

APPENDIX 3F

MINING STANDARDS GUIDELINES

1.0 Introduction

Exchange-listed companies are involved in mineral exploration around the world, with each project having unique characteristics and specific challenges. The exploration industry is further complicated by the diversity of the organizations which may have responsibility for determining procedures and guidelines. The Exchange cannot anticipate the challenges of each project nor can it consolidate the expertise and guidelines of the various professional bodies that exist within the mining industry.

The purpose of this Appendix is to present the Exchange's perspective on the responsibilities of a listed company and its board of directors when involved in mineral exploration. In our view, it is the responsibility of each director, regardless of their geological experience, to ensure that information collected and reported to the public be timely and accurate. These are standards which the Exchange believes should be applied prudently and with common sense.

1.1 Philosophy

The Exchange places responsibility for the implementation of prudent field procedures, applying conventional mining techniques, assaying and public reporting with the company and its board of directors. Further, it is the directors' responsibility to ensure that the release of information is accurate, balanced and timely.

Directors, the public and the Exchange gain confidence in a company's procedures and reporting through independent verification of results. The Exchange recognizes that independent reporting may be expensive and time consuming for a junior company that has neither a proven prospect nor is seeking public funding. Therefore the Exchange does not insist on independent verification in all circumstances. Instead, there is a sliding scale of independent verification that increases with the significance of a company's claim.

The Exchange advocates enhanced disclosure. Many company reports are presently required to be placed in company public files. The Exchange will extend this requirement to include a broader range of circumstances in support of the principle that the public and analysts should have access to the best information available with which to make interpretations, decisions and recommendations.

1.2 Role of Member Firms

The due diligence obligations placed upon Member Firms and their employees by the Exchange are not unique to mining companies. The Member Sponsorship Rule requires Exchange Members to fulfil specific criteria relating to corporate finance functions prior to acting as a sponsor. IPO's and other New Listings must be sponsored by a Member Firm at the time of listing.

Members and their Investment Advisors are also guided by the legal requirements of fiduciary duties and due diligence, and by the Exchange's gatekeeper expectations.

1.3 Actions

The actions required by a listed company are divided into three broad categories: Report Preparation and Distribution, Verification Programs, and Disclosure.

2.0 Report Preparation and Distribution

Reports are required in many different circumstances. The standard can be found in the Canadian Securities Administrators National Policy #2-A. National Policy #2-A has been revised and issued for comment as National Instrument #43-101 (*Standards of Disclosure for Mineral Exploration and Development and Mining Properties*) and its companion Policy. The Exchange recommends that all companies adopt the standards of National Instrument #43-101 and the Exchange requires that all companies utilize the resource/reserve standards of National Instrument #43-101. Not all reports need to be prepared to this standard, but a qualified professional must prepare the report and the company must be able to explain why the standards of National Policy #2-A were not deemed necessary.

The position of the Exchange is that all reports referred to in a news release or submitted as part of an Exchange filing will be placed on the public file. These reports should also be directly available from the company. There are very few circumstances when the Exchange will keep part or all of a report confidential.

The Exchange expects that reports will be filed with the Exchange and the report placed on a company's public file in, but not limited to, the following circumstances:

- Where the company is raising funds from the public
- Most property acquisition filings involving the issuance of shares
- Subsequent issuances of shares for a property acquisition
- Upon reporting estimates of measured or indicated mineral "resources"
- Upon reporting estimates of proven or probable mineral "reserves"
- Upon completion of summaries of preliminary or final feasibility studies
- Assessment ongoing programs through periodic reports which are publicly reported by companies

2.1 *Qualifications of Report Writers*

The Exchange will consider the qualifications of the author in reviewing any reports. The factors that we will take into account are:

- Membership in a professional organization which regulates the practice of engineering or geoscience, e.g. a provincial association of professional engineers and geoscientists;
- Educational background;
- Experience with similar geological models; and
- Reputation

3.0 *Verification Programs*

3.1 *Quality Assurance Programs*

Quality assurance programs should be routinely implemented as part of any exploration program that is generating analytical results. This will ensure that the procedures and processes utilized by the company are producing accurate information for the benefit of the company and the public. Such a program should verify the validity of sample collection, security, preparation, analytical method and accuracy. Procedures and findings of the program would normally be included in a report assessing recently completed phases of the exploration/development cycle. A common aspect of a quality assurance program would include the random submission of blank, duplicate and standard samples in each sample shipment. Duplicates, rejects and pulps would be regularly analyzed at a second laboratory for comparison and confirmation of the regularly utilized laboratory procedures and results.

3.2 *Check Programs*

The Exchange expects a company to carry out a check program whenever a major milestone is achieved in its property development or spectacular or unexpected results are obtained. The objective of such a milestone program is to verify all aspects of the quality assurance program. (The included table summarizes exploration milestones and notes when reports, checks and audits are normally conducted.) The procedures of a milestone check are similar to those of a quality assurance program. The Exchange considers a verification program to be a “check program” when it is conducted by a non-independent person and an “audit” when it is conducted by an independent person.

A check or audit program of spectacular or unexpected results is expected to provide immediate verification of specific results. These programs should be implemented immediately upon a company or its consultant receiving the anomalous results. The Exchange may insist upon an audit program, notwithstanding a company’s determination not to initiate such a program.

The Exchange requires the undertaking, reporting and the filing of a check program in the following circumstances:

- When spectacular results are reported by a company at any stage of the exploration/development cycle. These are generally trenching or drilling results which are clearly of economic significance or materially exceed previously reported results
- During or after the completion of an “in-fill” drilling program
- Upon reporting measured and/or indicated mineral “resources”
- Upon reporting proven and/or probable mineral “reserves”
- Excessive market activity or an increase in the market capitalization of a company releasing favourable assay results
- Unique circumstances such as the use of unorthodox or proprietary analytical methods, or reporting results uncharacteristic for the property, district or geological model

All check programs should be conducted under the supervision of a qualified professional. The Exchange, at its discretion, may require that a check program be conducted by an independent, qualified, professional acceptable to the Exchange. The shares of a company undergoing a check program, depending on the circumstance, may be halted until such time as the check program has been completed and results released to the public.

All reports that are required to be submitted will be placed on the public file unless specific and justifiable requests for confidentiality are received. Even these requests may be refused or only certain portions of a report will not be placed on the public file.

3.3 Assay Laboratories

The Exchange recognizes that there are laboratories around the world and that in many jurisdictions laboratories are not registered or required to meet internationally accepted standards. A company should implement measures to ensure the work being performed on its behalf produces accurate results. The following procedures are recommended in selecting an assay laboratory:

- Confirm the academic, professional and analytical experience of laboratory staff
- Investigate the reputation of the laboratory and its staff with its competitors, clients, regulators and others
- Inspect the laboratory for its sample preparation facilities, analytical procedures, reporting procedures, equipment, security, cleanliness, etc.
- Confirm the laboratory’s internal and external quality control and quality assurance programs
- If the jurisdiction that the laboratory is operating requires certification or registration, ensure that the laboratory conforms to the jurisdiction’s requirements
- Submit some blanks, standards and previously assayed samples to the laboratory to confirm its procedures and accuracy

These are all well-known procedures and should not be considered unusual by the laboratory or any other individuals involved in the process.

4.0 Disclosure

Disclosure of information is key to the financial markets. Exploration and mining companies often find disclosure to be a very difficult balancing act. The information must be timely, but the information is often not at a stage where definitive conclusions can be drawn, and the information is often highly technical and cannot be easily interpreted by the investing public.

The Exchange suggests the following Guidelines for the preparation of news releases with respect to the dissemination of drill, sample and mineral resource/reserve results. The purpose of these Guidelines is to help companies ensure disclosure provides sufficient detail to the investing public to make informed investment decisions. The list is not intended to be exhaustive or all-encompassing and greater detail may be appropriate and required in many situations.

Reporting of information and opinion with respect to mineral properties is currently dealt with under National Policy #22 with references to National Policy #2-A. National Policies #22 and #2-A have been combined into National Instrument #43-101 and companion Policy, which have been issued for comment. The following Guidelines are intended to incorporate and expound upon the minimum standards established under these National Policies as they apply to listed companies and to specifically extend these standards to include all public disclosure by such companies. Where technical data in a news release is based on a report or other information supplied by an engineer or geoscientist, the news release shall name the person supplying the technical data. These Guidelines are intended to apply to each and every news release or other disclosure document issued by a listed company unless specific reference is made to a recent previous disclosure document containing this information.

4.1 Reporting of Sampling/Drilling Results

The disclosure of sample or assay results, whether it be drilling, trenching, underground or preliminary surface sampling, should include the following details.

1. Sampling results should include details as to the type, nature and density of samples collected. For example, relevant information with respect to preliminary geochemical surveys should include number and type of samples collected, sample spacing or density, horizon or material sampled, and the area covered. Trench or outcrop sampling should include information on sample type (select, grab, chip, channel, etc.), sample interval/length, sample continuity, material sampled, and spatial relationship of such sampling to other known and/or previously reported samples, or mineralized structures. Drill results should include information on the type of drilling (core, reverse circulation, etc.), size (BQ, NQ, etc.), sample interval, and spatial relationship with other nearby drill holes or mineralized structures. In many situations, it will be necessary to include plans and/or sections to provide appropriate details. In all cases, disclosure should be made of any drilling, sampling or recovery problems which could materially impact the accuracy and reliability of results.

Estimated true widths should be provided whenever possible or stated that the true width is unknown.

2. Disclosure should also include relevant details with respect to the analytical process, including analytical method (ICP, AA, fire assay, etc.), assay sample size, and name and location of assay laboratory. Specific details of any unusual or non-standard sampling, preparation or analytical procedures must be disclosed. In these cases, disclosure should include results of a duplicate set of samples processed by industry standard procedures for comparative purposes. Disclosure should clearly distinguish between new and previously issued information.

Reporting of results should be in a format which reflects the type of analysis done. For example, trace element geochemical analyses are typically reported in the form of parts per million (ppm) or billion (ppb). Conversion of such values to units normally associated with fire assay, such as grams per tonne, ounces per ton or per cent, is generally not appropriate as this may imply a greater level of accuracy and reliability to results than is warranted.

3. Reporting of results in the form of “values up to...” can be very misleading and irrelevant unto itself, particularly if such samples are selectively collected. Such disclosure should be supported with appropriate sample descriptions and relevant statistical details to reflect the mean, range and distribution of sample values.
4. Reporting of aggregate intervals should be done on an interval-weighted average basis. Details should be given of any structural controls or cut-off grades used to establish the reporting interval. Significantly higher grade intervals within a lower grade intersections should also be reported separately.

Notwithstanding the above, there are cases where a few extremely high values occur which can severely skew or bias the average grade of the lower grade interval. In such cases, it is recommended that the higher grade sections not be included in the overall average, but be reported as completely separate intervals. Alternatively, it may be appropriate to cut such values, in accordance with industry standards, prior to their inclusion in any averaging. The details of such cutting must be disclosed and must be conducted by a qualified professional.

5. Verification of extremely high grade results through re-assaying and/or re-sampling would be expected as normal course of a check program.
6. Reporting of assay results should be accompanied by a description of the geological setting, mineral occurrences and nature of mineralization found.
7. Visual estimates of grade are not to be reported.

4.2 Reporting of Resources/Reserves

The establishment of a mineral deposit represents a major milestone in the development of a particular property; one that can create a significant impact on a listed company's market value. Reserves are subject to a number of different classifications depending upon their level of reliability and economic analysis. Reserves and reserve classifications can only be determined properly by qualified engineers or geoscientists trained and experienced in reserve calculation procedures. Because of their potential market impact, the indiscriminate, improper and premature use of reserves is a frequent and major concern to the Exchange. As such, the reporting and disclosure of reserves should include and conform to the following:

1. All reserve or resource calculations must be prepared by a qualified engineer or geoscientist. The name, qualifications and independence to the listed company of this person or firm should be disclosed. If such individuals are not at arm's length to the company, then their calculations and conclusions should be reviewed and verified by an appropriately qualified independent individual.
2. Reported reserves should be supported by an independently prepared or reviewed report by an appropriately qualified person. This report shall be filed with the Exchange and be made available for public review.
3. Guidelines for the classification and reporting of reserves for listed companies are currently set out in National Policies #2-A and #22. However, National Policy #2-A is currently under review and revisions are expected to make it more consistent with internationally accepted standards. Listed companies and consultants are therefore required to use the resource/reserve recommendations of the Canadian Institute of Mining's Ad Hoc Committee Report (September 1996), the Australasian Code for Reporting Mineral Resources and Reserves (July 1996) or such similar code and state which is being utilized.
4. Disclosure should include appropriate details of tonnage and grade for each category of resource/reserve. The use of only contained metal, metal equivalent, gross metal value or unclassified or non-segregated tonnage is unacceptable.
5. Disclosure of reserves should include details as to the number, type and spacing of sample points or drill holes used to estimate such reserves. It should also provide information with respect to other key assumptions, parameters and methodologies used. Reserves in the proven and probable category and resources in the measured or indicated category should be supported by a suitable independent check sampling/assaying program to verify sampling procedures and results.

6. Estimates of discounted future cash flow data and similar economic analysis should be prepared, by appropriately qualified, independent engineers and/ or geoscientists. These figures should be supported by an acceptable, independent feasibility or, at a minimum, a detailed preliminary feasibility study. Key assumptions and parameters should be disclosed including, but not limited to, details with respect to operating costs, recoveries, discount rates, mine life, production rate, capital costs, environmental costs, closure and rehabilitation costs and metal price and how each were determined. Such estimates should be restricted to encompass only proven and probable reserves as defined in National Policy #2-A or similar classifications in such other codes acceptable to the Exchange (see paragraph 3 above).

Given the diversity of the mineral exploration industry and the lack of uniform standards, the Exchange believes that imposing the responsibilities associated with Report Preparation and Disclosure, Verification Programs and Disclosure, within the above noted Guidelines will assist in providing a reasonable standard of accuracy and disclosure to the benefit of the industry and investors alike.

TABLE
Property Exploration/Development Milestones

Activity	News Release	Technical Report	Quality Assurance	Check Program	Audit Program
Acquire: Buy or Stake	Acquisition	Geology Report for filing or budget	None	None	None
Reconnaissance: Geology/ Geochem/ Geophysics/ Trenching	Program results	Geological report assessing results and recommending next phase	Recommended	None	None
Detailed: Geology/ Geochem/ Geophysics/ Trenching	Program results	Geological report assessing results and recommending drill program	Yes	Recommended	None
Reconnaissance: Drill Program	Results as received or upon completion of program	Report on drill results and recommending further reconnaissance or grid drilling	Yes	Recommended	None
Wide-Spaced Grid Drilling	Results as received or upon completion of program	Assessment of results and “maybe” initial Resource estimate	Yes	Yes	Maybe
Fill-in Drilling & Preliminary metallurgy & Economic studies	Results in groups of holes and metallurgy results & economic findings	Resource estimate and “maybe” Reserve estimate & pre-feasibility report	Yes	Yes	Maybe
Bulk sample: Drilling or underground & Detailed metallurgy studies	Comparison with drill results Define recovery process	Mineral Reserve report and Final feasibility	Yes	Yes	Yes
Engineering & Project financing	Economics of deposit Financing	Final feasibility	None	None	Yes