

High purity coarse flake concentrates from Siviour metallurgical tests

ASX: RNU

ASX RELEASE

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ASX CODE

RNU

Developing
Australia's largest
graphite deposit



- Metallurgical tests have achieved high proportions of high purity, coarse flake graphite. Results include:
 - 48% of graphite concentrates exceeding 150 microns, including 33% at +180 microns and 8% at +300 microns
 - Average purity of 94% total graphitic carbon (TGC), with recoveries of 85%
 - Purity levels in excess of 99% TGC can be achieved in finer fractions through addition of one re-grind and flotation circuit, suggesting suitability for lithium-ion battery market
- Results achieved through conventional (non-chemical, non-thermal) graphite flotation process, with scope for improvement from on-going test work
- Siviour's metallurgical properties are unique in the region and compare favourably with Syrah's (ASX: SYR) advanced Balama graphite project in Mozambique
- These results provide sufficient basis to complete the Siviour Scoping Study, with results expected next month

Flake category	Particle size		Distribution
	Microns (µm)	Mesh (#)	
Jumbo	>300	+48	8%
Large	180 to 300	-48 to +80	25%
Medium	150 to 180	-80 to +100	15%
Small	75 to 150	-100 to +200	39%
Fine	<75	-200	13%

Table 1. Summary of Siviour concentrate size distribution

Renascor Resources (ASX: RNU) is pleased to provide an update on metallurgical test work on its Siviour Graphite Deposit in South Australia.

Test work to date on Siviour core samples has produced a large proportion of coarse flake graphite concentrates using an industry standard flotation circuit at average purity levels of 94% TGC and recoveries of 85%. See table 1.

Commenting on the metallurgical results, Renascor Managing Director David Christensen stated:

“These results confirm Siviour's potential to produce high quality graphite concentrates for sale into traditional industrial markets, as well as the lithium-ion battery sector and other high growth market segments.”

“This test work continues to demonstrate that the Siviour mineralised body is unique in the region, with favourable size, potential mining costs and now metallurgical characteristics.”

“As we near completion of the Siviour Scoping Study, there is strong reason to believe that Siviour, located in the secure mining jurisdiction of South Australia, has the potential to compete with emerging large-scale graphite developments in Africa.”

Current metallurgical program

The current metallurgical test program for Siviour is evaluating the ability to produce marketable graphite concentrates with a cost-effective and conventional (non-chemical, non-thermal) flow sheet design.

Work to date has focused on an industry standard design, consisting of a crushing and grinding circuit, followed by four stages of flotation and re-grinding prior to drying and separation. Test work has been undertaken at ALS Metallurgy (Adelaide) and Bureau Veritas Minerals (Adelaide) on core samples obtained from 14 diamond holes drilled within areas representative of sectors of low strip ratio mineralisation considered to be of prime economic interest.

The flake size distribution from the test work to date is summarized in table 1. These results were achieved at a weighted average grade of 94% TGC and a recovery rate of 85%.

Additional test work has demonstrated the ability to achieve higher purity levels, including grades of over 99% TGC with an additional regrind and flotation circuit. Continuing metallurgical programs will include the addition of a cost-effective circuit designed to achieve high purity, +99% TGC within the fine flake categories, while maintaining flake size in the coarse flake categories at purity levels in excess of 94% TGC.

Renascor believes that Siviour has the potential to produce high quality and cost-competitive graphite concentrates for sale into both the traditional industrial markets, as well as into the lithium-ion battery sector and other high growth segments.

Siviour in comparison to other graphite resources

The metallurgical results to date continue to mark Siviour as unique within Australia, with a proportion of coarse flake graphite products that compares favourably to market leader Syrah Resources' (ASX: SYR) Balama graphite project in Mozambique. See Figure 1.

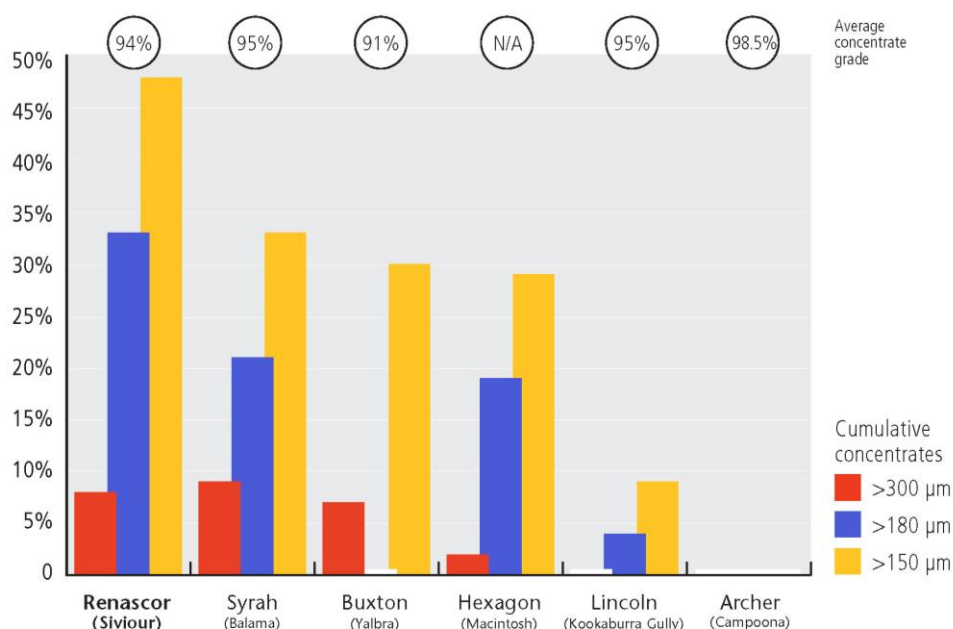


Figure 1. Summary of reported flake size distribution at >300µm, >180µm and >150µm size fractions and average concentrate grade of graphite projects in Australia and Syrah's Balama project in Mozambique (Source: company reports)

While Syrah's feasibility study (Syrah ASX release dated 29 May 2015) reports superior overall purity levels (95% TGC) and recoveries (92.5%) than Renascor has achieved to date in Siviour test work (purity of 94%

TGC and recoveries of 85%), Renascor expects that on-going metallurgical testing will provide opportunities for continued improvements.

Next steps

The metallurgical results from the tests completed to date provide sufficient confidence in the flow sheet design parameters to complete the Siviour Scoping Study, with results expected next month.

Concurrently, Renascor is continuing its metallurgical test work, including optimisation programs designed to modify the current conventional flow sheet in a manner that improves purities, flake size distribution and recoveries, while maintaining a cost-competitive process design.

Additional mineral processing programs will include variability testing and the collection of a bulk sample for rigorous pilot-plant scale test work and production of marketing samples for customer product testing.

Background information

The Siviour Graphite Deposit, located in South Australia’s Eyre Peninsula (see Figure 2), is among the world’s largest reported graphite deposits, with a Mineral Resource estimate of 80.6 million tonnes @ 7.9% TGC for 6.4 million tonnes of contained graphite, including higher-grade mineralisation of 30.1 million tonnes @ 10.0% TGC for 3.0 million tonnes of contained graphite.

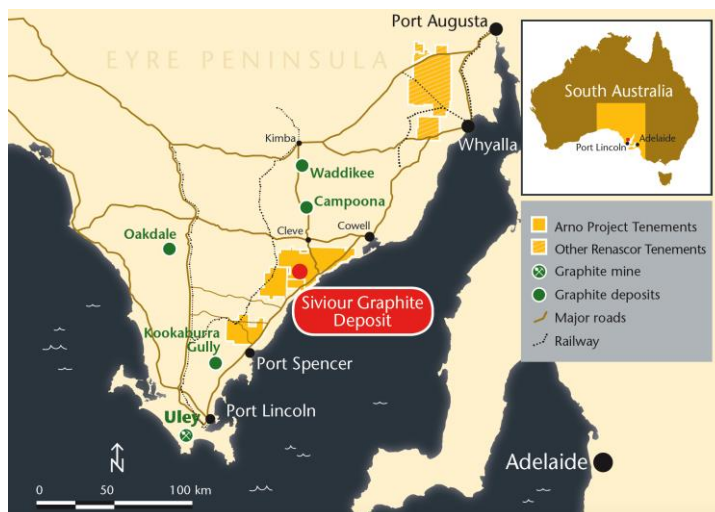
Category	Tonnes of mineralisation (millions)	TGC	Tonnes of contained graphite (millions)
Indicated	51.8	8.1%	4.2
Inferred	28.8	7.6%	2.2
Total	80.6	7.9%	6.4

Note: Cut-off grade of 3% total graphitic carbon

Table 2. Siviour Mineral Resource estimate as of 15 March 2017

Siviour is part of Renascor’s Arno Graphite Project. Renascor has the right to acquire the project through an option agreement between Renascor’s wholly-owned subsidiary Eyre Peninsula Minerals Pty Ltd (EPM) and Ausmin Development Pty Ltd (Ausmin). EPM’s option to acquire the project is exercisable upon completing a feasibility study in relation to the commercial development of graphite by issuing to the owners of Ausmin a 22% equity interest in a listed vehicle holding the project. See RNU ASX release dated 1 September 2016.

Figure 2 (right). Siviour Graphite Deposit



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.

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