STRATEGIC REVIEW OF EMPEROR HIGHLIGHTS BATTERY ANODE AND DOWNSTREAM PRODUCTS POTENTIAL

Highlights

- Following receipt of the recent ALS metallurgical test work, GCM conducted a detailed product marketing assessment for Emperor flake graphite concentrate identifying a range of upstream and downstream applications to drive the commercial viability of the McIntosh Graphite project.
- Emperor mineralisation achieved concentrate grade purities of >97% C(t) from the entire section of the Emperor deposit after 6 stages of cleaning, however, review has highlighted optimal target purity for Emperor based of its flake size distribution is 95% C(t) which meets the majority of upstream and downstream purity requirements.
- Furthermore, review of the latest metallurgical results has highlighted that **target purity of 95% C(t) may be achieved within 3 to 4 cleaners as opposed to 6**, further emphasising the high quality of Emperor flake concentrate.
- GCM with the guidance of its metallurgical expert will assess ways of optimising the process flowsheet with the objective of achieving the target purity of 95% C(t) utilising a simple flowsheet to minimize capital and reduce operating costs.
- Preliminary testing conducted by ALS suggests that the McIntosh signature has a homogenous flake size distribution required for the secondary battery anode industry with **~70% of flake size distribution between 45-150 microns (-100 Mesh). This metric meets spheriodisation feedstock specifications and long-term supply requirements by end users.**
- Further highlighting the quality of the Emperor flake signature, the remaining ~30% <45micron (-325 mesh) flake graphite also **achieved purity targets of 95-98% C(t) with >90% recoveries.** This suggests secondary <45micron flake graphite can be further upgraded into high value downstream products for a range of traditional and advanced applications.
- Markets and applications preliminary identified as suitable for McIntosh flake graphite include batteries (energy storage), thermal management, lubricants, and dispersions, engineered products, and polymers / rubber.

Green Critical Minerals Pty Ltd ("GCM" or "the Company") which holds earn-in rights for up to 80% of the advanced High Quality McIntosh Graphite Project (see CML's announcement on 15 June 2022) is pleased to share comprehensive insights into the recent product marketing assessment and metallurgical test results on Emperor flake graphite concentrate (ASX announcements on 21 and 27 November 2023).

The evaluation has illuminated the project's promising commercial outlook, considering its notable flake size distribution and the attainable purities/recoveries across all flake sizes, including the <45micron material. It is crucial to recognise that the commercial viability of a graphite project is influenced not only by a high head grade but also by the distribution of flake sizes, particularly when a deposit has majority of its flake size distribution below 45 microns. In the graphite sector, a high head grade alone does not ensure success; an unfavourable flake size distribution (majority <45microns) can limit the potential of a project particularly when targeting the battery industry. Importantly, it's worth noting that the size of graphite flakes cannot be increased, therefore this is a critical first pass metallurgical hurdle fine flake deposits need to achieve.

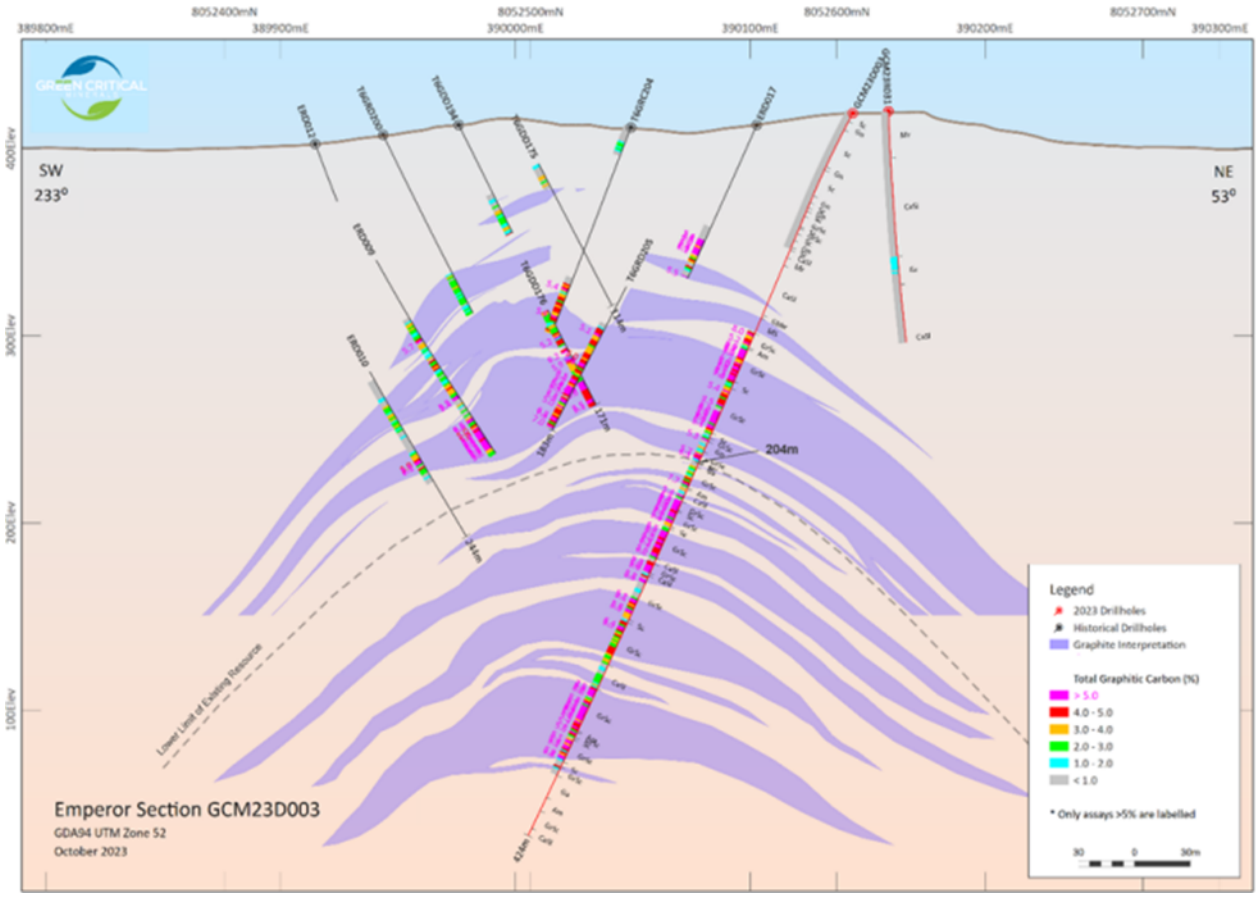

Figure 1 - Cross section of GCMDD003 through the Emperor Target from which the two composites representing the upper or known Emperor resource (128m to 204m downhole) and the lower 'new' discovery or extension below it (204m to 388m).

In the case of the Emperor deposit, initial results indicate that over 70% of its material surpasses the 45-micron threshold (Figure 2). This achievement was realised through an unoptimised process, underscoring the preliminary metallurgical success of these outcomes and instilling confidence within GCM to progress the Project towards commercial viability. A full economic assessment will be completed in the future to quantify the economic viability of the Project.

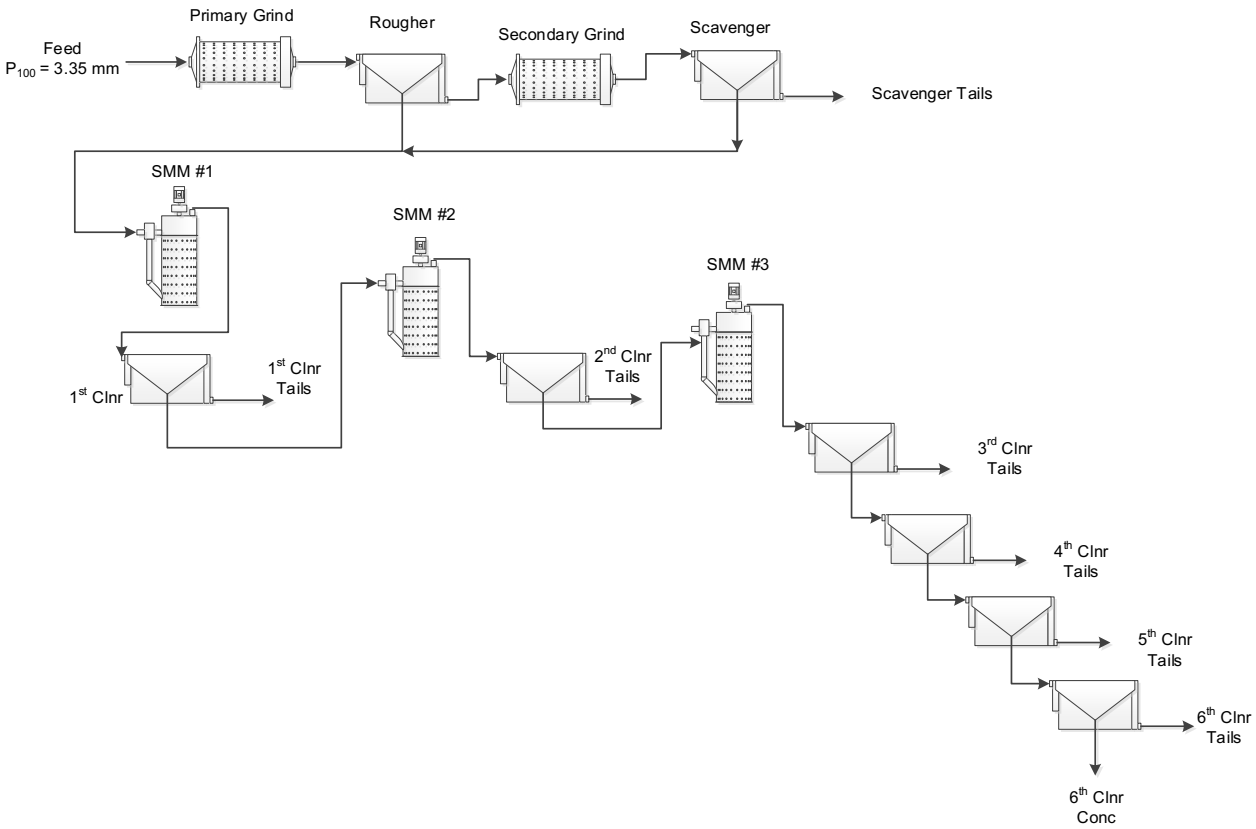

Figure 2 - Simple Cleaner Flotation Flowsheet

Optimal Purity, Efficiency, and Signature Quality Enhancement

Emperor's exceptional concentrate grades, surpassing 97% C(t) across the two composite samples from drill hole GCMDD003 (Figure 1), following a six-stage cleaning process, stand as a testament to the ability to achieve high-grade graphite concentrate with established processing equipment (Figure 2). As the ongoing review unfolds, it is evident that the optimal target purity for Emperor is 95% C(t) based of the target -100 Mesh size. Possible efficiency gains will be evaluated by a process optimisation assessment, preliminary results suggest that the target purity can possibly be achieved within a refined flowsheet using 3 to 4 cleaning stages only. Furthermore, evaluation of the flow sheet will take place in order to preserve flake size further, with the objective of reducing the mass reporting to the <45 micron size fraction.

Concurrently, the McIntosh Project's preliminary testing has highlighted a homogeneous flake size distribution at different depths that defines its quality (Figure 3). **Meeting the stringent requirements of the secondary battery anode industry, approximately 70% of flake sizes span between 45-150 microns (-100 Mesh),** seamlessly aligning with spheroidization feedstock specifications. Complementing this, the remaining ~30% of <45 microns (-325 mesh) flake graphite, exhibiting purity targets ranging from 95-98% C(t) and impressive recoveries exceeding 90%, not only reaffirms the Project's commitment to quality but also opens avenues to high-value downstream products across both traditional and advanced applications.

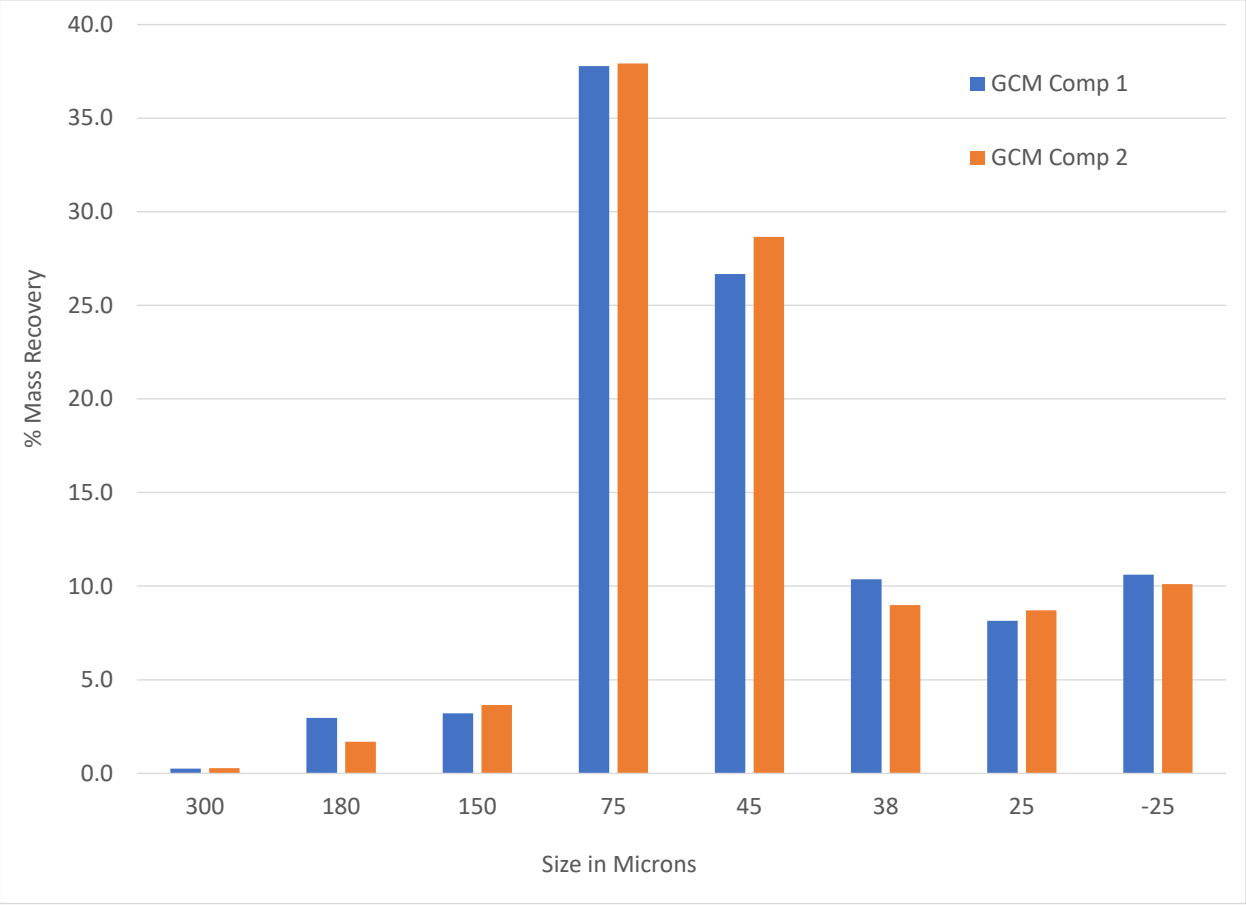

Figure 3: Mass Distribution of Graphite Concentrate

Geographical Advantages

Strategically positioned only 12km from a sealed highway leading directly to Wyndham Port, which is 280km away, the McIntosh Project enjoys exceptional logistical advantages (Figure 4). The proximity to a deep-water port not only enhances the project's export capabilities but further solidifies its position as a reliable and efficient supplier. Beyond its logistical prowess, the global significance of having a well-situated critical mineral project cannot be understated, especially considering the invaluable nature of a high-quality critical mineral project in a Tier 1 jurisdiction. Globally, the timing is crucial, particularly in light of China's export restrictions that came into effect on 1 December 2023. The McIntosh Project stands as a reliable alternative source of critical minerals, ensuring a stable and secure global supply chain.

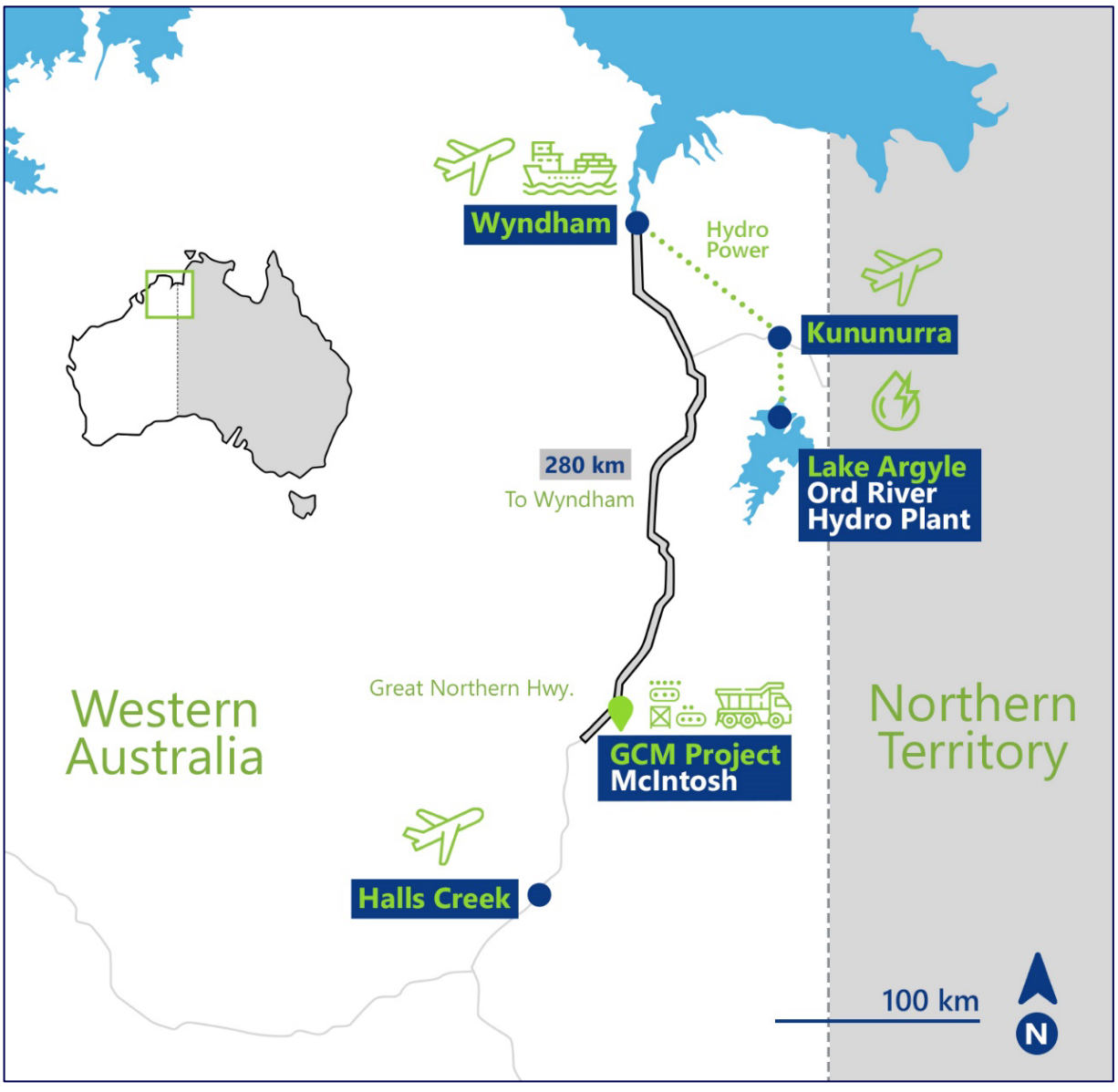

Figure 4 - Location of the McIntosh Project

The McIntosh Project Location Advantage

- ✓ Tier 1 Location – Western Australia
- ✓ 12km to Great Northern Highway
- ✓ Proximity to Clean Energy - Ord River Hydropower
- ✓ Proximity to Port - 280km to Deep Water Port of Wyndham
- ✓ Close proximity to key end users in Asia
- ✓ Strong government support for development of critical mineral deposits

Strategic Commitment to Vertical Integration

In conjunction with the operational and logistical fortifications inherent in the McIntosh Project, GCM maintains a strategic commitment to vertical integration, from Mine to Market. This strategic initiative is aligned with ISO 9001 quality control and traceability standards, assuring end-users of a consistent and dependable source of high-quality flake, an attribute which is highly desirable by end-users.

GCM's dedication to vertical integration seamlessly intertwines with the Project's intrinsic versatility and expansive market applications. Preliminary findings underscore the exceptional quality of McIntosh flake graphite, particularly in the realm of energy storage (battery) technologies. This superior quality resonates across diverse industries, including but not limited to thermal management, lubricants and dispersions, engineered products, and polymers/rubber. This strategic emphasis on batteries as a primary application showcases the McIntosh Project as a significant player within the critical minerals sector. Its adeptness at meeting the nuanced demands of evolving industries positions McIntosh as a cornerstone in the rapidly advancing landscape of critical minerals.

As we navigate this juncture of strategic commitment and market versatility, the positive outcomes gleaned from the product marketing assessment, metallurgical test results, and the overall strategic advantages of the McIntosh Project collectively underscore GCM's unwavering commitment to advancing this critical mineral Project. Looking ahead, the company eagerly anticipates updating shareholders on the optimisation process and other significant milestones in the near future.

NEXT STEPS FOR EMPEROR DEPOSIT

The Company Management and its Consultants are reviewing the statement released on 27 November 2023 and will update the market once timeframes are sorted.

Competent Person Statement

The information in this report that relates to the metallurgical activities are based on information compiled by Oliver Peters, who is a Member of the Professional Engineers of Ontario and the Principal Metallurgist and President of Metpro Management Inc. Oliver Peters has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Oliver Peters consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Authorisation

The provision of this announcement to the ASX has been authorised by the board of directors of Green Critical Minerals Limited.

Green Critical Minerals confirms that it is not aware of any new information or data that materially affects the exploration results contained in this announcement.

Forward Looking Statements

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Green Critical Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

Appendix 1: JORC Code, 2012 Edition - Table 1

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

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 mineralization 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 mineralization types (eg submarine nodules) may warrant disclosure of detailed information.*	• Diamond Drilling (DD) drilling at the McIntosh Project was supervised, and samples were collected by, geologists from APEX Geoscience Australia Pty Ltd (APEX), which is an independent geological consultancy. • For DD samples, HQ core was logged and marked up and cut in half 1cm below the cut line by ALS (Perth). Samples were collected at one metre intervals down the hole. • Samples from the drilling was sent to ALS laboratories (Perth), for sample preparation and analysis, with graphitic carbon determined by digesting the sample in a 50% HCl to evolve carbonate as CO_2. Residue is filtered, washed, dried and then roasted at 425C. The roasted residue is analysed for carbon by oxidation, induction furnace and infrared spectroscopy (ALS code C-IR18) and total carbon and sulphur analysis by induction IR (ME-IR08).
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diametre, 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).*	• The DD drilling was conducted by DDH1 of Canning Vale WA, using a Sandvik DE880 truck mounted drill rig. All diamond core was HQ in size.
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.*	• Sample recovery and sample condition is recorded for all drilling. Sample recovery was excellent and core competent for all DD holes completed.
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 diamond holes had a quick log performed, noting the lithology and the visual graphite abundances. The DD hole's core was sent to Core Explore technologies in Bassendeen WA for GeoCore X10 analysis which measures geotechnical features, lithology and density values. • Comments on estimates of visual mineralisation: Graphite

Criteria	JORC Code explanation	Commentary
	• *The total length and percentage of the relevant intersections logged.*	mineralisation is visually estimated on a metre by metre basis and vary from weak, moderate to strongly mineralised, similar to how alteration is recorded. This estimate is used as a guide only due to the variable nature of mineralisation and actual mineralisation was determined using laboratory analytical techniques at a certified laboratory. The graphite occurs in bands concordant with foliation in the schist. Identification of the mineralisation is completed on site by APEX geologists.
	• *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 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.*	• The HQ diamond core was cut into half at ALS core cutting facility in Perth. Half core was taken for sampling purposes and single pass crushed to 90% passing 3.1mm. The crushed material was then split 50:50. Half reserved for metallurgical purposes, and the other half then pulverised in preparation for C-IR18 analysis. GCM inserted blanks samples (1.4%) and duplicate samples (7%) at random into the diamond core sample stream to test lab repeatability and verify lab assay accuracy. • The sample sizes and analysis size are considered appropriate to correctly represent the mineralisation based on the style of mineralisation, sampling methodology and assay value ranges for the commodities of interest.
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.*	• The diamond core was cut in half and 1m samples sent to the ALS laboratory (Perth) for crushing, splitting and pulverising prior to analysis via C-IR18 analytical method. Graphitic carbon was determined by digesting the sample in n 50% HCl to evolve carbonate as CO_2. Residue is filtered, washed, dried and then roasted at 425C. The roasted residue is analysed for carbon by oxidation, induction furnace and infrared spectroscopy (ALS code C-IR18) and total sulfur analysis by induction IR (S-IR08). The other portion of the crushed core was transferred to ALS Metlabs (Perth) for the metallurgical testwork. • The analytical methods and procedures are appropriate for this style of mineralisation. • ALS inserts its own quality control standards and blanks at set frequencies and monitors the precision of the analyses. ALS performs repeat analyses at random intervals to test lab accuracy. • Laboratory procedures are within industry standards and are appropriate for the commodity of interest. • GCM inserted blanks and duplicate samples at random in the diamond core sample stream to test lab repeatability and verify lab assay accuracy.

Criteria	JORC Code explanation	Commentary
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.*	• Consultant geologists, from APEX Geoscience Australia Pty Ltd were involved in the logging of the Diamond drilling core, its logging, marking up, cut lines, metre markings. APEX was involved in the whole process including drill hole supervision, The entire chain of custody was supervised by APEX. • The drill hole data was logged using MX Deposit software and imported into a database for long term storage and validation.
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.*	• DD drill hole locations are picked up using a handheld Garmin GPS, considered to be accurate to ± 5 m. • Downhole surveys were completed at 30 m stations (and start and end of hole) using a downhole gyroscopic survey tool (AXIS). The holes were largely straight thus far. • All coordinates are recorded in MGA Zone 52 datum GDA94. Topographic control is provided by the two previously completed VTEM surveys and handheld GPS elevations.
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.*	• The drilling conforms with historical drilling lines and visibly mineralised surface mineralisation. • The completed drill spacing in conjunction with the historic RC drilling is spaced close enough to confirm continuity of mineralisation and is sufficient to support the definition of a mineral resource, and the classifications applied under the 2012 JORC code.
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.*	• GCM23DD003 was drilled at 231º which is just off the optimal orientation of 258º that is perpendicular to mineralisation. • This purpose of this sampling was to provide bulk composite samples for metallurgical testwork. • The diamond core was cut in half and 1m samples sent to the ALS laboratory (Perth) for crushing, splitting. A portion was pulverized for assaying and the other portion of the crushed core was transferred to ALS Metlabs (Perth) for the metallurgical testwork as described in the body of this report. • This rest of this section is not relevant.
Sample security	• *The measures taken to ensure sample security.*	• The sample security consisted of the diamond core trays, strapped on pallets and loaded for transport directly from site via Bruce Avery Transport. Bruce Avery Transport then delivers the samples to the laboratory. The chain of custody for samples from collection to delivery at the laboratory is handled by APEX Geoscience Australia personnel. • The sample submission were submitted by email to the lab, where the sample counts and numbers will be checked by laboratory staff.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No formal audits or reviews have been performed on the project, to date.

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

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.*	• These tenements are held by McIntosh Resources Pty Ltd who is a wholly owned subsidiary of Hexagon Energy Materials Limited (HXG). • Green Critical Minerals Ltd (GCM) has the right to earn up to an 80% interest in McIntosh from Hexagon Energy Materials Limited (HXG) • HXG entered into a joint venture arrangement with Mineral Resources Ltd (MRL) who are the managers of exploration on the project. • There are no known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The East Kimberley has been largely explored for base metals and diamonds with no active previous exploration for graphite. Graphite had been noted by Gemutz during regional mapping in the Mabel Downs area for the BMR in 1967, by Rugless mapping and RAB drilling in the vicinity of Melon Patch bore, to the east of the Great Northern Highway in 1993 and has been located during nickel exploration by Australian Anglo American Ltd, Panoramic Resources Ltd and Thunderlarra Resources Ltd over the last 20 years.
Geology	• *Deposit type, geological setting and style of mineralization.*	• The McIntosh Project graphite schist horizons occur in the high grade metamorphic terrain of the Halls Creek Mobile Zone of Western Australia. • The host stratigraphy is the Tickalara Metamorphics which extend for approximately 130 km along the western side of the major Halls Creek Fault. • The metamorphic rocks reach granulite metamorphic facies under conditions of high-temperature and high pressure although the metamorphic grade in the McIntosh Project area appears to be largely upper amphibolite facies with the presence of key minerals such as sillimanite and evidence of original cordierite. • Hexagon has identified graphite schist horizons and accompanying aerial EM anomalies over a strike length in excess of 15 km within the granted tenements, with potential for another 35 km strike length of graphite schist in EL applications. The McIntosh target areas contain graphite and include seven (7) identified exploration target areas –

Criteria	JORC Code explanation	Commentary
		Mackerel, Cobia, Wahoo, Barracuda, Emperor, Rockcod and Trevally.

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.*
		• GCM23DD003 was drilled at 231º which is just off the optimal orientation of 258º that is perpendicular to mineralisation.
		  • This purpose of this sampling was to provide bulk composite samples for metallurgical testwork.
		  • The diamond core was cut in half and 1m samples sent to the ALS laboratory (Perth) for crushing, splitting. A portion was pulverized for assaying and the other portion of the crushed core was transferred to ALS Metlabs (Perth) for the metallurgical testwork as described in the body of this report.
		• This rest of this section is not relevant.

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.*	• The results being reported are for a metallurgical test, not drilling results. This section is not appropriate or material.
Relationship between mineralization widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralization 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 being reported are for a metallurgical test, not drilling results. This section is not appropriate or material.
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.*	• An appropriate previously released section has been included in this report showing the Green Critical Minerals (GCM) diamond core GCM23DD003 alongside historical Hexagon and recent GCM drilling. • The sections composited to form the two samples being reported on are shown.
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.*	• The results being reported are for a metallurgical test, not drilling results. This section is not appropriate or material.
Other substantive	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical*	• The results being reported are for a metallurgical test, not drilling

Criteria	JORC Code explanation	Commentary
exploration data	*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.*	results. This section is not appropriate or material.
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.*	• This is a preliminary report of metallurgical testwork in progress. The testwork will continue.