RENASCOR RESOURCES

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ASX Release

February 15, 2018

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ASX CODE

RNU

Developing Australia's Largest Graphite Deposit

99.99% purity spherical graphite produced from Siviour

- **Further Independent tests produce spherical graphite at ultra-high purity of 99.99% carbon**
- **Industry standard (or better) results for lithium ion battery anode market achieved across all parameters tested, including BET (surface area), impurities, tap density and fraction size and ratio**
- **Results further support suitability of Siviour concentrates to be processed into high value spherical graphite**

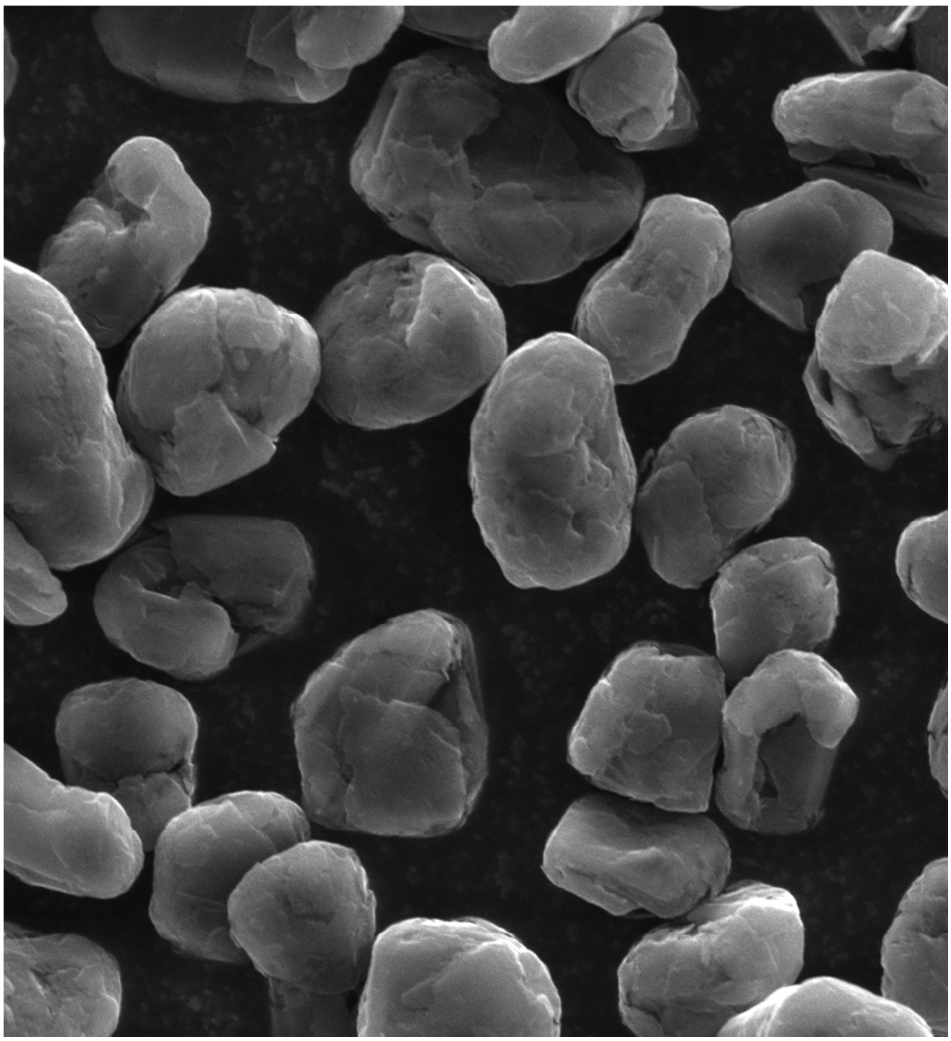

Figure 1. 99.99% C spherical graphite produced from Siviour graphite concentrates (EM Image; HV 20.00 kV, field of view approximately 100 microns)

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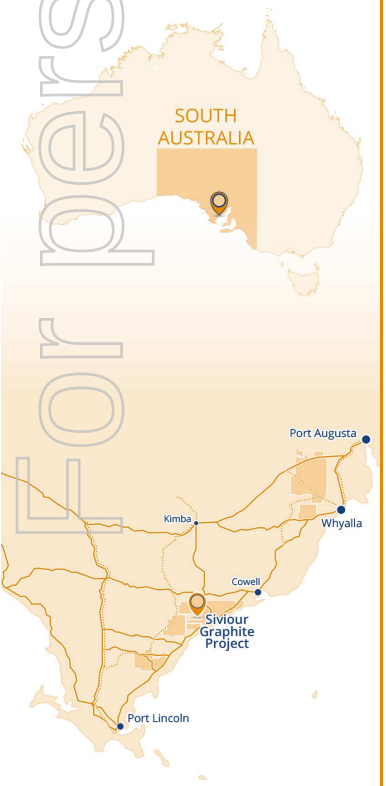

Renascor Resources (ASX: RNU) is pleased to announce that further laboratory test work has produced 99.99% carbon (C) spherical graphite from Siviour graphite concentrates, with the spherical product meeting or exceeding industry specifications across all parameters tested.

The results further support the suitability for Siviour concentrates to be processed into high value uncoated spherical graphite for sale into the market for lithium ion battery anodes.

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

> *"Spherical graphite produced from Siviour continues to meet or exceed industry standards across all key parameters tested to date.*
>
> *Our recently completed Spherical Graphite Scoping Study has highlighted the potential value of the spherical graphite market for Siviour, and this test work continues to demonstrate that Siviour graphite concentrates can be processed into a spherical graphite product that meets strict customer quality standards in the expanding lithium ion battery anode sector.*
>
> *These results further demonstrate Siviour's potential to supply a high value, Australian-made spherical graphite product into this important market."*

Description of spherical graphite test results

Renascor's spherical graphite test programs have included tests assessing the suitability of Siviour graphite concentrates to be processed into uncoated spherical graphite for sale into the market for lithium ion battery anodes.

On 25 January 2018, Renascor announced the results of preliminary tests undertaken by a European graphite specialist[1] with expertise in spheroidisation and purification of natural flake graphite for use in lithium ion battery anodes. See Renascor ASX release dated 25 January 2018.

These preliminary tests produced 99.97% C and 99.98% C spherical graphite from Siviour graphite concentrates, exceeding the industry standard purity of 99.95% C. The spherical graphite met or exceeded industry specifications across all key performance metrics measured, including particle size distribution (D10, D50 and D90) and tap density.

Further preliminary results from this test program are now available. These tests include additional purification assays on the spheronised graphite material used to produce the first test result reported on 25 January 2018, as well as surface area test results for both test 1 and test 2. In addition, the newly available test results include an impurity analysis on the 99.99% C spherical graphite.

The preliminary results are shown below in Tables 1 and 2 (pages 3 and 4).

[1] For confidentiality purposes, the identity of the European graphite specialist is not disclosed.

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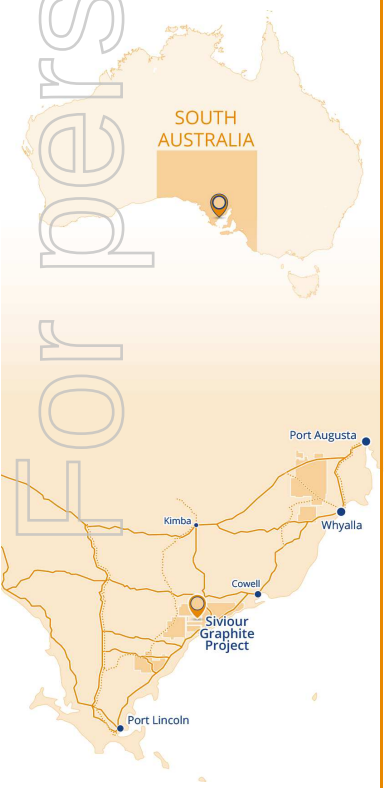

Parameter[2]	Test 1-A (25 Jan 18)	Test 1-B (newly reported)	Test 2 (25 Jan 18)	Industry standard
Fixed carbon	99.97%	**99.99%**	99.98%	99.95%
Ash content	0.03%	**0.01%**	0.02%	0.05%
BET (surface area)	**6.7m^2/g**		**5.8m^2/g**	5.0m^2/g to 7.0m^2/g
D10 size fraction (-10% finer than this size)	9.8 microns		11.3 microns	Meets industry specifications
D50 size fraction (-50% finer than this size)	16.3 microns		18.4 microns	Meets industry specifications
D90 size fraction (-90% finer than this size)	27.5 microns		29.7 microns	Meets industry specifications
Ratio D10 to D90 sizes	2.8		2.8	Meets industry specifications
Tap density (measure of density of spherical graphite powder settled in test cylinder)	0.93 g/cm^3		0.95 g/cm^3	0.90 g/cm^3 to 1.10 g/cm^3

Table 1. Test results for spheronised purified graphite from Siviour Graphite Deposit (newly reported results shown in bold)

[2] On 25 January 2018, Renascor announced the results for fixed carbon, ash content, fraction size (D10, D50 and D90) and ratio (D10 to D90) as shown in the table above for Test 1-A and Test 2. See Renascor release dated 25 January 2018. The results above for Test 1-B and for BET (shown in bold) are based on newly available data and are presented for this first time in this announcement.

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Parameter		Result (ppm)	Industry standard (ppm)
Al	Aluminium	5.7	≤**30**
Ca	Calcium	4.0	≤**30**
Cr	Chromium	0.2	≤**5**
Cu	Copper	0.9	≤**5**
Fe	Iron	14.9	≤**30**
Ni	Nickel	<0.4	≤**5**
Si	Silicon	10.3	≤**30**

Table 2. Impurity analysis of Test 1-B[3]

These additional results from the spherical graphite test program are consistent with Renascor's expectation that Siviour graphite concentrates are suitable for the production of uncoated spherical graphite, with all tested parameters meeting or exceeding industry standards.

The new purification results have confirmed the ability to exceed the standard 99.95% required by most spherical graphite customers.

Moreover, this 99.99% C ultra-high purity spherical graphite product was produced in a test sample where all key impurities, including iron, silicon, aluminium, chromium and copper, were far below standard impurity limits for purified spherical graphite.

Next steps

The spherical graphite test work undertaken to date has met all key industry standards in classification tests of uncoated spherical graphite processed from natural flake graphite concentrates.

Next step spherical graphite test work is expected to comprise:

- Further purification testing aimed at optimising production process flow sheet parameters, and
- Battery testing in which Siviour uncoated spherical graphite is coated and then tested for performance in a lithium ion battery cell.

Concurrently, Renascor is producing spherical graphite marketing samples to aid discussions with potential spherical graphite offtake partners.

[3] All results shown in Table 2 are reported for this first time in this announcement.

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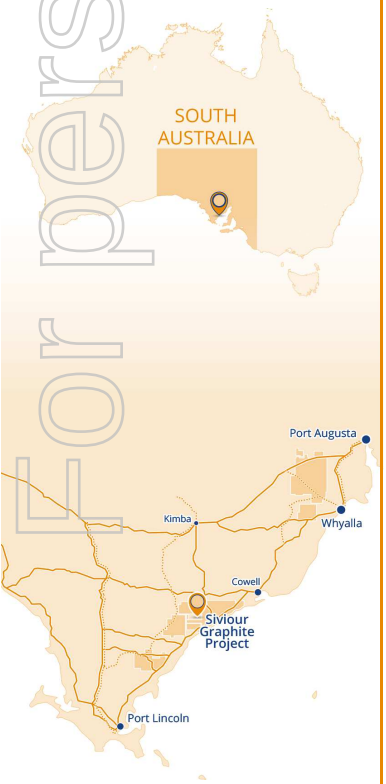

Competent Person Statements

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.

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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