ASX Announcement **2 February 2023**

Successful completion of Douglas Creek drill program

Highlights:

- **RC drill program at Douglas Creek successfully completed - twenty drill holes completed (1,080m drilled) testing Target Areas 1, 2 and 4**
- **Drilling has intersected a mineralised low angle structure with widespread disseminated sulphide mineralisation, with up to 5% visible pyrite and 1% chalcopyrite**
- **Material assay results from drilling program include:**
  - **DCRC15 intercepted 1.0m @ 2.1 g/t Au, 28.1 g/t Ag, 0.1% Cu & 0.2% Pb, from 9m down-hole;**
  - **DCRC01 intercepted 7.0m @ 20.7 g/t Ag, 0.1% Cu & 0.3% Pb from 12m down-hole; and**
  - **DCRC012 intercepted 2.0m @ 0.8 g/t Au, 41.2 g/t Ag, 0.1% Cu & 0.1% Pb, from 6m down-hole**
- **The mineralised low angle structure is hosted within either medium grained equigranular diorite-tonalite or medium-coarse grained granodioritic intrusions that demonstrate zoned alteration (potassic to propylitic then phyllic)**
- **Reprocessing of historical geophysical data has confirmed the presence of a donut style magnetic anomaly (indicative of a porphry system) and planning has commenced on a follow up induced polarisation (IP) geophysical survey**

Great Northern Minerals Limited (**ASX: GNM**) ("**GNM**" or the "**Company**") is pleased to announce that the initial RC drilling program at Douglas Creek has been successfully completed.

The twenty hole RC program tested three zones of mineralisation (Zones 1, 2 and 4) and intersected a mineralised low angle structure with widespread disseminated sulphide mineralisation.

GNM has also reprocessed historical airborne magnetic data for the Douglas Creek target, and this has highlighted multiple targets, including the presence of a donut style magnetic anomaly (indicative of a porphyry system).

GNM has commenced planning on a follow induced polarisation (IP) survey targeting the reprocessed magnetic anomalies, plus the potential depth extensions of the mineralisation intercepted in the recent drilling program.

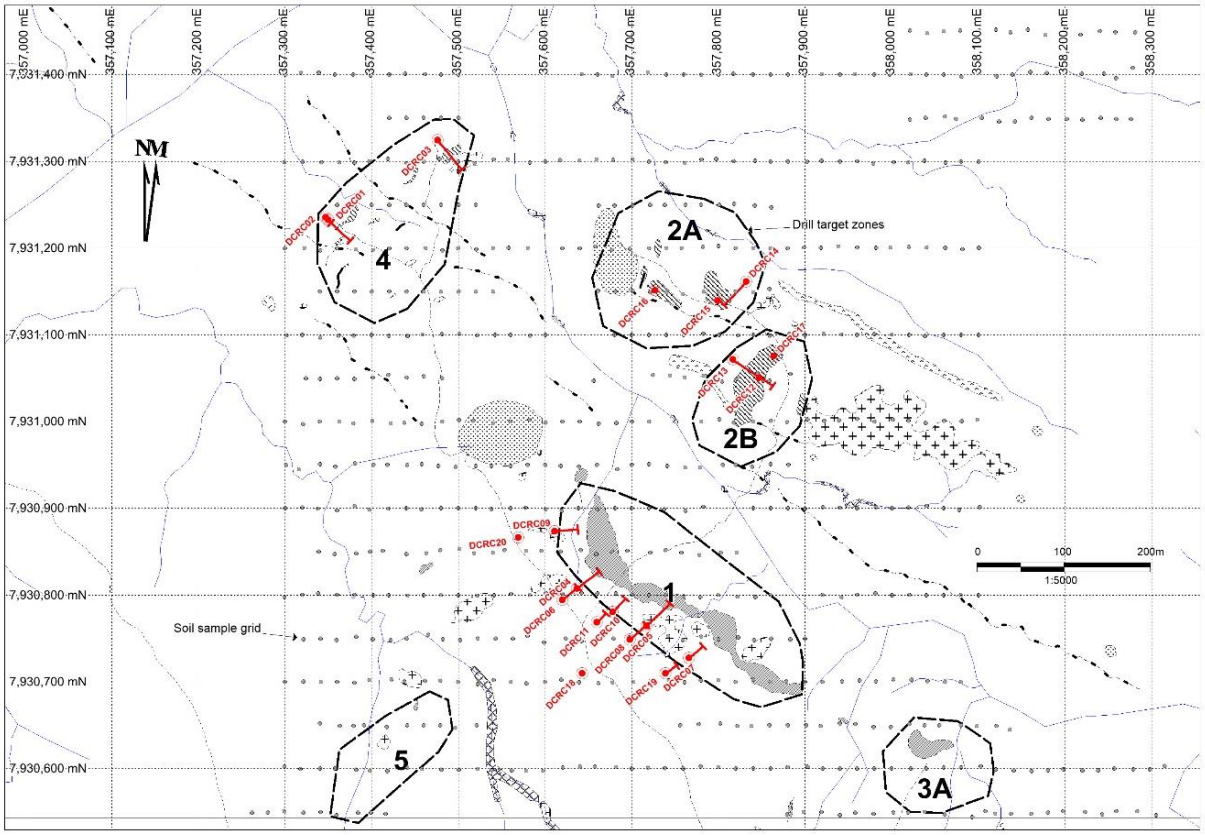
GNM CEO & Managing Director, Cameron McLean said: *"We are pleased with the results of the drilling program at Douglas Creek – confirming the presence of disseminated precious metal rich (Au-Ag) polymetallic (Cu-Pb-Bi) mineralisation.*

The geological information we have gained from the drilling combined with the reprocessed geophysical survey data will guide us in the next phase of exploration (IP survey) as we seek to target porphyry-style mineralisation and targets".

1. Douglas Creek Drilling

A reverse circulation (RC) percussion drill program was designed to test and define the subsurface nature of the mineralisation at Douglas Creek and the orientation of any containing structure. Three of the anomalous soil and rock targets that produced some of the higher polymetallic geochemistry, namely; Zones 1, 2 and 4, were selected for drill testing.

Figure 1 Douglas Creek RC Drilling Program



RC percussion drillholes DCRC01-03 were drilled to test Zone 4. These holes intersected a shallow north westerly dipping oxidised horizon from 5 metres containing an increased weight volume % of visible quartz vein fragments in a pervasive mixed (gossanous) limonite – hematite – goethite stained and variably sericite + silica altered intrusive host rock mass.

A further eleven RC percussion holes were drilled on five cross sections along the Zone 1 target. As per Zone 4, a shallow to moderately south easterly dipping mineralised horizon was intersected of approximate 3 to 5 metres thickness. The down dip drilling intersections displayed an association of increased weight volume % of visible quartz ± epidote ± chlorite veining and accessory pyrite ± chalcopyrite ± arsenopyrite with variable intensity silica + chlorite ± epidote wall rock alteration development within the medium grained equigranular diorite host rock.

Six RC percussion holes were drilled on four cross sections over the Zone2 target. As per Zone 1, a shallow south easterly dipping mineralised horizon was intersected of variable 3 to 10 metre thickness. The mineralised horizon was intersected from surface and thus strongly oxidised. A medium-coarse grained equigranular granodioritic host was intersected with an observable strong pervasive fine white mica (sericite) alteration of feldspar + biotite phenocrysts and groundmass through which a crystalline euhedral quartz ± gossan vein stockwork had variably developed.

The drilling intersected a mineralised low angle structure (LAS) with widespread disseminated sulphide mineralisation, with up to 5% visible pyrite and 1% chalcopyrite. The LAS is hosted within medium grained equigranular diorite-tonalite and medium-coarse grained granodioritic intrusions that demonstrates zoned alteration (from potassic to propylitic then phyllic), with a zonation towards phyllic predominant alteration trending north. Material assay results for the Douglas Creek RC drilling program are contained in Table 1.

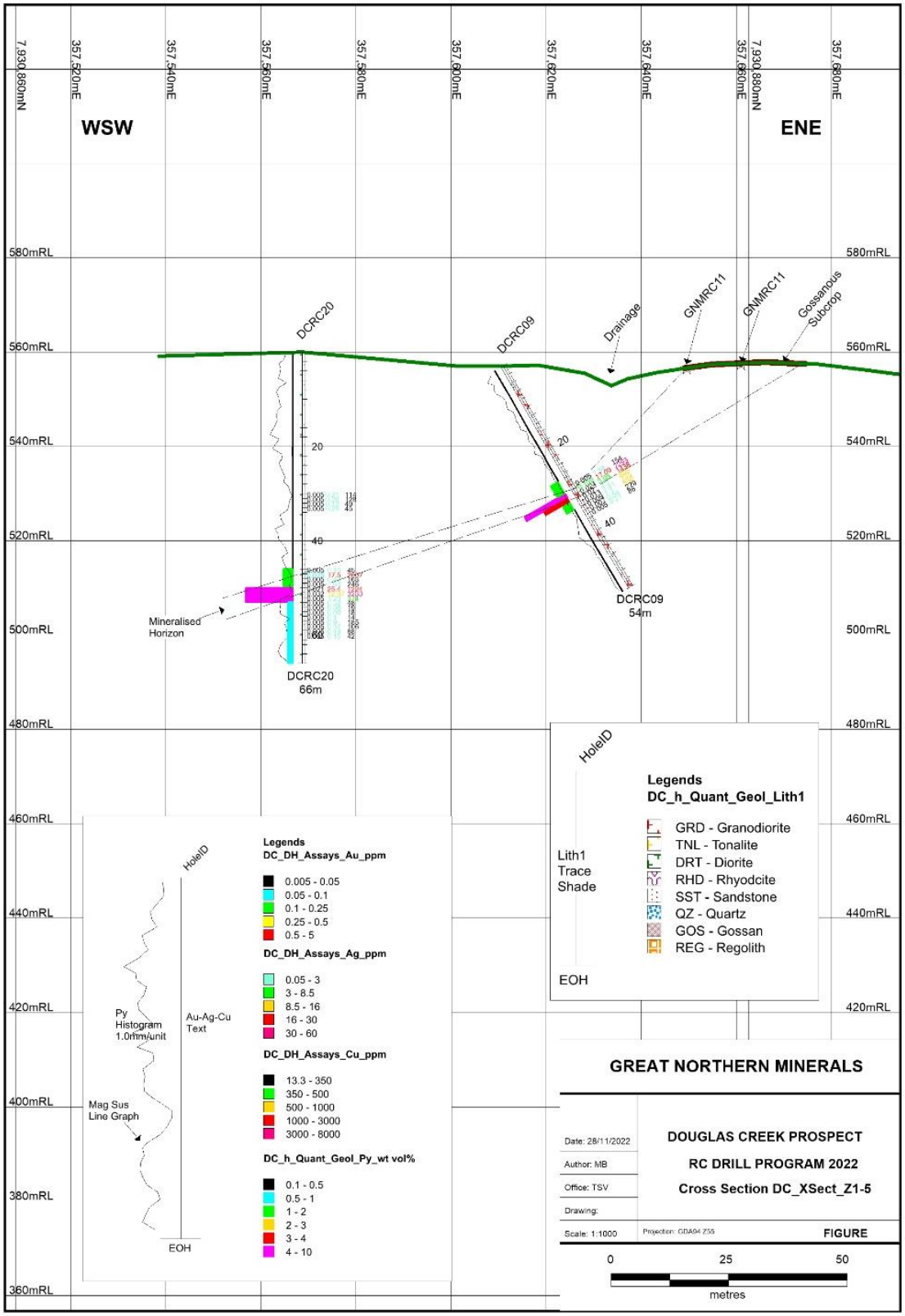
Table 1 Douglas Creek RC Drilling Material Intersections

Hole ID	Zone	From (m)	To (m)	Intersection (m)*	Au (g/t)	Ag (g/t)	Bi (g/t)	Cu (%)	Pb (%)
DCRC01	4	12.00	19.00	7.00	0.0	20.7	109	0.1%	0.3%
DCRC09	1	30.00	31.00	1.00	0.2	17.1	422	0.7%	-
DCRC12	2	6.00	8.00	2.00	0.8	41.2	729	0.1%	0.1%
DCRC13	2	26.00	27.00	1.00	0.3	10.6	112	0.2	-
DCRC15	2	9.00	10.00	1.00	2.1	28.1	675	0.1%	0.2%
DCRC20	1	47.00	48.00	1.00	0.1	17.5	344	0.3	-
DCRC20	1	50.00	52.00	2.00	0.0	18.7	78	0.2%	0.1%
*down hole width only									

The results returned a variable composite of anomalous Au + Ag + As + Bi + Cu + Pb + Zn ± W mineralisation associated with mixed sulphides intersected within the LAS. Surface manifestations of this sulphidic LAS had previously returned high grade gold, silver and copper rock chip samples from quartz rich gossanous intrusive outcrop located within the respective soil target anomalies drill tested.

The other five soil anomaly target zones that remain untested by drilling, contain similar textural, compositional and geochemical attributes in surface outcrop to target zones 1, 2 and 4.

Figure 2 Douglas Creek Drill Cross Section



2. Douglas Creek Regional Exploration

Southern Geoscience Consultants were contracted to re-process open file geophysical data from a 1993 airborne magnetics and radiometrics program completed by Kevron Geophysics over the Camel Creek tenements held by Golden Ant Mining (GAM). The reprocessing was completed and the final report was delivered in late December 2022.

Figure 3 Douglas Creek Airborne Geophysics (Magnetics)

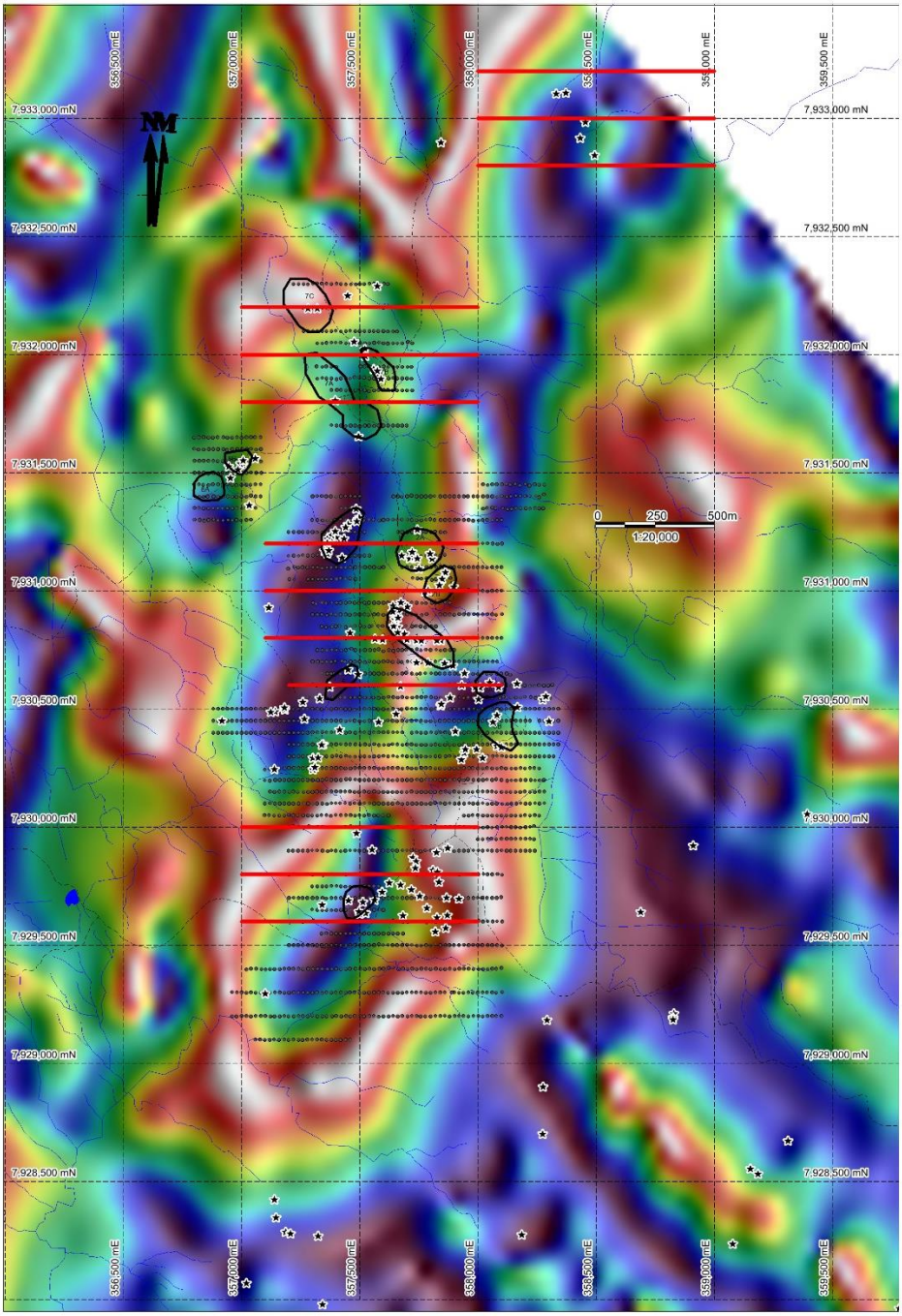


Image base: Tilt Angle of Reduced to Pole TMI (Linear Colour Stretch) shaded with 50% Automatic Gain Control Enhanced East Gradient, with Douglas soil and rock sample, anomalous soil target zones and proposed lines of IP geophysics data overlaid.

A review of the reprocessed geophysical data has highlighted the following targets:

- **Southern magnetic anomaly:** Central magnetic low 'eye' characterised by a core of quartz + feldspar adamellite containing no magnetite-pyrrhotite-pyrite, surrounded by a magnetic high 'donut' characterised by porphyritic quartz + feldspar + biotite + magnetite + pyrite bearing granodiorite-diorite. This pattern could represent a less oxidised porphyry system with a central magnetic low surrounded by an annular magnetic high. Soil Pb anomaly target 6 is located within the magnetic eye low.
- **Central magnetic anomaly centred on soil anomaly targets 1, 2, 3, 4 and 5:** A broad NNE trending magnetic low signature of dimension 1.5km x 0.5km developed within a surface expression of equigranular quartz + biotite + hornblende + magnetite diorite (reversed polarity?). Potentially an underlying source porphyritic granodiorite system. Contains soil targets 4, 5 and 1. Peripheral to this magnetic low 'core' are linear eastern and western magnetic high signatures which are coincident with soil targets 2, 7 and 1. Soil Target 2 is developed over quartz veined, phyllically altered medium-coarse grained granodiorite country rock.
- **Recently defined soil target 8 located near northern margin of central airborne mag low in contact with a significant magnetic high signature:** This soil anomaly target is similarly hosted by equigranular quartz + biotite + hornblende + magnetite diorite. Half of this soil anomaly has a reversely polarised magnetic low - high signature.
- **Northern magnetic low anomaly:** GNM exploration personnel briefly visited this anomaly area in Nov 2022 and collected three rock samples, two of which were of crystalline quartz veining, one of which returned highly anomalous molybdenum assays. This magnetic signature comprises a 1km x 0.7km low containing a 0.3km x 0.1km central lower intensity high 'eye'.

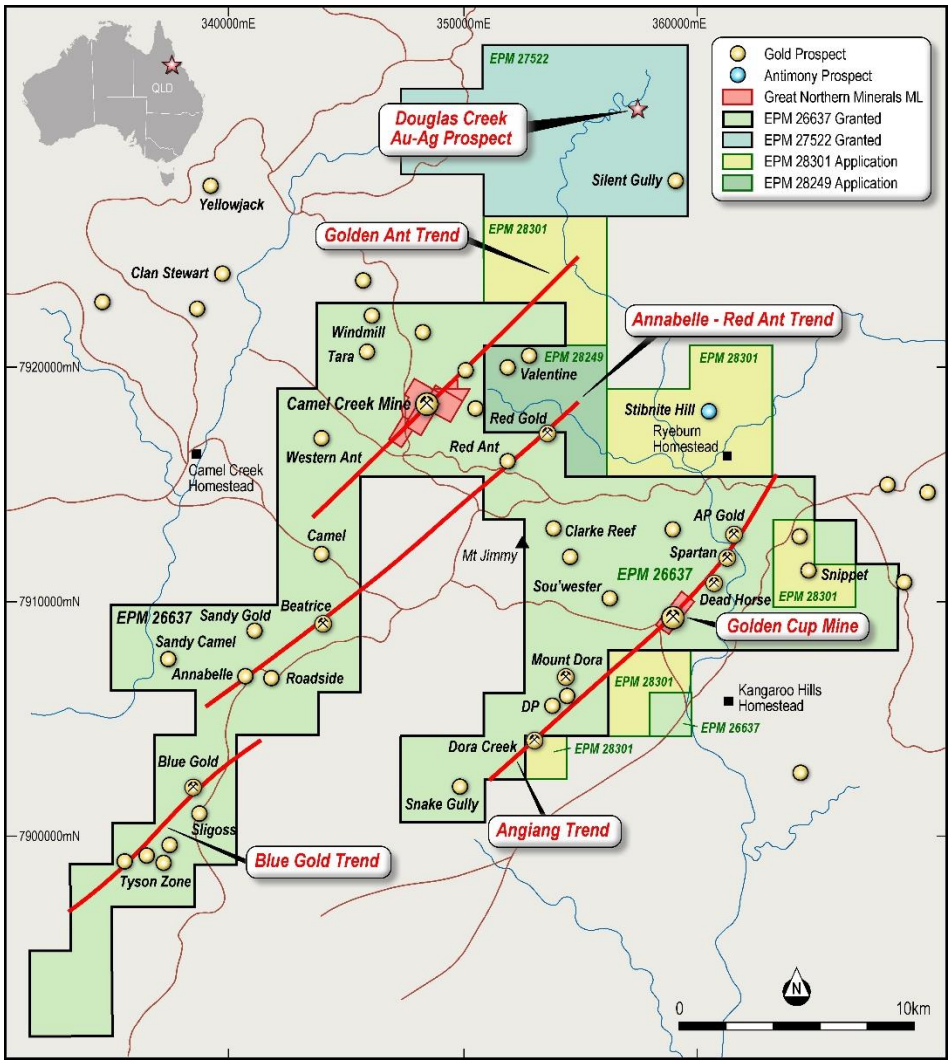
A follow up geophysical survey has been designed, using a Dipole-Dipole induced polarisation (IP) on 200m N-S line spacing by 100m E-W dipole spacing to target chargeability (sulphide bearing) targets. The survey will focus on the four spatially separate areas described above. The main concept is to test at depth beneath the magnetite bearing diorite for an underlying mineralised source intrusive.

The LAS zones intersected by the 2022 drill program appear to delineate structurally and/or lithologically controlled magnetite destructive alteration – mineralisation zones within intrusive hosts. These zones tend to coalesce with proximity to a porphyry centre.

The increase in abundance of crystalline granular quartz vein stockwork and associated pervasive, compositionally destructive, sericite alteration within the host granodiorite of soil target 2 is a good indication of proximity zonation towards a porphyry centre.

GNM's Douglas Creek IRGS discovery is located on EPM 27522, part of GNM's Golden Ant Project in North Queensland (refer to Figure 1). To date, GNM has defined multiple zones of outcropping IRGS mineralisation at Douglas Creek (over 125ha), with rock chips of up to 13.9 g/t Au, 598 g/t Ag, 11.0% Cu, 4.7% Pb & 1.8% Bi, plus eight defined soil geochemical anomalies.

Figure 4 Douglas Creek Location



ENDS

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

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About Great Northern Minerals Limited

Great Northern Minerals Limited is an ASX-listed gold focused explorer and developer. The Company's Golden Ant Project is located in Far North Queensland and includes the Amanda Bell and Big Rush Goldfields.

Total gold production from the Amanda Bell Goldfield was approximately 95,000 oz Au (57,000 oz from Camel Creek and 14,000 oz from Camel Creek satellite deposits, 18,000 oz from Golden Cup and 6,000 oz from Golden Cup satellite deposits). Total gold production from the Big Rush Goldfield was 60,000 oz Au. Three heap leach gold mines were operated (Camel Creek, Golden Cup and Big Rush). Mining activities commenced in 1989 and ceased in 1998 with the depletion of oxide gold mineralisation.

Great Northern Minerals aims to develop a new gold camp in North Queensland based on the Golden Ant Project.

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled under the supervision of Simon Coxhell, the Technical Director of Great Northern Minerals Limited. Mr. Coxhell is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation 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." Mr. Coxhell consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

Table 2 Douglas Creek RC Drilling Drill Hole Data

Hole	GDA94_E	GDA94_N	AHD_m	Azi_T°	Dip	Depth	Prospect	Target Zone
DCRC01	357350	7931232	564	140	-60	72	Douglas Creek	4
DCRC02	357347	7931235	564	140	-80	48	Douglas Creek	4
DCRC03	357476	7931324	558	145	-60	90	Douglas Creek	4
DCRC04	357637	7930807	564	60	-60	66	Douglas Creek	1
DCRC05	357717	7930764	563	55	-60	78	Douglas Creek	1
DCRC06	357620	7930794	567	60	-70	60	Douglas Creek	1
DCRC07	357766	7930727	572	60	-60	42	Douglas Creek	1
DCRC08	357698	7930748	569	55	-70	66	Douglas Creek	1
DCRC09	357611	7930873	557	90	-60	54	Douglas Creek	1
DCRC10	357678	7930780	564	55	-60	42	Douglas Creek	1
DCRC11	357660	7930768	557	55	-70	42	Douglas Creek	1
DCRC12	357847	7931050	560	0	-90	18	Douglas Creek	2
DCRC13	357817	7931071	558	130	-60	102	Douglas Creek	2
DCRC14	357832	7931161	562	230	-60	72	Douglas Creek	2
DCRC15	357799	7931139	560	0	-90	24	Douglas Creek	2
DCRC16	357727	7931151	562	0	-90	24	Douglas Creek	2
DCRC17	357864	7931075	555	0	-90	18	Douglas Creek	2
DCRC18	357643	7930709	556	0	-90	48	Douglas Creek	1
DCRC19	357739	7930709	568	60	-70	48	Douglas Creek	1
DCRC20	357569	7930866	559	0	-90	66	Douglas Creek	1

Table 3 Douglas Creek RC Drilling Assay Results

Hole ID	Zone	From (m)	To (m)	Intercept (m)*	Au (g/t)	Ag (g/t)	Bi (g/t)	Cu (%)	Pb (%)
DCRC01	4	10.0	11.0	1.0	0.0	9.7	6	0.0%	0.1%
DCRC01	4	11.0	12.0	1.0	0.0	9.0	4	0.0%	0.0%
DCRC01	4	12.0	13.0	1.0	0.0	13.2	63	0.4%	0.4%
DCRC01	4	13.0	14.0	1.0	0.1	53.7	341	0.2%	0.8%
DCRC01	4	14.0	15.0	1.0	0.0	10.4	39	0.1%	0.0%
DCRC01	4	15.0	16.0	1.0	0.0	16.5	99	0.1%	0.1%
DCRC01	4	16.0	17.0	1.0	0.0	8.6	30	0.1%	0.1%
DCRC01	4	17.0	18.0	1.0	0.0	11.3	43	0.0%	0.1%
DCRC01	4	18.0	19.0	1.0	0.0	31.1	147	0.1%	0.2%
DCRC09	1	29.0	30.0	1.0	0.0	1.5	17	0.0%	0.0%
DCRC09	1	30.0	31.0	1.0	0.2	17.1	422	0.7%	0.0%
DCRC09	1	31.0	32.0	1.0	0.0	3.1	52	0.1%	0.0%
DCRC09	1	32.0	33.0	1.0	0.0	2.1	36	0.1%	0.0%
DCRC09	1	33.0	34.0	1.0	0.0	1.4	27	0.1%	0.0%
DCRC09	1	34.0	35.0	1.0	0.0	1.1	22	0.1%	0.0%
DCRC09	1	35.0	36.0	1.0	0.0	0.5	11	0.0%	0.0%
DCRC09	1	36.0	37.0	1.0	0.0	0.2	4	0.0%	0.0%
DCRC12	2	3.0	4.0	1.0	0.0	2.8	9	0.1%	0.0%
DCRC12	2	4.0	5.0	1.0	0.0	2.2	11	0.1%	0.0%
DCRC12	2	5.0	6.0	1.0	0.0	5.0	14	0.1%	0.0%
DCRC12	2	6.0	7.0	1.0	0.7	35.7	572	0.1%	0.1%
DCRC12	2	7.0	8.0	1.0	0.9	46.7	886	0.2%	0.1%
DCRC12	2	8.0	9.0	1.0	0.1	4.1	29	0.1%	0.0%
DCRC13	2	20.0	21.0	1.0	0.04	1.9	25	0.0%	0.0%
DCRC13	2	21.0	22.0	1.0	0.02	17.4	81	0.0%	0.1%
DCRC13	2	22.0	23.0	1.0	0.01	2.3	53	0.0%	0.0%
DCRC13	2	23.0	24.0	1.0	0.01	1.7	13	0.0%	0.0%
DCRC13	2	24.0	25.0	1.0	0.01	1.6	4	0.0%	0.0%
DCRC13	2	25.0	26.0	1.0	0.02	0.3	2	0.0%	0.0%
DCRC13	2	26.0	27.0	1.0	0.30	10.6	112	0.2%	0.0%
DCRC13	2	27.0	28.0	1.0	0.05	1.4	19	0.0%	0.0%
DCRC13	2	28.0	29.0	1.0	0.01	0.7	5	0.0%	0.0%
DCRC13	2	29.0	30.0	1.0	0.01	0.5	5	0.0%	0.0%

Hole ID	Zone	From (m)	To (m)	Intercept (m)*	Au (g/t)	Ag (g/t)	Bi (g/t)	Cu (%)	Pb (%)
DCRC15	2	6.0	7.0	1.0	0.0	4.1	57	0.0%	0.0%
DCRC15	2	7.0	8.0	1.0	0.2	5.7	98	0.0%	0.0%
DCRC15	2	8.0	9.0	1.0	0.0	4.8	15	0.1%	0.0%
DCRC15	2	9.0	10.0	1.0	2.1	28.1	675	0.1%	0.2%
DCRC15	2	10.0	11.0	1.0	0.1	9.9	295	0.1%	0.0%
DCRC15	2	11.0	12.0	1.0	0.0	1.6	4	0.0%	0.0%
DCRC15	2	12.0	13.0	1.0	0.0	0.1	2	0.0%	0.0%
DCRC15	2	13.0	14.0	1.0	0.0	0.1	3	0.0%	0.0%
DCRC15	2	14.0	15.0	1.0	0.0	0.3	1	0.0%	0.0%
DCRC20	1	46.0	47.0	1.0	0.0	0.2	3	0.0%	0.0%
DCRC20	1	47.0	48.0	1.0	0.1	17.5	344	0.3%	0.0%
DCRC20	1	48.0	49.0	1.0	0.0	0.5	7	0.0%	0.0%
DCRC20	1	49.0	50.0	1.0	0.0	1.6	6	0.0%	0.0%
DCRC20	1	50.0	51.0	1.0	0.0	25.4	63	0.1%	0.1%
DCRC20	1	51.0	52.0	1.0	0.0	12.1	92	0.3%	0.0%
*down hole width only									

Section 1 JORC Code, 2012 Edition - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.*	• Drilling reported is reverse circulation (RC) drilling. • Great Northern Minerals completed 20 RC holes for 1,080m drilled. The drilling was completed by Dubbo, NSW based drilling contractors Durock Drilling Pty Ltd. • RC drilling returned samples through a fully enclosed cyclone system, then via a remote controlled gate into a cone splitter. Sample return was collected in 1m intervals (approx. 20-25kg). 1m RC samples were homogenised and collected by a static cone splitter to produce a representative 3-5kg sub sample • An Olympus Vanta portable XRF was used to aid geological interpretation. No XRF results are reported for the drilling. • Select 1m increment RC sub-samples were submitted to Intertek Australia in Townsville for Au and multielement assays
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The drilling was completed using a truck mounted RC rig utilising 6m rods with reverse circulation capability • Drilling diameter was 6.5 inch RC hammer using a face sampling bit. • RC hole length ranged from 18m to 102m with average hole length of 54m • Downhole surveys were undertaken at nominal 30m intervals during drilling utilising a digitally controlled IMDEX Gyro instrument.
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, moisture content and contamination were recorded by GNM personnel. • GNM personnel and Durock Drilling crew monitor sample recovery, size and moisture, making appropriate adjustments as required to maintain quality. • A cone splitter is mounted beneath the cyclone to ensure representative samples are collected. • The cyclone and cone splitter are cleaned as necessary to minimise contamination • No significant sample loss, contamination or bias has been noted in the current drilling

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All RC samples were geologically logged by suitably qualified geologists. Lithology, veining, alteration, mineralisation and weathering are recorded in the geology table of the drill hole database. Final and detailed geological logs were forwarded from the field following sampling. • Geological logging of the RC samples is qualitative and descriptive in nature. • Observations were recorded appropriate to the sample type based on visual field estimates of sulphide content and sulphide mineral species • During the logging process GNM retained representative samples (stored in chip trays) for future reference. The RC chip trays are photographed and the images electronically stored. • Every metre sample of RC drilling was logged by the GNM geologist
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.*	• 1m increment samples were collected off the drill rig via cyclone - cone splitter into calico bags with a respective weight between 3-5kg. • Every 1m increment sample was scanned directly through the calico bag with an Olympus Vanta portable XRF analyser set on a two beam 30second scan. • Magnetic susceptibility measurements of 1m increment samples were collected via hand held KT-10 instrument • The onsite geologist selects the mineralised interval from logging of washed RC chips, based on identification of either quartz content and visual sulphides (containing a composite of pyrite and chalcopyrite) • A field portable XRF analyser is used to guide the laboratory sample selection using a composite of anomalous polymetallic assays • 1m increment samples were submitted to Intertek Laboratory, Townsville for Au (FA50/OE04) and 48 multi-element (4A/MS48) analyses • Sample sizes are appropriate to the grain size of material being sampled
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• A portable XRF Olympus VANTA instrument was used to aid logging and sample selection for assaying. No XRF results are reported in this release. • The assaying work was Fire Assay (50g) for gold, which is industry standard assay technique for gold mineralisation and ICP for multi-elements with a four-acid digest. • Laboratory standards utilised. On site QAQC included inclusion of 1 x Au-Ag-Cu-Base

Criteria	JORC Code explanation	Commentary
	• *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.*	metal standard and 1 x blank standard within every respective drillhole mineralised intersection sub-sampled and submitted for laboratory analyses.
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.*	• No drill holes were twinned. • Data was collected in the field on paper and subsequently entered into an Excel Worksheets. • Assay results as digital files from Intertek lab were imported into Excel spreadsheets and merged with sample ID & respective drillhole downhole metre increments. • All drillhole data was compiled in Excel worksheets and imported into MapInfo/Discover and Micromine applications in order to query 3d data and generate drill plans and cross sections
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.*	• Downhole surveys completed at nominal 30m intervals by driller using a digitally controlled IMDEX Gyro instrument. • Collar coordinates located by hand held Garmin GPS, averaged for >1 hour, resulting in an X, Y co-ordinate accuracy of +/- 1 metres and Z AHD height of +/- 10 metres • Co-ordinates are recorded in GDA94 zone 55.
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.*	• Drilling was on nominal 40 metre centres. • One metre samples were collected through mineralisation and non-mineralisation.
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 attitude of the LAS unit was assumed to be NW-SE striking and dipping at a shallow angle towards the southwest in Targets 1 and 2, and NE-SW striking and dipping at a shallow angle towards the northwest in Target 4 Drilling was generally perpendicular to the considered mineralisation orientation with holes drilled at azimuths of 55°T at dip angles of --60 degrees for target 1 and 140°T at dip angles of --60 degrees for target 4. Some vertical holes were utilised to test the LAS unit on targets 1, 2 and 4. • Due to locally varying intersection angles between drillholes and lithological units all

Criteria	JORC Code explanation	Commentary
		results will be defined as downhole widths. • No drilling orientation and sampling bias has been recognised at this time and it is not considered to have introduced a sampling bias.
Sample security	• *The measures taken to ensure sample security.*	• Samples taken by qualified staff and delivered to assay laboratory by company representatives.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews completed.

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• 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.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Gold mineralization in the Camel Creek area and 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 with a maximum value of 4000 ppt. The majority of previous exploration was completed between 1986 –1990.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• EPM 27522 is located in the NE quadrant of the Broken River Mineral Province. In the project area, orogenic quartz vein hosted gold mineralization is hosted within mylonised sedimentary rocks of the Kangaroo Hills Formation.

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.*
		• Refer to Table 2 of this ASX Announcement which provides the required information

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*	• No data aggregation methods have been used. • No metal equivalents are used or presented.

Criteria	JORC Code explanation	Commentary
	shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
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 (e.g. 'down hole length, true width not known').*	• Drilling is generally perpendicular to the structure by angled RC at 50^{o} to 65^{o} into structures dipping between 30^{o} and 60^{o}.
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.*	• Maps and sections are presented in the announcement.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• The accompanying document is considered to represent a balanced report.
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.*	• GNM have carried out extensive mapping and rock chip sampling at the Douglas Creek project. • Refer to ASX releases dated 31 May 2022, 27 July 2022 and 14 September 2022.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• GNM is planning to undertake a follow up geophysical (IP – induced polarisation survey)