

**ASX ANNOUNCEMENT**

31 October 2016

**QUARTERLY ACTIVITIES REPORT – SEPTEMBER 2016**



**HIGHLIGHTS**

- COMPLETION OF PHASE 3 DRILLING PROGRAM
- UPGRADE IN MINERAL RESOURCE ESTIMATE
- COMPLETION OF METALLURGICAL TESTS
- PROVISIONAL FLOW SHEET DEVELOPED
- COMPLETION OF INITIAL LI-ION BATTERY TESTS
- COMPLETION OF PRELIMINARY MINING STUDY
- AGREEMENT TO CONSOLIDATE PROJECT OWNERSHIP
- PRE-MARKETING IN NORTH AMERICA AND ASIA

**Graphitecorp Limited (ASX: GRA)** (“Graphitecorp” or “the Company”) is pleased to provide the following Quarterly Activities Report for the September 2016 Quarter.

**EXPLORATION**

During the Quarter, the Company completed a Phase 3 Drilling Program at the Mount Dromedary Graphite Project to improve the confidence in the Mineral Resource. Seven (7) reverse circulation (RC) holes totaling 655m were drilled in conjunction with the drilling of four water monitoring bores beyond the current mining pit shells. The Phase 3 Drilling Program focused on the area between the Phase 1 and Phase 2 drilling programs and encountered significant high-grade graphite intersections which has significantly increased the Mineral Resource Estimate.

An updated independent Mineral Resource Estimate was issued by RungePincockMinarco (RPM) in October.

The RPM report confirmed a 125% increase in combined Measured and Indicated JORC Mineral Resource Estimate to 1.316 Million tonnes of contained graphite and a 66% increase in the total JORC Mineral Resource Estimate to 1.908 Million tonnes of contained graphite, while noting the current drilling covers less than half the mapped deposit surface area. Importantly, there is sufficient high-grade resource to support production scenarios being modelled, while allowing for significant further scalability.

Refer to the ASX announcement on the updated independent JORC Mineral Resource Estimate dated 20 October 2016 for full details and disclosures.

The following table summarises the Total Mineral Resource estimate prepared by RPM for the project to date. It is important to note that this Mineral Resource estimate is based on exploration drilling and test results covering less than 50% of the total mapped prospect outcrop area.

**Table: Mineral Resource Estimate (4% Total Graphitic Carbon Cut-off)**

Domain	Type	Measured Mineral Resource			
		Tonnage Mt	TGC %	TC %	Cont. Graphite kt
High Grade (>10% TGC)	Weathered	0.2	16.1	17.7	33
	Primary	0.5	16.9	18.0	84
	<b>Sub-Total</b>	<b>0.7</b>	<b>16.6</b>	<b>17.9</b>	<b>117</b>
Medium Grade (4 to 10% TGC)	Weathered	0.1	4.5	5.8	4
	Primary	0.2	4.5	5.0	11
	<b>Sub-Total</b>	<b>0.3</b>	<b>4.5</b>	<b>5.2</b>	<b>14</b>
	<b>Total</b>	<b>1.0</b>	<b>12.9</b>	<b>14.0</b>	<b>131</b>

Domain	Type	Indicated Mineral Resource			
		Tonnage Mt	TGC %	TC %	Cont. Graphite kt
High Grade (>10% TGC)	Weathered	0.9	18.2	19.4	170
	Primary	4.5	18.7	19.6	837
	<b>Sub-Total</b>	<b>5.4</b>	<b>18.6</b>	<b>19.6</b>	<b>1,007</b>
Medium Grade (4 to 10% TGC)	Weathered	0.6	5.6	6.6	35
	Primary	2.5	5.7	6.4	143
	<b>Sub-Total</b>	<b>3.1</b>	<b>5.7</b>	<b>6.4</b>	<b>178</b>
	<b>Total</b>	<b>8.5</b>	<b>13.9</b>	<b>14.7</b>	<b>1,185</b>

Domain	Type	Inferred Mineral Resource			
		Tonnage Mt	TGC %	TC %	Cont. Graphite kt
High Grade (>10% TGC)	Weathered	0.2	15.3	16.8	25
	Primary	2.2	18.8	19.7	414
	<b>Sub-Total</b>	<b>2.4</b>	<b>18.5</b>	<b>19.5</b>	<b>439</b>
Medium Grade (4 to 10% TGC)	Weathered	0.2	6.5	7.3	12
	Primary	2.2	6.4	6.9	142
	<b>Sub-Total</b>	<b>2.4</b>	<b>6.4</b>	<b>7.0</b>	<b>154</b>
	<b>Total</b>	<b>4.8</b>	<b>12.4</b>	<b>13.2</b>	<b>593</b>

Domain	Type	Total Mineral Resource			
		Tonnage Mt	TGC %	TC %	Cont. Graphite kt
High Grade (>10% TGC)	Weathered	1.3	17.5	18.8	227
	Primary	7.2	18.6	19.5	1,335
	<b>Sub-Total</b>	<b>8.5</b>	<b>18.4</b>	<b>19.4</b>	<b>1,562</b>
Medium Grade (4 to 10% TGC)	Weathered	0.9	5.7	6.7	51
	Primary	5.0	6.0	6.6	295
	<b>Sub-Total</b>	<b>5.8</b>	<b>5.9</b>	<b>6.6</b>	<b>346</b>
	<b>Total</b>	<b>14.3</b>	<b>13.3</b>	<b>14.2</b>	<b>1,908</b>

*Note:*

1. Totals may differ due to rounding, Mineral Resources reported on a dry in-situ basis.
2. Flake sizes for the Mineral Resource is tabulated below.
3. The Statement of Estimates of Mineral Resources has been compiled under the supervision of Mr. Robert Dennis who is a full-time employee of RPM and a Member of the AusIMM and AIG. Mr. Dennis has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he has undertaken to qualify as a Competent Person as defined in the JORC Code (2012).
4. All Mineral Resources figures reported in the table above represent estimates at 21st October, 2016. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.
5. Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).
6. Subsequently Graphitecorp has progressed detailed metallurgical testwork including production of a large sample of product for customer testing. Talks with potential customers have commenced. The Competent Person is of the opinion that because of these activities which are in progress, but are confidential in detail and product specification, there is a reasonable expectation a saleable product and customer will be secured.
7. Reporting cut-off grade selected based on the results of the Mount Dromedary Graphite Project Scoping Study conducted by RPM during August 2016. The Scoping Study indicated that a break-even cut-off grade for the Mount Dromedary Mineral Resource is 4% TGC, assuming a product (very fine) price of \$US800/t, a 95% TGC average concentrate grade and an open pit mining method.
8. TGC = total graphitic carbon.

**Table: Graphitic Schist Flake Size Distribution (>10% Total Graphitic Carbon Cut-off)**

Classification	Sieve Size (µm)	% in Interval	Cumulative %
Jumbo	>300	24.5	24.5
Large	180-300	18.9	43.4
Medium	150-180	6.8	50.2
Fine	75-150	23.9	74.1
Very Fine	<75	25.9	100.0

**Table: Graphitic Schist Flake Size Distribution (4 to 10% Total Graphitic Carbon)**

Classification	Sieve Size (µm)	% in Interval	Cumulative %
Jumbo	>300	9.5	9.5
Large	180-300	14.9	24.4
Medium	150-180	6.1	30.5
Fine	75-150	28.4	58.9
Very Fine	<75	41.1	100.0

**Table: Graphitic Schist Flake Size Distribution (All Total Graphitic Carbon)**

Classification	Sieve Size (µm)	% in Interval	Cumulative %
Jumbo	>300	18.8	18.8
Large	180-300	17.0	35.8
Medium	150-180	6.2	42.0
Fine	75-150	25.2	67.2
Very Fine	<75	32.8	100.0



Image: HQ diamond core – Drillhole MD-12 - Central Zone of the Mount Dromedary.

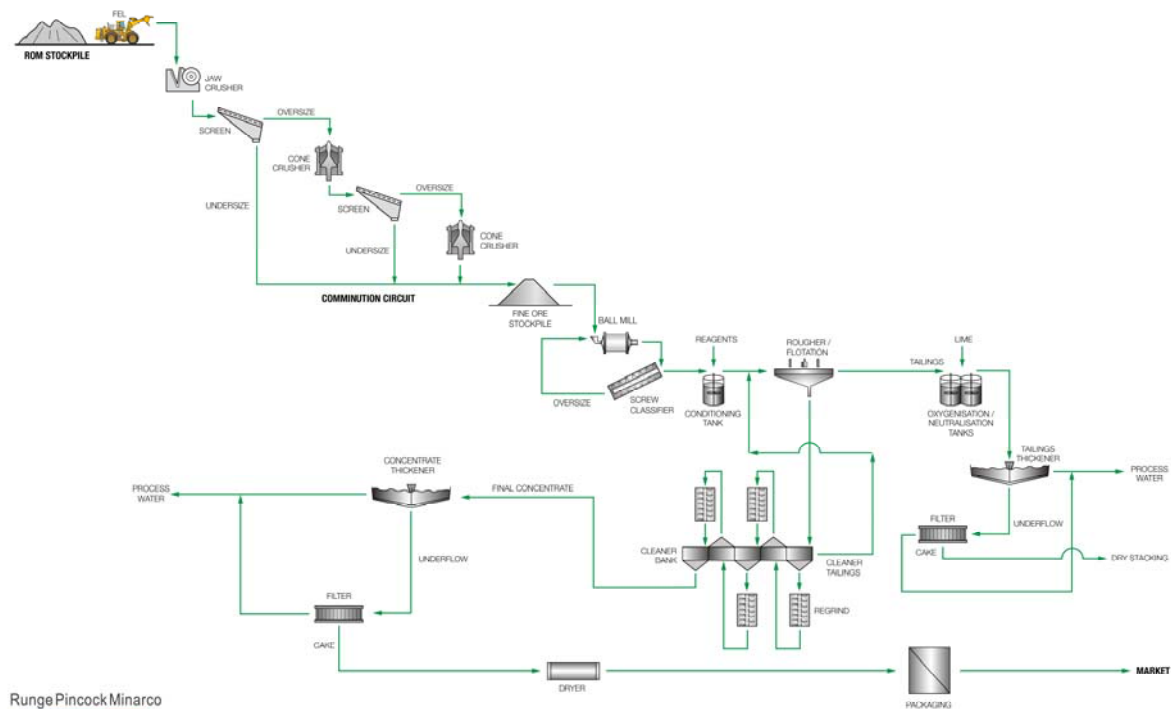
## METALLURGICAL TESTWORK AND PLANT DESIGN

The Company, with technical and supervisory assistance from RPM, completed a comprehensive program of metallurgical tests using a number of laboratories during the period. The metallurgical test program was designed to inform the company on processing properties of the different ore types, product quality and recovery capabilities while also providing base line data for process and plant design and mine and environmental assessment and planning.

The following tests and results have been reported:

- Completed Open Circuit Cleaning Tests and Locked Cycle Tests
- Confirmed 95+%Cg concentrates can be produced from simple flotation
- Comminution tests confirmed a “soft” hardness with low abrasiveness
- Completed a provisional flow sheet for the project based on test work results
- Concentrate characterisation tests
- Completion of oxidation and flotation test
- Thickening and filtration tests for concentrate and tailings
- Variability tests covering feed grade-recovery relationship
- Static environmental tests

The following provisional flow sheet has been reported:



## BATTERY TESTWORK

The Company engaged an international laboratory to undertake li-Ion battery physical and e-chemical tests on the concentrate produced from Mount Dromedary graphite ore to advance our understanding of the potential suitability of our concentrate for the battery market.

These tests were completed in September and the results reported in October.

Results from the 250g sample of -200 mesh natural flake graphite concentrate were as follows:

Flake Size (mesh)	Particle Size (mm)	Tap Density (g/cc)	LOI - Ash Content (% Carbon)	BET SA (Grnd - 635) (m2/g)	Rev Capacity (mAh/g)
100X200	0.150 - 0.075	0.48	97.8	6.55	366
200X400	0.075 - 0.037	0.45	97.53	6.01	375
400X635	0.037 - 0.020	0.41	96.95	6.95	371
-635	-0.02	0.4	93.99	6.33	351

The results confirmed the graphite concentrate was of high purity, good electrochemistry with high reversible capacity and most importantly will be suitable for LIB applications.

Based on these results the company is scoping the next phase of development work relating to supply of graphite products for LIB applications and is continuing discussions with potential customers and intermediaries.

## MINE PLANNING

The Company engaged RPM to complete a preliminary mining study based on the first two drilling programs and associated assay and metallurgical results. The study incorporated the review of project parameters, geological model, metallurgical results and other key technical inputs, developed pit shells, mining and mine plan options, high level production plans, quantities and high level overall optimization and economic analysis.

RPM has since been engaged to advance this work to support submission of the Mining License Application and the Environmental Authority Application, and to update the models and mining/processing plans to incorporate the results of the phase 3 drilling program and latest metallurgical and environmental geochemical test results.

## ENVIRONMENTAL

Significant environmental work was completed during the quarter including the installation of four ground water monitoring bores around the proposed mining operation and the taking of base line water samples.

This work is part of a comprehensive environmental work program underway that will culminate in the submission of an Environmental Authority Application to the Queensland Department of Environment and Heritage Protection.

## MARKET RESEARCH AND PREMARKETING

The Company has been active in undertaking further targeted market research efforts in Asia and North America with a focus on the emerging market requirements for battery-grade graphite.

From these meetings, it is clear that electric vehicles and energy storage markets are in the very early stages of what will be major growth markets and there is significant development and activity in USA, Asia and Europe taking place.

What has also become clear is the expected growing requirement for new raw materials for advanced battery manufacturers, with graphite as a key component, along with the need for alternative suppliers to traditional sources.

Graphitecorp has engaged with several major participants in all of these regions of the international market, including potential customers and development partners. This has helped inform about market and product requirements. This has laid the groundwork for ongoing testing and development of Graphitecorp products, and prepared us for sample delivery and customer testing of our products.

## CORPORATE

The Company concluded an agreement with its joint venture partner Exco Resources Limited, a wholly-owned subsidiary of Washington H. Soul Pattinson and Company Limited (WHSP, ASX: SOL), to merge its JV interest into Graphitecorp .

The agreement results in Graphitecorp moving to a 100% interest in the project and gaining priority development rights to the project area, with WHSP becoming a substantial shareholder in Graphitecorp at 18.73% of issued capital.

Additionally, WHSP has invested a further \$300,000 via a private placement at \$0.60 per share, and will commence board representation. Graphitecorp has also appointed WHSP subsidiary Pitt Capital Partners as financial advisor for advancing the project and for potential control transactions.

WHSP is Australia's second oldest listed company, has a market capitalization exceeding \$4 Billion and is one of Australia's largest, most active and successful institutional investors in the resources sector. The conversion of its interest in the

project into Graphitecorp equity is a major vote of confidence in the company and the future of graphite as an emerging strategic material for energy storage and other high tech applications.

The transaction also brings considerable mining expertise and experience in the north west minerals province around Mt Isa and Cloncurry in Queensland, and this adds significantly to the skills and capabilities available at board level.

This transaction and private placement was subsequently approved by shareholders at the AGM on 21 October.

## SIGNIFICANT ASX ANNOUNCEMENTS

The following significant announcements were lodged with ASX during the September Quarter:

- Appendix 3B – Release of shares from Escrow (10 August)
- Presentation to Geological Survey of Queensland Conference (19 August)
- Release of Restricted Securities (26 August)
- SOL to merge JV interest into GRA for equity (29 August)
- Annual Report (30 August)
- Release of Restricted Securities (12 September)
- Notice of Annual General Meeting / Proxy Form (20 September)
- Dispatch of 2016 Annual Report and Notice of AGM (20 September)

## TENEMENT LIST

The transfer of EPM 17246 to Graphitecorp was completed in the quarter.

Tenement	Permit Holder	Grant date	Graphitecorp Rights	Expiry date
EPM 26025	Exco Resources Limited	14/12/2015	80% Graphite Rights (Sub-Blocks Normanton 3123 D, J, N, O and S)	13/12/2020
EPM 17323	MD South Tenements Pty Ltd (Subsidiary of Graphitecorp Limited)	20/10/2010	100%	19/10/2021
EPM 17246	MD South Tenements Pty Ltd (Subsidiary of Graphitecorp Limited)	26/10/2010	100%	25/10/2018



## FOR FURTHER INFORMATION

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## ABOUT GRAPHITECORP

**Graphitecorp** (ASX: GRA) is a developer of one of the highest-grade flake graphite deposits in the world, located in Australia, and referred to as the Mount Dromedary Project.

Given strong project fundamentals and positive demand outlook for specialised graphite products, Graphitecorp is progressing a feasibility study to assess the economic opportunity of establishing a business to mine, process, manufacture and market high quality graphite products into Asian and other global markets.

Graphitecorp aims to become a leading alternative, competitive, secure and sustainable graphite supplier in the Asia-Pacific region.

For more information on Graphitecorp please visit our website at [www.graphitecorp.com.au](http://www.graphitecorp.com.au)



**Containerised Ocean Transport Possibilities: Port of Brisbane and/or Townsville to Potential Asian and West Coast Graphite Users**