

## ASX ANNOUNCEMENT

**LAMBOO RESOURCES Limited**

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ASX: LMB

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## QUARTERLY ACTIVITIES REPORT PERIOD ENDING 31 MARCH 2014

### HIGHLIGHTS:

- Lamboo entered into a Memorandum of Understanding ('MoU') with China Sciences Hengda Graphite Group in China.
- McIntosh Target 1 was upgraded to a JORC compliant resource under the inferred and indicated categories of 7.135M tonnes (rising significantly from previous resource of 5m tonnes) grading 4.73%TGC (4.95%TC) for 337,700 tonnes (up from 261,000 tonnes) of contained graphite.
- Aerial EM anomalies attributable to graphite schist within the McIntosh Project tenements now in excess of 50 km of strike.
- Metallurgical beneficiation of McIntosh Targets 2, 5 and 6 by GZRINM Laboratory in China has achieved up to 98% TGC with good recoveries in excess of 80%.
- Diamond drilling at the Geumam Project, South Korea achieved thick intersections of high grade graphite mineralization at Area B including:  
54m @ 7.24% TGC from 11m in GM09,  
35m @ 10.04% TGC from 10m in GM10,  
43m @ 7.69% TGC from 13m in GM11, and  
13m @ 10.55% TGC from 16m in GM12.
- Lamboo's Geumam (South Korea) flake graphite was successfully independently tested in a lithium ion battery cell by Very Small Particle Company Limited (VSPC), a leading Australian lithium ion battery R&D specialist laboratory.
- Capital raising of \$5.82 million completed in the period.

## **Memorandum of Understanding – Lamboo Resources Ltd and China Sciences Hengda Graphite Co., Ltd.**

In January Lamboo signed a MoU with China Sciences Hengda Graphite Co. Ltd. The MoU with Hengda will enable commercial production trials to be undertaken on the McIntosh flake graphite with the view to formalising an offtake agreement for McIntosh flake graphite. Lamboo will be able to utilise Hengda's extensive experience in the mining and production of quality flake graphite to help advance the development of the McIntosh project. Lamboo aims to be a supplier of graphite concentrate to Hengda and Hengda will represent a final processing option for Lamboo flake graphite

Hengda represents the only miner and supplier of flake graphite in Central China and, after recent rationalisations by the Chinese government, represents one of the few flake graphite suppliers in the country. Hengda is fully vertically integrated with a 300,000 tpa mine at Yinjiaping (Figure 1) producing 30,000 tonnes of graphite that is manufactured in Yichang on the Yangzte River, 100 km away, into an impressive array of industrial products that can only utilise high quality flake graphite. Hengda also produces lithium battery grade graphite and has plans to introduce a graphene production facility this year.



**Figure 1: China Sciences Hengda Graphite Co., Ltd treatment plant at Yinjiaping**

## McIntosh Project – Target 1 JORC Resource Upgrade

Based on additional RC drilling at Target 1, in the previous quarter, a JORC upgrade was completed in the March 2014 quarter. RC drilling confirmed that the graphite schist continues 2,000 m southwest of the current resource. More detailed resource drilling was conducted on 80 m traverses immediately to the south and north of the maiden JORC resource estimate (refer ASX:LMB Announcement – April 2013) and succeeded in extending the resource by an aggregate 160 m to a total strike length of 580 m.

Future resource extensions will be completed by diamond drilling as it is considered that RC drill sampling is potentially under reporting graphite grades. The JORC resource upgrade is summarised in Table 1.

**Table 1: Target 1 Flake Graphite Resource estimated at 2.0% TGC lower cut off(\*).**

Project Area	Ore Type	Resource Classification	Tonnes	Graphite (%TGC)	Contained graphite (tonnes**)
<b>Target 1 Resource</b>	Primary	Indicated	4,470,000	4.71	210,350
<b>Upgrade</b>	Oxide	Inferred	540,000	4.51	24,350
	Primary	Inferred	2,125,000	4.84	103,000
	Oxide + primary	<b>Upgraded Resource</b>	<b>7,135,000</b>	<b>4.73</b>	<b>337,700</b>
<b>Target 1 Maiden Resource</b>	Primary	Indicated	3,615,000	4.89	176,770
<b>(ASX:LMB - April 2013)</b>	Oxide	Inferred	350,000	5.03	17,600
	Primary	Inferred	1,359,000	4.93	67,000
	Oxide + primary	<b>Initial Resource</b>	<b>5,323,000</b>	<b>4.91</b>	<b>261,370</b>

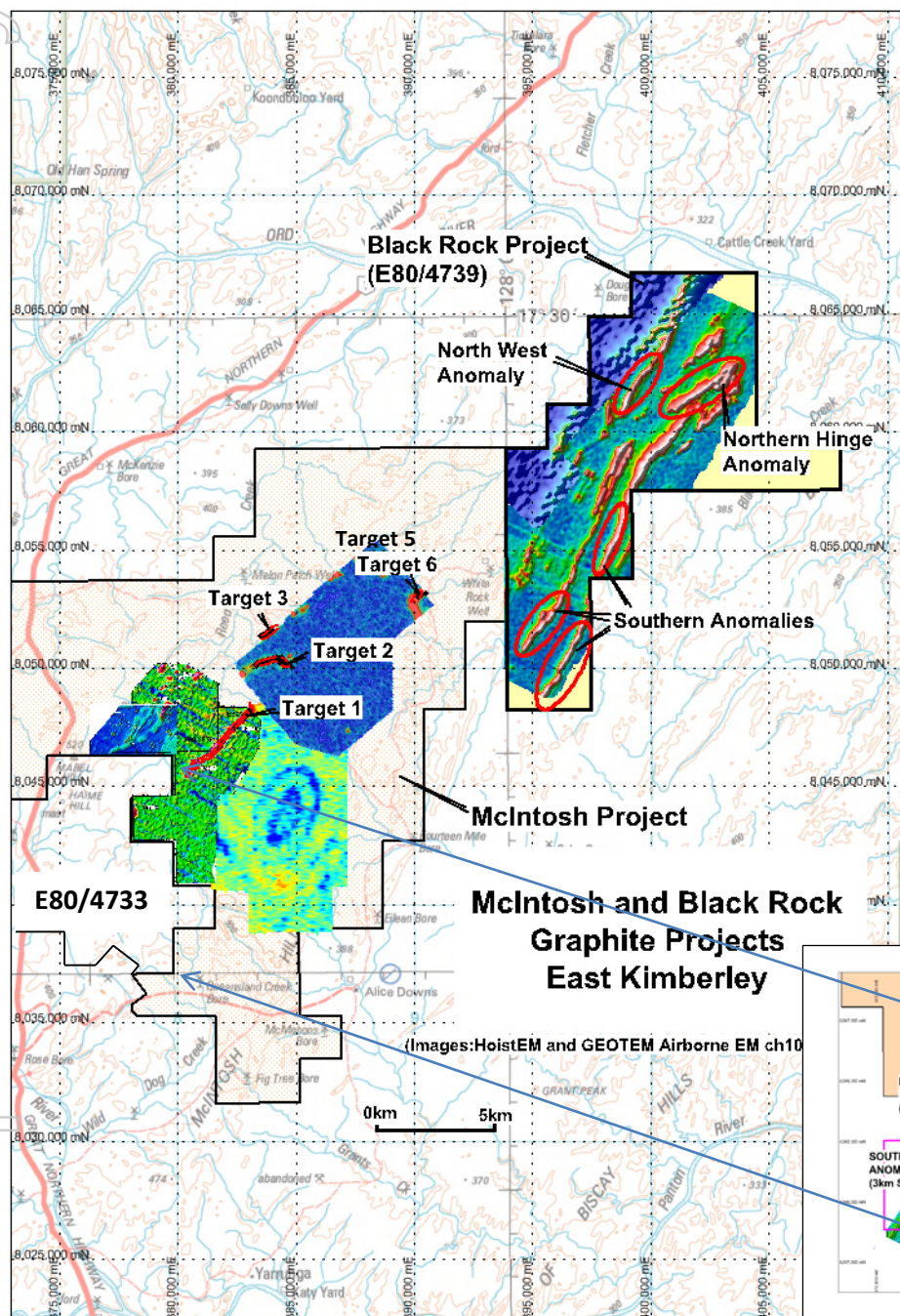
\* Resource modelling was undertaken with IMS mining software by Mr R.E Williams from Norvale Pty Ltd.

\*\* Rounding of figures occurs during resource modelling under JORC.

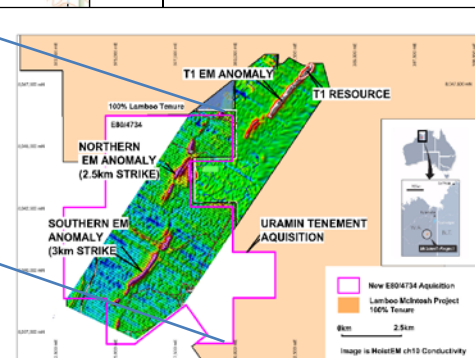
## McIntosh Project – Global Potential

With the addition, in the period, of the exploration rights for the Panton North EL (E80/4733) the McIntosh tenement aggregate area under tenure now covers 660 km<sup>2</sup>. The new tenement covers the southern interpreted extension of the main graphite horizons at McIntosh and brings the total strike length of aerial EM (electromagnetic) anomalies attributable to graphitic schist within the tenements to over 50 strike km (refer **Figure 2**).



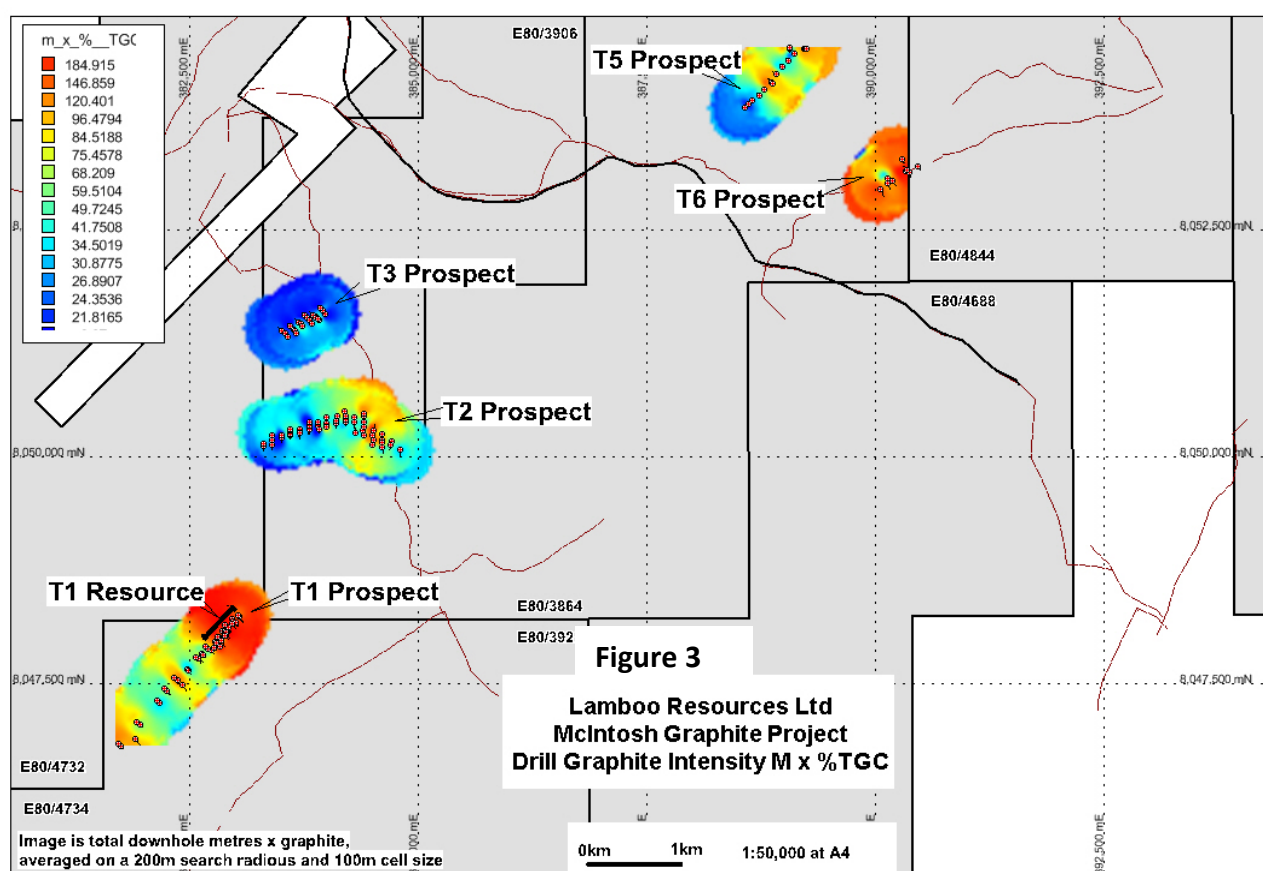


**Figure 2: McIntosh Project - aerial EM anomalies outlining potential graphitic schist horizons at Black Rock and Panton North (inset – E80/4733). McIntosh Targets 1, 2, 3, 5 and 6 are shown.**



## McIntosh Graphite Targets - Grade x Meter Summary

**Figure 3** represents a graphite intercept (m) x graphite grade (%TGC) image of the McIntosh targets based on RC and diamond drilling completed to date. The hot colours clearly outline the priority areas with Target 1 showing up as the main target although the eastern portion of Target 2, the northern portion of Target 5 and Target 6 are also developing as important areas requiring additional work. Targets 1, 5 and 6 remain open along strike and will potentially add to the global resource at McIntosh. The preliminary metallurgical testing of Targets 2, 5 and 6 has been very encouraging and has provided the impetus for further resource drilling during the coming field season.





## McIntosh Project - Targets 1, 2, 5 and 6 Metallurgy

Results of initial metallurgical testwork carried out at Guangzhou Research Institute of Non-ferrous Metals (GZRINM) in southern China indicate McIntosh Targets 2, 5 and 6 can produce strong preliminary flake graphite concentrates after simple flotation and gravity separation techniques. Ongoing beneficiation culminating in chemical leaching can achieve in excess of 98% TGC with no deleterious minerals. The purity of the graphite concentrates from Targets 2, 5 and 6 is comparable to Target 1 based on the XRF analyses.

Metallurgical testwork by GZRINM has confirmed that the use of simple, cost-effective reagents such as lime and sodium silicate to achieved good recoveries of flake graphite during the flotation process. Overall, the results of metallurgical testwork carried out at the Guangzhou Research Institute of Non-ferrous Metals (GZRINM) in southern China indicate that McIntosh Targets 2, 5 and 6 achieve higher preliminary flake graphite concentrates than were initially achieved for Target 1 (refer Table 2). The adoption of lime with the treatment of the McIntosh graphite was not only helpful in depressing sulphides but also accelerated the settlement of minerals making thickening easier. GZRINM concluded that the simple and stable beneficiation process they developed would be easily upgradable to the production scale.

Initial concentration including gravity separation and rougher and cleaner flotation for Target 6 has achieved 78% TGC (GZRINM, Table 2) at high recovery levels. The GZRINM studies have also confirmed that Targets 2 and 5 can achieve similar grades based on the same approach, albeit using improved reagents (Table 2). McIntosh flake graphite is amenable to caustic bake techniques (Nagrom) that will achieve the tenor and recoveries (93% TGC at 80% plus recoveries) of producing flake graphite mines in Central China. This tenor of graphite is currently being treated by hydrometallurgical techniques to achieve (lithium) battery grade graphite flake currently sold in China. Chemical leaching of the McIntosh graphite is realising grades up to 98% TGC (refer Table 3).

**Table 2: The graphite flotation results (after GZRINM).**

Sample	Assay of head (%TGC)	Graphite Concentrate (%TGC)	Recoveries (%)
Target 1	8.35	55.90	80.73
Target 2	4.43	80.22	88.30
Target 5	8.52	80.61	80.59
Target 6	4.83	78.43	95.82

**Table 3: Flotation concentrate after chemical leaching**

Sample	Chemical Leaching (HF + HCl) Results (%TGC)
Target 1	95.04
Target 2	98.03
Target 5	96.26
Target 6	97.43

Petrographic studies and sieved concentrates by Nagrom (Tables 4 and 5) have shown that Targets 2 and 5 contain medium to coarse flake graphite up to 500  $\mu\text{m}$  or 35 mesh and are typically coarser grained than Target 1 (refer Tables 5 and 6). The samples analysed by the metallurgical laboratories represent RC pulps that have already been subject to grinding within the RC drill hole that has resulted in the reduction of the coarser flake sizes. Ongoing metallurgical work will be conducted on bulk samples either from drill core or from pit/costean sampling providing the opportunity to fully assess graphite flake size.

**Table 4: Flake size (short diameter) distribution based on microscope studies of RC pulps (after GZRINM)**

Size ( $\mu\text{m}$ )	Target 1	Target 2	Target 5	Target 6
-640+320	-	3.15%	0.9%	
-320+160	3.05%	3.93%	3.12%	0.98%
-160+80	8.95%	16.91%	9.82%	15.28%
-80+40	14.0%	25.22%	18.3%	25.46%
-40+20	30.75%	28.73%	38.44%	36.43%
-20+10	32.58%	19.23%	25.67%	18.67%
-10	10.67%	2.83%	3.75%	3.18%

**Table 5: Flake size distribution based on sieved concentrates from Target 1 (Nagrom)**

Size ( $\mu\text{m}$ )	Mesh size (A.S.T.M)	Target 1 (cumulative flake size distribution after sieving)
-500	- 35#	98.17%
-425	- 40#	95.68%
-355	- 45#	92.46%
-250	- 60#	85.03%
-180	- 80#	77.65%
-125	- 120#	67.21%
-106	- 140#	62.76%
-90	- 170#	58.21%
-75	- 200#	53.53%
-53	- 270#	43.73%
-38	- 400#	37.49%

The methodologies employed by GZRINM to assess Targets 2, 5 and 6 will be mirrored at Nagrom Laboratories in Perth to produce flake graphite concentrate for assessment by potential end users.

### **XRD Analysis of Target 2 and 5 Concentrates**

The qualitative XRD analysis by ALS Laboratories in Perth of Target 2 (CBKC) and Target 5 (CE2KC) GZRINM metallurgical concentrates have confirmed the presence of oriented

crystalline graphite up to 99% (Table 6). The associated minerals are in trace amounts. The presence of trace sulphides (pyrite, pyrrhotite) will be further reduced.

**Table 6 Quantitative XRD results for Targets 2 (CBKC) and 5 (CE2KC)**

Mineral Identification	CBKC	CE2KC
Clay Mineral	<1	<1
Clinocllore	0	0
Kaolinite	0	0
Serpentine	0	0
Mica	<1	<1
Amphibole	<1	0
Sodic and/or calcic plagioclase	0	0
Alkali feldspars	0	0
Alpha quartz	0	0
Calcite	0	0
Troilite and pyrrhotite	<1	1
Pyrite	<1	1
Graphite	99	99

## Bulk Sample – China Sciences Hengda Graphite Co., Ltd.

A 60 tonne bulk graphite schist sample (3 containers) from McIntosh is in transit to the Hengda processing plant at Yiajiaping in Central China to assess the graphite for commercial production. The exercise will represent a vital part of the planned feasibility to assess flake graphite grades and recoveries at a production level as well as the logistics of eventually sending graphite concentrate to China. The results will help to facilitate an off-take agreement or alternative commercial arrangements for the McIntosh flake graphite.

## McIntosh Project - Environmental Studies

Lamboo has continued environmental studies at the McIntosh Project in the East Kimberley. The completion of wet season field flora and fauna studies will facilitate the application of a mining lease and form an integral part of the necessary EPA Part IV requirements. Similarly, hydrogeological studies involving flow testing of existing drill holes indicate significant water flows in the project area and confirms that fresh water (ie not saline water) availability will not be a problem. Water licences have been now granted.



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## Other Australian Projects

Limited work programs were undertaken in the quarter on the Mabel, Halls Creek and Valla projects.

## Lamboo Tenements - Australia

Project	Tenement	Type	Number	Status	Acquired/Disposed
<b>McIntosh WA</b>	Melon Patch	E	E80/3864	100% Lamboo	
	McIntosh Hills	E	E80/3928	100% Lamboo	
	Melon North	E	E80/3906	100% Lamboo	
	Melon South	E	E80/3907	100% Lamboo	
	Black Granite	E	E80/4396	100% Lamboo	
	White Rock South	ELA	E80/4688	100% Lamboo	
	Panton West	ELA	E80/4734	100% Lamboo	
	Black Rock Creek	ELA	E80/4739	100% Lamboo	
	Togo	ELA	E80/4732	100% Lamboo	
	Edle Creek	ELA	E80/4825	100% Lamboo	
	Alice Downs	ELA	E80/4842	100% Lamboo	
	White Rock	ELA	E80/4841	100% Lamboo	
	Carolyn Hills South	PLA	P80/1821	100% Lamboo	
	Panton North	E	E80/4733	100% Lamboo	Acquired 20/3/2014
<b>Mabel WA</b>	Mabel Downs	E	E80/4385	100% Lamboo	
	Spring Creek	ELA	E80/4797	100% Lamboo	
	Six Mile Bore	ELA	E80/4814	100% Lamboo	
<b>Halls Creek WA</b>	Golden Crown Sth	ELA	E80/4794	100% Lamboo	
	Highway	ELA	E80/4793	100% Lamboo	
	Granite	ELA	E80/4795	100% Lamboo	
	Granite	PLA	P80/1776	100% Lamboo	
	Granite	PLA	P80/1777	100% Lamboo	
	Granite	PLA	P80/1778	100% Lamboo	
	Granite	PLA	P80/1780	100% Lamboo	
	Granite	PLA	P80/1783	100% Lamboo	
	Granite	PLA	P80/1799	100% Lamboo	
	Granite	PLA	P80/1801	100% Lamboo	
	Granite	PLA	P80/1800	100% Lamboo	
<b>Valla NSW</b>	Valla	EL	EL6702	100% Lamboo	
				100% Lamboo	

## Geumam Project, South Korea - Diamond Drilling

Geumam was a historical graphite mine that operated from 1985-1992. Six areas of flake graphite have been mapped and designated Areas A, B, C, D, E, and G (Figure 4). A small mining operation and flotation processing plant was established at Area B at Geumam in 1986, consisting of a run-of-mine stockpile, conveyor, feed hopper, ball mill, two flotation cells (Rougher and cleaner cells), and a regrind ball mill. The plant was capable of producing 6tpd fine flake graphite flotation concentrate (>85% Cg), which was sold to export markets in Japan and Europe. The mill was subsequently upgraded with an alkaline-leach plant to produce high-grade fine flake graphite concentrate (93-97% Cg) in July 1987 (KMPC, 1988), which it sold to domestic markets for micronizing into superfine graphite powders. The mine ceased operations in about 1992.

### Phase 1 Drilling Program

The Phase 1 Drilling Program drill tested Areas B and C at Geumam. An initial 12-drill holes totalling 1,375.4 metres of HQ triple tube drill core was completed during October-November 2013. Core was quartered using a diamond saw and despatched to Actlab Laboratories in Canada for Total Graphitic Carbon (TGC), Total Carbon (TC) and Total Sulphur (TS) analysis. Drill hole collars are tabulated below (refer Table 8). Intersections from the assay results are presented in Tables 9 and 10.

**Table 8: Summary of Drill Hole Collar Surveys, Phase 1 Drilling Program.**

Hole ID	AREA	SUMMARY DRILL HOLE COLLAR SURVEY DATA				
		Easting	Northing	Azimuth (Magnetic °)	Dip (°)	Depth EOH (m)
GM-01	C	290829	4089898	316	-54	160.5
GM-02	C	290849	4089989	312	-50	89.5
GM-03	C	290866	4089967	312	-55	100.5
GM-04	C	290866	4089966	312	-80	130.2
GM-05	C	290868	4089965	357	-50	124.4
GM-06	C	290731	4089784	312	-50	124.5
GM-07	C	290732	4089785	357	-70	118.5
GM-08	B	290863	4089261	289	-50	121.4
GM-09	B	290746	4089345	289	-50	110.3
GM-10	B	290745	4089345	289	-80	110.0
GM-11	B	290746	4089344	334	-50	100.5
GM-12	B	290748	4089344	109	-50	85.5

## Phase 1 Graphite Mineralization Intersections

The Phase 1 Resource Drilling Program was designed to test the extent of the graphite mineralisation at Geumam and potentially increase the graphite resource. Two areas, Area B and Area C were drill tested.

**Area B** contains thick, high grade, intersections of flake graphite above the meta-limestone unit in drill core. The graphitic horizon appears to occur within the keel of a syncline and extends to a depth of 50m, evident in drill holes GM – 09, 10, 11 and 12. The strike extent of the mineralised synclinal keel is limited to the south based on a minor graphite intercepts in drill hole GM – 08. The extent of this unit to the north and west is being tested by the planned Phase 2 drilling.

**Table 9: Graphite Mineralized Intersections, AREA B.**

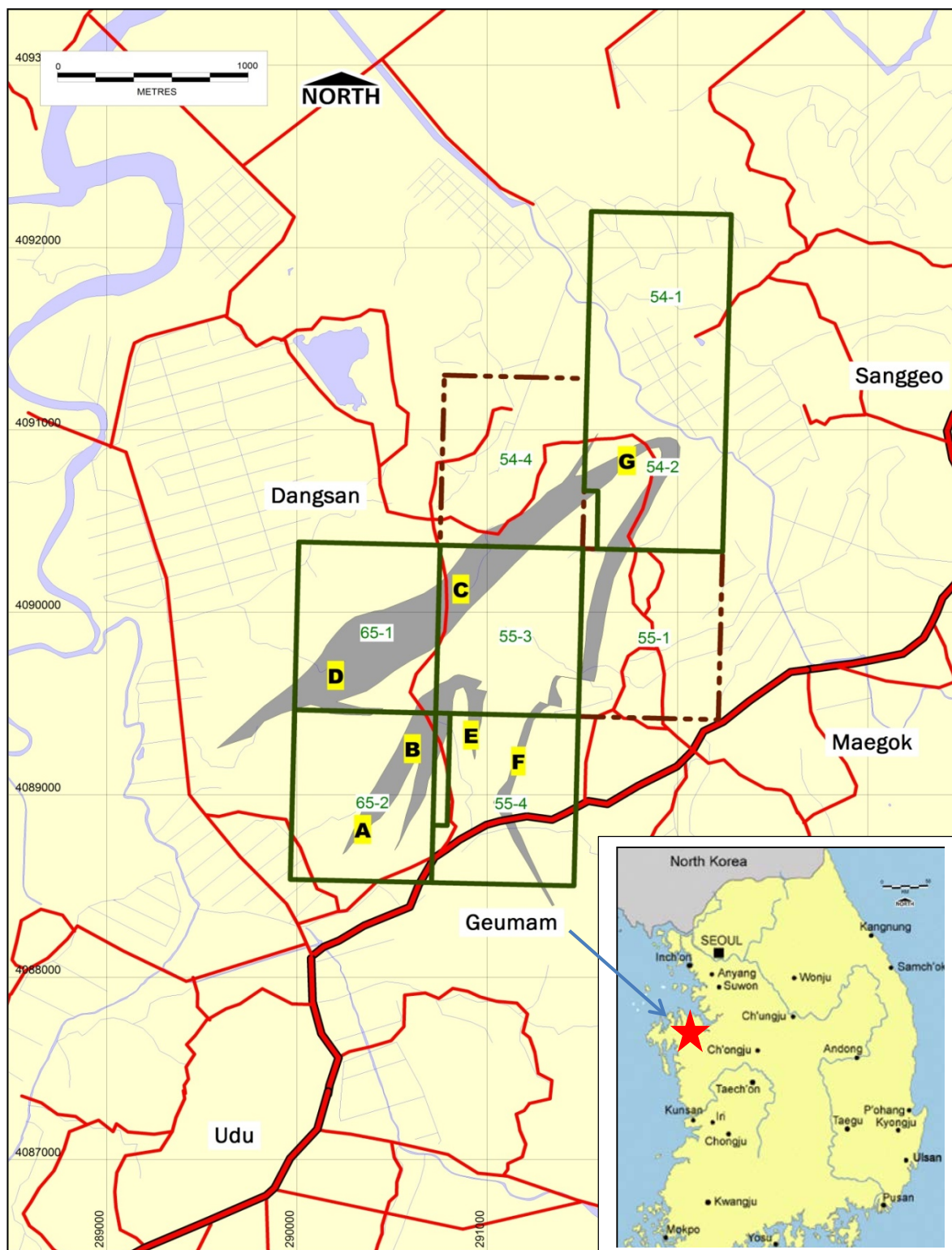
Hole ID	GRAPHITE MINERALIZATION INTERCEPT SUMMARY			
	DEPTH FROM (m)	DEPTH TO (m)	INTERVAL (m)	GRADE % TGC
GM-08	73	74	1	3.27
GM-09	11	65	54	7.24
	99	102	3	6.63
GM-10	10	45	35	10.04
	57	58	1	2.13
GM-11	13	56	43	7.69
	76	77	1	8.45
GM-12	16	29	13	10.55
	48	49	1	2.05

The assay interval table is defined at 2% TGC cut-off, maximum grade of 100% TGC, with minimum interval length of 1m and a maximum of 4m internal waste included if it carries at greater than 2% TGC.

**Area C** comprises multiple thinner zones of moderate grade graphite mineralisation. A quartz monzonite sill was intersected in the drilling and is concordant with graphite mineralisation that occurs within metasediments including meta-arenite and meta-limestone. The graphite schist units appear to be more consistent within the shallower drill holes (ie GM-02, GM-03, GM-05) and tend to become more diffuse at depth (ie drill hole GM-04).

Foliation structural data from the borehole televiwer confirms the graphite mineralisation was intersected orthogonally down-dip and in most cases is close to true width. The graphite schist is interpreted as thin-bedded, medium-grained carbonaceous, feldspathic quartz sandstone and the foliation represents original bedding.





**Figure 4 Geumam graphite project Tenure Map.** The granted Mining Rights with respect to the mapped graphite schist beds and prospect Areas A, B, C, D, E, F and G are indicated. Applications for Mining Rights are indicated by the dark red dashed line. Inset shows location of Geumam in South Korea.

**Table 10 Graphite Mineralized Intersections, AREA C.**

Hole ID	GRAPHITE MINERALIZATION SUMMARY			
	DEPTH FROM (m)	DEPTH TO (m)	INTERVAL (m)	GRADE % TGC
GM-01	56	57	1	3.75
	61	64	3	5.84
	66	67	1	3.10
	95	103	8	4.87
	120	121	1	9.06
GM-02	8	22	14	5.61
	37	41	4	5.99
	55	59	4	5.21
	67	69	2	3.01
GM-03	12	13	1	2.58
	29	42	13	5.04
	49	51	2	7.48
	56	61	5	4.24
	84	85	1	3.96
	92	93	1	5.43
GM-04	40	41	1	3.12
	49	52	3	4.56
	56	57	2	4.46
	65	70	5	3.54
	75	79	4	2.59
	91	92	1	6.47
	116	119	3	4.63
GM-05	35	55	20	3.62
	74	76	2	3.57
	99	100	1	3.1
GM-06	64	69	5	4.85
	77	78	1	2.39
	80	81	1	3.99
	89	90	1	3.19
	99	100	1	3.31
GM-07	44	45	1	4.37
	70	71	1	2.25
	80	81	1	5.42
	86	90	4	2.98
	106	107	1	3.41

The assay interval table is defined at 2% TGC cut-off, maximum grade of 100% TGC, with minimum interval length of 1m and a maximum of 4m internal waste included if it carries at greater than 2% TGC.



## Phase 2 Drilling Program

A follow up Phase 2 Drilling Program has commenced. Mineralised intercepts in the drill holes will be split using a diamond saw and samples despatched to Actlabs, Canada for Total Graphitic Carbon (TGC), Total Carbon (TC) and Total Sulphur (TS) analysis. The focus of this program will be to define extensions to the Area B graphite mineralisation to a level of detail whereby an initial Mineral Resource estimate can be supported. Area C will be the second priority and drill testing of the graphite zone identified at Area E may be undertaken.

As part of the follow up Phase 2 Drilling Program planning, all drill site access agreements have now been signed with the landowners. A Drilling Permit has been issued by the Dangin City County Government.

## Lamboo's Geumam high-purity flake graphite successfully trialled in a Lithium ion battery

Lamboo's Geumam (South Korea) flake graphite was successfully independently tested in a lithium ion battery cell by Very Small Particle Company Limited (VSPC), a leading Australian lithium ion battery R&D specialist laboratory. Conductivity and performance tests undertaken by VSPC over the past nine months demonstrated the Geumam product's equivalence to synthetic graphite material. VSPC concluded that the results suggest a commercially attractive negative electrode product could be developed from the Geumam natural flake graphite. Further validation will be carried out, including trials in new generation fuel cells and super capacitors.

## Lamboo Tenements - South Korea

Project	Tenement Name	Type	Number	Status	Acquired/Disposed
Geumam	Dangjin	54	200258	100% Lamboo	
	Dangjin	55-3	80077	100% Lamboo	
	Dangjin	55-4	200259	100% Lamboo	
	Dangjin	65-1	80014	100% Lamboo	
	Dangjin	65-2	78355	100% Lamboo	
Taehwa	Hongcheon	91-2	79948	100% Lamboo	
Samcheok	Samcheok	9-2	200216	100% Lamboo	





## Capital Raising

During the period Lamboo completed a successful capital raising with a total of (approximately) \$5.8 million being raised by way of a placement of (approximately) 20.78 million shares using the placement capacity available under ASX Listing Rules. At the end of the period the Company had cash of \$5,424,000.

Exploration expenditure in the quarter totalled \$465,000 on the Australian projects and \$252,000 on the Korean projects.

## Competent Persons Statements

Information in this "Quarterly Activities Report" relating to Exploration Results and geological data at the McIntosh Project has been compiled by the Technical Director of Lamboo Resources Ltd, Dr Craig S. Rugless who is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute Geoscientists. He has sufficient experience that is relevant to the types of deposits being explored for and qualifies as a Competent Person as defined by the JORC Code 2012. He consents to the inclusion of this information in the form and context in which it appears in this report.

The information relating to the Mineral Resources at the McIntosh Project is extracted from the ASX Announcement as follows:

- ASX Announcement titled 'Significant Flake Graphite JORC Resource Increase at McIntosh Target 1' dated 20 January 2014.

The information relating to Exploration Results associated with the Company's projects in South Korea is extracted from the ASX Announcements as follows:

- ASX Announcement titled 'Significant Flake Graphite Intersection Assay Results from Phase 1 Resource Drilling Program, Geumam Graphite Project, South Korea' dated 27 February 2014.

The reports are available to view on the Lamboo Resources website [www.lambooresources.com](http://www.lambooresources.com). The reports were issued in accordance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company 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.