ASX ANNOUNCEMENT

Samples grading up to 74g/t point to high-grade gold discovery

Maiden surface exploration program by AuTECO at Sioux Lookout prospect in Canada returns highly significant results; Discovery along strike of Treasury Metals' 2.9Moz Goliath Gold Project

KEY POINTS

- **Outstanding results from first-pass exploration work at AuTECO's Sioux Lookout property point to the discovery of a potentially significant high-grade gold system**
- **The surface mapping and fieldwork has returned high-grade outcrop samples within a broad sulphide alteration zone including:**
    - **73.6g/t gold**
    - **15.1g/t gold**
- **The property is on the same trend as Treasury Metals' (TSX:TML) 2.9Moz[1] Goliath Gold project**
- **Follow-up sampling is underway with results expected in coming weeks**
- **"*We are now looking at the potential for a major discovery which would create immense value for AuTECO shareholders.*" – AuTECO Chief Executive Darren Cooke**
- **In addition, regional high priority targeting is commencing at AuTECO's 2.8Moz Pickle Crow Gold Project**

AuTECO Minerals Limited (ASX:AUT) is pleased to announce the discovery of high-grade mineralisation at its Sioux Lookout property in Ontario, Canada.

The Company acquired the 160km^2 project in 2021 based on a detailed geological review of the Western Superior Craton. In 2022, AuTECO conducted a detailed heli-magnetic survey over the property that highlighted significant structural targets.

AuTECO Chief Executive Officer Darren Cooke said: "*These are outstanding results which reveal the presence of high-grade mineralisation on the same trend as the adjacent 2.9Moz Goliath project.*

"To find new high-grade outcrops on surface grading 74g/t gold highlights the enormous potential of the gold system so close to surface.

[1] Refer to Treasure Metals Mineral's TSX release dated 14 April 2022reported in accordance with Canadian National Instrument 43-101

"We picked up this project through smart geology and our in-country knowledge. As a result, we are now looking at the potential for a discovery which would create immense value for AuTECO shareholders.

"Once the remainder of the exploration samples are returned, we will review the data and move towards testing of the project".

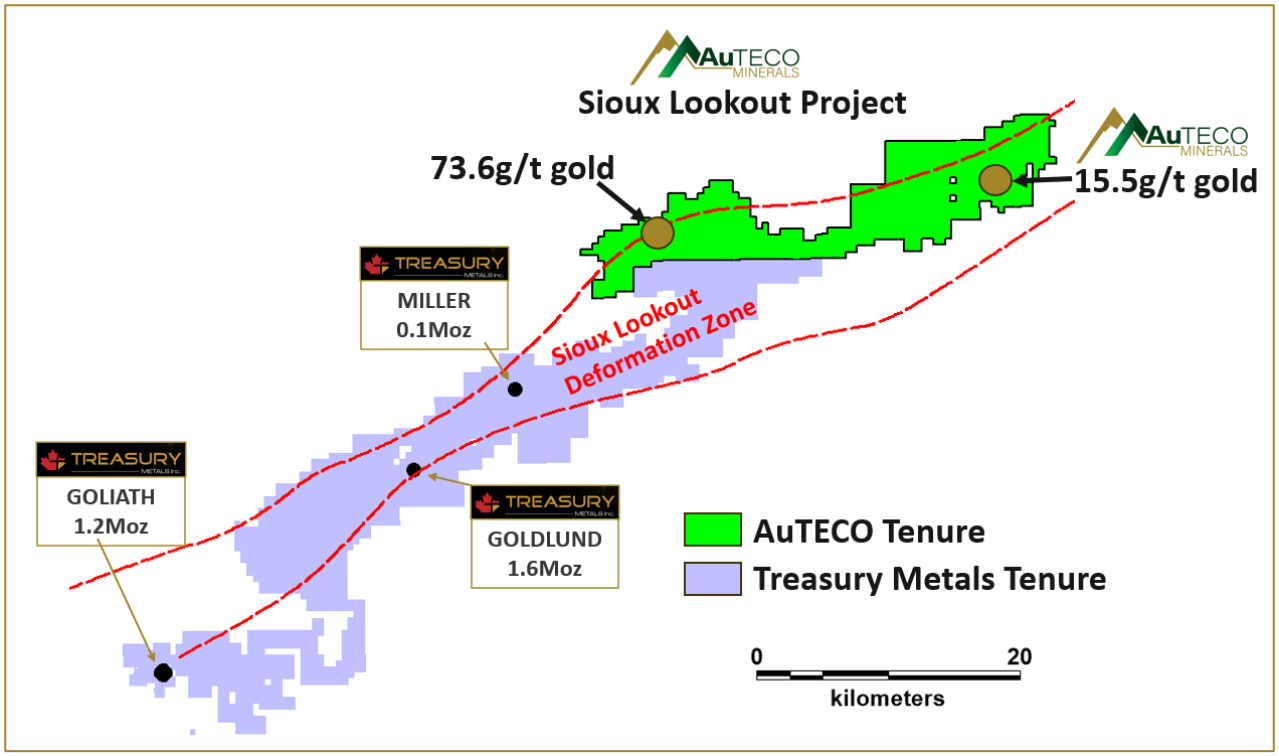


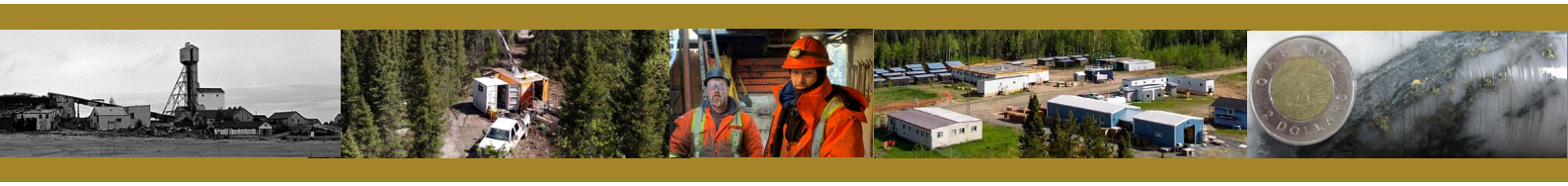
Figure 1: Regional setting of the Sioux Lookout mineralised zone. AUT and Treasury claims shown.[1]

The Company commenced the first ground-based mapping and sampling program in May 2023 to test the high priority structural targets. Sampling methods varied based on the surface cover, with a combination of soil sampling, till sampling and outcrop rock chip sampling completed.

The first results from the rock chip sampling have been received and include high-grade assays of 73.6g/t and 15.1g/t gold. These results are highly significant given the early-stage of the exploration activities and the fact that such high grades are present on surface. Furthermore, the targets are within the interpreted Sioux Lookout Deformation Zone which hosts the 2.9Moz Goliath gold project owned by Treasury Metals Inc. (TSX:TML).

Follow up sampling around the areas of significance has been completed by AuTECO geologists with results expected during the current quarter. Multi-element analysis of soil and till samples are also expected imminently.

The geological team has now mobilised to the Pickle Crow project, undertaking systematic 1km surface sampling traversing the entire 46km strike of the northern Pickle Lake greenstone belt. This work is expected to be completed by the end of October 2023.



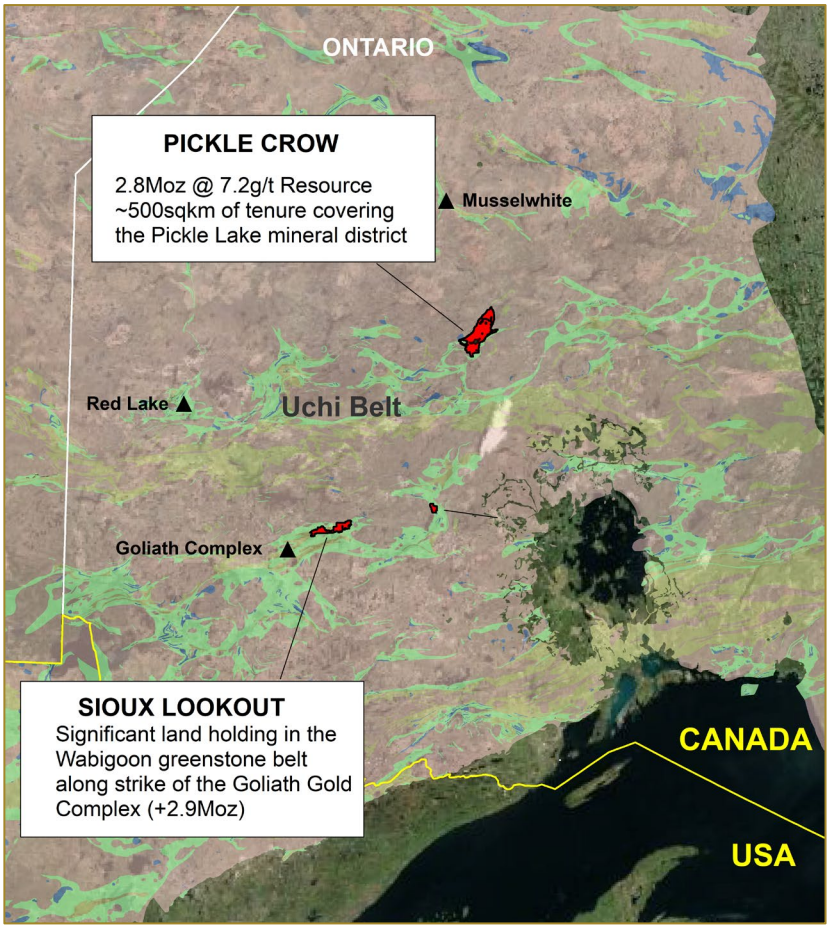


Figure 2: Location of the new Sioux Lookout project

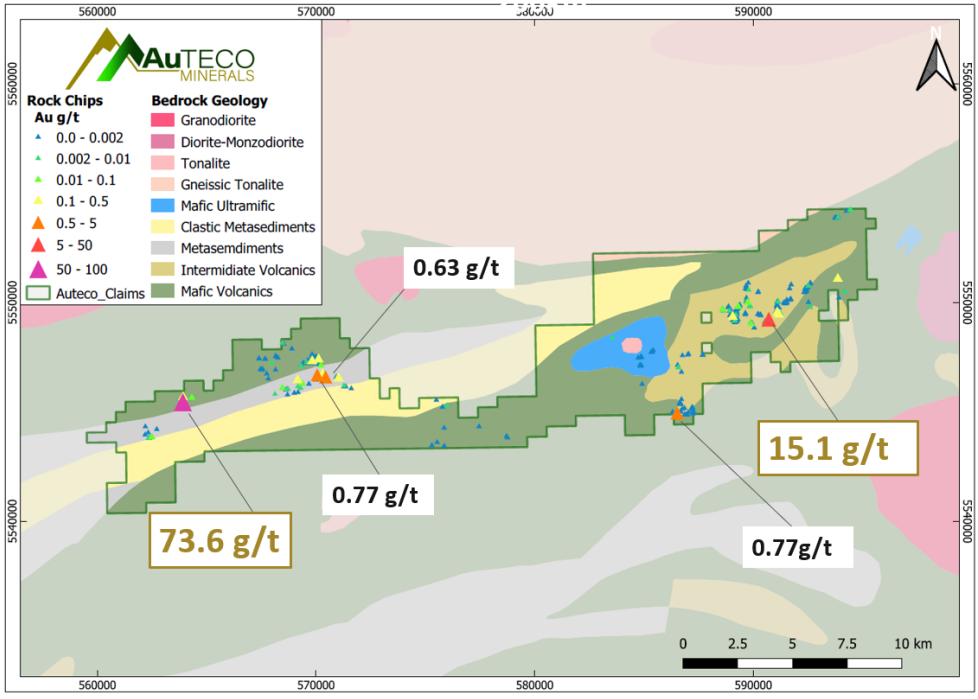
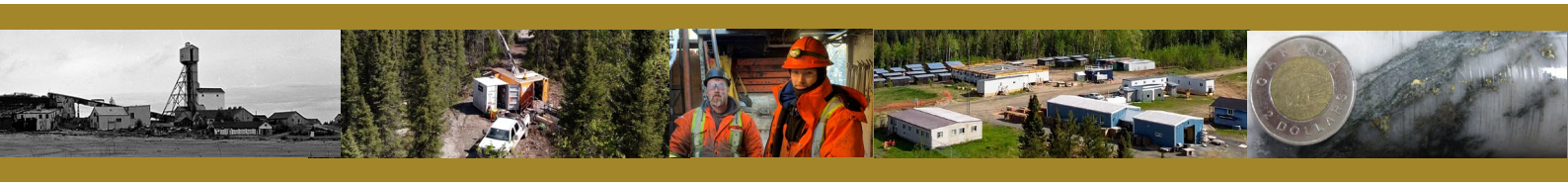


Figure 3: Rock chip results from the Sioux Lookout sampling program.



For and on behalf of the Board.

Mr Ray Shorrocks
Non-Executive Chairman
Auteco Minerals Ltd
Phone: +61 8 9220 9030

Media:
Paul Armstrong
Read Corporate
+61 8 9388 1474

ABOUT AUTECO MINERALS

AuTECO Minerals Ltd (ASX:AUT) is an emerging mineral exploration company focused on advancing high-grade gold resources at the Pickle Crow Gold Project in the world-class Uchi sub-province of Ontario, Canada.

The Pickle Crow Gold Project currently hosts a JORC 2012 Inferred Mineral Resource of 2.8 Moz at 7.2g/t gold. Pickle Crow is one of Canada's highest-grade gold mines – historically producing 1.5 Moz at 16.1g/t gold.

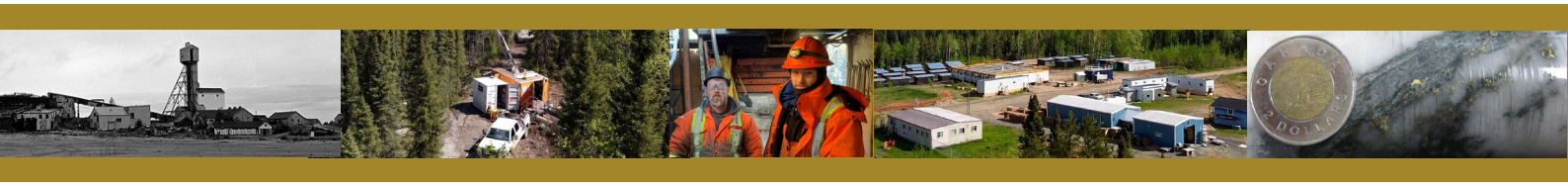
The Company also holds a 90% interest in the Limestone Well Vanadium-Titanium Project in Western Australia.

For further information regarding AuTECO Minerals Ltd please visit the ASX platform (ASX:AUT) or the Company's website https://www.autecominerals.com

COMPETENT PERSONS STATEMENT

The information in this announcement that relates to new Exploration Results is based on and fairly represents information and supporting information compiled by Mr Darren Cooke, who is a Member of the Australasian Institute of Geoscientists. Mr Cooke is an employee of the Company and has sufficient experience in the style of mineralisation and type of deposit under consideration and qualifies 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 Cooke holds securities in AuTECO Minerals Limited and consents to the inclusion of all technical statements based on his information in the form and context in which it appears.

The Company's **Mineral Resource Estimate** referred to in this announcement and set out in the table below was first reported in its ASX release dated 4 May 2023, titled "High-Grade Inferred Gold Resource Grows to 2.8Moz at 7.2g/t". AuTECO confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the estimates in the original announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.

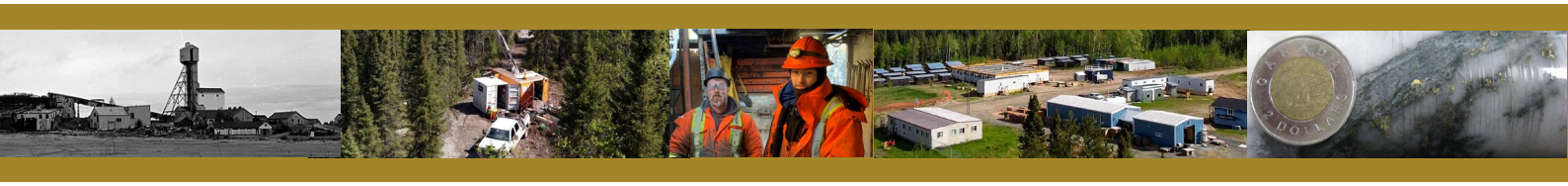


Inferred Mineral Resource Estimate – as at 31 December 2022

Mineralisation Domain	Lower Cut-off	Tonnes (Mt)	Gold Grade (g/t)	Gold (Moz)	Variance to 31 Dec 2021 Resource
Quartz Lodes	3.0g/t	6.7	9.8	**2.1**	+0.19Moz
Bulk (BIF, Porphyry)	2.0g/t	4.2	3.8	**0.5**	+0.21Moz
Satellite (East Pat, Cohen Mac)	2.0g/t	1.0	4.1	**0.1**	+0.13Moz
TOTAL		**11.9**	**7.2**	**2.8**	**+0.53Moz (+24%)**

FORWARD LOOKING INFORMATION

Various statements in this announcement constitute statements relating to intentions, future acts and events. Such statements are generally classified as "forward looking statements" and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. The Company gives no assurances that the anticipated results, performance or achievements expressed or implied in these forward-looking statements will be achieved.

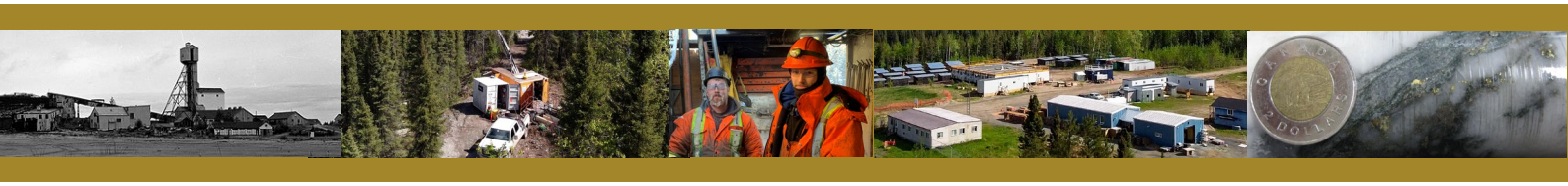


APPENDIX A: SURFACE ROCK CHIP RESULTS

Table 1: Significant Results – AuTECO Surface Rock Chip Sampling

Samples above 0.1g/t gold

Sample ID	Easting	Northing	Au (ppm)
K020053	586515.8	5544957	0.771
K020058	570299	5546736	0.387
K020064	569159.1	5546460	0.237
K020086	593862.5	5551087	0.11
K021002	590706	5549241	15.05
K021004	591093.9	5549548	0.332
K021071	570440	5546602	0.625
K021076	570056.3	5546698	0.773
K021132	570122	5547405	0.168
K021501	591169.2	5549450	0.134
K021773	569826.3	5547324	0.222
K022537	589056.9	5549350	0.271
K022784	590697.1	5549234	0.314
K022811	563917.8	5545466	0.177
K022813	563911.7	5545460	0.526
K022814	563911.7	5545457	0.165
K022815	563917.1	5545450	1.44
K022816	563909.4	5545451	73.6
K022818	563923.3	5545673	0.136
K022835	571030	5546531	0.399
K022837	571033	5546541	0.226

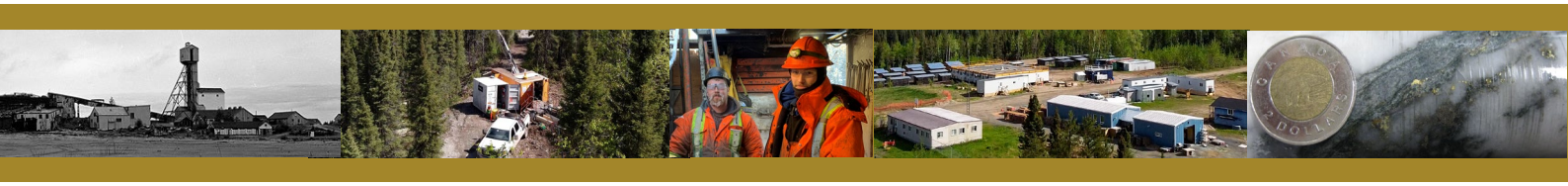


APPENDIX B: JORC CODE, 2012 EDITION

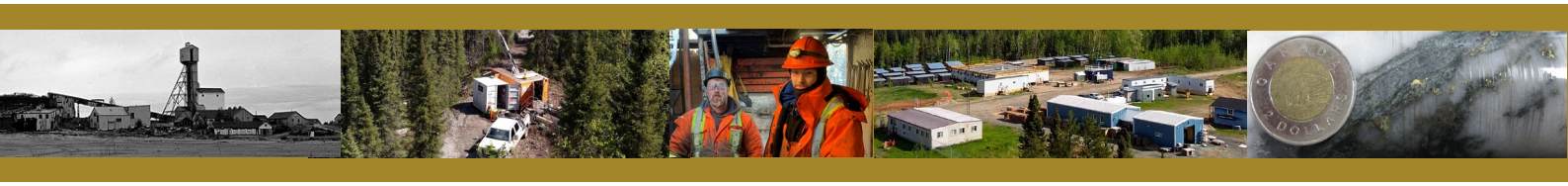
Table 1 – JORC Code 2012 Edition

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

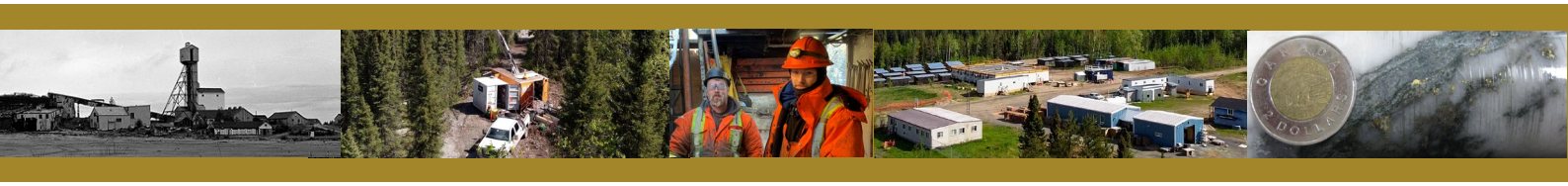
Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• All reported AuTECO results in this release are rock chip samples. • Geologists used a geological hammer to break off representative samples from exposed outcrops. • All samples reported in this release were prepared and analysed by ALS Laboratories in Thunder Bay, Ontario. • Samples were prepared for analysis using a jaw crusher which was cleaned with a silica abrasive between samples resulting in 90% of the sample passing through an 8 mesh screen. A split of the crushed sample weighing 1000g was then pulverised to 90% passing a 150 mesh screen. • Sample pulps were analysed for gold by Inductively Coupled Plasma Mass Spectrometry (ICP-MS). If the returned assay result was equal to or greater than 5g/t then the sample was re-assayed by Fire Assay with a gravimetric finish.
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• Not applicable as no new drilling undertaken.
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.	• Not applicable as no new drilling undertaken.
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.	• Rock chip samples were geologically logged. Lithology, veining, alteration, mineralisation and weathering are all recorded in the geology table of the drill hole database.



Criteria	JORC Code explanation	Commentary
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.	• This sampling technique is industry standard and deemed appropriate. • At least 1kg of sample was collected. • Sample size is deemed industry standard for Orogenic Gold deposits.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Samples were submitted to ALS Laboratories in Thunder Bay for analysis. • Samples were prepared for analysis using a jaw crusher which was cleaned with a silica abrasive between samples resulting in 90% of the sample passing through an 8 mesh screen. A split of the crushed sample weighing 1000g was then pulverised to 90% passing a 150 mesh screen. Sample pulps were analysed for gold by Fire Assay using 50g sample charge with atomic absorption spectroscopy (AAS) finish. If the returned assay result was equal to or greater than 5g/t then the sample was re-assayed by Fire Assay with a gravimetric finish. • In addition to the Company QAQC samples (described earlier) included within the batch the laboratory included its own CRM's (Certified Reference Materials), blanks and duplicates. • Sample assay results continue to be evaluated through control charts, log sheets, sample logbook and signed assay certificates to determine the nature of any anomalies or failures and failures were re-assayed at the laboratory. Check assaying was also conducted on 1 in every 20 samples. QAQC protocols are unknown for historical drill programmes (without the PC- hole prefix). • QA/QC work is industry standard and acceptable levels of accuracy and precision have been established. • The analysis method is industry standard for high grade quartz lode systems
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes.	• All logging and sampling data was entered directly into the AcQUIRE database on logging tablets.



Criteria	JORC Code explanation	Commentary
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• The logged data is stored on the server directly, and in turn synchronized with the Auteco server in Perth, Australia. • No adjustments were made to assay data
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.	• Auteco drilling has been surveyed with a hand-held GPS to an accuracy of less than 3m. • All location data is in UTM grid (NAD83 Zone 15) except where noted.
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.	• Data spacing is variable depending on surface outcrop presence.
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.	• Not applicable as no drilling was undertaken.
Sample security	• The measures taken to ensure sample security.	• Once the rock chip samples bagged and sealed with zip ties, ten samples are put into rice bags which are sealed and secured with numbered security tags. Once samples arrive at the laboratory the security tags and corresponding samples were verified against onsite logs. Site is always occupied, and no samples are left at the project during field breaks.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audits or reviews have been undertaken.

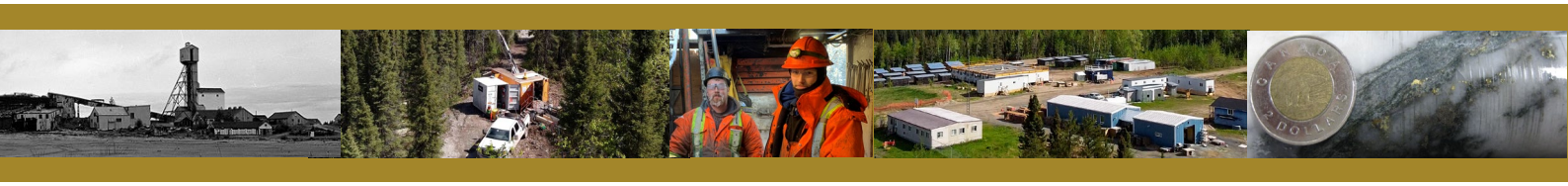


Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	• The mineral concessions of the Sioux Lookout project consist of 39 multi-cell claims covering 166km^2. • These are held under the name Revel Resources Ltd, a 100% owned subsidiary of AuTECO Minerals. There are no royalties on the project. • The project is 100% owned by Auteco
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Limited knowledge of previous exploration on the ground is available. • Ontario geological survey records indicate previous small scale gold exploration between the 1940s and 1990s. • Exploration focused on base metal potential associated with gabbro intrusions. • Recent exploration by Treasury Metals for gold has highlighted the potential for bulk disseminated mineralization.
Geology	• Deposit type, geological setting and style of mineralisation.	• The Sioux Lookout project is located in the Wabigoon sub province of the Archean aged Superior craton. • The project is dominated by a lower sequence of mafic volcanics and volcaniclastics and an upper zone of intermediate sediments and volcanics. • The project is located within the Sioux Lookout Deformation zone, a broad area of deformation with a strike exceeding 70 kilometres trending NE-SW.

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 meters) 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.
		• Sampling coordinates are included in Appendix A.

Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high	• Not applicable as no drilling was undertaken.



Criteria	JORC Code explanation	Commentary
	grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• Not applicable as no drilling was undertaken.
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 included in the body of this release as deemed appropriate by the competent person.
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.	• All rock chip samples >0.1g/t gold have been reported. • These samples are rock chip samples, and are therefore inherently biased and should not be relied upon to estimate mineralisation volumes, widths, tonnes or grade with certainty.
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.	• Appropriate plans are included in the body of this release.
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.	• Auteco Minerals Limited has completed follow up sampling in areas of interest. Results are pending at the time of this release. • Soil sample results and till sampling results are pending at the time of this release.