Final Drilling Assays Confirm 15km Clay Hosted Rare Earths Trend Averaging 1,268 ppm TREO.

HIGHLIGHTS

- Rare earths specific assays (fusion digest) have significantly increased the acid soluble grades reported previously at North Barkly.
- Assays confirm a >15km rare earths enriched strike at an average grade of 1,268 ppm TREO (500ppm cut off), drilled across a very large 200km, 200ppm soil anomaly.
- High value MREO (Magnet Rare Earths) make up a high percentage of the total TREO, at **29.7% with Neodymium and Praseodymium (NdPr) comprising 76% of the MREO**.
- The extensive >15km clay hosted rare earths enrichment is flat lying on the western traverse and lies ~20 metres above the base of total weathering (Figure 3).
- On the eastern traverse (5km East) 6 holes were drilled along a 4km trend with all holes hitting clay hosted rare earths with enrichment increasing as the mineralisation trends towards surface (Figure 4).
- Clay hosted rare earths enrichment has been intersected on both lines of drilled 5km apart on wide spaced drill holes. Drilling was first pass scout drilling, testing a much larger 200km rare earths soil anomaly using a 200ppm cut off (Figure 2).
- The scout drilling has confirmed a clay hosted rare earths deposit of globally significant scale, given the extensive strike of the 200km rare earths soil anomaly, it is unlikely that the most economic part of the rare earth's enrichment has been found.
- Preliminary leach extraction tests are underway to confirm if the rare earths are Ionic Clay Hosted (IOC).
- The Project area is mainly poor-quality grazing land and land use conflicts are unlikely in the event of a mining proposal.

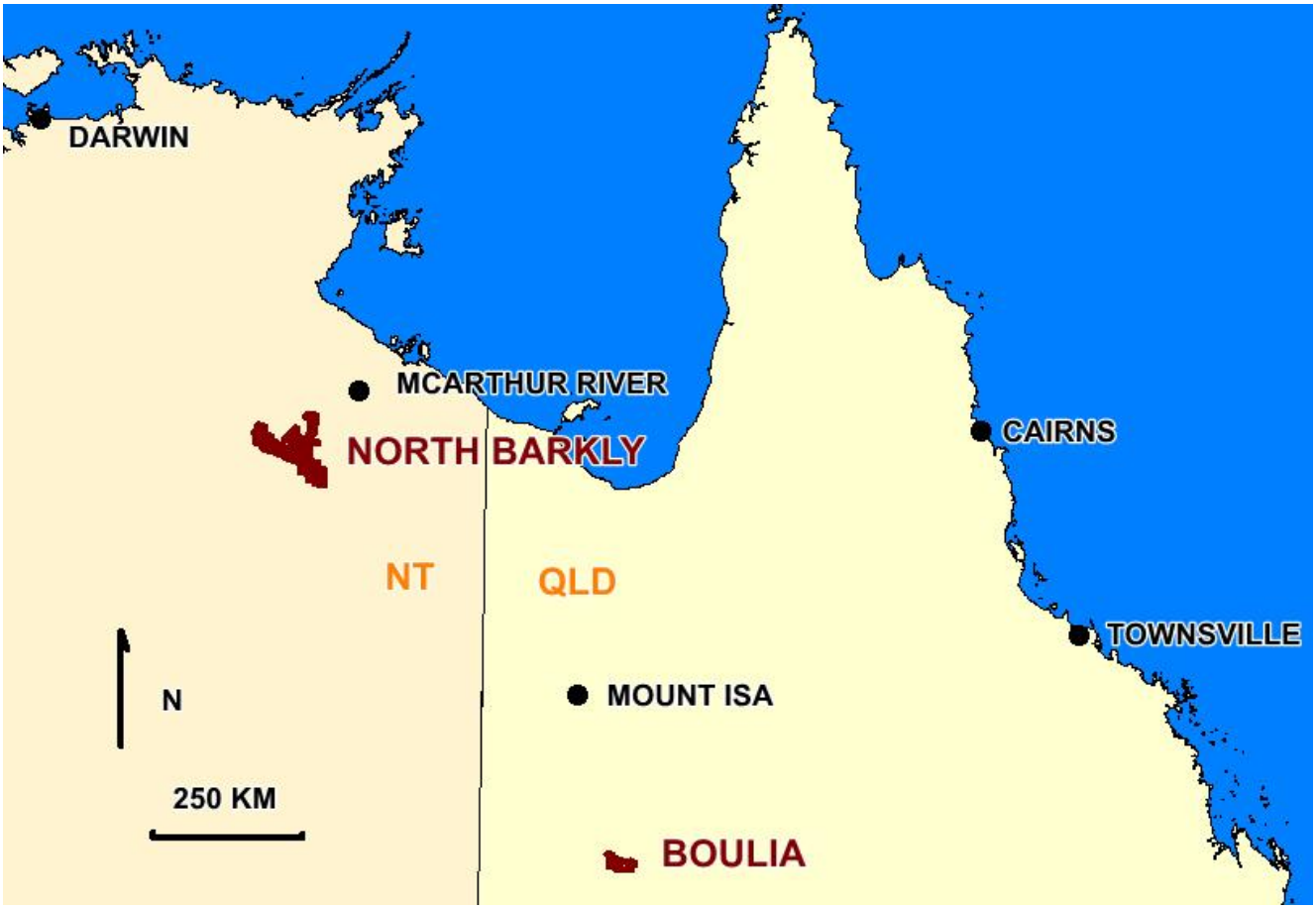

Figure 1: North Barkley Project Location

Green Critical Minerals Ltd ("**GCM**" or "**the Company**") is pleased to announce it has received rare earths specific fusion digest assays from its wide spaced drilling conducted in September this year.

Enhanced Acid Soluble Grades

Rare earths-specific assays, utilising fusion digest methods, have revealed a remarkable increase in acid-soluble grades compared to previous reports at North Barkley. The one metre samples were selected from rare earths enriched intervals selected from the previously announced acid digest analyses (ASX 17 November 2023).

Scout drilling across two lines, spaced 5km apart, has confirmed a globally significant clay hosted rare earths deposit. Sitting beneath an expansive 200km >200ppm rare earths soil anomaly, with indications that the most lucrative part of the rare earth's enrichment may yet be uncovered as very wide spaced drilling was conducted on two lines spaced 5km apart. Ongoing Investigations: Preliminary leach extraction tests are currently underway to determine if the rare earths are Ionic Clay Hosted (IOC).

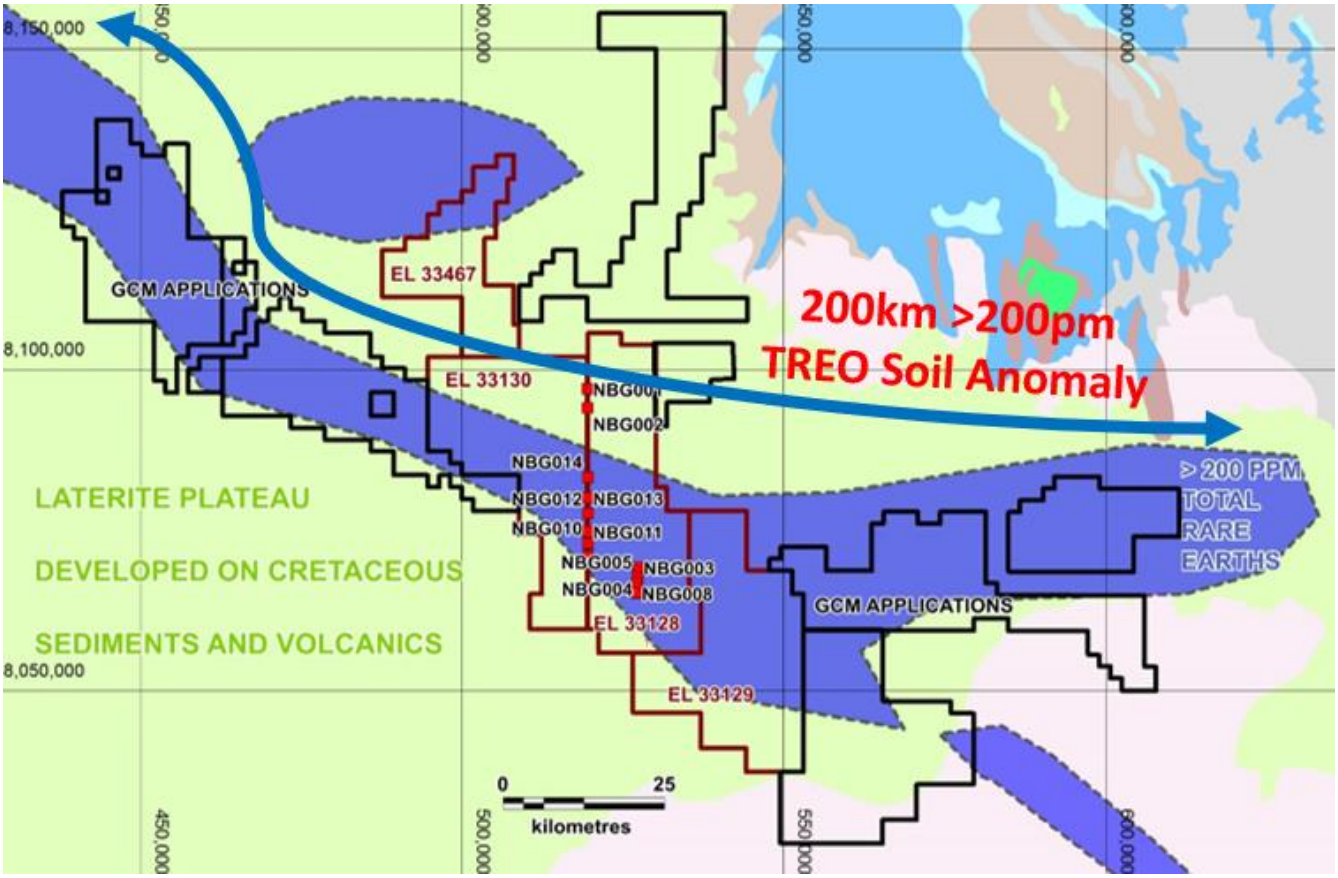

Figure 2: GCM First pass drillholes on regional geology with surface rare earth anomalism (GA)

Extensive >15km Rare Earths Trend

The assays confirm a vast >15km rare earths-enriched strike, boasting an average grade of 1,268 ppm Total Rare Earth Oxide (TREO) using a 500ppm cut-off. Two traverses were drilled along station tracks. The western traverse was over 28 kilometres and consisted of 8 holes, of which only 5 reached the desired depth. The eastern traverse was closer spaced to allow more confident correlations and is comprised of 6 holes over 4 kilometres.

Magnet Rare Earths (MREO)

High-value MREO constitute a substantial portion of the total TREO, accounting for 29.7%. Neodymium and Praseodymium (NdPr) making up a noteworthy 76% of the MREO. GCM is encouraged by these results, marking a pivotal moment in the North Barkley Project's development. The Company is committed to further exploration and analysis to unlock the full economic potential of this remarkable rare earth discovery.

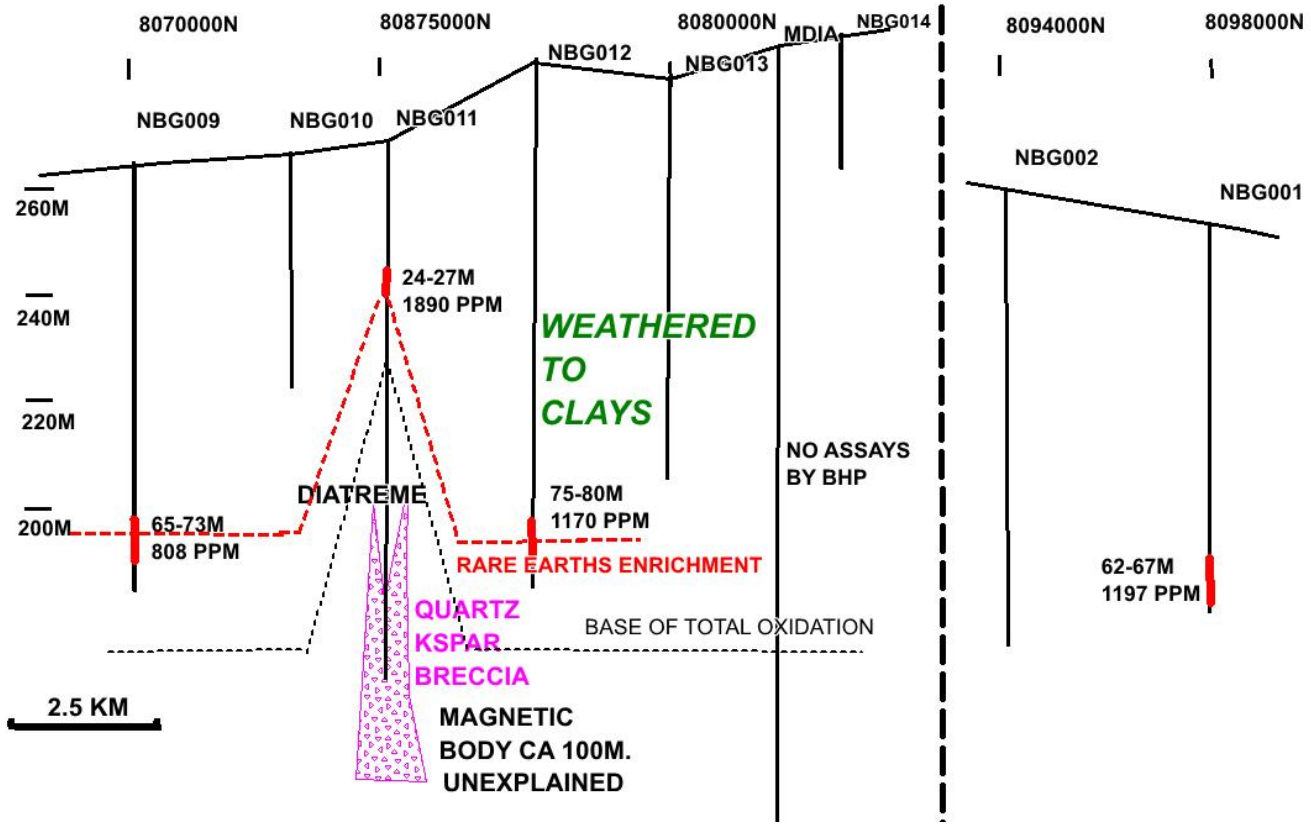

Figure 3: Western traverse with final total rare earth oxide assays

The western traverse was designed to give an evaluation of the large-scale potential for rare earth enrichment under the laterite plateau, and to gain information regarding the shallow magnetic bodies.

Rare earth enrichments were encountered in all sufficiently deep holes apart from NBG002.

Total Rare Earth Element Oxides (TREO) include (using 800 ppm cutoff with DyNdPr oxides above 200 ppm)

NBG001 62-67m 5m 1,197 ppm TREO

NBG009 65m-73m 808 ppm TREO

NBG011 24m-27m 1,890 ppm TREO

NBG012 75m-80m 1,170 ppm TREO

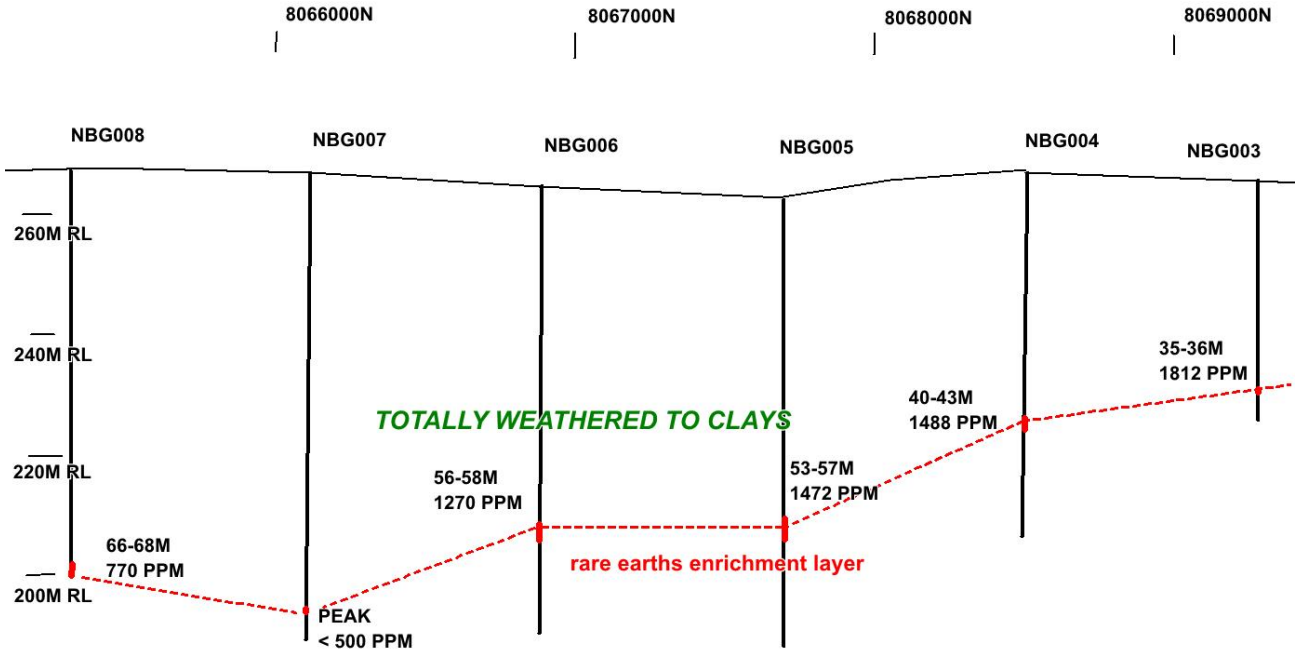

Figure 4: Eastern traverse with total rare earth oxide assays

Notable, grades appear to be increasing to the North as the mineralisation continues up dip towards surface.

Best intersections using 500 ppm TREO and > 200 ppm MREO cutoff:

NBG003 35m-36m 1,812 ppm TREO

NBG004 40m-43m 1,488 ppm TREO

NBG005 53-57m 1,472 ppm TREO

NBG006 56m-58m 1,270 ppm TREO

The recent Fusion Digest analytical results being reported can be found in Table 1.

The average grade and thicknesses of the 8 intercepts > 500 ppm TREO and >200 ppm MREO is 4.5m of 1,268 ppm TREO and 377 ppm MREO. **MREO is a high 29.7% of TREO, with Neodymium and Praseodymium (NdPr) making up 76% of the MREO (22.5% of the TREO).**

This demonstrates that the clay hosted enrichment layer at North Barkly has **sufficient grade and size to become a major resource**, provided metallurgical tests verify a low cost of extraction. The current area drilled has a thick overburden ratio, and **future work will concentrate on adjacent areas where the overlying portion of weathering profile has been removed by erosion.**

As announced previously, GCM has greatly expanded the areas under application, to enable access to several large adjacent areas where the enrichment is expected to be shallower. There are also large prospective areas within the existing granted tenure. The Project area generally, and in particular, the area of drilling is poor quality grazing land, some of which has not been taken up under pastoral leases. There are not likely to be serious land use conflicts should mining be proposed.

Figure 5: Chip tray photo NBG011 with rare earth oxide intersection

Next Steps

Preliminary metallurgical testing has been authorised, and results are expected to become available early 2024. This is designed to confirm that the rare earths are ionic and loosely bound to the clays, so that cheap reagents and low temperature processes can liberate and concentrate them. This feature, along with the ease of mining, is the principal economic advantage pertaining to ionic clay hosted REE deposits.

The 2024 field season is being planned and will see a shift towards scout drilling of the more eroded areas of the project, in order locate and define shallower REE enrichment.

The magnetic and gravity modelling has been extended to cover the full area of granted ELs and applications. This will be interpreted to assist in the selection of future rare earth targets, based on selecting high background substrates such as Cretaceous volcanic centres, granites, and potential IOCG alteration systems in the Proterozoic.

This interpretation will also include the selection of additional targets for shallow Cretaceous intrusive related mineralisation, particularly skarns and epithermal gold.

Table 1: > 500 ppm TREO and >200 ppm MREO Fusion Digest Assay Intersections.

SAMPLE	CeO2	Dy2O3	Er2O3	Eu2O3	Gd2O3	HfO2	Ho2O3	La2O3	Lu2O3	Nd2O3	Pr6O11	Sm2O3	Tb4O7	Tm2O3	Y2O3	Yb2O3	TREO
NBG001 62m - 63m	501	73	35	30	116	6	13	142	4	527	93	143	15	5	381	29	2111
NBG001 63m - 64m	136	41	20	14	63	4	8	47	2	172	27	54	8	3	231	16	844
NBG001 64m - 65m	196	47	24	16	73	5	9	67	3	204	34	67	9	3	282	20	1059
NBG001 65m - 66m	174	34	18	9	42	2	7	52	2	146	29	41	6	2	198	15	777
NBG001 66m - 67m	295	47	21	17	70	4	8	73	2	279	53	76	9	3	220	18	1194
NBG003 35m - 36m	913	7	3	8	28	6	1	372	0	306	94	44	2	0	25	2	1812
NBG004 40m - 41m	1280	8	3	14	41	6	1	400	0	555	156	90	3	0	25	2	2584
NBG004 41m - 42m	610	9	3	10	29	6	1	165	0	315	87	52	3	0	30	3	1322
NBG005 53m - 54m	979	18	7	23	61	5	2	312	1	587	130	120	5	1	55	5	2308
NBG005 54m - 55m	805	18	6	20	59	7	2	215	1	521	119	116	5	1	53	5	1952
NBG005 55m - 56m	214	15	6	12	38	6	2	61	1	255	43	59	3	1	53	6	775
NBG005 56m - 57m	273	17	5	14	50	5	2	91	1	239	45	60	5	1	44	4	855
NBG006 56m - 57m	674	25	9	23	70	6	4	182	1	509	107	126	6	1	85	8	1835
NBG006 57m - 58m	209	19	9	8	29	6	3	66	1	181	37	39	4	1	85	8	705
NBG009 65m - 66m	415	11	6	3	13	8	2	168	1	112	35	18	2	1	60	5	859
NBG009 66m - 67m	530	18	6	11	37	6	3	189	1	278	71	62	5	1	57	5	1279
NBG009 67m - 68m	251	10	4	4	15	7	2	114	1	134	36	23	2	1	47	4	654
NBG009 68m - 69m	117	5	2	3	9	4	1	34	0	59	14	14	1	0	24	2	290
NBG009 69m - 70m	226	17	8	4	20	9	3	79	1	124	33	26	3	1	90	8	650
NBG009 70m - 71m	300	19	8	9	31	11	3	74	1	194	44	46	4	1	80	7	830
NBG009 71m - 72m	307	25	12	8	32	9	4	61	1	169	37	45	5	1	108	11	834
NBG009 72m - 73m	329	32	15	11	44	20	6	93	2	234	51	61	6	2	151	14	1070
NBG011 24m - 25m	1095	57	30	18	76	6	12	154	3	376	83	92	11	4	330	26	2373
NBG011 25m - 26m	272	80	43	25	99	6	16	134	5	461	98	119	14	5	476	37	1890
NBG011 26m - 27m	100	55	25	21	94	6	10	161	3	381	77	97	11	3	272	20	1337
NBG012 75m - 76m	349	22	8	10	39	7	3	109	1	246	55	55	5	1	63	5	978
NBG012 76m - 77m	477	14	5	7	25	7	2	252	0	198	51	38	3	1	47	4	1131
NBG012 77m - 78m	315	21	8	10	36	7	3	93	1	224	49	51	4	1	66	6	895
NBG012 78m - 79m	471	43	19	14	62	6	7	129	2	295	61	67	8	2	193	15	1395
NBG012 79m - 80m	372	58	30	15	71	5	11	124	3	271	54	65	10	4	334	23	1449

Competent Person Statement

The information in this release that relates to exploration results is based on information compiled by Mr Neil Wilkins M.Sc. Exploration and Mining Geology, who is a Member of The Australian Institute of Geoscientists. Mr Wilkins is employed by Ascry Pty Ltd, which provides consultancy services to GCM. Mr Wilkins has previously worked in the North Barkly Project area and has more than five years' experience which is relevant to the styles of mineralisation and types of deposit mentioned in this report 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, Minerals Resources and Ore Reserves' (the JORC Code). This public report is issued with the prior written consent of the Competent Person as to the form and context in which it appears. Mr Wilkins holds shares in Green Critical Minerals Limited.

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 For exploration Target

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 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.*	• Samples were taken at 1m intervals by means of spearing the drill return sacks with a tube to produce 1m samples of 1 to 2kgs. • The samples were delivered to ALS in Mount Isa and trucked from there to ALS Perth for standard crushing and pulverising, followed by initial multi element acid digest ME-MS analyses. High values were then selected for fusion digest rare earth oxide analyses, by ALS. • THE DRILLING WAS NOT FOR RESOURCE ESTIMATION. It was to establish whether potentially economic levels of rare earths or other enrichments are present.
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).*	• Reverse circulation and aircore.
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.*	• 1m samples recovered in large number sacks, recoveries generally visibly good apart from an interval of running sands. • Problematic intervals near the bases of the holes were stabilised with gel. • Holes were rapidly stopped after loss of recovery.
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*	• This is first pass exploration drilling not used for resource estimation. All chips were logged.

Criteria	JORC Code explanation	Commentary
	costean, channel, etc) photography. • *The total length and percentage of the relevant intersections logged.*	
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 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.*	• Sampled by spearing with a tube. • This is appropriate for non resource drilling • The rare earths are believed to be finely distributed, so no nugget effect is anticipated. • Duplicate 4m composite samples were taken.
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.*	• Enrichments above 300 ppm acid digest Total Rare Earth Oxides were selected for 1m rare earth specific analyses by ALS method fusion ME-XRF30. • The samples have been assayed twice with the fusion digest giving slightly higher results, as anticipated. • ALS have included blanks and standards.
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.*	• The two analytical methods have similar results, the fusion digest slightly higher as expected. • No twinned holes. • This is the first drilling on this project and protocols are being established. More than one copy of all data has been kept.
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.*	• Sites are recorded electronically and on paper by hand held GPS. • Not resource drilling. • GDA94 zone 53. • GPS elevations are suitable for wide spaced exploration drilling, but not for detailed resource drilling.
Data spacing and	• *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.*	• Not Resource drilling, these exploration holes do indicate a degree of continuity.

Criteria	JORC Code explanation	Commentary
distribution	• *Whether sample compositing has been applied.*	
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.*	The enrichments are normally sub horizontal and the holes are vertical, so intercept widths are interpreted as close to true widths.
Sample security	• *The measures taken to ensure sample security.*	• Samples are kept secure on site and driven directly to ALS by company personnel.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews can be conducted until further drilling results are available.

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.*	• The announcement refers to 100% Green Critical Minerals Ltd (GCM) granted ELs 33128, 33129, and 33130, as well as EL applications 33229, 33230, 33467 and 33468. The applications mainly cover a mix of freehold leasehold and solely in the case of 33468 Aboriginal land. • There are no known security issues with the tenure at this time, however EL application 33468 may involve protracted negotiations to secure tenure. • The drilling is within EL33128, with the main traverse being close to the boundary with EL33130.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• There has been airborne EM by BHP (1993) and also by Geoscience Australia (2018) – Tempest wide spaced survey – EM and drilling details are available for download by the public. CRs 1993-191, 1994-139, 1995-181, 1996-210. • Geoscience Australia (GA) has conducted wide spaced geochemical sampling throughout the region, as part of the North Australian Geochemical Survey. • Stream sediment sampling with gold anomalous results draining the project is reported on the public NT geochemical database – CR1995-0365, CR1984-0247. and CR1989-0751 • CRA explored for diamonds and drilled RC collared corehole RK2 into the magnetic alteration bodies of interest and the logs are publicly available in CR1995-0520. •
Geology	• *Deposit type, geological setting and style of mineralisation.*	• An ionic clay hosted rare earths deposit within a Tertiary laterite weathering profile. • At Depth - Iron Oxide Copper Gold (IOCG) and deposits containing copper gold rare earths molybdenum and other elements in association with haematite or magnetite alteration and replacements. • At Depth- Mt. Isa (McArthur) Style zoned Co Cu Pb Zn, associated with basin margin faulting. • Deposits associated with newly recognised Cretaceous volcanics and intrusions eg skarns and epithermals.

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*
		• No previous IOCG drilling
		• No previous rare earths drilling.
		• No previous Cretaceous skarn drilling
		• Drilling by BHP in 1994 as previously reported.

Criteria	JORC Code explanation	Commentary
	○ *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.*	
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.*	• Intersections have been chosen as having a 500 ppm Total rare earth oxide cut and >200 ppm Magnet rare earths. This is arbitrary and is close to what other explorers are reporting. • These intercepts have high dollar values in comparison to most other ionic clay deposits due to higher percentages of the more valuable rare earths. The cut may in future be reduced. • The extraction characteristics are unknown and this impacts upon the future cut off grades.
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').*	• Intercept widths are close to true. Vertical holes were drilled through what is normally a sub horizontal enrichment.
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.*	• As shown in attached figures and tables
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.*	• As shown.
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.*	Geoscience Australia geochemical data has been contoured to illustrate the regional rare earths trend. This has been previously reported by GCM. The geological interpretation is by Neil Wilkins M.Sc who has had several years of mineral and petroleum experience across the McArthur Basin.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• The company plans to conduct preliminary extraction tests and further drilling. Future work may include either aircore RC or diamond drilling.

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	