

ASX Announcement

12 February 2024

Updated Copper-Gold Porphyry Style Deposit Characteristics Identified at Douglas Creek

Great Northern Minerals Limited (**ASX: GNM**) ("**GNM**" or the "**Company**") refers to its announcement released on 8 February 2024 titled "Copper-Gold Porphyry Features Identified at Douglas Creek" and notes that the announcement was missing JORC Table sections 1 and 2. The Company provides an updated announcement which now includes the relevant JORC Table sections 1 and 2 for the relevant geophysical results for the Douglas Creek project. The announcement has been amended to:

- include the JORC Table sections 1 and 2;
- include details regarding the PVFTS process and the airborne magnetic data, in section 2 of the JORC Table;
- include tables 1 – 4 which provides information on soil, rock and mineral geochemistry reported in this announcement.

Highlights:

A vectoring and fertility tool study (PVFTS) in combination with an internal exploration data review highlights fertile copper-gold porphyry characteristics. Diagnostic features of both deposit styles identified in the data include:

- Chlorite and epidote compositions identified by CODES University typical of porphyry-related copper-gold systems;
- Classic, large and circular airborne magnetic and radiometric anomalies;
- Large, coincident copper-bismuth-potassium-in-soil anomalies in regional soil data; &
- Classic potassic alteration signatures from lithogeochemistry alteration studies on ioGAS software.

IP program currently now being planned to build on this work and identify drill targets

GNM CEO & Managing Director, Cameron McLean said "This geochemical program has given the Board a much greater confidence in the existence of a highly prospective porphyry system at Douglas Creek, and the potential unveiling of a new porphyry district. We are looking forward to using the study and IP program to plan a more detailed drill program".

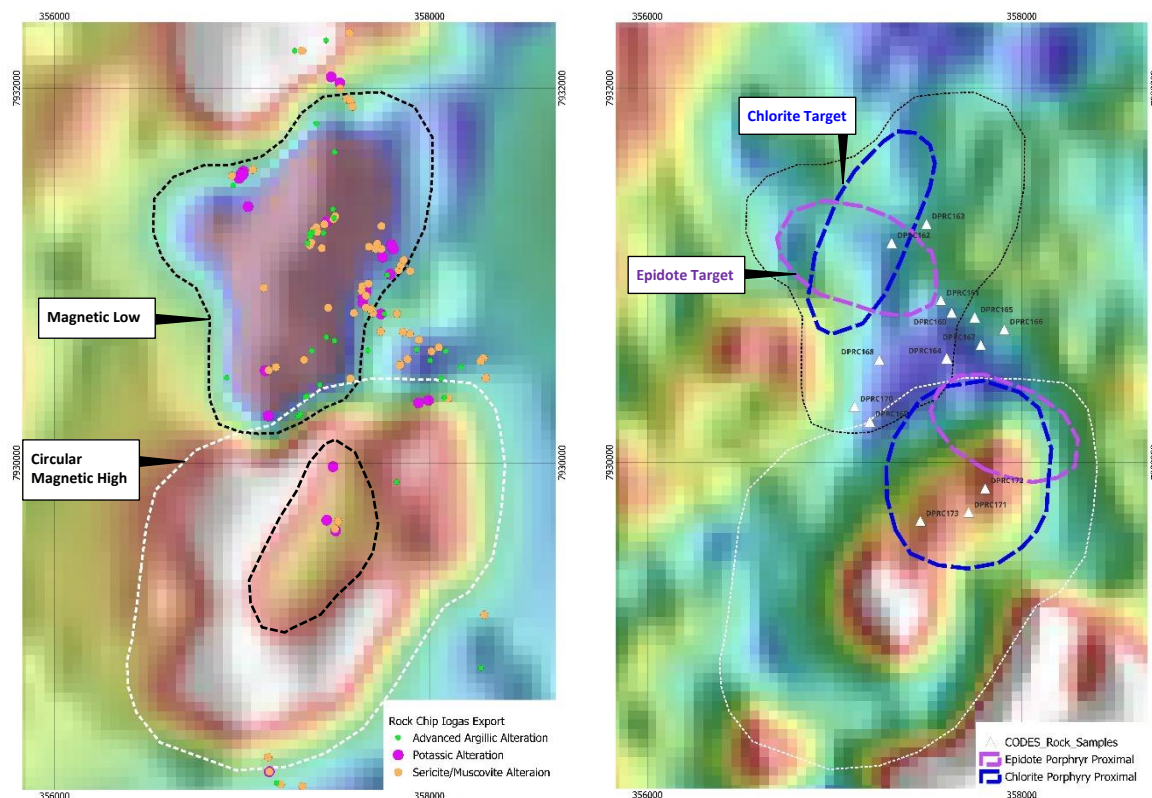


Figure 1 (left): Airborne magnetic image with lithogeochemistry alteration index on rock assays; (right) Airborne radiometric potassium image with CODES chlorite and epidote minerals samples and interpreted targets.

Great Northern Minerals Limited (**ASX: GNM**) (“**GNM**” or the “**Company**”) is pleased to announce the outcome of a fertility study undertaken by the Centre of Ore Deposit and Earth Sciences (CODES) at the University of Tasmania (UTAS) highlighting encouraging results from the Douglas Creek porphyry Cu fertility assessment study together with an internal review of the regional geophysical and geochemical data.

CODES Mineralogy Vectoring Work

The Porphyry Vectoring and Fertility Tool Study (PVTs) uses the chemical compositions of hydrothermal minerals to predict the likely direction and distance to mineralised centres, and the potential metal endowment of a mineral district. Industry adoption of the study method has steadily increased to combine with more established exploration techniques when searching for deeper buried resources or concealed under cover.

At Douglas Creek total of 16 samples from Douglas Creek were sent to University of Tasmania (CODES) for analysis (Figure 1). During that work on each sample chlorite and epidote minerals were identified and probed to define the chemical composition and compared to known deposits including Batu Hijau in Indonesia and Northparkes in Australia in order to define vectors.

Out of 16 samples epidotes were analysed in 13 samples, while chlorites were analysed in all samples from the area. Epidote compositions suggest a medium size porphyry system, while chlorite compositions display more fertile signatures with several samples plotting in the “Giant only” field. Most proximal samples identified based on epidote compositions are DPRC161, DPRC162 and DPRC173 and possibly samples DPRC174 and DPRC164. Most proximal samples identified based on chlorite

compositions are sample DPRC170, DPRC161 and DPRC169 (Figure 1). Two semi-coincident target areas on in then north and one in the south were identified based on chlorite compositions using Heatmap approach and data-driven Heat Regression modelling approach was applied to both chlorite and epidote compositions. Target areas are summarised in Figure 1.

Magnetic and Radiometric Geophysics Work

In light of the targeting work by CODES an assessment of magnetic geophysical images was conducted in order to identify porphyry characteristics given many known deposits display characteristic magnetic and potassic alteration signature.

The most striking feature from this work is that in the south a large circular magnetic feature 2km by 1km is evident coincident with both epidote and chlorite targets (Figure 1). In addition, a large potassium anomaly 1km by 400m occurs in the centre of the anomaly that may represent potassic alteration typical of porphyry copper-gold deposits (Figure 1).

Another important geophysical feature of interest is a large prominent magnetic low feature 1.6km by 700m occurs at the north coincident with both epidote and chlorite targets (Figure 1). Magnetic low features are interesting in porphyry environments and can represent reversely polarised magnetite alteration.

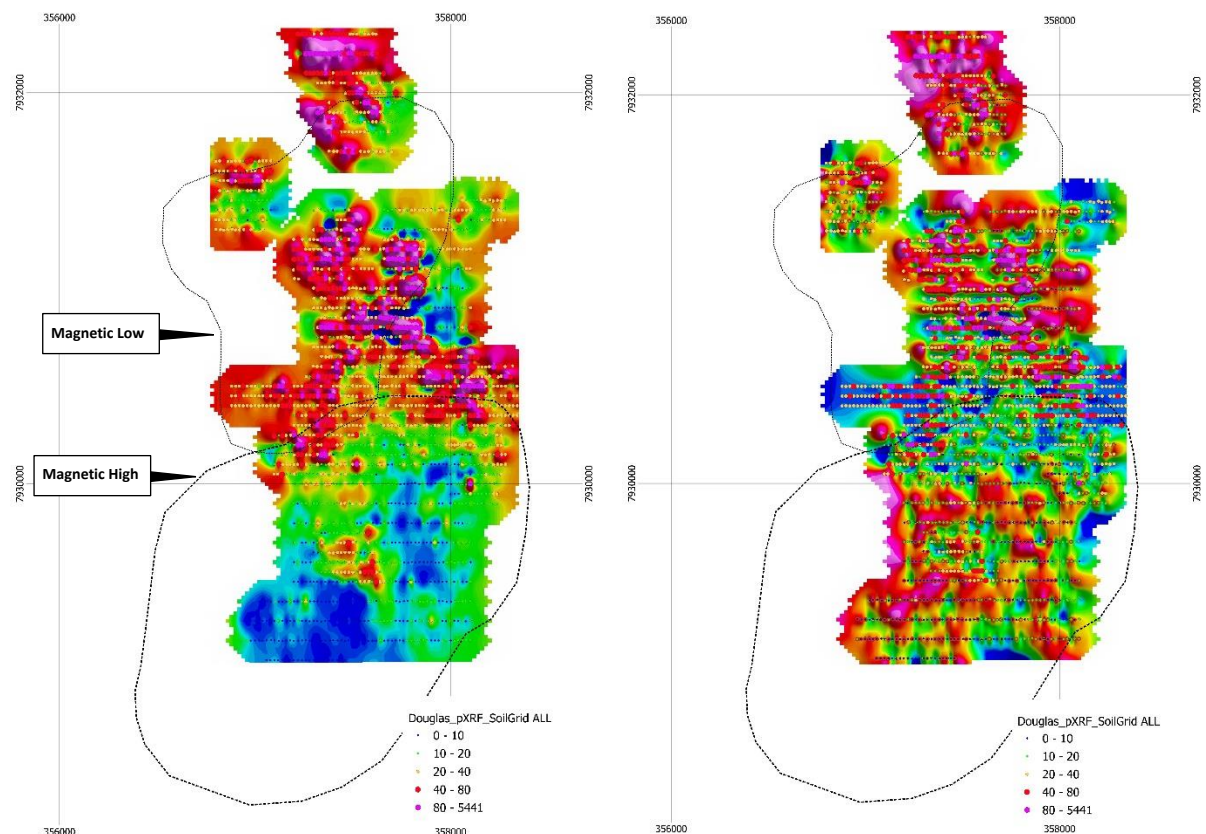


Figure 2 (left): Gridded copper-in-soil from the regional XRF dataset; (right) Gridded bismuth-in-soil from the regional XRF dataset showing the magnetic low and magnetic high anomalies for reference.

Regional Soil Geochemistry

An assessment of regional soil geochemistry was completed in order to assess if characteristic metals typical of porphyry systems occur associated with the identified geophysical and CODES mineralogy targets. In the northern target area both copper, bismuth and potassium are highly coincident with the airborne magnetic low and chlorite and epidote targets (Figure 1 & 2). In the southern target, there is a prominent central copper-in-soil anomaly however the bismuth (and potassium) is much more prominent and widespread. It should be noted that a smaller aqua-regia digest soil survey was completed and has validated the anomalies identified in the XRF data.

Rock Lithogeochemistry Alteration Studies

In order to gather further evidence for alteration typical of porphyry-related copper-gold deposits a database of 228 rock samples with 4-acid digestion multi-element geochemistry assay data which was interrogated with ioGAS software to produce ternary K/Al and Na/Al Molar plots that can accurately characterise the dominant alteration mineralogy typical of porphyry copper-gold systems which are typically 'potassic' that grade through to 'phyllitic' (sericite-muscovite) alteration into 'advanced argillic' (chloritic) alteration. Argillic alteration typically occurs in the upper levels of a hydrothermal system, above the zone of phyllic alteration, and is often associated with porphyry copper and gold deposits.. Plot on Figure 3 indicates all three alteration styles are represented in the Douglas Creek data.

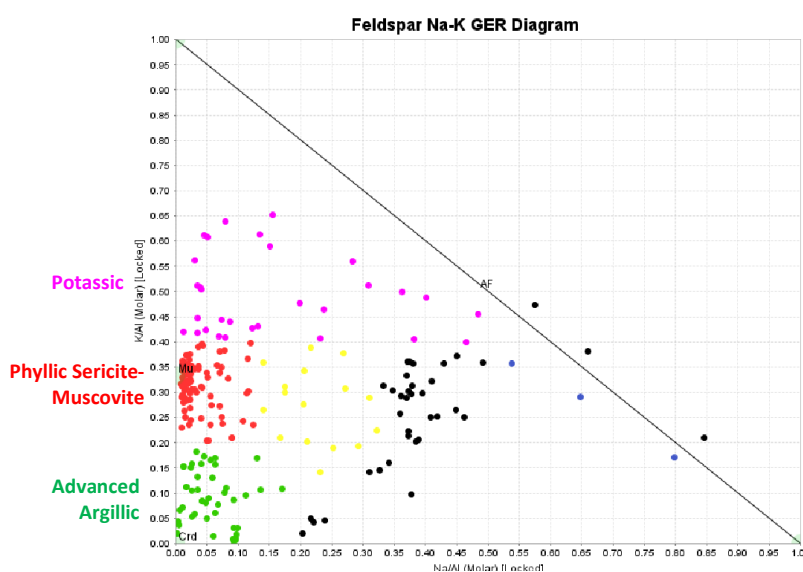


Figure 3: Ternary K/Al and Na/Al molar plots from multi-element rock geochemistry characterising the primary alteration types present at Douglas Creek. NB: Three alteration styles plotted on map in Figure 1.

Both the southern and northern target areas associated with prominent circular magnetic anomalies are represented by a potassic alteration signature (Figure 1) typical of classic porphyry copper-gold deposits. The data also suggests a cross over into sericite-muscovite alteration signatures in places. This potassic signature is supported by field observations where pink potassium feldspar altered adamellite intrusives have been identified in the field associated with a magnetic low (Figure 4).



Figure 4: Photograph of HP4 sample described as a potassium feldspar altered adamellite intrusive

Discussion and Next Steps

This new comprehensive work by GNM completed recently at Douglas Creek indicates numerous evidence to support excellent potential for a fertile porphyry copper-gold system on the project. The next step on this project is to conduct some strategically located IP survey lines across the main anomalies in order to detect large accumulation of disseminated copper sulphide at depth that would indicate the presence of a buried mineralised porphyry system.

*****ENDS*****

This announcement has been authorised by the Board of Great Northern Minerals Limited.

For more information please contact:

Cameron McLean
Managing Director
Great Northern Minerals Limited
+61 8 6214 0148
info@greatnorthernminerals.com.au

Competent Person Statement

This report's information related to Historical Exploration Results is based on information and data compiled or reviewed by Mr James Cumming and Mr Leo Horn. Both Mr Cumming and Mr Horn are consultants for the Company and are a Members of the Australasian Institute of Geologists (AIG).

Mr Cumming and Mr Horn have sufficient experience relevant to the style of mineralisation under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Accordingly, Mr Cumming and Mr Horn consent to the inclusion of the matters based on the information compiled by them, in the form and context it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases. The form and context of the announcement have not materially changed.

Table 1: Statistics on pXRF soil geochemistry data

pXRF data	Cu_ppm	Bi_ppm
Number of samples	2138	2138
Minimum	0	0
Maximum	5441	412
Mean	41.2	8.7

Table 2: Rock chip feldspar Na-K GER diagram data statistics

Rock chip data	Na/Al (Molar)	K/Al (Molar)
Number of samples	226	226
Minimum	0.002440429	0.004905507
Maximum	0.846314852	1.232973052
Mean	0.135326263	0.283984718

Table 3: Selected samples for chlorite and epidote analysis

Sample ID	Date	Zone	MGA94_E	MGA94_N	AHD_m	Comments	Geological Description
DPRC160	20-Jul-23	55	357626	7930800	560	Drillhole chips DCRC06 21-22m	Altered bio + qtz + plagio ± actinolitic hrnblde Diorite. Select chlor altn of bio±plag and xstal interstit + vlet ntrk infill by chlor+qtz+mixed fgnd sulph.
DPRC161	20-Jul-23	55	357569	7930866	509	Drillhole chips DCRC20 51-52m	Altered plagio + chlor + qtz + sulph Diorite. Selective seric±chlor altn of plag and chlor altn of bio±amphib + vlet ntrk infill by chlor+qtz+mixed fgnd sulph
DPRC162	20-Jul-23	55	357306	7931172	558	Peripheral to Zone4	Altd mgrnd qtz+fs+bio±amphib±mag DRT. Select wk-mod chlor±epid altn of bio±amphib pheno's. Trace chl+py vlets
DPRC163	20-Jul-23	55	357491	7931274	563	Peripheral to Zone4	Altd mgrnd qtz+fs+bio±amphib DRT. Mod intensity chlor+sil±epid±py altn
DPRC164	20-Jul-23	55	357599	7930556	583	Adjact to H.Hensel petro sample site HP6	M-cgrnd qtz+plag+bio+amphib±mag DRT. Mod selective chlor±epid±py altn of amphib and sericite altn of plagio. Plnr ntwrk of chlor+qtz+py±chpy vlets
DPRC165	21-Jul-23	55	357749	7930775	568	Upslope H.wall? Rock to Zone1	M-cgrnd qtz+fs+bio+amphib±mag DRT. Mod-strg selective chlor±py altn of amphib+bio pheno's
DPRC166	21-Jul-23	55	357907	7930711	560	Peripheral to trend of Zone1	M-cgrnd qtz+fs+bio+amphib DRT. Wk- mod selective chlor+py altn of amphib+bio pheno's
DPRC167	21-Jul-23	55	357782	7930628	570	100m upslope from Zone1 trend	M-cgrnd qtz+fs+bio+amphib±mag DRT. Wk selective chlor±py altn. Bio±amphib displays chlor 'disease'
DPRC168	21-Jul-23	55	357239	7930549	575	Peripheral to trend of Zone5	M-cgrnd qtz+fs+bio+amphib±mag DRT. Wk-mod selective chlor+py altn
DPRC169	21-Jul-23	55	357188	7930219	560	250m sth from Zone5 trend	F-mgrnd qtz+fs+bio±amphib mDRT. Pervas sil+chlor±py altn
DPRC170	21-Jul-23	55	357107	7930299	568	250m sth from Zone5 trend	Cgrnd qtz+fs+bio+amphib±mag DRT. Wk- mod selective chlor+sil+sulph altn. Abundt dissem sulph
DPRC171	21-Jul-23	55	357716	7929733	602	Adjact to H.Hensel petro sample site HP3	F-mgrnd porphyritic plag+qtz+bio±amphib Tonalite. Wk selective chlor altn of bio pheno's.
DPRC172	21-Jul-23	55	357805	7929861	600	Near H.Hensel petro sample sites HP1 & HP2	Porphyritic plag+qtz+bio+amphib±mag G.DRT. Wk chlor altn of bio pheno's
DPRC173	22-Jul-23	55	357459	7929687	585	Adjact to H.Hensel petro sample site HP5	F-mgrnd porphyritic plag+qtz+bio±amphib Tonalite. Wk selective chlor altn of bio±amphib pheno's.
DPRC174	22-Jul-23	55	358199	7932817	569	Original reconn sample site DPRC153	Wkly propylitic altered m-cgrnd DRT with ntwrk plnr chlorite+qtz+sulphide vlets
DPRC175	22-Jul-23	55	358452	7932933	573	Original reconn sample site DPRC145	Wkly propylitic altered m-cgrnd DRT with plnr chlorite+qtz+sulphide vlets to 5ml

Table 4: Filtering parameters developed within AMIRA project P1060 for chlorites and epidote chemistry.

Accepted epidote	Accepted chlorite
• 150,000 < Ca < 172,000	• 100,000 < Si < 225,000
• Mg < 35000 ppm	• K ≤ 1000 ppm
• Ti < 15000 ppm	• Ti ≤ 1000 ppm
• K < 20000 ppm	• Ca < 20,000 ppm
• Na < 7500 ppm	
• Al > 50000 ppm	
• Fe > 30000 ppm	

Table 5: Summary analysis for chlorites and epidote chemistry

Mineral	Epidote			Chlorite		
Sample	Analysed	Accepted	%	Analysed	Accepted	%
DPRC160				29	12	41
DPRC161	20	15	75	27	26	96
DPRC162	25	22	88	28	21	75
DPRC163	24	23	96	27	23	85
DPRC164	17	12	71	25	20	80
DPRC165	26	25	96	26	20	77
DPRC166				26	20	77
DPRC167	11	11	100	31	11	35
DPRC168	19	14	74	27	23	85
DPRC169				17	5	29
DPRC170	21	12	57	27	24	89
DPRC171	26	23	88	25	18	72
DPRC172	23	15	65	27	21	78
DPRC173	27	23	85	27	24	89
DPRC174	6	3	50	27	13	48
DPRC175	25	22	88	24	23	96
Total	270	220	81	420	304	72

JORC Code, 2012 Edition

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Soil samples were collected of 'B' horizon material sieved onsite to -1.6mm for an approx. 200gm soil sample. All sample locations were recorded by handheld GPS survey with estimated accuracy of +/-2-3 metres. Analysis of the soil samples was conducted using a handheld Olympus Vanta Selective sampling of geologically interesting rocks was conducted and the representative nature of the sampling is unknown. Approximately 2 kilograms of rock chips, from pseudo outcropping areas was collected for each sample collected. Analysis of the rock chips was conducted by Intertek Laboratory in Townsville for gold by 50 gram fire assay at a 0.001 ppm threshold with multielement analysis via multi acid digest followed by ICP MS. Chlorite and Epidote samples: Sixteen samples were received at CODES Analytical Laboratories, University of Tasmania on 4th August 2023. A 25 mm diameter polished epoxy mount was prepared with chlorite and epidote minerals for each sample. Themounts were polished and washed prior to analysis. Samples were analysed by laser ablation mass spectrometry (LA-ICPMS) using the instrumentation and analytical parameters summarized. The standard glasses NIST612, BCR-2G and GSD-1G were measured at regular intervals throughout the analytical run to perform calibration, quantification and secondary corrections. Data reduction was performed using the software packageLADR, developed at the University of Tasmania. The time resolved signal for each analysis was examined in detail and intervals containing mineral intergrowth and/or micro-inclusions were excluded. Analyses thatcontained mineral mixtures throughout the ablation were rejected and are not reported. Epidote is normalized to H2O-free 98 wt% oxide total, and chlorite is normalized to H2O-free 88 wt% oxide total.
Drilling techniques	<ul style="list-style-type: none"> 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.). 	<ul style="list-style-type: none"> Soil samples were taken on an initial 100m x 20m spaced grid over the Douglas Creek area Rock chip samples were taken of sub outcropping zones of interest. Chlorite and epidote probing was conducted on selected rock and drill samples

Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • One soil sample or rock sample per sample site collected. • There is insufficient data available at the present stage to evaluate potential sampling bias.
<i>Logging</i>	<ul style="list-style-type: none"> • <i>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.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> • Soil samples were not logged • Samples were logged for colour and sample type. • All samples were logged, in a qualitative manner. • Rock chip samples were selective on the basis of outcrop and interesting looking material
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>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.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • No core • Sample preparation for all recent samples follows industry best practice and was undertaken by Intertek Laboratories in Townsville where they were crushed, dried and pulverised to produce a sub sample for analysis. • Sample preparation involving oven drying, followed by rotary splitting and pulverisation to 85% passing 75 microns. • QC for sub sampling follows Intertek procedures. • No field duplicates were taken. • No Blanks were inserted. • No Standards were inserted. • Sample sizes are considered appropriate to the grain size of the material being sampled.
<i>Quality of assay data</i>	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying</i> 	<ul style="list-style-type: none"> • The methods are considered appropriate to the style of mineralisation. Extractions are considered near total.

Criteria	JORC Code explanation	Commentary																						
and laboratory tests	<p>and laboratory procedures used and whether the technique is considered partial or total.</p> <ul style="list-style-type: none">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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul style="list-style-type: none">Laboratory QA/QC involves the use of internal lab standards using certified reference material, blanks, splits and duplicates as part of the in house procedures. Repeat and duplicate analysis for samples shows that the precision of analytical methods is within acceptable limits.Laser and analytical parameters for chlorite and epidote analysis:<table><tr><td>Mass spectrometer</td><td>Agilent 7900</td></tr><tr><td>Laser</td><td>ATL</td></tr><tr><td>Laser wavelength</td><td>193 nm</td></tr><tr><td>Ablation cell</td><td>Laurin Technic S155</td></tr><tr><td>Type</td><td>Excimer ArF</td></tr><tr><td>Fluence</td><td>3.5 J/cm²</td></tr><tr><td>Repetition rate</td><td>5 Hz</td></tr><tr><td>Spot size</td><td>30 μm</td></tr><tr><td>Data acquisition mode</td><td>time resolved</td></tr><tr><td>Background acquisition</td><td>30 s</td></tr><tr><td>Analysis length</td><td>60 s</td></tr></table>	Mass spectrometer	Agilent 7900	Laser	ATL	Laser wavelength	193 nm	Ablation cell	Laurin Technic S155	Type	Excimer ArF	Fluence	3.5 J/cm ²	Repetition rate	5 Hz	Spot size	30 μm	Data acquisition mode	time resolved	Background acquisition	30 s	Analysis length	60 s
Mass spectrometer	Agilent 7900																							
Laser	ATL																							
Laser wavelength	193 nm																							
Ablation cell	Laurin Technic S155																							
Type	Excimer ArF																							
Fluence	3.5 J/cm ²																							
Repetition rate	5 Hz																							
Spot size	30 μm																							
Data acquisition mode	time resolved																							
Background acquisition	30 s																							
Analysis length	60 s																							
Verification of sampling and assaying	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">The Company's Geologists have collected and visually reviewed the samples collected.No twin holes drilledData and related information are stored in a validated MapInfo or Micromine database. Data has been visually checked for import errors.No adjustments to assay data have been made.																						
Location of data points	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">All sample locations have been located by GPS with precision of sample locations considered +/-2-3m.Location grid of plans and coordinates in this release samples use MGA94, Zone 55 datum.No Topographic data was used.																						
Data spacing and distribution	<ul style="list-style-type: none">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	<ul style="list-style-type: none">Data spacing and distribution is considered sufficient to establish the likely trends of anomalous mineralisationNo Sample compositing has occurred.																						

Criteria	JORC Code explanation	Commentary
	<i>has been applied.</i>	
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> <i>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.</i> 	<ul style="list-style-type: none"> Mineralised zones strike NE, NW and N-S with the sampling more or less orthogonal to this apparent strike'. <p>A reasonable density of samples were collected at regular intervals across and along mineralised trends. No sampling bias was deemed to be material.</p>
<i>Sample security</i>	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> Chain of custody is managed by the Company and samples are transported to the laboratory via Company staff with samples safely consigned to Intertek Genalysis Laboratory in Townsville for preparation and analysis. Whilst in storage, they are kept in a locked yard. Tracking sheets are used track the progress of batches of samples.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> No review or audit of sampling techniques or data compilation has been undertaken at this stage.

Section 2 JORC Code, 2012 Edition - Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> EPM 27522 is owned by Northern Exploration Pty Ltd, a 100% owned subsidiary of Great Northern Minerals Limited and was granted on the 1-12-2020. The tenement is located 14 kilometres to the north of GNMs Camel Creek and Golden Cup mining leases.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Gold mineralization in the Camel Creek area was first recognized in 1987. Previous exploration and mining activities have been undertaken by Lynch Mining in the district, with anomalous bulk cyanide leach work completed in 1989 which outlined a gold anomaly. The majority of previous exploration was completed between 1986 –1990.
<i>Geology</i>	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> EPM 27522 is located in the NE quadrant of the Broken River Mineral Field. Orogenic quartz vein hosted gold mineralization was previously identified within Kangaroo Hills Fm sedimentary rock units within the project area.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drilling not reported in this announcement Tables 1 and 2 summarise statistics for soil and rock geochemistry
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high 	<ul style="list-style-type: none"> No high-grade cuts have been applied to the tabled intersections. No metal equivalents are used or presented.

Criteria	JORC Code explanation	Commentary
	<p>grades) and cut-off grades are usually Material and should be stated.</p> <ul style="list-style-type: none"> 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. 	
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> 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 (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> No mineralisation widths or intercept lengths were released in the announcement. Rock chip samples are selective and targeted on outcropping and sub outcropping rocks.
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Maps are presented in the announcement.
Balanced reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The accompanying document is considered to represent a balanced report.
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Publicly available regional airborne magnetic data and imagery was utilised in this recent interpretation work by GNM. The survey was conducted at 250m spaced north-south lines with 2500 m east-west tie lines. Southern Geoscience was contracted to complete reprocessed airborne magnetic images that are illustrated and reported in this announcement The Porphyry Vectoring and Fertility Tool Study (PVTs) uses the chemical compositions of hydrothermal minerals such as chlorite and epidote in and surrounding known porphyry deposits such as Batu Hijau, Ujina, Northparkes and El Teniente as type examples to fingerprint approximate distance to each deposit. Element

Criteria	JORC Code explanation	Commentary
		ratios used were Ti/Ni, Ti/Sr, Ti/Li, Ti/Co, Ti/Pb, Mg/Ca and Mg/Sr to predict the likely direction and distance to mineralised centres, and the potential metal endowment of a mineral district. The same scientific method is then utilised on other exploration projects, in this case at Douglas Creek to make similar interpretations and predictions (Belousov & Cooke, 2023). The method involves assessment of element ratios that gave the highest number on intersections for different proximator equations.
Further work	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> An IP survey is planned over the newly identified anomalies