr Simon Hall, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Hall is a consultant to the Company. Mr Hall has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical beneficiation thereof 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 Hall 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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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

### Key Components of Optimised Development Plan

#### 1. Overview of Study

The optimised development plan (the **Optimised Development Plan**) considers the viability of mining and producing natural flake graphite from Renascor's Siviour Graphite Deposit in relation to a revised two-stage development approach.

The Optimised Development Plan builds on the large-scale, 117,000 tonnes per annum production case considered in the Siviour Prefeasibility Study (**PFS**) by staging production through the construction of two substantially identical processing plants, each with an ore through-put capacity of 825,000 tonnes per annum to achieve a substantially similar annual production rate as the large-scale 1,650,000 tonnes per annum ore processing plant considered in the large-scale case from the PFS.

The development scenario of the Optimised Development Plan was adopted after considering multiple mine option plans for Siviour. Based on discussions regarding potential project financing and market requirements, Renascor determined that the revised two-stage production considered in the Optimised Development Plan offered a financeable production scenario by reducing the up-front capital requirement, while still maintaining a low projected operating cost.

Stage-one of the revised two-stage approach of the Optimised Development Plan has received in principle support from the Dutch export credit agency (**ECA**), Atradius Dutch State Business (**Atradius**), the official Dutch ECA. Renascor has estimated that up to approximately 60% of project capital expenditure for the first stage plant projected under the Optimised Development Plan is expected to qualify under the Atradius ECA cover. See Renascor ASX announcement dated 10 April 2019.

Renascor is currently undertaking a Definitive Feasibility Study (**DFS**) assessing the staged production case considered in the Optimised Development Plan, with the DFS expected to be available in July. The Optimised Development Plan includes data from on-going work undertaken on the DFS but as yet, economic and engineering assessment of this option has only been completed to scoping study standards.

As such, the cost estimates for the Optimised Development Plan have been prepared to an accuracy level of +/-35% in accordance with the Australian Institute of Mining and Metallurgy (the **AusIMM**) guidelines<sup>2</sup>.

<sup>2</sup> Ausimm 2012. Cost Estimation Handbook. 2<sup>nd</sup> Edition, Monograph 27. The Australian Institute of Mining and Metallurgy.

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2. Location and ownership

The Siviour Graphite Project is part of Renascor's Arno Graphite Project. The project is located on South Australia's Eyre Peninsula, approximately 15km west of the coastal township Arno Bay, 120km northeast of Port Lincoln and 150km southwest of Whyalla. See Figure 1.

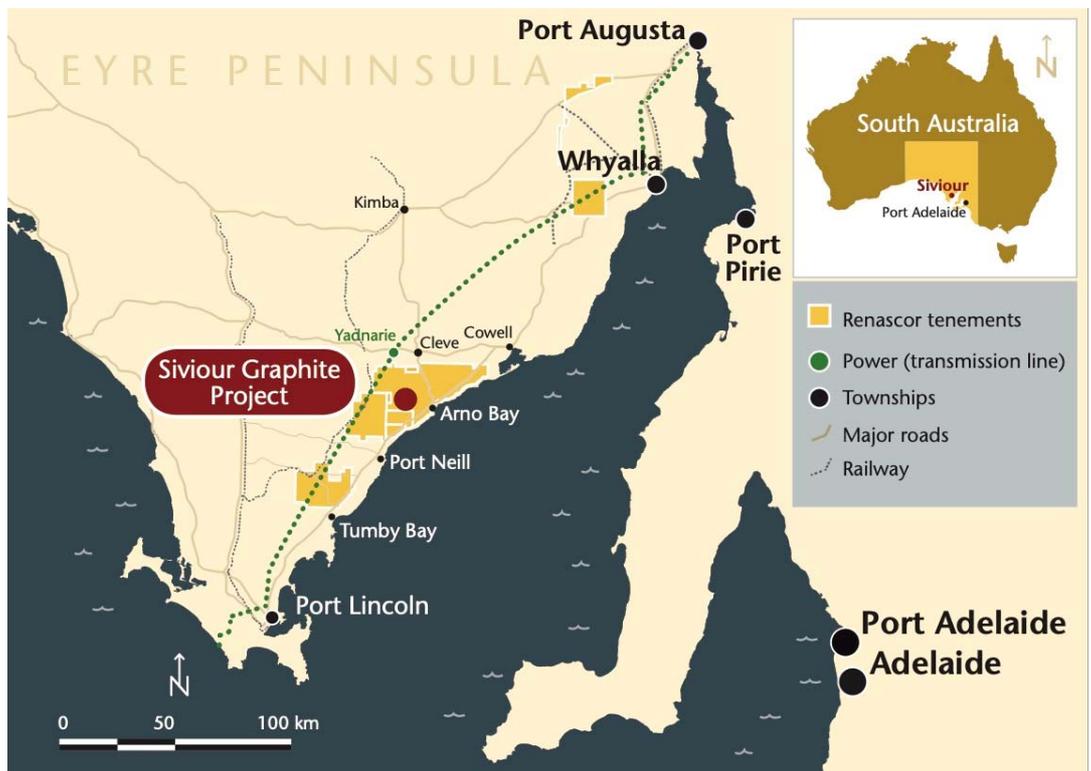


Figure 1. Project location

Renascor, through its wholly-owned subsidiary Ausmin Development Pty Ltd, owns a 100% interest in the Siviour Graphite Project.



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### 3. Mineral Resource and Ore Reserve

The Optimised Development Plan considers the development of a single graphite deposit, the Siviour Graphite Deposit, to produce up to an estimated 145,000t per annum of graphite concentrates through a staged development.

It relies on the Mineral Resource estimate first reported on 30 April 2019 (see Renascor ASX announcement dated 30 April 2019) and presented in Table 1 below; and a Probable Ore Reserve estimate first reported in the PFS in March 2018 (see Renascor ASX announcement dated 14 March 2018) and as set out in Table 2 below.

The Mineral Resource and Probable Ore Reserve estimates were prepared by Competent Persons in accordance with the 2012 JORC Code.

Resource Category	Tonnes of mineralisation (Mt)	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
<b>Total</b>	<b>87.4</b>	<b>7.5%</b>	<b>6.6</b>

Table 1. Siviour Mineral Resource estimate as of 29 April 2019 reported above a cut-off grade of 2.3% TGC

Reserve Category	Tonnes of ore (Mt)	TGC%	Tonnes of contained graphite (Mt)
Proven	-	-	-
Probable	45.2	7.9%	3.6
<b>Total</b>	<b>45.2</b>	<b>7.9%</b>	<b>3.6</b>

Table 2. Siviour Ore Reserve as of 14 March 2018

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**4. Mining and Mine Design**

The geometry of the Siviour Graphite Deposit is generally flat-lying, with thick, flat, gently folding graphite mineralisation sitting from within 5m to 15m of surface. This orientation facilitates a single shallow mining design that can be mined by conventional open pit mining.

The Optimised Development Plan is based on a mining study completed for the DFS for which 14 designed pit stages were identified for mine planning purposes.

For the purposes of the Optimised Development Plan, the mining study reflects the lower mining rate projected during the first stage of operation, before increasing production in stage-two. The mining schedule progressively mines in stages commencing in the south-eastern portion of the orebody of the large-scale production case to permit mining of a higher-grade corridor in the southern portion of the orebody in the mine's first year.

Over the 40-year life of mine, approximately 25% of the ore processed is within the Measured Mineral Resource category, approximately 58% is within the Indicated Mineral Resource category, and approximately 17%<sup>3</sup> is within the Inferred Resources category.

During the first 10 years, approximately 59% of the ore processed is within the Measured Mineral Resource category, approximately 40% is within the Indicated Mineral Resource category, and approximately 1% is within the Inferred Resources category.

<sup>3</sup> 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 determination of Indicated Mineral Resources or that the production target itself will be realised. The potential quantity and grade of an exploration target is conceptual in nature, there has been insufficient exploration to determine a Mineral Resource and there is no certainty that further exploration work will result in the determination of Mineral Resources or that the production target itself will be realised.

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**5. Metallurgy**

The Optimised Development Plan relies on previous metallurgical test work undertaken and reported in relation to the PFS and in subsequent announcements (see Renascor ASX announcements dated 31 March 2017, 31 August 2018 and 16 October 2018) as well as additional work programs undertaken in relation to the DFS.

For the Optimised Development Plan, mineral processing parameters are based on composite samples from 13 diamond-core holes drilled within the Siviour Probable Reserve. The core samples were selected on the basis of being representative of the typical mineralised zone within each core hole and different lithologies. Examination of these samples has demonstrated continuity of the quality of the graphite.

Metallurgical investigations were undertaken to assess the ore's amenability to different grind sizes, beneficiation by froth flotation and regrind and to identify the nature, flake size and occurrence of the graphite at various stages of the flowsheet. Investigations included variability testing based on grade and lithology.

Flowsheet parameters were applied to maximise recovery of all size fractions, including fine flake, which Renascor's test work has identified as amenable to further processing into spherical graphite, which can be sold for premium prices for use in lithium-ion battery anodes. See Renascor ASX announcement dated 28 November 2018. Renascor recently completed a prefeasibility study assessing the viability of producing spherical graphite from Siviour graphite concentrates (**Spherical Graphite PFS**) (see Renascor ASX announcement dated 21 February 2019) and in currently undertaking additional work programs assessing the viability of producing spherical graphite.

A final flowsheet was adopted to optimise purity, flake size and recovery, and included a financial investigation that confirmed the estimated operating and capital cost impact. See Section 6 (Process Plant) for a discussion of the flowsheet parameters adopted for assessing the process plant design in relation to the Optimised Development Plan.

The flake size distribution has been updated from the latest metallurgical testwork results and is summarised in Table 3. These results were achieved at a weighted average graphite concentrate grade of approximately 94% C and a recovery rate of 91%.

Flake category	Particle size		Purity (C)	Distribution
	Microns (µm)	Mesh (#)		
Jumbo	>300	+48	94%	4%
Large	180 to 300	-48 to +80	94%	12%
Medium	150 to 180	-80 to +100	94%	9%
Small	75 to 150	-100 to +200	94%	37%
Fine	<75	-200	94%	39%

**Table 3. Summary of Siviour concentrate size distribution**

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**6. Process Plant**

The Optimised Development Plan considers the construction of two 825,000t per annum processing plants, for a total processing capacity of 1,650,000 per annum, with the construction of the second plant to potentially be funded from projected cash-flows derived from graphite sales from the first plant.

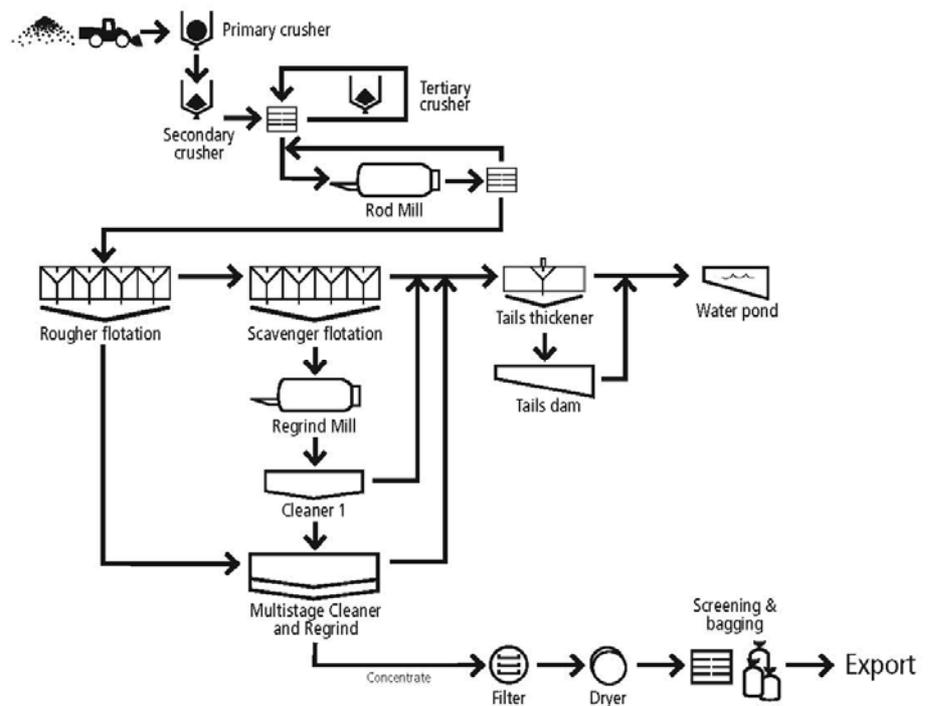
The plants are based on identical designs, with the exception that it is proposed to construct a crushing and screening plant for the first plant with the capacity to feed both plants.

**Flowsheet**

The flowsheet parameters for both the plants are based on metallurgical test work undertaken from composite samples which take into account grade and lithology. The flowsheet adopted for the Optimised Development Plan is based on the metallurgical parameters discussed in Section 5 (Metallurgy).

Each of the process plants is designed to recover graphite concentrate by froth flotation. Ore from the mine will be crushed in stages, followed by grinding, flotation, filtering, drying and sizing, before being bagged and containerised for shipment.

A simplified flow sheet is shown in Figure 2.



**Figure 2. Process plant flowsheet**

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### Crushing

Crushing will occur in two stages. In the first stage, a primary sizer will permit optimal blending of ore from the ROM pad prior to secondary sizer from approximately 500mm to 20mm. Ore will then be conveyed to a crushed ore stockpile or crushed ore bin before being sent to a scrubber to remove fine material and assist with tertiary crushing/size reduction.

### Dewatering

The final concentrates will be filtered, dried and screened into five size fractions (+300µm, +180µm, +150µm, +75µm and -75µm). Concentrates will then be directed to bins and bagged into one tonne bulka bags by product specification.

### Grinding

Tertiary crushed, scrubbed ore will be conveyed to a primary rod mill to achieve flotation feed of P<sub>99</sub> 425 micron. The mill discharge will be collected in a hopper before being pumped to a cyclone cluster, with oversized material recycled back to the rod mill. The fine material bypasses the primary mill to avoid overgrinding.

### Flotation and Regrind

Flotation and regrind circuits contain desliming, roughing, scavenging, five stages of cleaning and four stages of regrind. The cleaning circuit includes screening of concentrate to 300µm after the second cleaning, with the coarser flake material reporting direct to filtration or undergoing a light regrind, before a final stage of cleaning and filtration and drying. The finer material will pass through additional regrind and cleaning to increase purity. The circuit is designed to optimise coarse flake graphite retention at a minimum purity of 94% C.

### Dewatering

The final concentrates will be filtered, dried and screened into five size fractions (+300µm, +180µm, +150µm, +75µm and -75µm). Concentrates will then be directed to bins and bagged into one tonne bulka bags by product specification.

### Tailings

Tailings, including slimes and flotation circuit tailings, will be directed to a tailings thickener for dewatering prior to being pumped to the tailings storage facility. Tailings thickener overflow will report to a process water tank for water recovery and reuse.

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**7. Infrastructure and Logistics**

Infrastructure will include:

- A mining services area
- A tailing storage facility
- Office and workshop facilities
- Analytical and metallurgical laboratories
- Communications infrastructure
- Raw water and process dams
- Access roads to the plant and project site

**Electricity.** Electricity will be supplied from the existing 33kV grid system owned and operated by SA Power Network. An allocation has been made to augment and extend the existing power transmission line by approximately 12.5km.

**Water supply and management.** Water will be supplied from a reverse osmosis plant and associated infrastructure at the coast approximately 12km from the Siviour site. This proposed position on the Spencer Gulf (subject to planning and approvals) will be approximately 11km south of Arno Bay township and will be remote from local residential, tourism and aquaculture.

**Transport.** Concentrates will be bagged and loaded for road transport from the project site to Port Adelaide, where they will be loaded into standard shipping containers. The transport route from the project site to Port Adelaide is generally approved for use by restricted access vehicles, such as road trains, with the exception of approximately 8km of road covering the distance from the project site that connects to the Port Lincoln Highway. An allocation has been made to upgrade these roads to ensure the maintenance of safe traffic conditions.

**Workforce.** Renascor expects to employ the majority of personnel from local communities within the vicinity of the project site, with personnel not based in the district having access to air service from Adelaide to either Port Lincoln or Whyalla. Accommodation and messing will not be provided on site, with personnel residing in existing facilities in Arno Bay and other nearby townships. Medical support facilities, including hospitals and doctors, are located in the region in Cleve, Tumby Bay, Whyalla and Port Lincoln, with emergency services available locally. Allocation has been made for emergency response and first aid facilities at the project site to complement these local services.

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**8. Permitting and Environment**

**Permitting**

Renascor, through its 100%-owned subsidiary company, Ausmin Development Pty Ltd, has been granted a Mineral Lease for the Siviour Graphite Project by the South Australia Department for Energy and Mining. See Renascor ASX announcement dated 8 April 2019.

The grant of the Mineral Lease demonstrates that the Government of South Australia is satisfied that the proposed level of impact of the Siviour Graphite Project is acceptable given the anticipated economic and social benefits. With the grant of the Mineral Lease, the terms that Renascor must follow during the construction, mining and operation phases are now established.

The Mineral Lease also details the conditions that that must be addressed in a Program for Environment Protection and Rehabilitation (**PEPR**), which is the second step in the Government’s two-stage assessment and approval process. The PEPR, which must be approved before mining operations may commence, is intended to establish how the conditions outlined in the Mineral Lease will be met. Prior to approval, the PEPR must be evaluated by the Department for Energy and Mining against the conditions of the Mineral Lease, as well as applicable legislation and Department regulations and guidelines. Renascor expects to submit a PEPR to the Department later this year.

**Environment**

The current land use of the area to be subject to the Mineral Lease is primarily agricultural and has been extensively cleared of native vegetation for cropping purposes.

Renascor has entered into an agreement with the owners of the property that grants Renascor the right to acquire an option to purchase the land, with the price to be set following an independent appraisal.

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**9. Capital Costs<sup>4</sup>**

The capital cost estimate for the processing plants and related plant infrastructure has been compiled by consulting engineers Wave International based on information and data developed from the PFS. The capital cost estimate for capital items relating to mining costs has been compiled by consulting mining engineer Optima. Renascor has compiled the cost estimates for the remaining capital items, with input from Wave International and Optima. The capital cost estimate also takes into consideration Renascor’s procurement strategy, which focuses on procurement of high quality equipment to ensure reliability of performance, reduced maintenance expenditures and higher confidence in the production processes.

Estimated pre-production capital costs are provided below in Table 4.

Category	Stage-one		Stage-two	
	years 1 to 3		years 4 to 40	
	AU\$	US\$	AU\$	US\$
Total process plant	\$53.7m	\$38.7m	\$53.7m	\$38.7m
Infrastructure and owners’ costs	\$34.3m	\$24.7m	\$10.9m	\$7.8m
EPC	\$6.0m	\$4.3m	\$2.5m	\$1.8m
Contingency	\$14.0m	\$10.1m	\$10.0m	\$7.2m
<b>Total</b>	<b>\$108.1m</b>	<b>\$77.8m</b>	<b>\$77.2m</b>	<b>\$55.6m</b>

Table 4. Pre-production capital cost estimate summary

**Process Plant**

The capital cost estimate for the process plant includes all capital costs for the establishment of a functioning process plant plus plant specific infrastructure. The battery limits for the processing plant for the PFS are:

- ROM bin feed to the processing plant (prior to the crushing circuit)
- Incoming transmission line, main site circuit breaker output terminal where grid supply is utilised
- Discharge spigot of the tailings pipeline at the tailings storage facility
- Final product bagging station and concentrate loadout area
- A pipe connection and pipeline outlet of the raw water feed pipeline.

**Infrastructure and Owners’ Costs**

Capital costs for infrastructure and owners’ costs include:

<sup>4</sup> Note that all cost estimates for the Optimised Development Plan have been prepared to an accuracy level of not less than +/- 35% in accordance with the Australian Institute of Mining and Metallurgy (the AusIMM guidelines) and are subject to the cautionary statements relating to scoping study parameters on page 1 of this announcement.

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- Establishment of mining infrastructure (major mining fleet equipment has been assumed to be leased with ancillary and support equipment purchased)
- Tailings storage facility
- Administrative and non-mining equipment
- Power supply augmentation and transmission line
- Reverse osmosis plant and raw water supply system
- Land purchase
- Rehabilitation bond as required by the State Government bond
- Groundwater disposal
- Site buildings and facilities
- Site access and road upgrades
- Earthworks, fencing and landscaping
- Ecological offsets

**EPC**

EPC costs for the capex were developed on the basis of the process plants being delivered by a single EPC contractor.

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**10. Operating Costs**

Operating costs have been estimated by Wave International, Optima and Renascor based on the following sources:

- Information developed during the PFS and DFS
- Estimates built from first principles referencing data bases and information from similar projects
- Budget quotations and supplier recommendations
- Reagent consumptions based on metallurgical test work derived consumptions and reagent supply costs
- Power demand developed from the equipment list installed power (with service factors applied)
- Power costs from South Australia energy market supplier quotes (inclusive of transmission charges)
- Product logistics costs derived from logistic and port service providers
- Water costs are estimated from costs provided ARUP Pty Ltd.

Estimated cash operating costs per concentrate produced are provided below in Table 5.

Category	Stage-one		Stage-two			
	years 1 to 3		years 4 to 10		LOM	
	AU\$/t	US\$/t	AU\$/t	US\$/t	AU\$/t	US\$/t
Mining	166	120	170	123	130	94
Processing	177	128	217	157	267	193
General and administration <sup>5</sup>	28	20	17	12	22	16
Product logistics	105	76	105	76	105	76
<b>Total</b>	<b>477</b>	<b>344</b>	<b>511</b>	<b>367</b>	<b>526</b>	<b>379</b>

**Table 5. Operating cost per concentrate produced estimate summary**

Note that all cost estimates for the Optimised Development Plan have been prepared to an accuracy level of not less than +/-35% in accordance with the Australian Institute of Mining and Metallurgy (the AusIMM guidelines) and are subject to the cautionary statements relating to scoping study parameters on page 1 of this announcement.

<sup>5</sup> Cost of personnel for mining, processing and product logistics are separately accounted for within operating cost in respective categories in Table 5.

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## 11. Marketing

### Product Specifications

Renascor has adopted five product specifications on the basis that this will generate a product offering likely to attract interest across a variety of graphite applications, including both traditional industrial uses and emerging growth markets such as lithium ion batteries and expandable graphite.

In adopting product specifications, Renascor has adopted the following general parameters:

- **Purity.** Renascor has received market feedback that graphite concentrates produced to a minimum purity of approximately 94% C will be attractive to potential customers at premium pricing levels, provided the concentrates do not otherwise contain any potentially disqualifying contaminants. Further market feedback suggests that increases in purity levels above 94% C will attract additional premiums.
- **Flake size.** As coarser flake graphite generally sells at a premium to fine flake, Renascor has adopted process flow sheet designed to maximise the recovery of coarser flake graphite subject to meeting a minimum purity of 94% C and other product specifications.

### Pricing

Natural flake graphite concentrates are generally sold on a directly negotiated basis between suppliers, end-users and intermediaries without regard to a recognised reference price. Renascor has had extensive engagement with end-users, intermediaries, speciality price reporting consultants and other graphite market participants regarding the potential sale of Sivoir graphite concentrates and these discussions provide the basis for the pricing model adopted as shown in Table 6 below.

Flake category	Particle size		Price (US\$/tonne) FOB (Port Adelaide)
	Microns (µm)	Mesh (#)	
Jumbo	>300	+48	1,998
Large	180 to 300	-48 to +80	1,863
Medium	150 to 180	-80 to +100	1,052
Small	75 to 150	-100 to +200	801
Fine	<75	-200	762

Table 6. Graphite product specifications and pricing<sup>6</sup>.

<sup>6</sup> Product prices are based on discussions regarding forecast prices with end-users, intermediaries, speciality price reporting consultants and other graphite market participants regarding the potential sale of Sivoir graphite concentrates.

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## 12. Financial Evaluation

A summary of the key financial results of the Optimised Development Plan is described below in Table 7.

Parameter	Stage-one		Stage-two	
	years 1 to 3		years 4 to 40	
	AU\$	US\$	AU\$	US\$
Annual production (graphite concentrate)	83,400t		145,000t (years 4 -10)	
	110,300t (LOM)			
Plant throughput (run of mine ore)	825,000		1,650,000	
Average feed grade (of run of mine ore) (TGC)	11.0%		9.1% (years 4 -10)	
	7.4% (LOM)			
Cash cost per tonne (graphite concentrate)	AU\$477	US\$344	AU\$511 (years 4-10)	US\$367 (years 4-10)
	AU\$526 or US\$379 (LOM)			
Basket sales price (graphite concentrate)	AU\$1,366	US\$984	AU\$1,366	US\$984
Life of mine	40 Years			
Development capital	AU\$108m	US\$78m	AU\$77m	US\$56
Payback period	3.7 years <sup>7</sup>		Not applicable	
NPV <sub>10</sub> (after tax)	AU\$435m or US\$313m			
IRR (after tax)	40%			

**Table 7. Summary of key financial results**

Note that all financial estimates for the Optimised Development Plan have been prepared to an accuracy level of +/-35% in accordance with the Australian Institute of Mining and Metallurgy (the AusIMM guidelines) and are subject to the cautionary statements relating to scoping study parameters on page 1 of this announcement.

<sup>7</sup> Reflects period of time to payback development capital for stage-one as calculated from first production, assuming cashflow from stage-one is not used to pay stage-two development capital.

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**13. Financial Sensitivities**

A sensitivity analysis was completed to assess the impact of the following parameters to the net present value (10% discount rate, after-tax) as expressed in Australian Dollars: operating expenditure, capital expenditure, Australian-US exchange rate and product basket price.

Results of the sensitivity analysis are show in Figure 4 below:

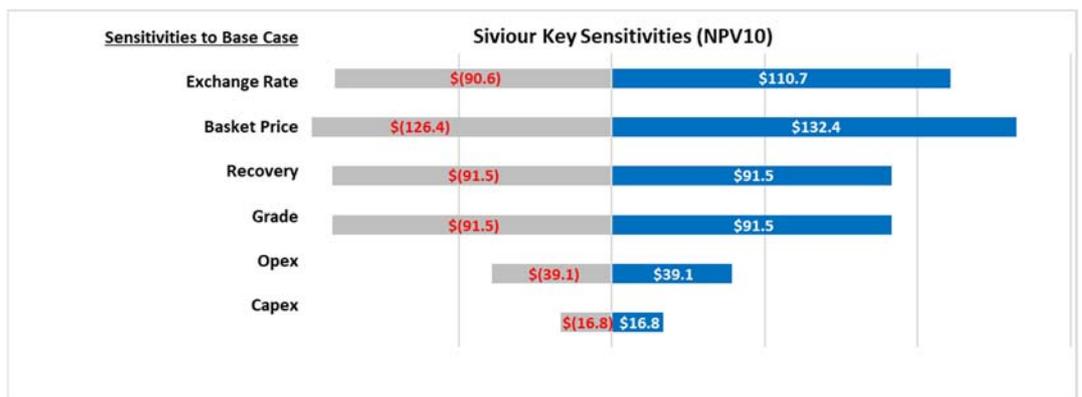
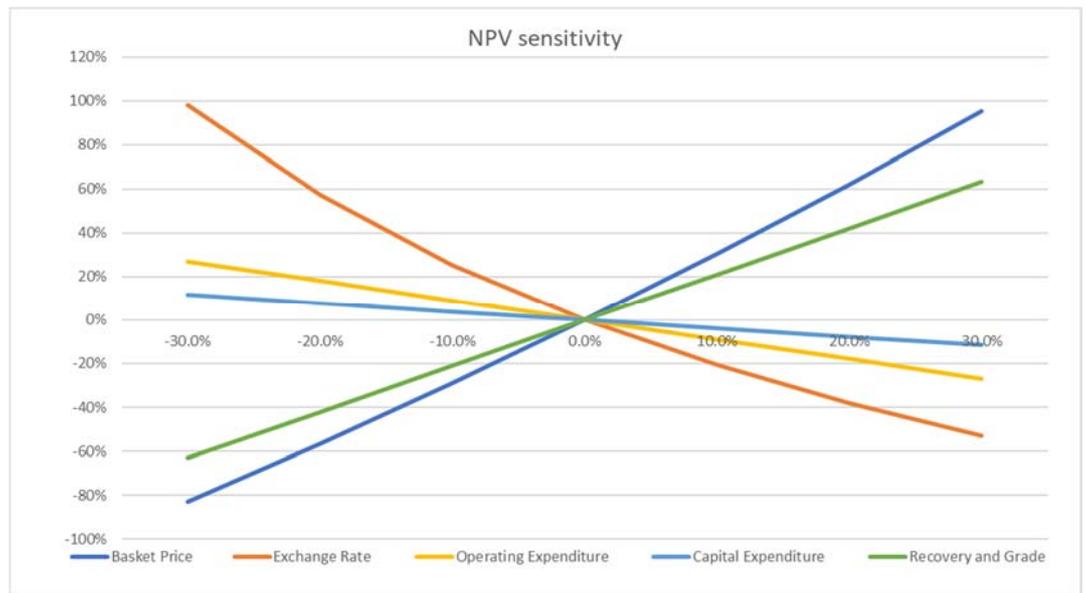


Figure 4. Sensitivity analysis

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**14. Funding**

The Optimised Development Plan is based on the adoption of a production schedule that is considered likely to attract project debt financing. Stage-one of the Optimised Development Plan has received in principle support from Atradius, the official Dutch ECA. Renascor has estimated that up to approximately 60% of upfront stage-one project capital expenditure projected under the Optimised Development Plan is expected to qualify under the Atradius ECA Cover. See Renascor ASX announcement dated 10 April 2019.

Renascor believes it is well placed to secure necessary funding for the Optimised Development Plan. In addition to potential ECA Cover from Atradius, options being actively pursued include:

- Equity and debt instruments from existing shareholders,
- Project finance
- Partner finance
- Offtake-related finance
- Equipment and contractor finance
- Access to government grants.

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**15. Implementation Schedule**

The project development schedule contemplates completing the DFS in July. The schedule allows for project financing and financial due diligence before funding and, subject to obtaining final regulatory approvals, commencing construction in 2020. Mining is scheduled to commence in the fourth quarter 2020, with first production in the first quarter 2021.

A summary schedule is shown in Figure 8 below.

Year	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Mineral Lease												
Marketing and offtake												
DFS												
Project financing and financial due diligence												
Final regulatory approvals												
Final investment decision												
Detailed design and procurement												
Construction												
Operation												

Figure 8. Summary project schedule

## Appendix 2

### Material Assumptions

Material assumptions used in the estimation of the production targets and associated financial information relating to the study discussed in this announcement are set out in the following table.

Criteria	Commentary
Study status	The production targets and financial information in this study are based on a scoping study level assessment, with cost estimates prepared to an accuracy level of +/-35% in accordance with the Australian Institute of Mining and Metallurgy (the <b>AusIMM</b> ) guidelines ( <i>AusIMM 2012. Cost Estimation Handbook. 2<sup>nd</sup> Edition, Monograph 27. The Australian Institute of Mining and Metallurgy</i> ).
Cut-off factors	Cut-off grade was based on the processing plant feed grade that produced the breakeven point of product revenue less all associated costs except mining costs on a block by block basis in the resource model. Cut-off grade was calculated at 2.3% TGC.
Mining factors or assumptions	This study is based on mining and processing of graphite ore that is obtained from the Siviour Graphite Deposit, as contemplated in the Siviour Optimised Development Plan. The Siviour Optimised Development Plan contemplates mining based on an open cut operation utilising conventional drill and blast, load and haul and crusher feed. Whittle LG shell optimisation was carried out on Measured, Indicated and Inferred Resources to identify the mining sequence and location of economic shells. The optimisation was constrained by the Driver River in the west and south and constrained by public unsealed roads to the north and east. The optimised selected shells were then used to base detailed mine designs. The mine designs were then scheduled with the results placed in a cost model to evaluate the feasibility of mining these designs pursuant to the Optimised Development Plan at a scoping study level. The mining method to be 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 PFS. This mining method suits the thick flat lying shallow nature of mineralisation and results in a low stripping ratio of around 1.9 over the life of mine. Other bulk mining methods were assessed with truck and excavator conventional mining clearly found to be the most suitable mining method. Pit wall slope

	<p>angles used an overall slope wall angle of 45 degrees which is at least 5 degrees less than the advised values, from geotechnical parameters provided by Mining One Pty Ltd. The cut-off grade was applied to the resource model to flag possibly economic blocks. A 1m skin was placed around these blocks and flagged to represent dilution from mining on each bench and projected up 2m to represent bench recovery. The resource model was then transferred into a 10x10x2m mining model to create a diluted mining model. Overall resource recovery is around 98% with around 3% dilution. Minimum mining width is 20m but due to the flat lying nature of mineralisation is not a constraint on mining. Over the 40-year life of mine, approximately 25% of the ore processed is within the Measured Mineral Resource category, approximately 58% is with the Indicated Mineral Resource category, and approximately 17% is within the Inferred Resources category. Removing Inferred material makes no material difference to project economics. Inferred material is generally at the indicated boundary and part of the Indicated only Whittle shell and mine design volumes and is mined incidental to Indicated material. Infrastructure requirements are modest for the selected mining method with no upgrade of nearby services and infrastructure required.</p>
<p>Metallurgical factors or assumptions</p>	<p>The metallurgical process is to crush, grind and float which is common for this style of mineralisation and is commonly used in mine sites globally. Metallurgical test work was conducted on composite samples which included lithological variations with a range of head grades; acceptable grade and recovery was achieved. The understanding of recovery in completely weathered material requires further test work but represents a small amount of the mineralisation. No deleterious elements have been identified. Further test work is in progress and not considered required at scoping study level. Product specifications are dependent on the end use and customer. The concentrate produced from test work is at the benchmarked 94% C purity.</p>
<p>Environmental</p>	<p>Ongoing environmental assessment is based upon studies initiated as part of the compliance and approvals process to establish baseline characteristics, including geology, water, air, noise, flora, fauna, socio-economic, traffic and transport, cultural heritage and visual amenity, including historical and recorded data. These studies supported a Mineral Lease grant under Section 35 of the <i>Mining Act, 1971</i> (SA). An approved PEPR will be required to enable operations to commence. Renascor has adopted an integrated planning approach, feeding results from stakeholder engagement and environmental studies into the project to minimise potential</p>

	impacts on the surrounding environment and community, whilst reducing regulatory risk.
Infrastructure and logistics	The infrastructure required to support the mining and processing operation including a tailings storage facility, water supply pipeline, reverse osmosis plant, access roads within the plant and the project site, diesel generators, office and employees' facilities, and upgraded roads as required for site access.
Capital costs	<p>The capital cost estimate has been compiled by Wave International, Optima and Renascor as noted below:</p> <ul style="list-style-type: none"> <li>• Process plant and related infrastructure costs evaluated by Wave International based on flowsheets, mass balances and capital cost data developed during the PFS.</li> <li>• Owners' costs related to the reverse osmosis plant were provided by ARUP Pty Ltd, with all other owners' costs provided by Renascor with input from consultants and suppliers. Owners costs were built up from estimates based on first principles, supplier quotes and costs from similar projects. Bulk earthworks, roads, drainage and fencing costs were estimated by Renascor.</li> <li>• Contingency allowance represents approximately 15% of capital cost. The cost estimate was compiled in AU\$ with a base date of Q4 2018 with no allowance for escalation to an accuracy of +/-35%. EPC refers to engineering, procurement and construction management costs and it represents approximately 10% of the total process plant costs.</li> </ul>
Operating costs	The operating cost estimate for this study includes all costs associated with mining, processing, infrastructure, and site-based general and administration costs. Mining costs were developed by Optima Consulting based on a mine optimization and design and the development of a mining schedule and equipment selected. Processing costs were evaluated by Wave International based on operating costs and data from the PFS. General and administration costs were developed by Renascor supported by its consultants and suppliers. The operating cost estimate is presented on an annualised basis in Q4 2018 AU\$ to an accuracy of +/-35%. There has been no contingency applied to operating costs. Labour force estimates were developed by Renascor, Optima and Wave International based on industry standards from similar operations. The estimate for product logistics was made by Renascor and is based of quotes from logistic service providers and port costs. In all cases, the operating cost estimates exclude exchange rate variations, price escalation and interest charges. Operating costs reported have been based on design criteria adjusted to reflect ore grade and mining schedule.

Revenue factors	Revenue from the project is derived from the sale of graphite flake products. Renascor has established the characteristics of expected final products through test programs undertaken on composite samples from Siviour core. Renascor has received market feedback that graphite concentrates produced to a minimum purity of approximately 94% will be attractive to potential customers. Product prices are based on discussions regarding forecast prices with end-users, intermediaries, speciality price reporting consultants and other graphite market participants regarding the potential sale of Siviour graphite concentrates. Risks associated with these assumptions used in product pricing include that the product split is not achieved and that the price assumptions are not met by the prevailing markets. Sensitivity analysis has been completed with key parameters assessed, with the project maintaining a positive net present value in all cases.
Schedule and timeframe	The project development schedule is based on having funding and approvals in place to commence construction in Q1 2020. The schedule was developed by Renascor with input from its consultants. The schedule assumes a likely EPC implementation strategy. The project implementation schedule estimates a timeline of approximately 15 months from funding approval to commissioning. The schedule assumes that permitting progresses concurrently with the schedule.
Market assessment	Natural flake graphite is generally sold on a directly negotiated basis between suppliers, end-users and intermediaries. While there is not a recognised benchmark for pricing and qualifying graphite for sale, purity and flake size are the most frequently adopted parameters use. Generally, increased prices are available to graphite with higher purity and coarser flake size. In addition, other parameters, including the levels of impurities or contaminants, can impact the desirability of natural flake graphite. Renascor has adopted five product specifications based on flake size and purity on the basis of market feedback that suggests this will give Renascor a product offering likely to attract interest across a variety of graphite applications using a relatively simple process flowsheet facilitating low cost production and consistent product quality.
Funding	To achieve the range of outcomes indicated in the Optimised Development Plan, indicative funding in the range of AU\$126m or US\$91m will likely be required for capital works, pre-production working capital and contingency required to construct the Siviour Graphite Project, together with costs associated with project financing. It is anticipated that the finance will be sourced through a combination of equity and debt instruments from existing shareholders, new equity investment and debt providers from Australia and overseas. The Company

	<p>has sufficient cash on hand at the date of this announcement to undertake the next stage of planned work programs, including continued metallurgical testing. Renascor's Board believes that there is a reasonable basis to assume that funding will be available to complete all feasibility studies and finance the pre-production activities necessary to commence production on the following basis:</p> <ul style="list-style-type: none"> <li>• Renascor's Board and executive team have a strong financing track record in developing resources projects;</li> <li>• Renascor has a proven ability to attract new capital;</li> <li>• Renascor's Board believes this study demonstrates the project's strong potential to deliver favourable economic return; and</li> <li>• Other companies at a similar stage in development have been able to raise similar amounts of capital in recent capital raisings.</li> </ul>
Economic	<p>A discount rate of 10% has been used for financial modelling. This number was selected as a generic cost of capital and considered a prudent and suitable discount rate for project funding and economic forecasts. The model has been run as a life of mine model and includes sustaining capital and closure costs (in real terms). The study outcome was tested for key financial inputs including: basket price, capital and operating costs and US/AU exchange rate. All of these inputs were tested for variations of +/- 10%.</p>
Exchange rate	<p>The exchange rate for the reporting of the results from this study is AU\$1.00 = US\$0.72.</p>
Social	<p>This study contemplates siting the mine and processing plant in a greenfield location. There are no known community issues that Renascor has identified as being a likely material impediment to developing the project.</p>
Other	<p>There are several other material risks to this project including product price, competition, regulatory approval, social license, scheduling and other risks typical of projects of similar scale.</p>
Classification	<p>Mineral Resources converted to Ore Reserves as per JORC 2012 guidelines.</p>
Audits or reviews	<p>This study was internally reviewed by Wave International and Renascor. No material issues were identified by the reviewers. All study inputs were prepared by Competent Persons identified in this announcement.</p>

### Appendix 3 – Financial Model

A summary of the financial model is shown below:

	Unit	Stage-one					Stage-two								LOM	
		Production year 1 to 3					Production year 4 to 10									Years 11 to 40
		FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32 – FY61		
AUD/USD	U\$/	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	
Basket sales price	US\$/t	-	-	983.62	983.62	983.62	983.62	983.62	983.62	983.62	983.62	983.62	983.62	983.62	983.62	
Cash Cost per tonne	A\$/t	-	-	534.12	386.14	453.26	498.19	493.44	499.80	519.08	511.70	534.24	523.16	534.90	526.14	
Waste mined	kt	-	1,529.6	2,372.8	140.1	1,606.3	3,739.5	6,540.5	3,757.0	4,118.9	5,043.0	6,367.7	1,632.7	78,796.1	115,644.3	
ROM mined	kt	-	145.3 <sup>8</sup>	3,676.1	2,237.1	662.3	3,755.7	997.4	4,092.8	3,595.2	2,409.2	1,592.9	5,971.5	32,909.4	62,044.9	
Grade %TGC	%	-	4.2% <sup>9</sup>	8.5%	9.8%	6.9%	8.2%	8.5%	7.2%	7.6%	8.5%	6.9%	7.2%	6.9%	7.4%	
Milled ore	kt	-	-	719.7	825.0	825.0	1,599.1	1,650.0	1,650.0	1,650.0	1,650.0	1,650.0	1,650.0	48,176.0	62,044.9	
Grade %TGC	%	-	-	12.1%	11.7%	9.3%	9.4%	9.4%	9.5%	8.9%	9.0%	8.7%	8.8%	6.8%	7.4%	
Stockpile ore	kt	-	145.3	3,101.7	4,513.8	4,351.1	6,507.6	5,855.0	8,297.8	10,243.0	11,002.2	10,945.1	15,266.6			
Recovery rate	%	-	-	89%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	
<b>Flake distribution</b>																
Jumbo	%	-	-	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
Large	%	-	-	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	
Medium	%	-	-	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	
Small	%	-	-	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	
Fine	%	-	-	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	
<b>Concentrate produced</b>	<b>kt</b>	-	-	<b>82.3</b>	<b>93.8</b>	<b>74.1</b>	<b>146.2</b>	<b>150.8</b>	<b>151.0</b>	<b>143.0</b>	<b>143.4</b>	<b>139.7</b>	<b>140.5</b>	<b>3,148.9</b>	<b>4,413.7</b>	
Purity %C	%	-	-	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	94%	

<sup>8</sup> This represents pre-strip mining of mostly low grade ore.

<sup>9</sup> Refer to Note 11 above.

	Unit	Stage-one					Stage-two								LOM
		Production year 1 to 3					Production year 4 to 10						Years 11 to 40		
		FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32 – FY61	
Gross Revenue	A\$'M	-	-	112.5	128.1	101.2	199.7	206.0	206.3	195.3	195.9	190.9	192.0	4,301.9	6,029.6
Royalties	A\$'M	-	-	(5.1)	(5.8)	(4.6)	(9.0)	(9.3)	(9.3)	(8.8)	(8.8)	(8.6)	(8.6)	(193.6)	(271.3)
<b>Net Revenue</b>	<b>A\$'M</b>	<b>-</b>	<b>-</b>	<b>107.4</b>	<b>122.3</b>	<b>96.6</b>	<b>190.7</b>	<b>196.8</b>	<b>197.0</b>	<b>186.5</b>	<b>187.0</b>	<b>182.3</b>	<b>183.3</b>	<b>4,108.3</b>	<b>5,758.3</b>
Mining	A\$'M	-	(5.6)	(20.4)	(8.0)	(7.5)	(24.2)	(24.3)	(25.3)	(24.9)	(24.0)	(25.7)	(24.5)	(360.3)	(574.7)
Processing	A\$'M	-	-	(12.7)	(15.8)	(15.8)	(30.7)	(31.7)	(31.7)	(31.7)	(31.7)	(31.7)	(31.7)	(916.0)	(1,181.2)
General & Admin	A\$'M	-	-	(2.3)	(2.4)	(2.4)	(2.4)	(2.5)	(2.5)	(2.5)	(2.5)	(2.5)	(2.5)	(74.6)	(98.9)
Product logistics	A\$'M	-	-	(8.6)	(10.0)	(7.9)	(15.5)	(16.0)	(16.0)	(15.2)	(15.2)	(14.8)	(14.8)	(333.5)	(467.4)
<b>Operating Expenditure</b>	<b>A\$'M</b>	<b>-</b>	<b>(5.6)</b>	<b>(44.0)</b>	<b>(36.2)</b>	<b>(33.6)</b>	<b>(72.8)</b>	<b>(74.4)</b>	<b>(75.5)</b>	<b>(74.2)</b>	<b>(73.4)</b>	<b>(74.6)</b>	<b>(73.5)</b>	<b>(1,684.4)</b>	<b>(2,322.2)</b>
<b>EBITDA</b>	<b>A\$'M</b>	<b>-</b>	<b>(5.6)</b>	<b>63.4</b>	<b>86.1</b>	<b>63.1</b>	<b>117.9</b>	<b>122.3</b>	<b>121.5</b>	<b>112.3</b>	<b>113.7</b>	<b>107.6</b>	<b>109.8</b>	<b>2,423.9</b>	<b>3,436.1</b>
Working capital adjustments	A\$'M	-	3.7	(19.3)	3.2	1.1	(9.8)	(0.8)	0.1	1.6	(0.2)	1.0	(0.4)	18.1	(1.7)
<b>Pre – tax Operating Cash Flow</b>	<b>A\$'M</b>	<b>-</b>	<b>(2.0)</b>	<b>44.1</b>	<b>89.3</b>	<b>64.2</b>	<b>108.1</b>	<b>121.6</b>	<b>121.6</b>	<b>113.9</b>	<b>113.4</b>	<b>108.7</b>	<b>109.4</b>	<b>2,442.0</b>	<b>3,434.4</b>
Tax	A\$'M	-	-	(16.5)	(25.0)	(18.0)	(33.8)	(35.1)	(34.9)	(32.1)	(32.4)	(30.6)	(31.2)	(649.5)	(939.1)
<b>Post – tax Operating Cash Flow</b>	<b>A\$'M</b>	<b>-</b>	<b>(2.0)</b>	<b>27.6</b>	<b>64.3</b>	<b>46.2</b>	<b>74.3</b>	<b>86.5</b>	<b>86.8</b>	<b>81.8</b>	<b>81.0</b>	<b>78.1</b>	<b>78.2</b>	<b>1,792.5</b>	<b>2,495.3</b>
<b>Capital Expenditure</b>															
First Plant	A\$'M	(10.8)	(97.3)	-	-	-	-	-	-	-	-	-	-	-	(108.1)
Second Plant	A\$'M	-	-	-	-	(77.2)	-	-	-	-	-	-	-	-	(77.2)
Sustaining Capex	A\$'M	-	-	(2.2)	(2.2)	(2.6)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(87.7)	(120.5)
<b>Project Free Cash Flow</b>	<b>A\$'M</b>	<b>(10.8)</b>	<b>(99.3)</b>	<b>25.4</b>	<b>62.2</b>	<b>(33.6)</b>	<b>70.6</b>	<b>82.8</b>	<b>83.1</b>	<b>78.1</b>	<b>77.3</b>	<b>74.4</b>	<b>74.5</b>	<b>1,704.8</b>	<b>2,189.5</b>
NPV	A\$'M	434.9													
IRR	%	40%													

Note: all the numbers stated in this announcement are in real, unless otherwise stated.

### Appendix 4 – Mining Schedule

A summary of the mining and processing schedule is shown below:

