APPENDIX 2: JORC Table - Croteau Est Project

Section 1 - Sampling Techniques and Data – Diamond Drilling
(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 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 (eg submarine nodules) may warrant disclosure of detailed information.*	• Diamond drilling was used to obtain a continuous core from the overburden bedrock interface to a final end of hole depth which was based on the geology intersected. • Intervals of recovered core selected for analysis were identified based on geological criteria including a combination of lithology, alteration assemblage and or the presence of sulphides. Sample intervals were predominately 1.0m in length, but ranged from 0.3 to 1.5m. Each interval was preceded and followed by 1.0-2.0m shoulder samples extending out beyond the interval of interest. • The core selected for sampling was split and samples of half core were dispatched to an ISO17001 certified commercial laboratory for preparation and analysis of gold according to industry standard practises.
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).*	• Drilling was NQ (47mm) diamond core using a LF 70 diamond drill rig. • Drill core was not oriented.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Diamond drillhole core recoveries and RQD are logged. Recoveries are generally good with majority >95%.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Based on the drilling method being diamond core and the high core recoveries the sampling is representative.
	• *Whether a relationship exists between sample recovery and*	• Whilst no assessment has been undertaken the competency of the core would tend to preclude any

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	grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	potential issue of sampling bias.
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.*	• Geological logging of major characteristics such as rock type, alteration, sulphide abundance etc is conducted in detail. Basic geotechnical logging including RQD and orientation of structures (faults, veins, bedding etc) is also undertaken. • The geological and geotechnical logging is at an appropriate level for the stage of exploration being undertaken.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• The logging of the geological features was predominately qualitative. Parameters such as sulphide abundances are visual estimates by the logging geologist. • Core is photographed after metre marks and sample intervals have been clearly marked on the core. The core was photographed both dry and wet.
	• *The total length and percentage of the relevant intersections logged.*	• The entire length of all holes, excluding any surface casing was logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• Core was cut longitudinally with a masonry saw and a half core sampled for analysis, the residual half core being retained in the core box for reference.
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry*	• Not applicable.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• The splitting of core by masonry saw is an appropriate sample technique.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Documented procedures are in place to ensure that core is sampled systematically and the same methodology is applied to each sample and every drilling campaign.
	• *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.*	• Duplicate coarse reject samples are submitted with each sample submission at a ratio of 1:8.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The sample sizes are considered appropriate given that visible gold is rare and assay results have not flagged a serious coarse gold issue.
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.*	• Samples are submitted for preparation and gold analysis to an accredited lab, ALS Canada in Sudbury, Ontario for analysis by fire assay. Sample preparation comprised: (i) drying for a minimum of 8 hours, (ii) mill crushing to -80#, (iii) riffle splitting to approximately 250g, (iv) disk pulverizing of subsample to 90% passing -150#. (v) sample is then split to 30g for analysis, by fire assay and determination by atomic absorption. The

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		detection limits are 5 ppb (lower) and 3000ppb (upper). • Above detection are re-analyzed by fire assay and gravimetric determination. The detection limits are 0.03ppm (lower) and 10,000ppm (upper). • For intervals reporting high grade gold values (>10.0 g/t Au), either by atomic absorption and/or gravimetric methods, the samples are re-analyzed by screen metallic assay. • The analysis technique is considered total and is appropriate for the determination of the level of gold anticipated.
	• *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.*	• Not applicable.
	• *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.*	• At this stage of the prospect's evaluation, QC procedures involve a review of laboratory supplied internal QA/QC and in house controls, including routinely inserting appropriate grade commercial certified reference standards (CDN Resource Labs Ltd), samples of "barren" material (Uncertified Blanks) and coarse reject duplicate samples (averaging 1 standard, 1 blank and 1 duplicate randomly inserted per 8 samples submitted).
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• The significant intersections have been reviewed by the Exploration Manager.
	• *The use of twinned holes.*	• Not applicable.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* •	• Primary data was recorded on laptop computers directly into Geotic drillhole logging software. This information is merged with the assay certificate data into an in-house database system managed internally.
	• *Discuss any adjustment to assay data.*	• There was no adjustment of 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.*	• Drill collar locations coordinates were surveyed using a handheld Garmin CSx-60 GPS unit with a positional accuracy on the order of ± 3 m. The foresights for each drillhole collar were installed using either a Sylva or Brunton compass compensated for variations in the local magnetic declination (16° east). • Downhole surveys were conducted using a Reflex EZ-Shot single shot camera at nominal 50m intervals down-hole.
	• *Specification of the grid system used.*	• The grid system is UTM_NAD83, Zone 18N.
	• *Quality and adequacy of topographic control.*	• Topographic control is taken from 1984 NTS mapsheets 32G-15. 32G-16, 32J-1 & 32J-2, supplemented by a Digital Elevation Model (DEM) provided by an

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		aeromagnetic survey flown in 2012.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• The drill hole spacing for the CBSZ prospect is a nominal 60m x 100m (refer to figures in main text).
	• *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.*	• The drilling undertaken was exploratory in nature and no mineralized geological domains have been defined to support the definition of Mineral Resources.
	• *Whether sample compositing has been applied.*	• No compositing has been applied.
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.*	• Drilling was oriented perpendicular to mineralised structure as defined by surface mapping and trenching. For this early stage of exploratory drilling in this manner is acceptable to provide initial geological control and intersect potential mineralization. • Given the relatively limited drilling to date it is uncertain at this stage if the drilling orientation produced biased sampling.
	• *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.*	• At this stage no orientation based sampling bias has been identified.
Sample security	• *The measures taken to ensure sample security.*	• The core samples are placed in jute sacks, which are secured with one-time-use teflon tie-wraps. A sample manifest is prepared by Northern Superior's geologist(s) for each batch (200-300) of samples for delivery directly to the assay lab. The manifest lists the number and numerical sequence of samples in each consignment, as well as the analyses required to be performed by the lab for each sample consignment. • The samples are kept in the core shack under lock and key until a door-to-door courier delivers the samples to the assay lab. • Upon arrival at the laboratory, personnel verify the sample submission list and confirm receipt of samples, notify if any security ties or sacks are not intact and if there are additional or missing samples to those indicated on the sample submission sheet.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audit or review of the sampling techniques and data for this release has been carried out

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 project area comprises two blocks of claims – Croteau Est and Waconichi. • The Croteau Est property consists of a contiguous block of 109 claims which encompass an area of 3,856 hectares within Barlow and McKenzie townships in north-central Québec. The core group of the claims were acquired in July 2011 when Northern Superior Resources signed a letter of intent with GL Géoservices Inc. and Marc Bouchard of Chapais, Québec who granted Northern Superior an option to acquire a 100% interest in the property. The Optionors retain a 1.0% NSR on any future commercial production from the property, with Northern Superior having the right to buy back 0.5% of the NSR for $1.5 million at any time. The property is otherwise unencumbered. • The Waconichi property, which adjoins the Croteau property to the north and east, consists of three claim blocks totalling 213 CDC or *claim designé sur carte*, encompassing an area of 8,316 ha. In May 2013, Northern Superior acquired a 100% interest in the claims from Murgor Resources Inc. by a cash payment of $225,000. Murgor retains a 1% NSR over each of the claims except for the "Charbonneau Claims" (7 claims, approximately 387 hectares), wherein a 2% NSR is stipulated, with Northern Superior having the right to buy-back the 1% for $1,000,000 and also retaining the right of first refusal to purchase the remaining 1%. Northern Superior also has the option at any time to re-purchase 0.5% of the Murgor NSR royalty by payment of $1,000,000. The property is otherwise unencumbered.
	• *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.*	• The various claims are in good standing and no known impediments exist to continued exploration.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Croteau Est gold showing was first discovered in 1935, with limited trenching completed at that time. • Commencing in the 1950's, various companies undertook extensive exploration programs targeting both gold and base metals, with drilling conducted at various gold showings including Croteau Est, Tadd & Lac Chevrillon as well as some base metal geophysical targets. • Ground and airborne EM, IP, aeromagnetics, trenching, soil and till sampling have been conducted over various parts of the project area by several previous explorers. • Several gold showings have been identified by this work, mostly associated with major shears such as the Faribault and Croteau-Bouchard systems. • Currently the most promising prospect identified from historical and Northern Superior work is the Croteau Est prospect and its possible extensions or repetitions along the CBSZ.

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Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Croteau Est project setting is an Archaean granite-greenstone terrane situated in the northeast corner of the Matagami-Chibougamau Greenstone Belt (MCGB) of the Abitibi Subprovince of the Archean Superior Province, north-central Québec . • The MCGB consists of two Archean age mafic to felsic volcanic cycles (Roy Group) unconformably overlain by the Opémisca Group volcano-sedimentary sequence. The volcanics and associated sediments are intruded by a series of large granitoid plutons and septa of probable basement. • Gold mineralization in the main CBSZ prospect comprises gold bearing sericite-carbonate-pyrite quartz vein stockwork mineralization hosted by intensely sheared and carbonatised mafic volcanics.

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 tabulations in the main text and Appendices for detailed summaries of drillholes and significant intersections.

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.*	• No averaging techniques or truncations were used. A 0.5g/t lower cut-off has been applied when reporting significant intersections.
	• *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*	• Not applicable.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not applicable.

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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').*	• Down hole lengths have been reported, true widths not known.
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.*	• Refer to figures and tabulations in the main text and Appendices.
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.*	• A summary of analytical results based on a 0.5g/t lower cut-off has been reported for all drill holes.
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.*	• 32 trenches with a cumulative area of 8,860 m2 were excavated, mapped and channel sampled on the property by Northern Superior. • A 1,271 line-kilometre heli-borne total magnetic field and gradient survey on 100 m spaced lines has been flown, with the data used to better define the regional geology, particularly the structural architecture. • Follow-up ground mag (42.2 line-km) and 35.9 line-km of pole-dipole ground IP survey were conducted on a series of handcut grids (47.8 line-km) emplaced across the Croteau-Bouchard and Croteau North shear zones on the property. • The drilling was augmented by a diverse variety of geochemical (till sampling: 382 samples; MMI sampling: 687 samples; soil gas sampling: 854 samples), borehole spectral IP surveys (12 drillholes), structural geological studies, detailed mapping of trenches and petrographic studies. • 142 reverse circulation drillholes (1,665 m) were completed in a 46 km2 area on the Croteau and Waconichi properties on a series of staggered drillhole fences oriented perpendicular to the dispersion of Wisconsin glacial sediments to determine the presence of gold and/or base metal mineralized dispersion trains originating from one or more areas on the property (as detailed in Table 1b). • This work highlighted gold prospects at the Grobo showing and Croteau Trench 5 for follow up.

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		• Baseline water quality sampling has commenced.
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.*	• Future work programs are being assessed with a view to in-fill and extension drilling at CBSZ and other high priority areas.