

ASX Announcement

31 May 2022

High Gold-Silver-Copper grades returned from reconnaissance sampling at Douglas Creek prospect

Highlights:

- Reconnaissance sampling program at Douglas Creek discovers outcropping high-grade gold-silver-copper mineralisation
 - 15 samples taken over an area 900 by 170m – majority of samples returned strong gold, silver and copper assays – up to 2.0 g/t Au, 88 g/t Ag and 11.0% Cu
 - GNM targeted an area of anomalous bulk cyanide leach sampling dating from 1988 – with no known historical workings in area
-

Great Northern Minerals Limited (ASX: GNM) (“GNM” or the “Company”) is pleased to announce the results of a reconnaissance sampling program at the Douglas Creek prospect, located on EPM 27522, part of GNM’s Golden Ant Project in North Queensland. Samples were taken from outcrop and float in an area with no known historical workings.

The sampling program was designed to follow up a historic bulk cyanide leach gold (BCL) anomaly, dating from 1988, where sampling returned assays of up to 4 ppb (parts per billion) Au. Fifteen samples were taken from outcrop and surface float from an area approximately 900 by 170m. The majority of samples returned strongly anomalous gold, silver and copper grades of up to 2.0 g/t Au, 88 g/t Ag and 11.0% Cu.

Further soil sampling and rock chip sampling will be carried out in June to follow up this exciting new discovery.

Figure 1 Douglas Creek Sampling



GNM CEO & Managing Director, Cameron McLean said: *“The recently completed sampling program at Douglas Creek has returned outstanding results of up to 2.0 g/t Au, 84 g/t Ag and 11.0% Cu. The sampling program was designed to follow up highly anomalous BCL Au sampling results from 1988.*

The majority of samples returned highly anomalous gold, silver and copper grades from an area of no known historical workings over an area of approximately 900 by 170m

We intend to follow up these exciting results with a detailed soil sampling program and further rock chip sampling planned to take place in June”.

Figure 2 GNMRC12 (1.2 g/t Au, 88 g/t Ag & 0.2% Cu)



Douglas Creek Rock Chip Assay Results

GNM undertook reconnaissance rock chip sampling at the Douglas Creek target (EPM 27522), part of GNM’s Golden Ant project in Central Queensland. Fifteen samples were taken over an area of approximately 900 by 170m (refer to Table 1 for sample descriptions and assay results).

The reconnaissance program was designed to follow up a bulk cyanide leach (BCL) anomaly discovered in 1989 and never followed up. The BCL anomaly is located in an area with no known historic workings.

The samples returned highly anomalous gold, silver and copper grades of up to 2.0 g/t Au, 84 g/t Ag and 11.0% Cu from mesothermal style mineralisation. GNM plan to complete a systematic soil sampling grid over the area combined with a more extensive rock chip sampling program to better understand the extent of the mineralisation. This program is scheduled to take place in June.

Figure 3 Douglas Creek Sampling Program

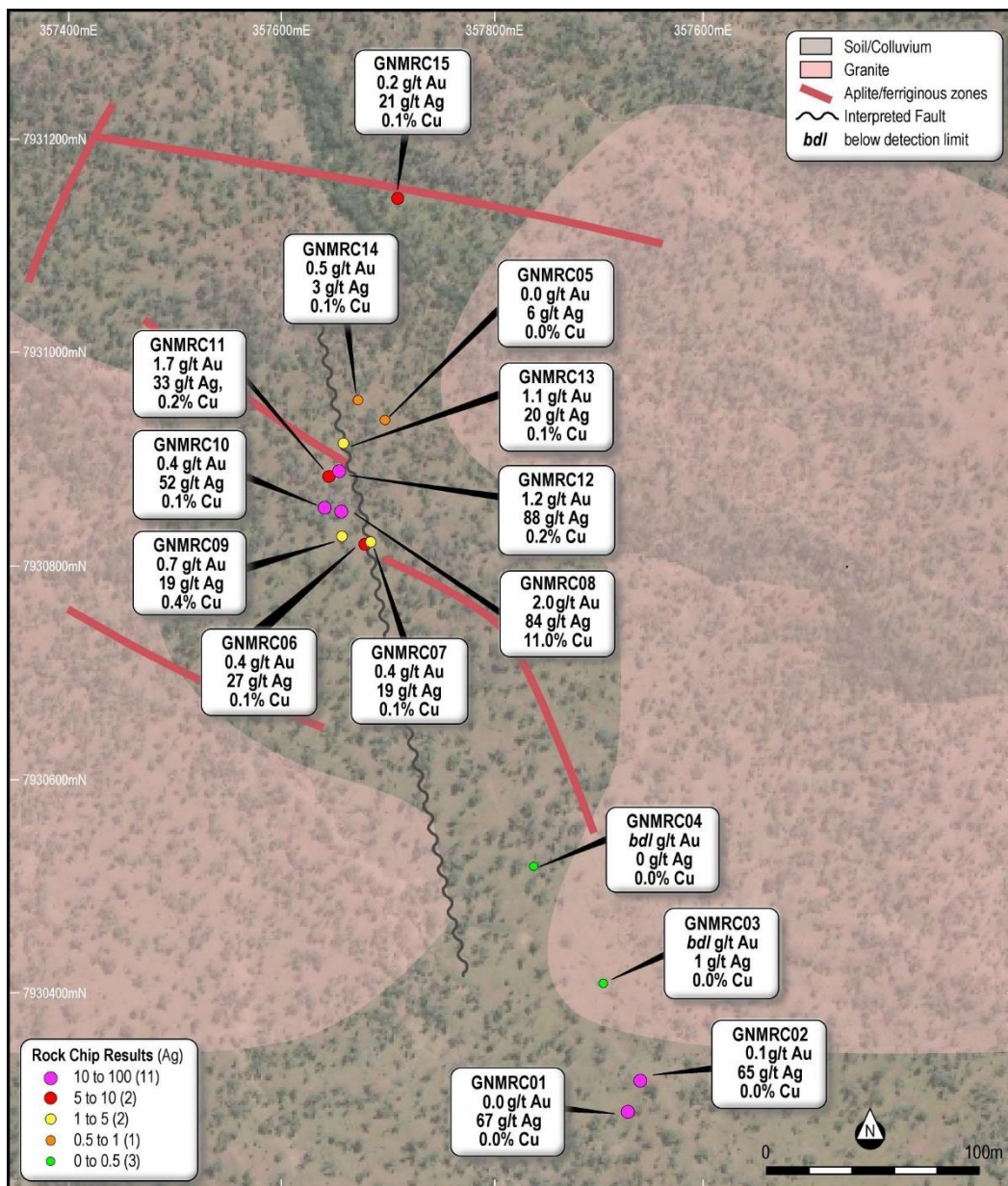
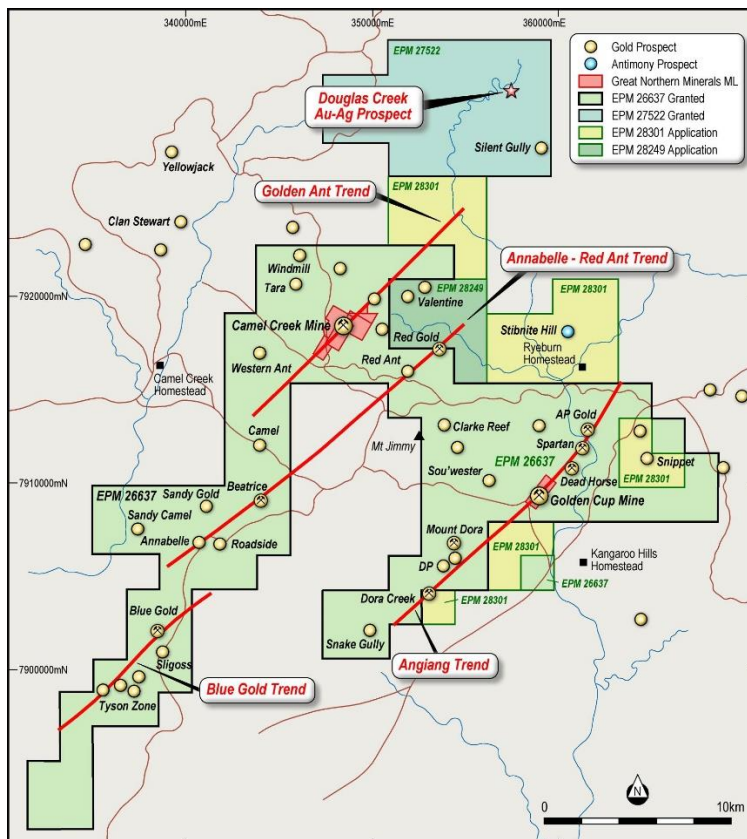


Table 1 Douglas Creek Rock Chip Assay Results

| Sample No. | Easting | Northing | Description | Au g/t | Ag g/t | Cu % |
|------------|---------|----------|--|------------|--------|-------|
| GNMRC01 | 357930 | 7930291 | Sandstone & qtz veining with Fe staining | 0.0 | 67 | 0.0% |
| GNMRC02 | 357942 | 7930320 | Sandstone & qtz veining with Fe staining | 0.1 | 65 | 0.0% |
| GNMRC03 | 357905 | 7930411 | Sandstone/mica-sericite | <i>bdl</i> | 1 | 0.0% |
| GNMRC04 | 357842 | 7930520 | Sandstone/mica-sericite | <i>bdl</i> | 0 | 0.0% |
| GNMRC05 | 357701 | 7930937 | Vuggy gossan | 0.0 | 6 | 0.0% |
| GNMRC06 | 357684 | 7930821 | Qtz vein (dog tooth texture) | 0.4 | 27 | 0.1% |
| GNMRC07 | 357689 | 7930823 | Diorite | 0.4 | 19 | 0.1% |
| GNMRC08 | 357660 | 7930853 | Qtz malachite veining | 2.0 | 84 | 11.0% |
| GNMRC09 | 357661 | 7930829 | Ferruginous qtz vein & gossan | 0.7 | 19 | 0.4% |
| GNMRC10 | 357644 | 7930856 | Qtz vein | 0.4 | 52 | 0.1% |
| GNMRC11 | 357648 | 7930884 | Limonitic qtz vein & gossan | 1.7 | 33 | 0.2% |
| GNMRC12 | 357658 | 7930890 | Gossan with minor qtz | 1.2 | 88 | 0.2% |
| GNMRC13 | 357662 | 7930915 | Ferruginous qtz veining | 1.1 | 20 | 0.1% |
| GNMRC14 | 357675 | 7930957 | Bleached sandstone, minor Fe and Si | 0.5 | 3 | 0.1% |
| GNMRC15 | 357712 | 7931143 | Aplite dyke | 0.2 | 21 | 0.1% |

bdl – below detection limit

Figure 4 Douglas Creek Location



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
+61 8 6214 0148
info@greatnorthernminerals.com.au

Peter Taylor

Investor Relations
NWR Communications
+61 412 036 231
peter@nwrcommunications.com.au

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 plus 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.

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"> Rock chip samples were collected over 900 metres of approximate north-south strike and 100 metres east-west in areas of nominal outcrop. 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. Sample locations were recorded by handheld GPS survey with estimated accuracy of +/-2-5 metres. 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. |
| 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"> Rock chip samples were taken of sub outcropping zones of interest. |
| Drill sample recovery | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> One sample per hole/sample site collected. There is insufficient data available at the present stage to evaluate potential sampling bias. |
| Logging | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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 |

| Criteria | JORC Code explanation | Commentary |
|--|---|--|
| Sub-sampling techniques and sample preparation | <ul style="list-style-type: none"> • 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. | <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. |
| Quality of assay data and laboratory tests | <ul style="list-style-type: none"> • 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 (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"> • The methods are considered appropriate to the style of mineralisation. Extractions are considered near total. • 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. |
| 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 drilled • Data 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 +/-2m. • 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 has been applied. | <ul style="list-style-type: none"> • Data spacing and distribution is considered sufficient to establish the likely trends of anomalous mineralisation • No Sample compositing has occurred. |

| Criteria | JORC Code explanation | Commentary |
|--|--|---|
| <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 outcrop strikes north-north-east with the sampling more or less orthogonal to this apparent strike’. • Mineralised outcrop strikes north-north-east with sampling was more or less orthogonal to this apparent strike. |
| <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 |
|---|---|---|
| Mineral tenement and land tenure status | <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. |
| Exploration done by other parties | <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 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 | <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 Broken River Mineral Field. Orogenic quartz vein hosted gold mineralization within sedimentary rock units occurs within the project area. |
| Drill hole Information | <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"> Refer to Table 1 of this ASX Announcement which provides easting and northing of the rock chip samples with Figure 2 and 3, illustrating the distribution and values of the rock chip results. |
| Data aggregation methods | <ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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 | <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 |
|---|--|---|
| | <i>metal equivalent values should be clearly stated.</i> | |
| <i>Relationship between mineralisation widths and intercept lengths</i> | <ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>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').</i> | <ul style="list-style-type: none"> • Rock chip samples are selective and targeted on outcropping and sub outcropping rocks. |
| <i>Diagrams</i> | <ul style="list-style-type: none"> • <i>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.</i> | <ul style="list-style-type: none"> • Maps are presented in the announcement. |
| <i>Balanced reporting</i> | <ul style="list-style-type: none"> • <i>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.</i> | <ul style="list-style-type: none"> • The accompanying document is considered to represent a balanced report. |
| <i>Other substantive exploration data</i> | <ul style="list-style-type: none"> • <i>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.</i> | <ul style="list-style-type: none"> • The mineralization in the region was originally outlined by BCL and followed up by limited rock chip sampling returning anomalous and significant gold results. Follow up sampling by GNM has now highlighted this area as a new mineralised area, with very high silver values, and gold values. It lies at the intersection of a prominent NE trending deep seated structure which contains significant gold mineralisation at Camel Creek and a NW trending sequence of cross cutting felsic dykes. Minor copper mineralisation on a dominant NW trend was also observed |
| <i>Further work</i> | <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"> • Further work will include; • Systematic soil sampling over the area of anomalous rock chip results is planned. • Site Clearance surveys with Native title groups prior to any drilling will be required. • Earthworks to establish access and drill pads |