# QUARTERLY REPORT



### THE PERIOD ENDING 30 JUNE 2017

## **Significant Events**

- Siviour Scoping Study confirms Renascor's potential to become a low-cost, long-term graphite producer from Australia. Key study findings include:
  - Annual graphite production of 123,000t
  - Cash cost of production of AU\$450/t (US\$333/t), with an estimated basket sales price of AU\$1,420/t (US\$1051/t)
  - Net present value (after tax) of AU\$551 million (US\$408 million)
  - o Internal rate of return (after tax) of 59%
  - Payback of 1.7 years
- Renascor awarded grant from South Australian Government to support mineral processing testwork on Siviour
- Airborne electromagnetic survey over Siviour confirms shallow, flat-lying orientation of mineralised body and identifies significant near-surface, flat-lying extensions along strike
- Based on favourable Scoping Study results, Renascor has commenced an advanced feasibility study and preparation for the collection of a bulk sample for production of marketing samples requested by potential end-users

#### • Cash position of ~\$1.2 million as of 30 June 2017



Figure 1. Siviour Graphite Deposit

Renascor Resources Ltd ABN 90 135 531 341

RNI

#### HEAD OFFICE

36 North Terrace Kent Town, SA 5067 Australia

#### CONTACT

T: +61 8 8363 6989 F: +61 8 8363 4989 info@renascor.com.au www.renascor.com.au

ASX CODE RNU

Developing Australia's largest graphite deposit



#### Siviour Scoping Study

The Siviour Scoping Study considered multiple mine options based a 20-year mine life in which the entire Life of Mine (LOM) graphite production target would be entirely included within the existing Indicated Resource of Siviour. Based on market requirements and potential capital raising capacity, an annual production rate of 123,000 tonnes per annum was selected as the most viable scenario.

The Scoping Study is based on producing flake graphite concentrates from a proposed open pit mine and graphite production plant to be located on the project site in South Australia. The potential to produce spherical graphite or other advanced materials through downstream processing is to be considered in further studies.

BatteryLimits, an independent mining consulting group, acted as the Scoping Study manager and supervising engineer.

A summary of the key results of the Scoping Study is described below in Table 1, with additional results appearing elsewhere in this announcement. More complete details of the Scoping Study are available in Renascor's ASX announcement dated 23 May 2017.

Annual graphite concentrate production (tonnes per annum)	123,000	
Plant throughput (tonnes per annum)	1,650,000	
LOM average feed grade (TGC)	8.1%	
NPV <sub>10</sub> (after tax)	AU\$551m	US\$408m
IRR (after tax)	59%	
Cash cost of production (per tonne of concentrate)	AU\$450 US\$	
Capital cost (pre-production)	AU\$144m	US\$107m
Sustaining capital	AU\$28m US\$2	
Basket sales price	AU\$1,420	US\$1,051
Payback (after-tax) from first production	1.7 years	

Table 1. Summary of key results from Scoping Study

#### Key Financial Results of Scoping Study

**Product Pricing.** The Scoping Study used a basket price of \$1,051/t based on discussions with potential end-users and market professionals, as well as investigations into prices adopted by peer companies.

	Partic	le size	Distribution	Pricing – FOB (US\$)	
Flake category	Microns (µm)	Mesh (#)	Distribution		
Jumbo	>300	+48	8%	2,100/t	
Large	180 to 300	-48 to +80	25%	1,450/t	
Medium	150 to 180	-80 to +100	15%	1,150/t	
Small	75 to 150	-100 to +200	39%	750/t	
Fine	<75	-200	13%	425/t	
Basket price				US\$1,051/t	

Capital Costs. Estimated pre-production capital costs for the Scoping Study are provided below.

Area	Australian Dollars	US Dollars
Process Plant	AU\$87.9m	US\$65.0m
Site Infrastructure	AU\$16.7m	US\$12.4m
EPCM	AU\$15.3m	US\$11.3m
Contingency	AU\$5.1m	US\$3.8m
Owners' costs	AU\$15.7m	US\$11.6m
Other	AU\$3.1m	US\$2.3m
Total	AU\$143.9m	US\$106.5m

*Operating Costs.* Estimated annual cash operating costs for the Scoping Study are provided below.

Area	AU\$/year	AU\$/ tonne of concentrate	US\$/year	US\$/ tonne of concentrate	
Mining and technical services	14.4m	117	10.7m	87	
Processing and power	27.9 m	224	20.6m	166	
General and administration	2.4m	19	1.8m	14	
Product logistics FOB	11.1m	90	8.2m	67	
Total	AU\$55.8	AU\$450	US\$41.3m	US\$333	

#### **Electromagnetic Survey**

To support on-going advanced mining studies at Siviour, during the recently completed quarter, Renascor completed an airborne electromagnetic (EM) survey over areas within and adjacent to the Siviour Indicated Resource.

Survey data was collected using the Xcite helicopter EM system over flight lines following a northwest-southeast pattern. Flight-line spacing consisted of 100m-spacing over the Siviour Indicated Resource and areas immediately adjacent to it, and a series of 200m- and 400m-spacing across areas extending into areas further from the immediate Indicated Resource zone.

Analysis of the EM data has confirmed the general shallow, flat-lying orientation of the Siviour mineralised body, as well as identifying significant near-surface, horizontal extensions along strike.



Figure 2. Comparison of EM conductivity depth images and cross section for EM line 1390

As illustrated in the EM depth slices shown in Figure 2, at an interpreted depth of approximately 20m (top left image), there is strong correlation between conductivity and the Siviour Indicated Resource. In this area, graphite mineralisation commences from approximately 5m to 10m and includes intersections of graphite mineralisation of over 30m.

As shown in the EM cross-section for flight line 1390 (Figure 2, bottom image), the EM data confirms the near-surface, flat-lying orientation of graphite mineralisation over the Indicated Resource and suggests this geometry continues into conductive anomalies in the Buckies and Paxton areas, adjacent to the current Indicated Resource.

At a depth slice of 40m (Figure 3, top right image), larger areas of comparable conductivity are evident to the north of Siviour (at the Buckies prospect) and to the southeast (at the Paxtons prospect). Previous drilling within these prospect areas intersected some of the widest graphite

intersections within the project area, suggesting the potential for significant extensions to the current Indicated Resources with a similarly favourable near-surface, flat-lying orientation.

The results of the recent EM survey will be used in advanced mine planning studies and are expected to further contribute to establishing an efficient, low-cost mining operation at Siviour. The EM results will also be used to define potential resource extensions and to optimize life-of-mine throughput and concentrate production options consistent with product sales opportunities

#### South Australian Government Grant

During the recently completed quarter, Renascor was awarded a \$100,000 grant by the Future Industries Accelerator Research and Development Voucher Scheme, an investment by the South Australian State Government led by the Future Industries Institute at the University of South Australia.

The grant funds are supporting mineral process testwork on Siviour, with the aim of optimising the Sivour mineral process flowsheet and identifying operational and capital cost reductions that could be applied to a full-scale operation.

The grant is will also supporting testwork assessing the suitability of Siviour concentrates for advanced industry applications, including lithium-ion batteries and expandable graphite.

#### **Feasibility Study**

Renascor considers the project economics of the Scoping Study to be highly encouraging, and accordingly Renascor has commenced additional developmental programs and a more advanced feasibility study on Siviour. Additional work programs that commenced during the recently completed quarter in support of an advanced feasibility study for Siviour included:

- Variability metallurgical testing from core samples taken from the Siviour Indicated Resource
- Further metallurgical tests designed to optimise the existing flow sheet parameters
- Advanced materials tests to assess the potential to produce spherical graphite for use in lithium-ion batteries and other premium-priced products
- Environmental approvals to permit the collection of a bulk sample and pilot plant preparation of concentrates
- Offtake discussions with potential end-users
- Continued compliance permitting and community engagement

### **OTHER PROJECTS**

Additional exploration and evaluation activities undertaken during the quarter included activities at Renascor's Munglinup Project near Ravensthorpe, Western Australia. Renascor completed a review of prospective targets, including potential cobalt and nickel prospects, as well as previously identified lithium and graphite targets. Next step programs under consideration include geophysical surveys and a program of multi-element geochemistry.

#### Competent Person's Statement – Metallurgical Results

The results reported herein, insofar as they relate to metallurgical test work results, are based on information provided to and reviewed by Mr Simon Hall, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and 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. 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.

#### 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. A number of factors could cause actual results, or expectations to differ materially from the results expressed or implied in the forward-looking statements.

#### FOR FURTHER INFORMATION, PLEASE CONTACT:

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

				registereu	%	Status as at
Location	Project Name	Tenement No.	Tenement Name	Owner <sup>1</sup>	Interest	30 June 2017
Tenements held duri	ng quarter ended 30 Jun	<u>e 2017:</u>				
South Australia	Eastern Eyre	EL 5822	Iron Baron	Renascor	100	Current
South Australia	Eastern Eyre	EL 5012	Cultana	Renascor	100	Current
South Australia	Eastern Eyre	EL 5236	Old Wartaka	Renascor	100	Current
South Australia	Gawler Craton	EL 5859	Gairdner	Renascor	100	Current
South Australia	Gawler Craton	EL 5927	Lake Harris (Prev EL4836)	Renascor	100	Current
South Australia	Warrior	EL 5733	Warrior	Renascor	100	Current
South Australia	Warrior	EL 5856	Carnding (prev EL4707)	Renascor	100	Current
South Australia	Farina	EL 4822	Willouran	Renascor	100	Current
South Australia	Farina	EL 5586	Callana Area	Renascor	100	Current
South Australia	Olary	EL 5385	Cutana	Astra	100	Current
South Australia	Olary	EL 5384	Outalpa	Astra	100	Current
South Australia	Olary	EL 5228	Wompinie	Renascor	100	Current
South Australia	Frome Basin	EL 5322	Lake Callabonna	Renascor	100	Current
South Australia	Arno Graphite	EL 5204	Malbrom - Areas A, B, C & D	Ausmin <sup>3</sup>	0 2	Current
South Australia	Arno Graphite	EL 5495	Lipson Cove	Ausmin <sup>3</sup>	0 <sup>2</sup>	Current
South Australia	Arno Graphite	EL 5618	Verran	Ausmin <sup>3</sup>	0 <sup>2</sup>	Current
South Australia	Arno Graphite	EL 5714	Malbrom West	Ausmin <sup>3</sup>	0 2	Current
Wesern Australia	Munglinup Graphite	E74/517	Munglinup	Sol Jar	100	Current
Wesern Australia	Munglinup Graphite	E74/518	Munglinup	Sol Jar	100	Current
Wesern Australia	Munglinup Graphite	E74/523	Munglinup	Sol Jar	100	Current
Wesern Australia	Munglinup Graphite	E74/531	Munglinup	Sol Jar	100	Current
Wesern Australia	Munglinup Graphite	E74/538	Munglinup	Sol Jar	100	Current
Wesern Australia	Munglinup Graphite	E74/544	Munglinup	Sol Jar	100	Current
Wesern Australia	Munglinup Graphite	E74/545	Munglinup	Sol Jar	100	Current
Northern Territory	Ngalia Basin	ELA27517	NirripiNth	Kurilpa	100	Application
Northern Territory	Ngalia Basin	ELA27518	NirripiWest	Kurilpa	100	Application
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#### Table 1: Summary of tenements for quarter ended 30 June 2017 (ASX Listing Rule 5.3.3)

Tenements disposed, surrendered or lapsed during quarter ended 30 June 2017:

N/A

#### <u>Note 1</u>

Renascor:	Renascor Resources Limited
Kurilpa:	Kurilpa Uranium Pty Ltd, a wholly owned subsidiary of Renascor Resources Limited
Astra:	Astra Resources Pty Ltd, a wholly owned subsidiary of Renascor Resources Limited
Sol Jar:	Sol Jar Property Pty Ltd, a wholly owned subsidiary of Renascor Resources Limited
EPM	Eyre Peninsula Minerals Pty Ltd, a wholly owned subsidiary of Renascor Resources Limited
Ausmin:	Ausmin Development Pty Ltd

<u>Note 2</u> Agreement with EPM - option to acquire 100%

<u>Note 3</u> Agreement with EPM - option to acquire Ausmin Development Pty Ltd