GREEN CRITICAL MINERALS

TEST WORK INDICATES POTENTIAL OF HIGH PURITY EMPEROR CONCENTRATE SUITABILITY FOR SPG - BATTERY ANODE

Highlights

- ALS Metallurgical test work conducted on Emperor diamond drilling core has produced graphite **concentrate grades over 97% C(t) by simple flotation on two bulk samples.**

- These high purities were further supported by very **high graphite recoveries of 96%** from both samples, which will have a favourable impact on operating cost.

- It is expected that introducing an attrition and cleaning stage into the currently simple flow sheet may further increase the purity.

- Metallurgical test work conducted on the two bulk composites submitted to ALS has confirmed most of the flakes have dimensions between **45-150µm**.

- The preferred starting flake size for battery anode material (SPG) is **<150µm (<100 mesh)**, which is then micronised down to smaller particles between **5-45µm** before being shaped and then purified into spherical purified graphite (SPG).

- The high purity nature of the Emperor deposit and its flake size distribution allow GCM to target the SPG anode market with the company's flagship Emperor deposit, just as **Chinese graphite export restrictions come in to play in Dec 2023** highlighting the critical need for sovereign supplies of battery grade graphite.

- The McIntosh Graphite Project is well situated in Western Australia being close to key end user markets and only 280km by sealed highway to a deep-water port. The location also benefits from strong government support for the development of critical mineral deposits.

Green Critical Minerals Ltd (“**GCM**” or “**the Company**”) which holds earn-in rights for up to 80% of the McIntosh Graphite Project (see announcement on 15 June 2022) is pleased to announce the promising preliminary metallurgical test work results from the Emperor Resource at the McIntosh Graphite Project, with all test work being conducted on material sourced from diamond core drilled by GCM in 2023. The two bulk samples used came from diamond drill hole GCM23D003, the assay results of which was the subject of ASX Announcement dated 1 November 2023.

ALS METTALURGICAL TEST WORK

The ALS results demonstrate a significant milestone, with the ability to upgrade to **concentrate grades over 97% C(t) by simple flotation with high recoveries 96%,** highlighting high purity of the McIntosh flake, which present promising marketing opportunities, particularly for the specialised EV battery sector. Further treatment using another attrition stage and cleaner flotation may further increase the purity of the product. Future testwork will optimize the process from ore to a finished product to maximize the value of the McIntosh mineralization. The program will include testwork to transform the flotation concentrate to SPG.

The latest testing, conducted at the ALS facility in Perth used samples from drill hole GCM23D003 at the McIntosh Graphite Project. Two composites representing the upper or known Emperor resource (128 m to 204 m downhole) and the lower ‘new’ discovery or extension below it (204 m to 388 m) was created using coarse assay rejects as summarised in Table 1. The graphitic carbon content in these composites was recorded at 3.69% C(g) and 3.33% C(g) respectively, showcasing the Projects capacity to yield a substantial graphite resource at a decent grade. Furthermore, **the detection of significant titanium levels hints at the presence of valuable rutile, aligning with previous mineralogical studies.**

Table 1: Composites for Metallurgical Testing at ALS

Sample	From (m)	To (m)	Interval (m)	Estimated Total weight (kg)
GCM Composite 1	128	204	76	342
GCM Composite 2	204	388	184	828

BATTERY ANODE MATERIAL POTENTIAL

The preferred starting flake size for battery anode material (SPG) is <150µm (100 mesh), which is then micronised to smaller particles between 5-45µm before being shaped into spherical graphite, converting coarse flakes (>150µm) into required smaller particles sizes (5-45µm) is expensive as additional grinding is energy intensive, adding additional cost to processing to convert the coarse flakes into smaller particles.

At the Emperor deposit, metallurgical test work has confirmed that most of the flakes have dimensions between 45-150µm (Figure 1) classifying it as fine. This characteristic presents an exciting opportunity to target the SPG anode market with the company's flagship Emperor deposit.

As evidence in the charts, approximately 6% of the concentrate mass reported to the size fractions greater than 150 microns. The size distribution of the two concentrates was almost identical, which suggests that the flake size distribution of the known Emperor resource and the new discovery are similar.

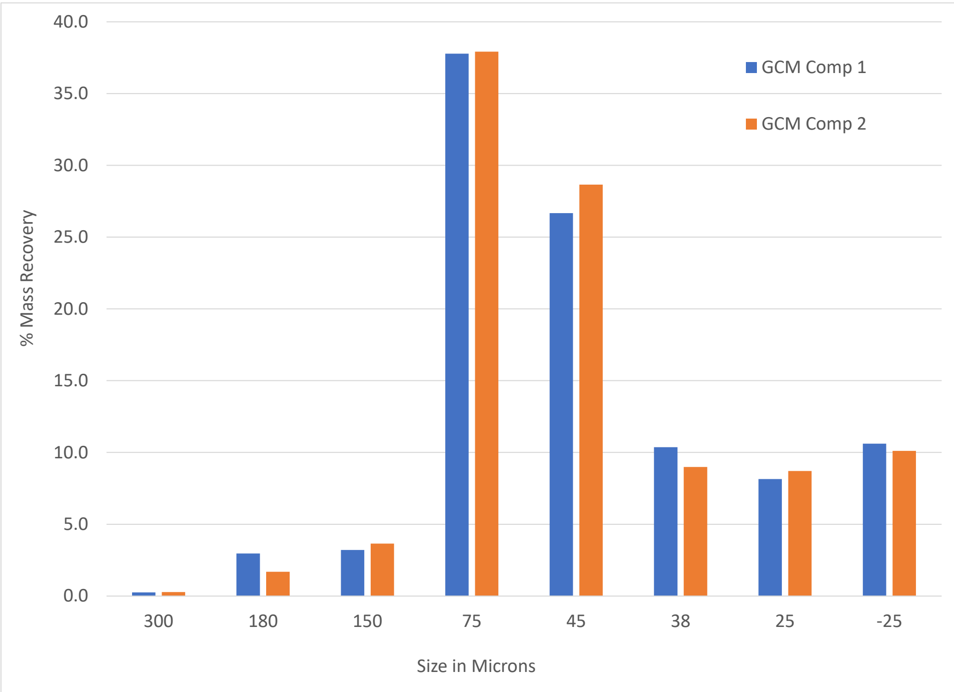

Figure 1: Mass Distribution of Graphite Concentrate

DOWNSTREAM TESTWORK

The company intends to perform downstream metallurgical testing on the Emperor flake to further investigate its battery anode potential, opening the door to the SPG market which is expected to have significant growth. The need for this critical mineral is further extrapolated by the largest exporter of graphite in the world (China) implementing export controls from the start of Dec 2023. Having a sovereign critical mineral project as recognised by the Australian Government Department of Industry, Science, Energy & Resources with suitability to SPG battery anode close to end use markets in Asia has not come at a better time.

SIMPLE FLOWSHEET – HIGH PURITY

The contents of the coarse reject bags were combined, homogenised, and two 2.25 kg sub-samples were split for chemical analysis and for a flotation test charge.

The two composites were subjected to cleaner flotation tests employing the flowsheet that is depicted in Figure 2. The flowsheet consists of a rougher flotation of the P_{100} = 3.35 mm material followed by a grind to P_{80} of 500 microns and scavenger flotation. The combined rougher and scavenger concentrate was then subjected to three stages of stirred media milling (SMM) with intermittent cleaner flotation. The third SMM discharge was upgraded in three stages of cleaner flotation to produce the final concentrate. A summary of the results of the cleaner flotation tests is presented in Table 2.

The combined concentrate for GCM Composite 1 and GCM composite 2 graded 97.1% C(t) and 97.6% C(t), respectively, at very high open circuit total carbon recoveries of over 96% (*Table 2)*

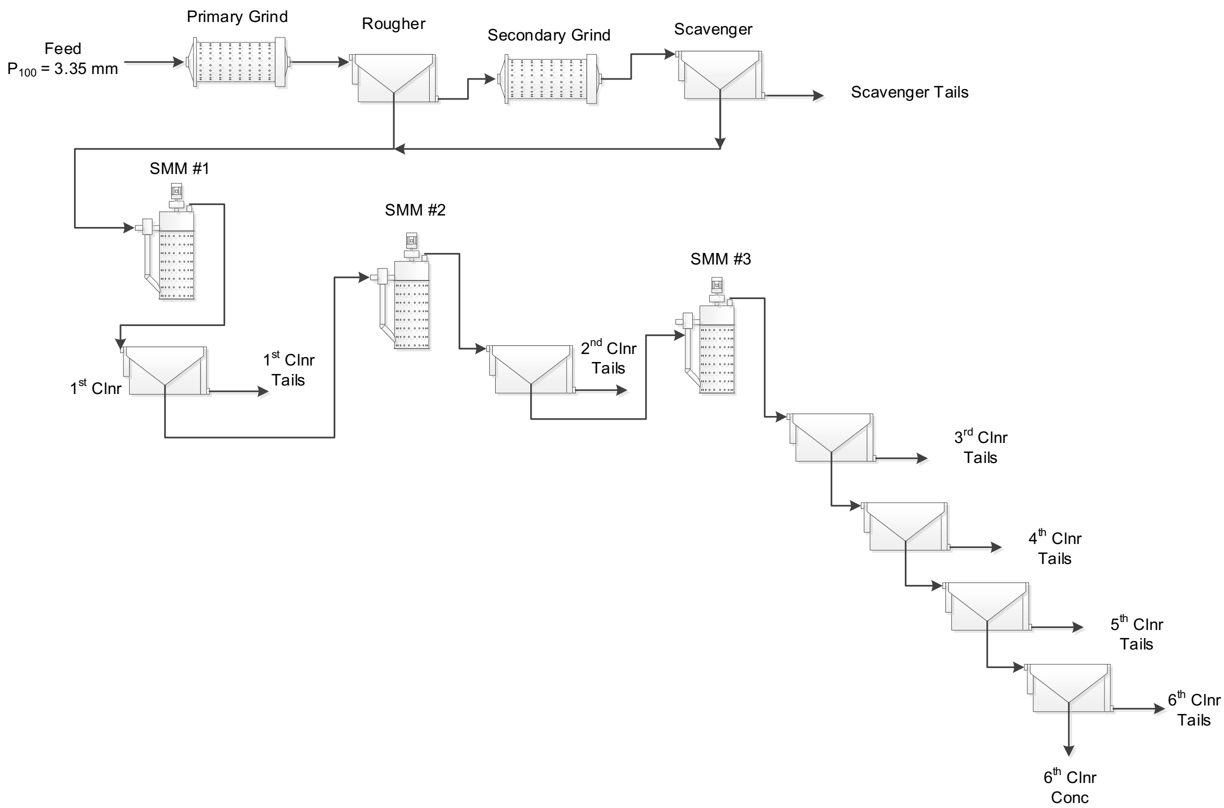

Figure 2: Cleaner Flotation Flowsheet

Table 2: Summary of Cleaner Flotation Tests

Composite	Mass Recovery %	C(t) Grade %	C(t) Recovery %
GCM Comp 1	4.08	97.1	96.7
GCM Comp 2	3.60	97.6	96.5

The two 6th cleaner concentrates were submitted for a size fraction analysis. The total carbon grades of the various size fractions are presented in Figure 3. Note, the plus 150 microns size fractions were combined for chemical analysis due to the limited sample mass.

The total carbon grades of the various size fractions exceeded 94.5% in all products. GCM Composite #2 produced slightly higher grades for most size fractions, which confirms the analysis results for the combined concentrates.

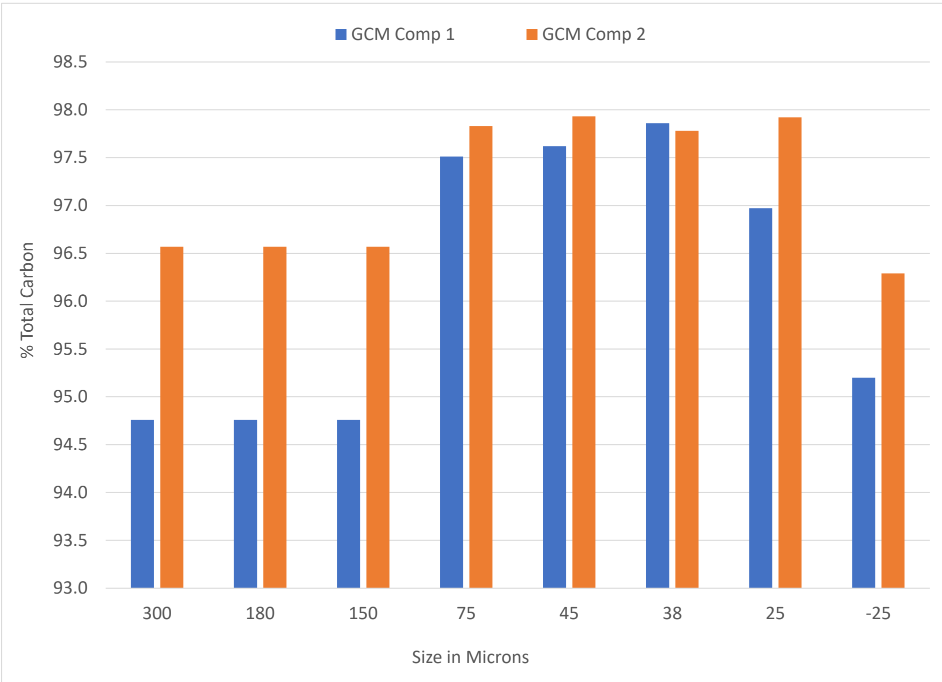

Figure 3: Total Carbon Profile of Graphite Concentrate

The results obtained by ALS are in agreement with the findings of SGS. While the intermediate concentrate produced in the SGS work yielded a higher mass recovery into the plus 150 micron size fractions of 15%

compared to 6% in the ALS test, the SGS work concluded at an intermediate concentrate grading 50% C(t), thus requiring further grinding and cleaner flotation. The coarser size fractions of the intermediate concentrate yielded low grades of 18% to 30% C(t), which indicates that most of these larger particles were predominantly gangue minerals and that a final plus 95% C(t) concentrate will contain only a small percentage of 150-micron flakes.

The ALS work demonstrated that despite a finer flake size distribution, the Emperor mineralisation can be upgraded to a high-grade concentrate grading greater than 97%. Even the smallest size fraction of minus 25 microns yielded a grade of over 96% C(t). While traditional battery anode material feed stock limits the amount of minus 45 microns material, the high grades of the minus 45-micron product provide attractive marketing options.

PROJECT LOCATION ADVANTAGE

The McIntosh Graphite Project (Figure 4) is well situated in Western Australia being close to key end user markets and only 280km by sealed highway to a deep-water port. The location also benefits from strong government support for the development of critical mineral deposits. This governmental backing is crucial, providing a stable and supportive framework for operations and grants through the Critical Mineral Fund. The McIntosh project, therefore, not only stands out for its geographic and infrastructural advantages but also for being in a jurisdiction that values and promotes mining activities.

The synergy of these factors makes the McIntosh Project an attractive proposition for battery anode end users, who increasingly prioritize responsible sourcing from stable, reputable countries known for their good environmental practices.

Another key advantage of the McIntosh Project is its proximity to clean energy sources, particularly the Ord River Hydropower facility. This proximity aligns perfectly with the growing global emphasis on sustainable mining practices and responsible sourcing. The use of hydropower for the project's energy needs significantly reduces the carbon footprint, making the end product more appealing to environmentally conscious consumers and industries.

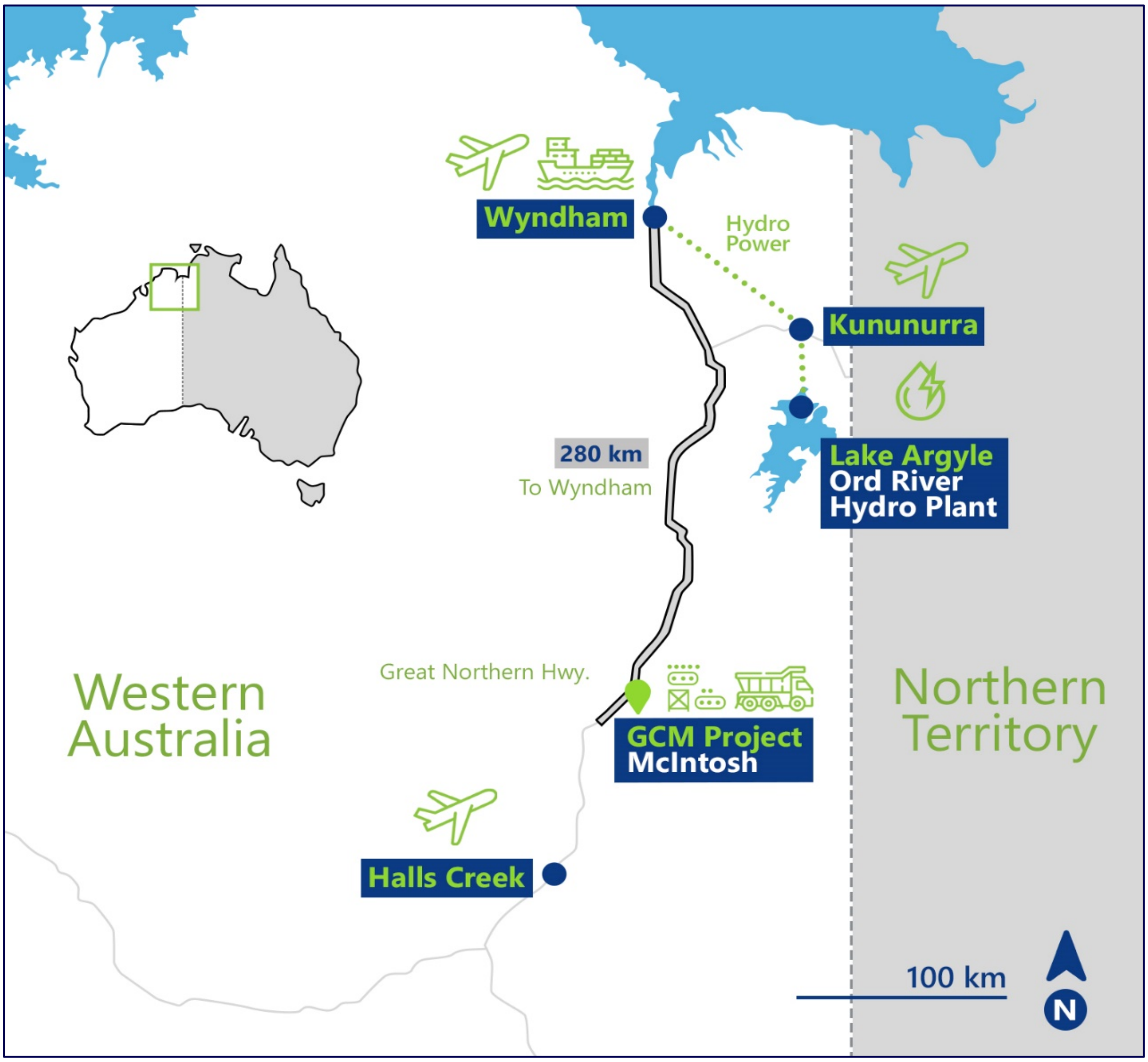

Figure 4 - Location of the McIntosh Project

The McIntosh project location advantage:

- ✓ Tier 1 Location – Western Australia
- ✓ 12km to Great Northern Highway via Sealed Roads
- ✓ 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

Battery anode end users are attracted by supply from stable, reputable countries with good environmental practices (Responsible Sourcing).

GREEN CRITICAL MINERALS

NEXT STEPS FOR EMPEROR DEPOSIT

- Perform a marketing analysis to determine premium markets for the high-grade -195 graphite concentrate.
- Explore opportunities from current test work now showing the Emperor flake may be a suitable feedstock for the in demand lithium ion battery industry.
- Conduct ore sorting test work to increase the feed grade to the mill thus potentially reducing capital and operating costs.
- A Downstream value add test work program will be developed to test the suitability of Emperor flake for making SPG (spherical graphite), which is needed to make Battery anode material. The program is envisioned to include purification of the SPG, carbon coating, and battery trials to evaluate the full value add process. Alternative battery applications to EV battery anode material will be investigated to accelerate off-take agreements.
- Provide purified material to battery anode producers for test work and offtake negotiations.
- Develop a financial model assuming a phased and modular approach to develop the McIntosh resource with reduced initial nameplate capacity to minimize the capital cost of the project. A phased approach will also allow GCM to develop relationships with customers and to establish market credibility.
- Update JORC resource following exceptional new depth extension to Emperor resource.

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.*	• Whole HQ Diamond Drilling core sourced from GCM's 2023 discovery hole GCMDD003 targeting the limb and depth extension of the Emperor deposit that intersected a 250m @ 3.9% graphite zone from 129m of a previously unknown and untested repeat graphite zone was cut in half and processed as described in the report above and in the GCM announcement to the ASX on 1 November 2023. • APEX did the core logging as announced on 6 July 2023. Core was cut by ALS, crushed per metre and anaylsed (ASX on 1 November 2023).
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).*	• As per Sampling Techniques above
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.*	• As per Sampling Techniques above
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.*	• As per Sampling Techniques above

Criteria	JORC Code explanation	Commentary
	• *The total length and percentage of the relevant intersections logged.*	
	• *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.*	• As per Sampling Techniques above.
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.*	• As above • No 'geophysical tools' were used. • As per Sampling Techniques above.
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.*	• As per Sampling Techniques above.
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.*	• . As per Sampling Techniques above
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.*	

Criteria	JORC Code explanation	Commentary
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.*	• As per Sampling Techniques above.
Sample security	• *The measures taken to ensure sample security.*	• The sample was taken from material that had been held in long term storage across multiple project operators. It is difficult to rely on sample security under these circumstances. As per Sampling Techniques above. •
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• As per Sampling Techniques above

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) • 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

Criteria	JORC Code explanation	Commentary
		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 – 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.*	• The results being reported are for a metallurgical test, not drilling results. This section is not appropriate or material. However, the information is available as per Sampling Techniques above.
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. However, the information is available as per Sampling Techniques above.
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. However, the information is available as per Sampling Techniques above.

Criteria	JORC Code explanation	Commentary
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.*	• See section in body of report.
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. However, the information is available as per Sampling Techniques above.
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.*	• The results being reported are for a metallurgical test, not drilling results. This section is not appropriate or material. However, the information is available as per Sampling Techniques above.
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 final report on the planned testwork. Additional testwork may occur in future.