ASX Announcement

31 January 2020

December 2019 Quarterly Activities & Cash Flow Report

HIGHLIGHTS

- **Development of the Commercial Demonstration Plant for RapidSX™ rare earth separation due to start in early 2020 following commencement of Hexagon funding**
- **Negotiations ongoing to secure potential commercial agreements with rare earth producers and advanced project developers**
- **Change of company name and broader corporate strategy, to encompass rare earth processing was overwhelmingly approved by shareholders**
- **Graphite concentrate test work completed for McIntosh and Alabama sourced samples**
- **Halls Creek gold project detailed aeromagnetics survey completed - target generation now in progress**

Hexagon Energy Materials Limited (**Hexagon** or the "**Company**") (ASX: HXG) is pleased to provide a report on its activities and cash flows for the quarter ended 31 December 2019.

This was a transformative period for the Company as it entered into an Option Agreement for an exciting, robust business opportunity to commercialise RapidSX™, an advanced downstream rare earth element (**REE**) separation technology, called RapidSX™. Separation of REEs is a major pinch-point in the global REE supply chain, with China dominating this critical downstream process.

REEs, like graphite, are a critical component of the e-mobility, renewable energy, consumer electronics and energy storage revolution occurring around the world. These new and emerging industries are driving strong demand for rare-earth permanent magnets (**REPMs**) and high-purity, speciality graphite products.

Hexagon is positioning itself to develop downstream businesses focused on these high-value materials in a manner which enables a fast-track to cash flow – initially based in North America.

Managing Director, Mike Rosenstreich, commented, *"The December quarter was a strategic turning point for Hexagon. We changed our company name to reflect a greater focus on commercialising downstream REE processing and advanced graphite materials. The Board considers this to be the most direct pathway to early cash flow. We have committed to funding the development of the RapidSX Commercial Demonstration Plant (**CDP**) in Canada to separate REEs at costs that are potentially competitive with China. The CDP is planned to be operating and financially self-sustaining in Q4 this year. The RapidSX CDP will enable existing and emerging producers to capture additional REE metal values on a highly competitive basis with China. This is a key to disrupting and diversifying the global REE magnet metal supply chain."*

OPERATIONS

Rare Earths Processing

On 10 October 2019, Hexagon announced its planned participation in a new REE processing Joint Venture (**JV**) with private Canadian company, Innovation Metals Corp. (**IMC**), which was subsequently overwhelmingly approved by Hexagon shareholders.

The objective of the JV is to commercialise RapidSX, a proven solvent extraction (**SX**) based technology to separate and purify REEs into commercial-grade rare-earth oxides (**REOs**). Successfully piloted in 2016, RapidSX has demonstrated significantly lower capital and operating costs than conventional SX – and, most importantly, is cost competitive with Chinese separation plants.

China dominates the global REE supply chain from mining to separation to production of REPMs. REPMs are critical, non-substitutable inputs to electric vehicle motors, wind power turbines and electronic devices, as well as several military/defence applications – which, as repeatedly cited by the US government, creates a critical and strategic supply concentration risk to both businesses and governments outside of China.

At present, emerging producers face a stark choice of either selling REE chemical concentrates to China and incurring a 30-50% loss on the REE basket value or funding an additional more than US$100 million to build a conventional SX-separation plant to produce REOs.

RapidSX offers a compelling solution for finally enabling the supply chain to diversify from China by offering producers a low-capital, highly efficient separation process which is based on well understood SX chemistry and was proven through United States' Department of Defense-funded pilot plant test work. The technical comparison is provided in Table 1 below.

The strong financial drivers of RapidSX are summarised in Figures 1 and 2 below – highlighting capital-costs savings of 60% to 70% and operating cost savings of up to 15%-20% in comparison to the most modern Chinese conventional SX processing. For REE producers and project developers, that saving represents start-up capital reductions of tens of millions of dollars, in addition to annual operational savings of several millions of dollars, subject to production scale. Additionally, Hexagon believes the RapidSX CDP will demonstrate further technical and economic efficiencies of the technology.

Hexagon has elected to commence funding of the RapidSX CDP to ensure the CDP is available to process customers' samples in Q4 of 2020. The availability of the CDP is critical for customers to achieve financing and generate samples for REO offtakes.

There are two commercialisation models being developed by the JV parties:

- a technology licensing structure where the JV participates in the CapEx and OpEx savings – likely through a mixture of fixed and variable fees related to REO sales revenue; and
- Build-out of its own REE separation capability to purchase concentrate materials and sell high-purity REOs, at locations that do not adversely impact on any licensing arrangements.

There are already a series of confidentiality agreements in place with a range of producing companies and entities with advanced 'shovel-ready' projects. The current focus is to finalise technical services agreements, which, subject to the CDP program results, are expected to convert into binding licensing agreements and installation of full, commercial-scale RapidSX plants.

Table 1: Summary of RapidSX™ vs Conventional SX for REE Separation

	RapidSX™	Conventional SX	Comment
Performance & Efficiency			
Commercial Purity	**Yes**	Yes	
REE Recovery Rates	**High**	High	
Processing Time	**Rapid**	Slow	Reduced metal residence time
Time to Equilibrium	**Hours/Days**	Weeks	
CAPEX			
Equipment Cost	**~60% to 70% Reduction**	High	Far smaller footprint and less equipment. *Refer Figures 1 & 2*
Separation Staging	**~90% Reduction**	High	
OPEX			
Organic Volumes	**Low**	High	<$2/kg for LREO <$12/kg for HREO Based on Pilot work
Labour	**Low**	High	
Power Consumption	**Low**	High	

Note Because Heavy REE (**HREE**) separation requires more staging and separation units (columns); CapEX and OpEx efficiencies for Light REE (**LREE**) will be magnified for HREE-endowed projects.

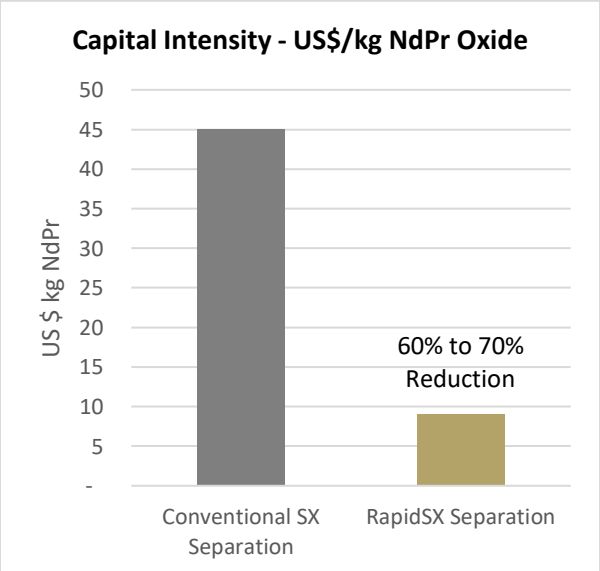

Figure 1: Comparison of Conventional SX and RapidSX™ - Capital Intensity per Kg of Separated NdPr Oxide

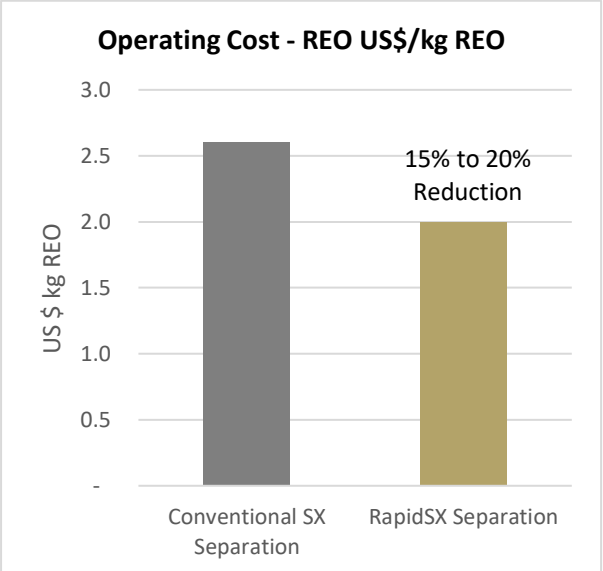

Figure 2: Comparison of Estimated Conventional SX and RapidSX™ – Unit Operating Costs

Graphite

The Company is presently working on commercialising its valuable IP on downstream graphite processing and pursuing opportunities to establish production in the US. It has also completed work on its two upstream projects, McIntosh in Western Australia and Ceylon in Alabama, USA.

Downstream Graphite Transformation

Graphite Transformation Test work – Hexagon completed key test work directed at enhancing graphite electrodes used in electric-arc furnaces (**EAF**) worldwide. Graphite electrodes are an essential part of the EAF steel production process and comprise a significant portion of OpEx. The market for graphite electrodes is growing and technology advances that will extend their service life and lower consumption rates have significant market appeal.

Testing of purified flake-graphite concentrate from its McIntosh Project treated with a proprietary ingredient and branded as "Performance+", has demonstrated a positive and direct correlation between the addition of Performance+ and increased electrical conductivity and durability in synthetic-graphite electrodes.

A total of 38 extruded graphite electrodes, manufactured with Performance+ additive, demonstrated consistent enhanced electrode performance — including true density, bulk density and electrical conductivity performance — versus the control group (100% synthetic-graphite electrodes), specifically:

- 12% increase in true density
- 4.5% increase in bulk density
- 25% increase in electrical conductivity

These results highlight the potential of increasing electrical performance and increasing durability/service lifetime in graphite electrodes to reduce smelter operating costs. Hexagon's technical development work indicates a potentially significant new market opportunity for its transformed graphite material, consistent with the outcomes of the Company's Downstream Scoping Study released in May 2019.

McIntosh Graphite Project (WA, Australia)

Mineral Resources Limited withdrew from the McIntosh Joint Venture (**MJV**) with effect from 31 October 2019. Hexagon has regained 100% interest in the McIntosh project tenements. It plans to hold and undertake selective evaluation work in preparation for the

rebalancing of the international graphite concentrate supply-demand situation, forecast to occur in the coming years.

Flotation Test work Outcomes - As outlined in the September quarterly report, samples from three drill holes totalling 276 kg at a combined head grade of 4.47% TGC were submitted to a specialist test work facility in China to outline an optimised flowsheet to produce high-grade graphite concentrate whilst preserving flake size. Final results were received during the quarter and are summarised in Table 2 below. Flake graphite concentrate assaying 94.7% TC was produced through rougher, regrinds and ten cleaning stages. The concentrate grade and recovery results are consistent with previous piloting work at ALS in 2016/2017. The concentrate flake-size distribution data did not reconcile with previous results announced in November 2017 with a finer product produced which requires further investigation. Additional flowsheet development work, including coarser primary grind, utilisation of stirred mills for regrind only and possibly gravity separation to remove sulphide minerals is required to achieve a coarser flake size distribution. No immediate follow up work is planned at this point as the Company's immediate interest is in downstream test work.

Table 2: McIntosh Flotation Concentration Results

Product	Mass %	Fixed Carbon (FC) Assay %	Recovery, %	Total Carbon (TC) Assay %
Concentrate	4.18	93.29	82.98	94.74
Middling	15.28	4.60	14.97	-
Tail	80.54	0.12	2.05	-
Head	100.00	4.70	100.00	-

Alabama Graphite Projects (Alabama, USA)

Hexagon has an 80% interest in several early-stage graphite exploration projects located in Alabama, USA, including the historic, Ceylon Mine workings. In July 2019, the Company committed to undertake the first metallurgical test work on a series of bulk samples excavated from the site totalling over 100 tonnes.

Bench-scale tests were carried out on one composite sample. Concentrate assaying 97.4% TGC was produced through rougher, one re-grind and five cleaning stages. Recovery was high with only 1.6% of the graphite reporting to tails. As high as 8.2% of the final concentrate was premium + 300 μm jumbo flake. The high concentrate grade and coarse size distribution highlight good market potential for Ceylon flake-graphite concentrate. These preliminary results indicate the flowsheet to treat Ceylon mineralisation could be simpler compared to other graphite projects – including Hexagon's

McIntosh project; which means significantly reduced capital expenditures to build any processing plant and likely lower operating cost. Final concentrate and flake-size analysis and variation tests on nine samples are in progress – to complete this phase of work.

As with the McIntosh project, following this test work the Company has no immediate plans to undertake further work, while management is concentrating on the downstream transformation work.

Halls Creek Gold Project (WA, Australia)

During the quarter, Hexagon flew a 100 metre spaced airborne magnetic and radiometric data survey over its Halls Creek project area. This new data was merged with additional high resolution open-file data, and a new interpretation is currently underway at a 1:25,000 scale. The purpose of the recently flown survey was to refine the structural and lithological targets within the large tenure with the aim of defining drill targets. Current targets and tenements overlaid on the recent aeromagnetic data is presented in Figure 3.

The increased geophysics data resolution has enabled better discrimination of the various geology units, as well as potential vectors for mineralisation controls which has added value to the land package. The project area is considered highly prospective for gold and base metal mineralisation. The new geophysical data has defined several geophysical anomalies which warrant on the ground investigation and represent likely drill targets.

The next steps are to appraise the recently flown geophysical data in conjunction with existing soil geochemistry, geological mapping and other existing datasets in order to scientifically rank and appraise the targets. It is anticipated that this review will be completed by early February which will allow testing within the next field season.

The East Kimberley Mineral Field contains the first ever gold discovery in Western Australia in 1885 at Old Halls Creek, and significant gold and base metals have been produced from the area since that time. The Kimberley region is considered massively underexplored in comparison to other known mineralised belts within Western Australia, yet boasts the right geological terrain, metamorphic grade and tectonic setting to host multiple world-class deposits.

The Company remains open to partnering with a well-credentialed exploration company, potentially via a joint venture, to further explore at Halls Creek; and the additional geophysical data, new targets and high gold price (up more than 20% in the past year) make a partnership more attractive.

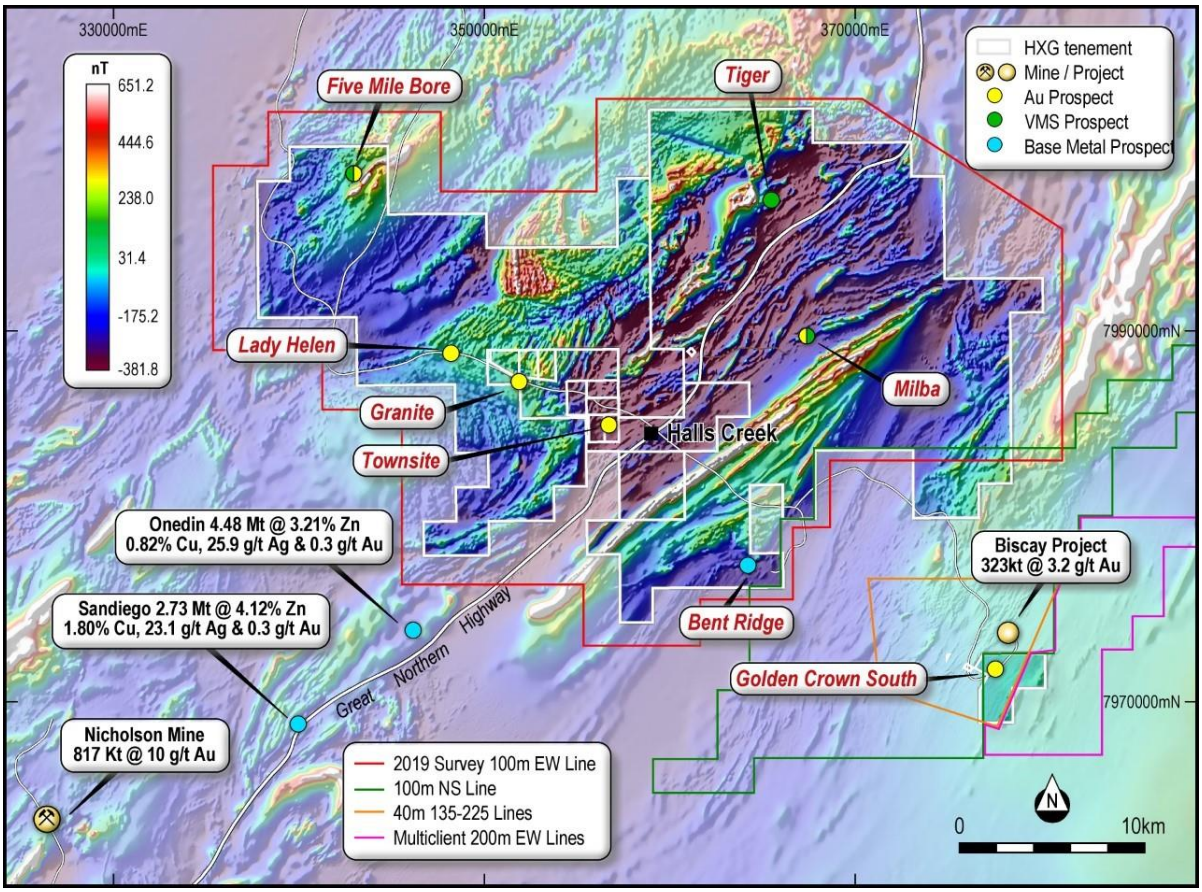

Figure 3: Halls Creek Project - Aeromagnetic Data (1vd) with Current Gold and Base Metal Targets

CORPORATE

Corporate Development

Company Name Change - Shareholders approved the change of company name from Hexagon Resources Limited to Hexagon Energy Materials Limited at the Annual General Meeting of shareholders held on 22 November 2019.

OTCQB Listing - – following the increasing number of North American opportunities and the subsequent interest from US based investors, the Company plans to have completed an OTCQB listing in the USA in the March 2020 quarter. The OTCQB Venture Market is a special purpose exchange for early-stage and developing US and international companies. The purpose of listing on the OTCQB is to create greater visibility and liquidity for US-based investors with a readily accessible platform for trading the Company's share, and potentially lead to a full US listing, subject to the development of its US-based business interests.

As part of this process, the Company has subscribed with GlobeNewswire and its announcements are now being distributed internationally and specifically onto US-based platforms to generate greater access to US institutional and retail investors.

Hexagon is in discussions with North American-based Investor Relations firms to ensure the Company gets the maximum exposure and benefit of the dual listing.

Capital Structure – During the quarter, 3 million performance rights and 0.3 million options were cancelled following the termination of an employment agreement. Additionally, 0.65 million performance rights were converted to shares in accordance with the Company's employee incentive scheme.

The current issued capital comprises:

- 292,433,397 fully paid ordinary shares;
- 24,097,500 unlisted options expiring 16 October 2020 with exercise prices of between 15 to 20 cents; and
- 950,000 performance rights.

Health and Safety

No injuries or major incidents were recorded for the quarter on any Hexagon-managed programs.

Financial Position

A Quarterly cash flow and forecast is summarised in the attached Appendix 5B. The Company finished the period with a cash balance of $1.84 million, which was supplemented by a $0.44 million R&D payment from the Australian Taxation Office received subsequent to the end of the quarter in mid-January 2020.

COMPETENT PERSONS' ATTRIBUTIONS

Exploration Results and Mineral Resource Estimates

The information within this report that relates to exploration results, Exploration Target estimates, geological data and Mineral Resources at the McIntosh and Halls Creek Projects is based on information compiled by Mr Mike Rosenstreich, who is an employee of the Company. Mr Rosenstreich is a Fellow of The Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities currently being undertaken to qualify as a Competent Person(s), as defined in the 2012 edition of the Australasian Code for

Reporting of Exploration Results, Mineral Resources and Ore Reserves, and he consents to the inclusion of this information in the form and context in which it appears in this report.

Exploration Results

The information within this report that relates to exploration results, Exploration Target estimates and geological data at the Halls Creek Projects, is based on information compiled by Ms Cherie Leeden, who is a Consultant to the Company. Ms Leeden is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities currently being undertaken to qualify as a Competent Person(s), as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, and she consents to the inclusion of this information in the form and context in which it appears in this report.

Metallurgical Test Work Outcomes

The information within this report that relates to metallurgical test work outcomes and processing of the McIntosh material is based on information provided by a series of independent laboratories. Mr Rosenstreich (*referred to above*) managed and compiled the test work outcomes reported in this announcement. A highly qualified and experienced researcher at NAmLab planned, supervised and interpreted the results of the NAmLab test work. Dr Lin Zhou, a consultant to the Company, also reviewed the metallurgical test work outcomes. Dr Zhou is a Metallurgical Consultant and a Member of the Australasian Institute of Mining and Metallurgy Dr Zhou and the NAmLab principals have sufficient experience relevant to the style of mineralisation and types of test work under consideration and to the activities currently being undertaken to qualify as a Competent Person(s),as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, and have consented to the inclusion of this information in the form and context in which it appears in this report.

FOR FURTHER INFORMATION, please contact:

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ATTACHMENTS

Attachment 1: Hexagon Tenement Holdings as at 31 December 2019
Attachment 2: Appendix 5B
Attachment 3: JORC Tables

Attachment 1: Hexagon Tenement Holdings as at 31 December 2019

Project	Type	Number	Ownership Status at end of Quarter	Tenement Status
McIntosh, WA	E	E80/3864	100% Hexagon	Granted
	E	E80/3928	100% Hexagon	Granted
	E	E80/3906	100% Hexagon	Granted
	E	E80/3907	100% Hexagon	Granted
	E	E80/4688	100% Hexagon	Granted
	E	E80/4734	100% Hexagon	Granted
	E	E80/4739	100% Hexagon	Granted
	E	E80/4732	100% Hexagon	Granted
	E	E80/4825	100% Hexagon	Granted
	E	E80/4842	100% Hexagon	Granted
	E	E80/4841	100% Hexagon	Granted
	P	P80/1821	100% Hexagon	Granted
	E	E80/4733	100% Hexagon	Granted
	E	E80/4879	100% Hexagon	Granted
	E	E80/4931	100% Hexagon	Granted
	E	E80/5151	100% Hexagon	Granted
	E	E80/5157	100% Hexagon	Granted
	L	L80/0092	100% Hexagon	Application
	M	M80/638	100% Hexagon	Application
	M	M80/639	100% Hexagon	Application
Halls Creek, WA	E	E80/4794	100% Hexagon	Granted
	E	E80/4793	100% Hexagon	Granted
	E	E80/4795	100% Hexagon	Granted
	E	E80/4858	100% Hexagon	Granted
	E	E80/5126	75% Hexagon*	Granted
	P	P80/1816	100% Hexagon	Granted
	P	P80/1817	100% Hexagon	Granted
	P	P80/1815	100% Hexagon	Granted
	P	P80/1818	100% Hexagon	Granted
	P	P80/1814	100% Hexagon	Granted
	P	P80/1799	100% Hexagon	Granted
	P	P80/1801	100% Hexagon	Granted
	P	P80/1800	100% Hexagon	Granted
Alabama, USA	MLAs		80% Hexagon**	Agreed

**E80/5126 pending transfer approval*

***Mineral Lease Agreements with respective mineral rights holders*

+Rule 5.5

Appendix 5B

Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

Name of entity

HEXAGON ENERGY MATERIALS LIMITED	
ABN	**Quarter ended ("current quarter")**
27 099 098 192	**31 December 2019**

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (6 months) $A'000**
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(309)	(932)
	(b) development	(178)	(285)
	(c) production	-	-
	(d) staff costs	(118)	(215)
	(e) administration and corporate costs	(402)	(802)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	12	22
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Research and development refunds	-	-
1.8	Other (provide details if material)	-	-
1.9	**Net cash from / (used in) operating activities**	**(995)**	**(2,212)**

Consolidated statement of cash flows		Current quarter $A'000	Year to date (6 months) $A'000
2.	**Cash flows from investing activities**		
2.1	Payments to acquire:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	(170)	(170)
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	**Net cash from / (used in) investing activities**	**(170)**	**(170)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	**Net cash from / (used in) financing activities**	**-**	**-**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	3,070	4,203
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(995)	(2,212)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(170)	(170)

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (6 months) $A'000**
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	(66)	18
4.6	**Cash and cash equivalents at end of period**	**1,839**	**1,839**

5.	**Reconciliation of cash and cash equivalents** at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	**Current quarter $A'000**	**Previous quarter $A'000**
5.1	Bank balances	518	971
5.2	Call deposits	1,321	2,099
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**1,839**	**3,070**

6.	**Payments to directors of the entity and their associates**	**Current quarter $A'000**
6.1	Aggregate amount of payments to these parties included in item 1.2	131
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

6.1: Includes payments to Managing Director.

7.	**Payments to related entities of the entity and their associates**	**Current quarter $A'000**
7.1	Aggregate amount of payments to these parties included in item 1.2	-
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

8.	**Financing facilities available** *Add notes as necessary for an understanding of the position*	**Total facility amount at quarter end $A'000**	**Amount drawn at quarter end $A'000**
8.1	Loan facilities	-	-
8.2	Credit standby arrangements	-	-
8.3	Other (please specify)	-	-

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

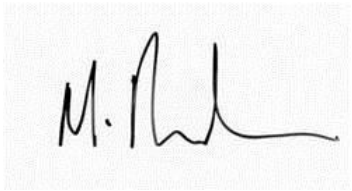
9.	**Estimated cash outflows for next quarter**	**$A'000**
9.1	Exploration and evaluation	135
9.2	Development	193
9.3	Production	-
9.4	Staff costs	108
9.5	Administration and corporate costs	291
9.6	Other (provide details if material)	
9.7	**Total estimated cash outflows**	**727**

10.	**Changes in tenements (items 2.1(b) and 2.2(b) above)**	**Tenement reference and location**	**Nature of interest**	**Interest at beginning of quarter**	**Interest at end of quarter**
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	-	-	-	-
10.2	Interests in mining tenements and petroleum tenements acquired or increased	-	-	-	-

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.



Sign here: Date: 31 January 2020

Print name: Mike Rosenstreich

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

Attachment 3: JORC Table 1 Halls Creek

Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• *Nature and quality of sampling* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• 100m spaced airborne magnetic and radiometric data were acquired by Magspec in 2019 over the Halls Creek tenement package (see Figure for survey areas). The aircraft used by Magspec was a Cessna 210, specially modified for geophysical surveys. Southern Geoscience Consultants (SGC) merged the geophysical data with additional high-resolution open-file and multi-client data to produce a new interpretation at the 1:25,000 scale (see Table 1).
Drilling Techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• N/A
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• N/A
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• N/A
Sub-sample techniques and sample preparation	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Magspec acquired airborne magnetic, radiometric and DEM data along 090-270 degree lines, spaced 100m apart, with 1,000m tie line spacing at 000-180 degrees, with a mean terrain clearance (sensor height) of 35m. Total lines flown was 10,260km. • During the airborne survey the pilot monitored system health from prompts on the navigation screen and the ground crew monitored diurnal base stations. • Post-flight, all survey data were transferred from the acquisition system to the infield data processing computer and the data were checked for any error and compliance with specifications. All profiles were visually checked, the flight path was plotted with colour-coded indicators of any out of specification height or cross-track and the data were gridded and visually inspected for errors and compared for continuity with previous flights. The summed 256-channel spectra were plotted and inspected and the test line and pre- and post-flight ground calibration were tabulated and reviewed.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *Nature of quality control procedures adopted (e.g. standards, blanks,*	• N/A

	duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• N/A – only geophysical work has been conducted
Location of Data points	• *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All data and interpretation products are provided in the GDA94 datum and MGA Zone 52 projection
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Hexagon has now acquired increased geophysical data resolution from 100m surveys • This program has provided Hexagon with a high-quality data set on which to base litho-structural interpretations critical for detailed target generation and refinement work prior to drilling**.**
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• N/A
Sample Security	• *The measures taken to ensure sample security.*	• N/A
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No reviews of the data have been undertaken.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Halls Creek Project (C124/2014) is in the East Kimberley region of Western Australia and comprises eleven granted tenements covering an area of 571 km2. These tenements are 100% owned by Hexagon Resources Ltd through a subsidiary Halls Creek Resources Pty Ltd. The tenement package consists of a combination of three Exploration and eight Prospecting Licence.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The project has been subject to exploration by several companies over the past 40 years. This work has been built up by successive explorers. • Interpretations from this airborne geophysical survey relied on merging additional data sources, including, • Multiclient MAG and RAD data from the Palm Springs survey (job #1152), acquired by Kevron in 1995, with flight

		line spacing of 200m, mean terrain clearance of 60m, and 90-270 degree flight line direction • Open file MAG, RAD, DEM data from the Golden Crown survey (job #A60903), acquired by UTS Geophysics in 2004, with flight line spacing of 40m, mean terrain clearance of 40m, and 135-225 degree flight line direction • Open file MAG, RAD, DEM data from the Palm Springs survey (job #A962), acquired by UTS Geophysics in 2007, with flight line spacing of 100m, mean terrain clearance of 50m, and 90-180 degree flight line direction
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Halls Creek Project prospecting leases lie within the Palaeoproterozoic metamorphosed volcanics and sediments from the Halls Creek Orogeny. These include metamorphosed basalts, volcanic, sub-volcanic and volcaniclastic rocks and metamorphosed turbidites, calcareous rocks and cherts commonly displaying schistose fabrics. • The exploration licence extends over a far more extensive area to the west and north west and comprises of granitic and subordinate gabbroic rocks (+/- minor metasedimentary hornfels from the Koonie Park Formation) to the north-west of the tenement, weakly porphyritic biotite monzogranite and syenogranite to the south of the tenements and an epidotic and chloritic amygdaloidal basalt intrusion with minor lithic sandstone and siltstone along its western boundary

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:*
	  • *easting and northing of the drillhole collar*
	  • *elevation or RL (elevation above sea level in metres) of the drillhole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth*
	  • *hole length.*
		• There are 122 RAB Holes, 21 RC and 9 RP Holes in the historic Halls Creek data identified to date.
		• Individual hole detail can be obtained from WAMEX reports, specifically, A51736, A47329, A48163, A51736, A21782

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	• No weighting has been applied.
Relationship between mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect.*	• Intersection is reported as down hole intervals.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	• Location plans are contained within the body of this announcement.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• A selection of significant results has been reported
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey*	• Other data has not been considered at the time. A full evaluation of other geological and geophysical information is ongoing.

	results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Hexagon is currently conducting an appraisal of all existing datasets and will recommend next steps to the market in due course.

Attachment 3 (Cont.): JORC Table 1 Alabama Graphite Projects

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Sampling by Hexagon was conducted by geologist Cris Carman between 24th April to the date of this announcement. Fact (outcrop, subcrop, float, and scree) mapping, including structural measurements on 1.2 km by 800 m of strike (1.3 km2) at the Rushing Prospect 1:2000 scale. Mapping at the Ceylon Mine over approximately 900 by 300 m (1:500 scale, 0.3 km2) and the surrounding area over 2.1 km by ~600 m of strike (1.3 km2) (2137 lithology polygons, 695 structural measurements). 10 rock samples from the Ceylon Mine were tested for density. 49 rocks were collected from the Ceylon Mine prospect and 34 from the Rushing Prospect and submitted for analysis. 69 of these were collected for graphite, and 11 for possible Au mineralisation. Reference samples were retained. 29 trenches were dug to either blade refusal or a maximum of about 2 m if no rock exposure, for a total of 2769 m (*figure 1*) 90 pits were dug to expand the coverage in areas with shallow dip or to cover more ground quickly 762 samples were submitted from the trenches for analysis plus standards (5 per 100) and replicates (5 per 100).
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	No drilling has been completed.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No drilling is reported
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	No drilling is reported. Trenches and pits were geologically logged for weathering intensity, shear intensity, lithology, visual graphite estimate, presence of V-bearing mica, mineralogy, flake size estimate, and structural measurements.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ	No drilling is reported.

Criteria	JORC Code explanation	Commentary
	material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• Standards were inserted to monitor the lab results at a rate of 5 per hundred samples. • The lower value standard (GGC-09 2.41 %) was consistently overreported (average of 5.5 %) and the higher value standard (GGC-12: 5.27 %) was consistently underreported (5%). • Replicates were collected in the field from the same sample intervals as a separate sample (not split from the original). These serve to monitor the repeatability of the entire methodology, from sample collection through lab analysis. • Results are considered appropriate and of sufficient quality to report.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	None undertaken.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	A handheld Garmin GPS was used to record the locations of the samples within the trenches. These samples were plotted over the locally available topographic maps generated by Lidar. This surface point data is not intended to be used as part of a Mineral Resource estimate.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	Report refers to interim metallurgical results on trench samples.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Trenches were planned based on mapping and visual graphite estimates (no assays were available prior to the trenching). Graphite mineralisation is present in several different units in the Ceylon Mine area. The dominant lithologies with graphite are, in decreasing grade, friable quartzite, quartzite, quartz-sillimanite gneiss, sillimanite gneiss. Graphite is also present in quartz-sericite schist, but this is likely a retrograded (metamorphic grade) from the previous list.
Sample security	• The measures taken to ensure sample security.	The laboratory samples were in the Company's custody until receipt by the lab.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	None completed.

JORC Table 1 Alabama Graphite Projects

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	Private surface and mineral ownership exist at the Ceylon project. Charge Minerals, LLC has entered into long-term mineral/mining lease and surface use agreements with the private landowners and is fully paid through to 2024, with the option to renew and extend. Hexagon owns 80% of Charge Minerals LLC. There are no known material issues affecting the mineral leases. All licenses have been legally validated by a land manager to confirm title to the relevant surface and mineral rights.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	The Ceylon Mine was historically mined during periods of US international trade wars, including during World War 1 and World War 2. There is no historical drilling data available. The historical miners appear to have focused their mining activity on the outcropping graphite mineralisation that contains a grade of approximately 3-4% TGC
Geology	• Deposit type, geological setting and style of mineralisation.	The Ceylon Mine (historical reference) is located on a prominent hill of graphitic gneiss and quartzite 15 km SE of Sylacauga, AL along highway US280. Although all contacts with different rheology are sheared, the rocks are a sequence from west to east that is not repeated. From west to east this sequence includes a pelitic package without graphite, a quartz bearing package with variable graphite that grades into a sillimanite bearing package also with graphite, an amphibolite bearing gneiss without quartz or graphite, and possibly more quartz-rich rocks with graphite. The dip of measured bedding is generally low angle (0–30°, see below) and has an overall easterly orientation. The graphite mineralisation averages circa 2%-5% TGC and averages approximately 3% TGC.

Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
	  ○ easting and northing of the drill hole collar
	  ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
	  ○ dip and azimuth of the hole
	  ○ down hole length and interception depth
	  ○ hole length.
	• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.
		No drilling is reported or available.

Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	All results and trench sample details have been provided in Table 1. Maximum and minimum has been noted within the text body of this announcement.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	The results relate to trench sampling. Details of the sample length are provided in Table 1.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Report refers to preliminary metallurgical results.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All new relevant information has been reported in this announcement.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	A bulk sampling program was completed during July-August 2019. A total of 115 tonnes of graphite ore was crushed to a size of 2-inch minus on the Ceylon site and placed directly into 1-tonne supersacks. Rock was collected from five (5) different locations at Ceylon and from three (3) different locations on Rushing in order to represent the variations in lithology and weathering of the graphitic zones on the property. The precise location and basic geologic descriptions were recorded for each pit. All supersacks were given an ID corresponding to the Pit ID (CMB001001, first 3-digit for pit#, and the second 3-digit for bag#), as well as color-coded by pit to help with easy organization and identification by third parties. A small representative sample was taken from each supersack with a matching ID# to be sent to ActLabs for graphitic carbon assay. The supersacks were all kept dry and secure by immediately trucking to a local warehouse in Sylacauga when a load was completed. For preliminary bench-scale beneficiation testing, a 250kg of weathered material from Rushing and 250kg of relatively fresh sulphide rock from the Ceylon pit area were also collected, as well as 8x50kg of representative material from each pit location for variability analysis.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Bench-scale test work on flotation of weathered samples is underway with preliminary results reported herein.\\This work is ongoing.

Table 1. Laboratory results of all rock chip samples obtained from trench sampling. Results have been sorted by descending graphite content.

Bulk ID	CollarX	CollarY	CollarZ	C-Graph_IR_%	Weathering	Property
CMB001	577817	3659633	313.3	3.96	oxide	Ceylon
CMB002	577483	3659536	319.6	3.63	sulfide	Ceylon
CMB003	577382	3659415	318.9	2.47	sulfide	Ceylon
CMB004	577398	3659454	318.8	2.4	sulfide	Ceylon
CMB005	577408	3658406	300.5	2.81	oxide	Ceylon
CMB006	578328	3660194	295.2	3.42	oxide	Rushing
CMB007	578374	3660335	288.8	3.29	oxide	Rushing