

## **ASX ANNOUNCEMENT**

11 June 2021

## Final Four Metre Assays Extend the Camel Creek Gold System

### **HIGHLIGHTS**:

- Final four metre composite results at the Camel Creek Gold Project include:
  - o 72m @ 1.26 g/t Au (CCRC63) from 164 including 44m @ 1.49 g/t Au
  - o 20m @ 2.03 g/t Au (CCRC68) from 76 metres
  - 8m @ 3.79 g/t Au (CCRC72) from 52 metres
  - o **20m @ 3.04 g/t Au** (CCRC73) from 76 metres
  - o 8m @ 2.77 g/t Au (CCRC76) from 56 metres
  - o **24m @ 1.54 g/t Au** (CCRC77) from 92 metres
  - o 16m @ 1.56 g/t Au (CCRC78) from 56 metres
- Results highlight that Camel Creek has potential for a substantial gold project, with results confirming deeper and higher grade mineralisation at the Hinge Zone target which remains open at depth and along strike

**Great Northern Minerals Limited ("Great Northern Minerals"** or the **"Company") (ASX:GNM)** is pleased to announce the receipt of the second and final four metre composite results from the recently completed RC reverse circulation (RC) drilling program, which comprised a total of 49 holes for 5996 metres of drilling.

Planning for an additional RC and diamond tail (HQ) program is well advanced with an anticipated start by the end of July 2021, subject to finalisation with the drilling contractor. This follow up program is aimed at testing further strike extensions and down dip continuity to be followed by an initial resource estimate later in the year.

GNM Managing director, Cameron McLean commented on the announcement: "The finalisation of our first program at Camel Creek for 2021 has returned some of the best and most significant assay results ever seen at Camel Creek. We look forward to the next program, designed to test and extend the high grade and strike extensive gold mineralised zones highlighted. Drilling is due to commence by the end of July 2021 and will be targeted on further deep testing of the Camel Creek gold system, particularly in the Hinge Zone target area."

These results cover the last 25 holes drilled during late May at Camel Creek for a total of 3120 metres. Four metre composite results from the first 24 holes (2876 metres) were released to the ASX on the 17<sup>th</sup> May 2021 and included

- 56m @ 4.14 g/t Au (CCRC50) from 152 including 20m @ 10.87 g/t Au
- o 40m @ 2.31 g/t Au (CCRC51) from 160 metres
- 36m @ 2.15 g/t Au (CCRC52) from 128 metres
- o 12m @ 1.47 g/t Au (CCRC53) from 152 metres
- o 24m @ 5.94 g/t Au (CCRC54) from 152 including 8m @ 14.79



The high grades in CCRC50→CCRC54 relate to testing of the Hinge Zone target (refer to ASX release dated 9 September 2020 and 17 May 2021 respectively) where deeper drilling in a new untested position has highlighted and outlined a substantial zone of new mineralisation which has now been outlined over 250 metres of strike and extending to at least 180 metres below surface.

Importantly CCRC63 was drilled 50 metres south of the CCRC50 and CCRC54 section and returned a large intersection of 72 m @ 1.26 g/t Au, which included a number of higher grade zones and is open to the south and at depth.

CCRC67→CCRC78 were drilled to the north on nominal 40 metre centres, initially targeting underneath the previously mined areas. Results in these areas are consistent and have defined substantial gold mineralisation extending over 350 metres of strike and 100 metres vertical depth. Further deeper drilling in these areas is required.

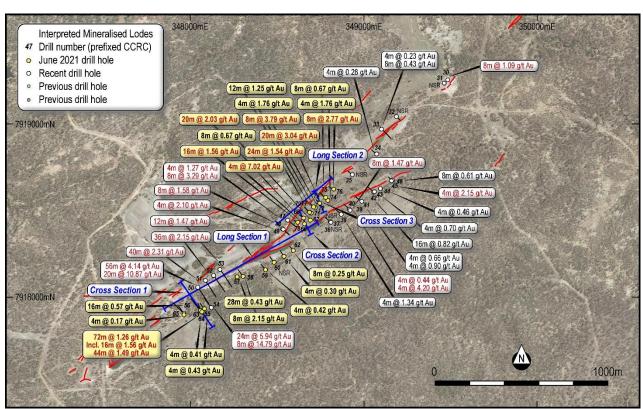


Figure 1: Location plan of the 2021 Camel Creek Drilling on Aerial Imagery

### **Camel Creek**

The final batch of four metre composite assay results from the Camel Creek reverse circulation program have been returned. These results cover the last 25 RC holes for 3120 metres with a total of 49 holes (CCRC30→CCRC78) for 5996 metres drilled between April and May 2021. All of the anomalous original one metre samples relating to the 4 metre composites have been collected in the field and submitted to the laboratory for final multielement analysis to accurately define and document the intersections indicated from the four metre composite results.



Results from all of the one metre samples are expected within a few weeks and will be reported once received and compiled. Gold assays for the four metre composite samples provide an indicative distribution of the grades, and all anomalous one metre assays will now be analysed for multi-element assays and gold. Significant antimony (in the form of stibnite) was observed in a number of the holes and the ICP analysis will provide an indication of the calibre of these results.

A full listing of the anomalous gold intersections (all greater then 0.2 g/t Au) is documented in Table One. The majority of the anomalous intersections are associated with a strong mylonite zone trending north east and in places up to 20 metres in width and extending along strike over the entire area tested.

An increase in quartz veining and specifically sulphide content accompanies the anomalous intersections. True thickness of the mineralised zones as determined from the drilling range from  $2 \rightarrow 25$  metres, with the Hinge Zone showing a southerly plunging ore shoot is likely.

This is the largest RC program completed at Camel Creek and has tested the interpreted mineralised zone to a maximum vertical depth of approximately 200 metres. No deep drilling has ever been completed at Camel Creek previously and this systematic program has highlighted the continuity of the mineralisation underneath the previously mined shallow open pits and demonstrated considerable additional potential, particularly at the Hinge Zone target.

The three dimensional nature of the Camel Creek gold mineralisation is becoming apparent and the more drilling we complete provides additional information and understanding of the distribution of the mineralisation.

The highest grade and thickest intersections have been delivered in the vicinity of the previously interpreted "Hinge Zone" target, where a number of the parallel structures were interpreted to coalesce. No previous mining has been conducted in this area and a plunging ore shoot is interpreted. The location coincides with a contact zone between sandstone and the siltstone/shale mylonite zone.

This is the third RC drilling program completed by GNM at Camel Creek (refer to ASX announcements dated 9 September 2020 and 24 January 2021 respectively) with drilling now extending over 1600 metres of potential strike extent and providing confidence in the extent of the gold mineralisation so far defined.



**Table One**: Four metre composite results:(CCRC55→CCRC78) Camel Creek Gold Project (>0.2 g/t Au)

Hole	East	North	RL	Dip	Azimuth	Final Depth	From	То	Intersection
CCRC55	348083	7917934	507	-75	320	170	168	172	4 m @ 0.43 g/t Au
CCRC56	347964	7917903	499	-75	325	194	160	176	16 m @ 0.57 g/t Au
CCRC57	348269	7918123	479	-75	320	92	40	68	28 m @ 0.43 g/t Au
CCRC58	348305	7918123	490	-75	320	128	88	96	8 m @ 2.15 g/t Au
CCRC59	348431	7918161	500	-75	320	242	144	148	4 m @ 0.42 g/t Au
CCRC60	348483	7918200	497	-75	320	164	NSR		NSR
CCRC61	348544	7918235	492	-75	320	164	104	108	4 m @ 0.30 g/t Au
CCRC62	348594	7918271	487	-75	320	116	88	96	8 m @ 0.25 g/t Au
CCRC63	348067	7917920	507	-75	329	242	164	236	72 m @ 1.26 g/t Au
						including	164	180	16 m @ 1.56 g/t Au
						including	192	236	44 m @ 1.49 g/t Au
CCRC64	348060	7917925	507	-60	320	224	152	156	4 m @ 0.41 g/t Au
CCRC65	347965	7917909	496	-55	312	158	76	80	4 m @ 0.17 g/t Au
CCRC66	348658	7918419	481	-62	135	110	88	92	4 m @ 7.02 g/t Au
CCRC67	348691	7918445	488	-62	140	98	80	88	8 m @ 0.67 g/t Au
CCRC68	348655	7918460	478	-70	305	104	76	96	20 m @ 2.03 g/t Au
CCRC69	348685	7918484	484	-55	310	86	64	72	8 m @ 1.34 g/t Au
CCRC70	348712	7918518	480	-55	315	68	36	52	16 m @ 0.28 g/t Au
CCRC71	348716	7918518	481	-70	315	74	48	60	12 m @ 1.25 g/t Au
CCRC72	348742	7918545	480	-70	310	74	52	60	8 m @ 3.79 g/t Au
CCRC73	348745	7918544	478	-85	312	134	76	124	48 m @ 1.99 g/t Au
	Note	e: CCRC73,	drilled par	tially dowr	dip	including	76	96	20 m @ 3.04 g/t Au
CCRC74	348777	7918572	475	-60	310	80	52	56	4 m @ 1.76 g/t Au
CCRC75	348786	7918560	480	-75	310	116	88	96	8 m @ 0.67 g/t Au
CCRC76	348826	7918621	474	-70	302	74	56	64	8 m @ 2.77 g/t Au
CCRC77	348695	7918483	474	-70	312	122	92	116	24 m @ 1.54 g/t Au
CCRC78	348618	7918432	472	-75	305	86	56	72	16 m @ 1.56 g/t Au

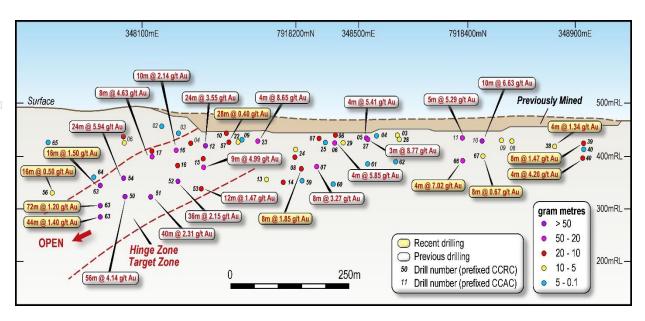


Figure 2: Long Section 1: Camel Creek

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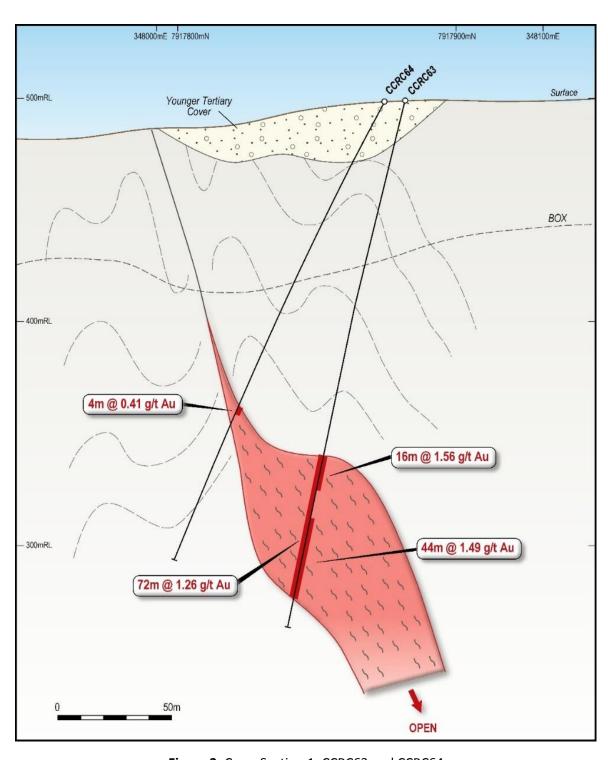


Figure 3: Cross Section 1: CCRC63 and CCRC64



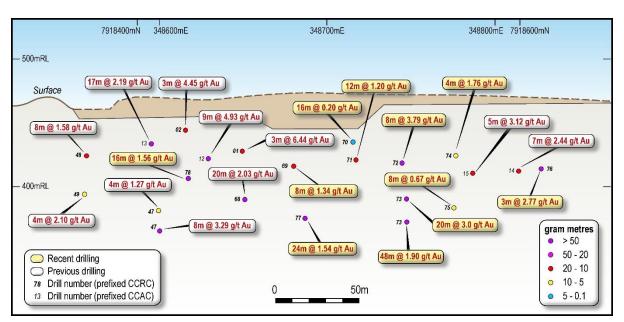


Figure 4: Long Section 2: North Pit Area, Camel Creek

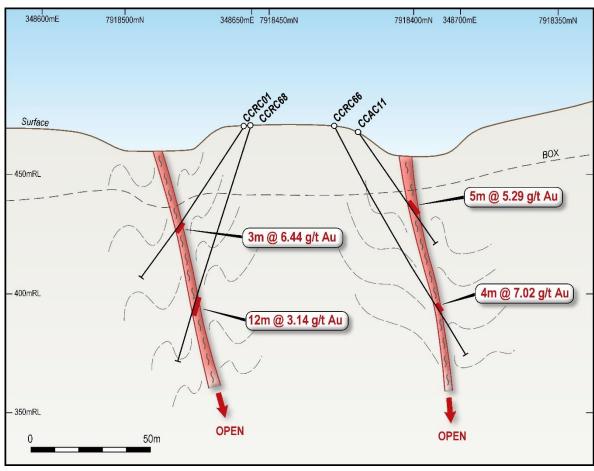


Figure 5: Cross Section 2: CCRC66 and CCRC68



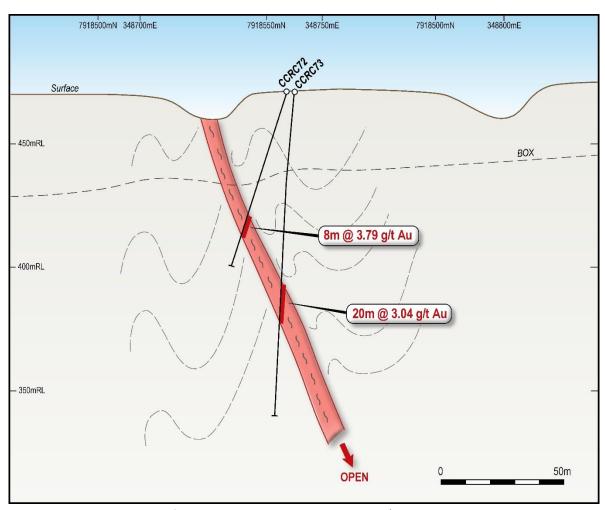


Figure 6: Cross Section 3: CCRC72 and CCRC73

This announcement has been authorised for release to the market by the Board of Directors of Great Northern Minerals Limited.

## \*\*\*ENDS\*\*\*

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### **About Great Northern Minerals Limited**

Great Northern Minerals Limited is an ASX-listed gold focused explorer. The Company's key North Queensland Gold Projects include the Golden Cup, Camel Creek and Big Rush Gold Mines in North Queensland. The historic mines ceased operation in the 1990's after production of over 150,000 oz at an average grade of 1.91g/t Au. Great Northern Minerals aims to extend known mineralisation and develop a significant gold resource in North Queensland.

### **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.



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

Criteria	ORC Code, 2012 Edition - Sampling Te	
	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Drilling reported is angled Reverse Circulation (RC) drilling.</li> <li>Sampling consists of four metre composite split samples.</li> <li>Sample weights were approximately 3kg or material. The full sample was pulverised. Fire Assaying (gold only) was completed using a 50 g charge. One metre samples related to the anomalous 4 metre results will now be individually analysed for a multielement suite via ICP and individual fire assays for gold.</li> <li>Assaying was completed at Intertek Ltd.'s assay laboratory in Townsville.</li> </ul>
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, facesampling bit or other type, whether core is oriented and if so, by what method,	All drilling at Camel Creek was angled Reverse Circulation drilling using a face sampling hammer. (150mm)
Drill sample	<ul><li>etc).</li><li>Method of recording and assessing core</li></ul>	Sample recoveries were assessed visually
recovery	<ul> <li>and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>and appeared to be consistent throughout drill holes.</li> <li>All samples were dry.</li> <li>No measures needed to be taken.</li> <li>No sample bias believed to occur.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geological logging of colour, weathering, lithology, alteration and mineralisation has been undertaken.</li> <li>RC is considered both qualitative and quantitative in nature.</li> <li>The total length of the RC holes were logged.</li> </ul>

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Criteria	JORC Code explanation	Commentary
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Drilling was RC not core drilling.</li> <li>1m samples were collected straight from the drill rig cyclone and splitter.</li> <li>Representative 4 metre composite samples were collected by a standard systematic quantity from every individual metre sample and composited.</li> <li>Sampling is considered representative.</li> <li>Internal laboratory standards used.</li> <li>No duplicates taken at this stage.</li> <li>3kg sample size considered appropriate for the grain size of the sedimentary rock units sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The assaying work was Fire Assay (50g) which is industry standard assay technique for gold mineralisation.</li> <li>No instruments reported.</li> <li>Laboratory standards utilised.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Historic mining within 40m also recorded gold mineralisation although thickness and grade varies yet this is believed to represent the changing nature of this style of mineralisation.</li> <li>No twin holes were drilled, All previous drilling in shallow zones.</li> <li>Data was collected on paper and entered into an Excel Worksheet.</li> <li>No adjustments to assay results.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Coordinates located by hand held Garmin GPS.</li> <li>Co-ordinates are recorded in GDA94 zone 55.</li> <li>Control considered to be good.(+/- 2 metres)</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity</li> </ul>	<ul> <li>Drilling was on nominal 40 metre centres.</li> <li>Data spacing is believed sufficient to establish geological and grade continuity.</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<ul> <li>appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>One metre samples and composited samples were taken. Assay results reported are all 4 metre composite samples.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	The attitude of the lithological units is predominantly believed to be NE striking and dipping at a moderate angle towards the southeast. Drilling was generally perpendicular to the considered lithology orientation with holes drilled at azimuths of 130 and 310 degrees at dip angles between -50 to -75 degrees. Due to locally varying intersection angles between drillholes and lithological units all results will be defined as downhole widths. True widths of the mineralised zones are interpreted as between 2-25 metres true thickness  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.	<ul> <li>Samples taken by qualified staff and delivered to assay laboratory by company representatives.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Mining Leases are held by Golden Ant Mining Pty Ltd, a 100% owned subsidiary of Great Northern Minerals Limited.</li> <li>The Mining Lease is granted.</li> </ul>
Exploration by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The Camel Creek Gold Mine has been the subject of substantial previous exploration, shallow resource definition drilling and mining operations.</li> <li>Lynch Mining first recognized gold mineralization in the Camel Creek area in 1986 and mined the shallow oxide portion of the deposit and treated via a heap leach operation.</li> <li>Great Northern Minerals Ltd (previously Greenpower Energy Ltd acquired the final interest in the project in August 2020).</li> </ul>



Criteria	JORC Code explanation	Commentary
Geology •	Deposit type, geological setting and style of mineralisation.	<ul> <li>The gold mineralisation at Camel Creek is located within the generally tightly folded sediments of the early Devonian age Kangaroo Hills Formation which is characterised by a varying assemblage comprising sandstone, mudstone and lesser tuff.</li> </ul>
		The area is traversed by a major north west/south east structural corridor paralleling the Sybil Graben, with many of the numerous basaltic, andesitic and rhyolitic dykes of the region sharing a similar trend.  The region has undergone three significant periods of deformation with gold mineralisation introduced during at least four different phases, resulting in a complex mineralogical history.  Gold is strongly associated with quartz veining, arsenopyrite and stibnite.
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.	<ul> <li>Refer to Table One of this ASX         Announcement which provides easting and northing of the drill collars, dip, azimuth and end of hole depths.     </li> </ul>
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>The drill intercepts reported in Table One are on a length weighted basis. No high-grade cuts have been applied to the tabled intersections.</li> <li>Based on the 4 metre composite results, all anomalous results greater than 0.2 g/t Au have been reported.</li> <li>No metal equivalents are used or presented.</li> </ul>



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Drilling is generally perpendicular to the structure by angled RC at -55° to -75° into structures dipping at 80 degrees to the south east.</li> <li>Due to locally varying intersection angles between drill holes and lithological units all results will be defined as downhole widths.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Maps and sections are presented in the announcement.</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>The accompanying document is considered to represent a balanced report.</li> </ul>
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.	<ul> <li>The Camel Creek Gold Project has been the subject of substantial previous exploration, resource definition drilling and mining operations.</li> <li>Anomalous antimony and arsenic vales have been indicated from portable XRF results, and metallurgical test work is planned.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further work will include;</li> <li>Drill testing for extensions to the known mineralization, mostly down dip and down plunge.</li> <li>Metallurgical test work to determine the most appropriate process route for potential gold recovery.</li> </ul>