



British Columbia
Securities Commission

2012 Mining Report

British Columbia Securities Commission

January 2013

TABLE OF CONTENTS

| | |
|--|-----------|
| A. Executive Summary | 5 |
| B. Introduction | 6 |
| C. Mining Technical Reviews | 7 |
| 1. Continuous Disclosure Reviews | 7 |
| 2. Annual Compliance Reviews | 8 |
| 3. Targeted Review Project | 11 |
| 4. Prospectus Filing Reviews | 12 |
| D. Topical Issues and Guidance | 13 |
| 1. Technical Report Deficiencies | 13 |
| 2. Industry Standards and Best Practices | 14 |
| 3. Metal Pricing Assumptions | 15 |
| 4. Mineral Resource Estimation | 16 |
| 5. Mining Studies | 19 |
| E. Appendix A | |
| The Mining Rule Compliance Measures with reference to sections of the Mining Rule | 20 |

EXECUTIVE SUMMARY

- The purpose of this mining report is to provide information to market participants on areas where they can improve their disclosure and on interpretative issues that have materialized during the past year.
- British Columbia Securities Commission (BCSC) staff conduct continuous disclosure reviews, annual compliance reviews, targeted reviews, and prospectus reviews of mining technical disclosure. Some of the most common findings are:
 - ◇ Failure to file current or fully compliant technical reports
 - ◇ Failure to include the required cautionary statements for preliminary economic assessments (PEA), historical estimates, and exploration targets
 - ◇ Disclosure of mineral resources and mineral reserves (MRMR) that does not fully comply with NI 43-101
 - ◇ Restricted or misleading references to mining studies
 - ◇ Failure to name the qualified person (QP)
- We find that a company's disclosure in websites, investor relations materials, email promotions, social media sites, and corporate presentations (voluntary disclosure) is less likely to comply than its news releases, technical reports, annual information forms (AIF), and management discussion and analysis (MD&A) (required filings).
- Some of the more common issues with technical reports are:
 - ◇ Missing or altered statements in certificate and consents of QP
 - ◇ Prohibited disclaimers or statements of reliance on other experts
 - ◇ Non-compliant disclosure of MRMR, historical estimates, and exploration targets
- Staff will question:
 - ◇ Disclosure that is not based on industry best practices
 - ◇ Anomalous metal or commodity pricing assumptions and sensitivity analyses
 - ◇ Technical reports that do not disclose the QP's assumptions regarding reasonable prospects of economic extraction
 - ◇ Mineral resource estimates that are not based on an appropriate geological model or do not apply reasonable constraints on mineralization
 - ◇ Disclosure of ongoing mining studies prior to establishing mineral resources

INTRODUCTION

Mining is very important to British Columbia and our securities markets. The British Columbia Securities Commission (BCSC) has primary jurisdiction and oversight responsibility for approximately 1150 mining companies that are reporting in BC. This number includes mining companies that trade on Canadian markets, as well as BC companies quoted on any of the over-the-counter markets in the United States.

As at December 31, 2011, there were 962 BC mining companies listed on the TSX and TSX Venture Exchange representing about 70% of all BC companies and 58% of all Canadian mining companies listed on these exchanges. In 2011, these BC mining companies raised \$2.4 billion through public offerings and a further \$3.9 billion in the private placement market. Both figures account for 77% of the total amount of investment dollars raised by BC companies during 2011. In 2011, BC mining companies raised more money through public offerings than mining companies in any other Canadian jurisdiction, including Ontario (a close second).

The BCSC recognizes the value of securities regulation that inspires investor confidence and supports fair, efficient, and innovative capital markets. This is particularly important to mining companies, which are capital intensive and require timely access to funds to advance their projects. National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (the Mining Rule) plays a significant role in promoting public confidence in our markets and establishing Canada as the world leader in mining disclosure standards.

The 2012 Mining Report sets out the current views and interpretations of BCSC staff.

MINING TECHNICAL REVIEWS

1. Continuous Disclosure Reviews

We review mining disclosure made by companies for compliance with the Mining Rule and other disclosure requirements. These continuous disclosure reviews form part of our ongoing program to improve the quality of disclosure provided to investors.

a) Review process

We may examine a company's mining disclosure for overall compliance with the requirements of the Mining Rule. The scope of the reviews can range from very limited issue-oriented reviews through to a complete examination of a company's disclosure record. The review process typically incorporates required filings as well as voluntary disclosure. We also review third party documents such as analyst reports, newsletters, and presentations that the company disseminates, links to its website, or pays for, directly or indirectly.

If we identify significant issues during the review process, we will typically notify the company by letter. The letter will outline the issues identified with the disclosure and include suggestions on any required corrective actions the company needs to take to bring its disclosure and filings back into compliance going forward. As a result of our review, we may take a number of actions to improve the compliance of the company's disclosure and filings, depending on the severity of the issues and potential risk to investors. For example, we may:

- Request the company amend disclosure on its website and in investor relations material to comply with the Mining Rule
- Request the company amend and re-file disclosure documents, such as technical reports, MD&A, and AIFs
- Request that the company issue a news release to clarify and correct its disclosure
- Place the company on the BCSC Defaulting Issuers List until the company corrects the disclosure or filing
- Issue a cease trade order against the company's securities until the company files the required document in the required form

Corrected filings fix disclosure failures going forward, but do not absolve a company from responsibility for the original breach. There may be cases where the breach is sufficiently serious that the Executive Director will pursue enforcement action.

MINING TECHNICAL REVIEWS

b) Common deficiencies

The following are examples of some of the most common deficiencies identified during continuous disclosure reviews:

- Failure to file a current or compliant technical report
- Non-compliant disclosure of MRMR
- Disclosure of exploration targets and historical estimates without the required cautionary language and context
- Disclosure that is not timely, factual, or balanced
- Failure to name the QP who is responsible for the disclosure

2. Annual Compliance Reviews

a) Background and purpose

Every year we review a sample of randomly selected mining companies to assess, at a high level, their overall level of compliance with specific Mining Rule disclosure requirements and to monitor any trends in non-compliant disclosure. This review is separate and distinct from our continuous disclosure reviews and typically does not result in our issuing comment letters to the companies chosen. For the purpose of this work, we select active mining companies that have not been subject to a staff review in the previous two years. The reason for this is to provide a representative cross-section of current industry disclosure.

The annual compliance review examines up to 20 separate disclosure requirements, primarily from Parts 2 and 3 of the Mining Rule, in the company's required filings and voluntary disclosure. Not all of the 20 disclosure measures necessarily apply to all companies, depending on the various stages of their projects. This review does not consider disclosure or filing issues relating to technical reports because the company often does not prepare these documents directly.

MINING TECHNICAL REVIEWS

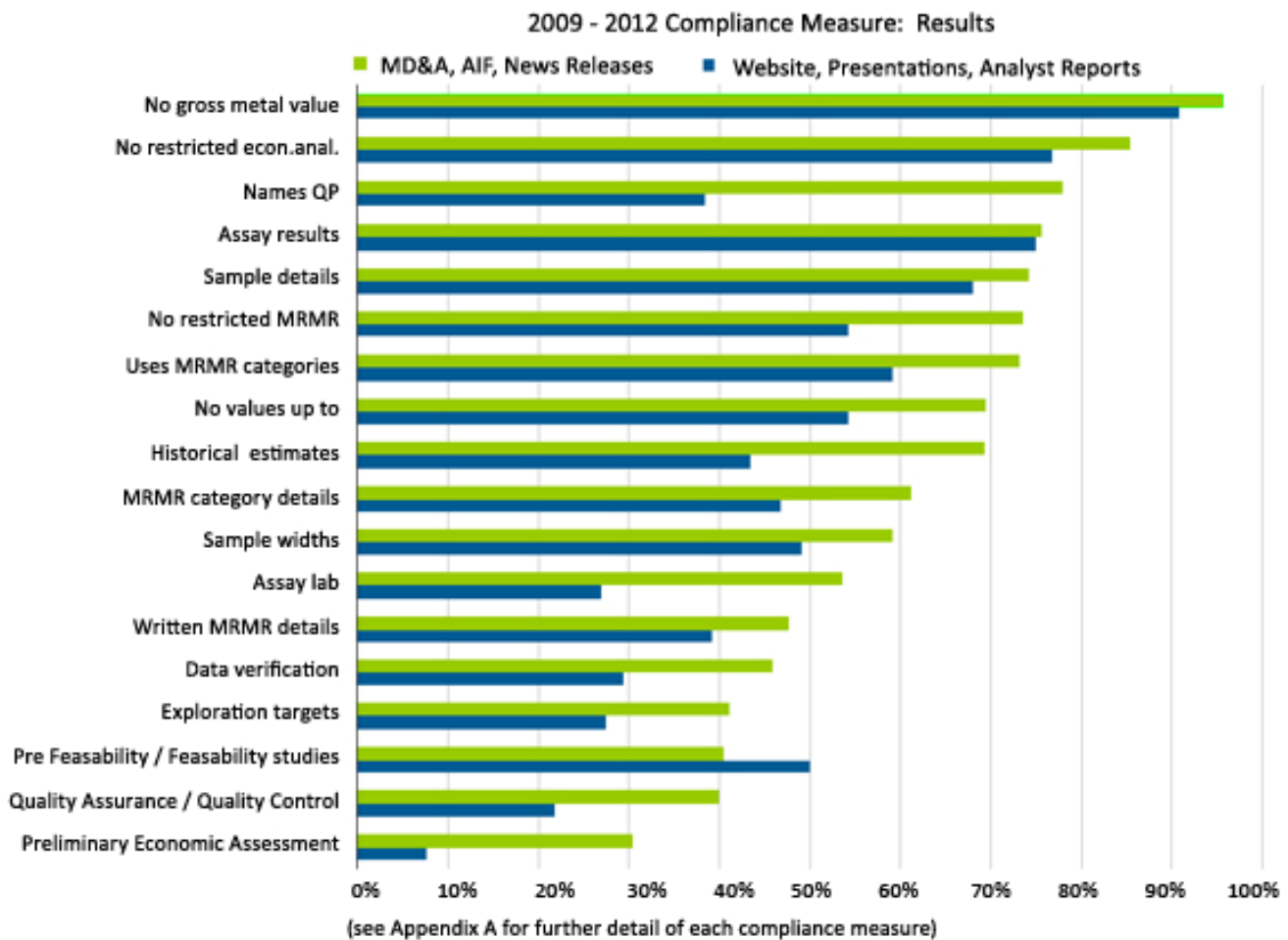
b) Discussion of results

The review measures the extent to which the sample of mining companies is compliant in specific areas of their technical disclosure. We assess each company's relative compliance level with each applicable category on a subjective scale of 0 to 3. For the purpose of this assessment, we consider that a score of two or higher is generally acceptable because it indicates the company is making an effort to comply with the requirement in most cases. The company's overall score represents an average of all applicable categories, converted to percentage. Due to the relatively small annual sample size, we are reporting the results from 2009 - 2012 in aggregate, as shown in the following chart.

The results of our annual compliance reviews indicate that a company's voluntary disclosure is less likely to comply with the requirements of the Mining Rule than its required filings.

On average, disclosure in the required filings we measured was 65% compliant with the requirements of the Mining Rule, compared to only 50% for voluntary disclosure. The discrepancy between the two forms of disclosure is especially apparent in reporting the results of PEA, historical estimates, Quality Assurance/Quality Control (QA/QC) results, laboratory procedures, and naming the QP.

MINING TECHNICAL REVIEWS



The results also identify specific areas where industry’s overall level of compliance is relatively low for both required filings and voluntary disclosure. For example, the disclosure of exploration targets and results of PEAs show overall low levels of compliance (less than 50%), usually due to companies not including required cautionary language. Website disclosure of the results of PEAs is particularly problematic with only 10% of those companies reviewed compliant with the rule. Other areas of low compliance include disclosure of QA/QC, data verification, mineral resource/reserve estimates, and mining studies (pre-feasibility studies or feasibility studies).

3. Targeted Review Project

a) Purpose and scope

Starting in February 2011, we began targeting areas of mining disclosure that we identified as problematic during our continuous disclosure and annual compliance reviews. This targeted review specifically focuses on several core requirements of the Mining Rule, such as the proper disclosure of MRMR estimates (ss. 2.2 and 3.4), historical estimates (s. 2.4), and compliant disclosure of exploration targets and PEAs (s. 2.3). In most cases, we select companies for these limited scope reviews based on poor disclosure we observe in email blasts, news releases, and paid promotions on industry-related websites.

b) Results and common deficiencies

Since its inception, we have conducted targeted reviews of 82 companies (as of September 30, 2012). Of those companies, 34 had issues with their disclosure that warranted placing them on the defaulting issuers list. We sent letters to an additional 13 companies identifying problematic disclosure that required correction. The review has also resulted in 31 companies issuing clarifying news releases.

Most of the problematic disclosure we identify during the targeted review is on company websites, linked third-party sites, and in corporate presentations.

Some of the most common deficiencies are:

- Adding inferred mineral resources to other categories
- Not disclosing the appropriate resource category
- Disclosing historical estimates or the results of a PEA without providing the appropriate cautionary language
- Disclosing exploration targets that are not expressed as ranges or with no cautionary language
- Not naming the QP responsible for the disclosure

4. Prospectus Filing Reviews

In addition to continuous, annual, and targeted disclosure reviews, we review prospectus filings to assess a company's mining disclosure for compliance with the Mining Rule and other disclosure requirements. The process is similar to the continuous disclosure review, except for the expedited timeline associated with short form offerings and a higher threshold for comments. Since 2008, we have completed 411 prospectus-filing reviews. The majority of these offerings were in the form of initial public offerings, followed closely by short form prospectus filings. Most of the technical disclosure comments we provided related to deficiencies in the supporting technical report. (See our comments below for a summary of common technical report deficiencies.)

1. Technical Report Deficiencies

a) Who is responsible for technical report compliance

The QP is responsible for preparing the technical report. The QP also certifies that the report contains all scientific and technical information required in order to make the report not misleading, and that it has been prepared in accordance with the Mining Rule and Form 43-101F1 *Technical Report* (the Form). We rely on this certification during the course of any technical reviews. In addition, the company is responsible for retaining an appropriately qualified QP to prepare the technical report and for filing a compliant technical report in accordance with the requirements of the Mining Rule and the Form.

b) Limitations on BCSC reviews

We do not review all technical reports filed on SEDAR. We do not, and cannot, approve the compliance or certify the contents of any technical reports that we may review.

c) The technical report review process

When we review a technical report, we usually focus on assessing the report for compliance with the Form and the core requirements of the Mining Rule. In most cases, we rely on the responsible QP's expertise and certificate as evidence that the information was collected and interpreted in accordance with industry standards and best practices. However, this approach does not preclude us from asking questions if our review suggests the QP may be deviating for such standards and practices.

d) Common deficiencies

Some of the most common issues that arise when reviewing technical reports include:

- Missing or altered statements in certificates and consents of the QPs
- Not dated, signed, or addressed to the company
- Non-compliant disclaimers of responsibility or statements of reliance
- Does not provide a summary of all material technical and scientific information for the entire property
- Non-compliant disclosure of historical estimates, exploration targets, or MRMR
- Does not provide adequate or sufficiently transparent information on the key assumptions, parameters, and methodologies used in mineral resource estimates

2. Industry Standards and Best Practices

a) CIM Best Practice Guidelines and other industry guidance

General Guidance (6) to Companion Policy 43-101CP provides a list of mining industry best practice guidelines adopted by The Canadian Institute of Mining, Metallurgy and Petroleum (CIM). As noted in this guidance, we expect that a QP, acting in compliance with the professional standards of competence and ethics established by their professional association, will generally use procedures and methodologies that are consistent with industry best practices, as established by CIM and similar organizations in other jurisdictions. We also expect that the disclosure of scientific and technical information will be comparable to similar disclosure made by other companies.

b) Consistency with other credible sources

The SEDAR database contains several thousand public technical reports prepared on a wide variety of commodities, deposit types, and project stages of development. Many of these reports were prepared by highly credible sources, including international consulting firms, well-known experts, and major mining companies. We may use these technical reports as examples of industry consensus or approaches to particular issues and techniques.

We may question a company's disclosure, including estimates of mineral resources, mineral reserves, and the results of PEAs, if it appears inconsistent with the CIM Best Practice Guidelines. In these cases, we may invite the company and its QP to explain the basis and circumstances that would justify this deviation, and to provide examples of other credible sources that use similar approaches. Alternatively, we may question the objectivity of the QP and ask the company for the opinion or involvement of another QP to address the concerns about possible bias.

In appropriate cases where failing to follow industry best practices is an issue, we may ask the company to retain another QP, acceptable to us, to author or co-author the technical report, or to audit or verify the work of the first QP.

3. Metal Pricing Assumptions

a) Metal pricing assumptions

Metal or commodity price assumptions are used to establish cut-off grade and reasonable prospects of economic extraction, and for the financial analyses in PEAs and mining studies. Pricing assumptions can have a significant impact on the size of the mineral resource or mineral reserve and the resulting economic analysis based on these estimates. For this reason, metal or commodity pricing is an area of potential concern to securities regulators.

The Mining Rule does not specify how a QP should determine pricing assumptions. Generally, we expect that any assumptions will be explained in the technical report and be consistent with what other QPs and companies are using at the time. When a QP uses prices that are materially different from those other QPs are using, it could raise concerns that the resulting mineral resources, mineral reserves, and economic analyses will not be reasonably comparable to other similar projects and might be misleading to investors.

Where a QP uses anomalous metal or commodity pricing assumptions, we may ask the QP to explain the basis for the pricing assumptions and provide examples of other technical reports prepared by credible sources that use similar pricing assumptions. Alternatively, we may ask the QP to revise the original assumptions.

b) SEC guidance

We understand the US Securities and Exchange Commission (SEC) accepts, as a maximum price allowed, the lesser of the three-year moving average and current spot price. We see many Canadian mining companies using this method and recognize that it has become a common industry standard.

c) High and low price sensitivity

We recognize that it is common industry practice to show metal price sensitivities in PEAs and other economic analyses. While we do not take issue with this approach, we have observed a number of situations where companies are reporting only positive sensitivities.

Disclosure of only positive price sensitivity could be misleading to investors, because it does not reflect the risk of lower prices.

4. Mineral Resource Estimation

a) *Reasonable prospects of economic extraction*

By definition, mineral resources must have reasonable prospects of economic extraction. Typically, this is reflected in the cut-off grade selected based on metal pricing assumptions, potential mining scenarios, and other relevant factors. In many cases, reasonable prospects might require the QP to constrain the mineralization within a conceptual pit shell or mine model and to exclude mineralization that falls outside these constraints.

We believe that some technical reports do not adequately discuss how the authors established reasonable prospects. This can lead to questions as to whether the reported tonnes and grade actually qualify as a mineral resource. An example of this is where the author uses a very low cut-off grade relative to comparable deposits, or incorporates material that would not be reasonably accessible in a potential mining scenario.

A QP's assumptions regarding reasonable prospects must be disclosed under section 3.4(c) of the Mining Rule and is material information that must be included in a technical report.

In addition, the CIM Definition Standards on Mineral Resources and Mineral Reserves provide the following guidance:

“The phrase ‘reasonable prospects for economic extraction’ implies a judgement by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports.”

CIM also provides additional guidance on this subject in its December 15, 2009 publication, *Additional Guidance - [Reasonable Prospects for Economic Extraction](#)* .

TOPICAL ISSUES AND GUIDANCE

b) Importance of geological model

We have seen a number of situations where QPs are estimating mineral resources without the application of an appropriate geological model or the consideration of geological and grade continuity between data points. For example, we have seen cases where QPs are assigning resource categories based solely on distances from, or areas of influence around, individual drill holes. In other cases, we see search ellipsoids used that appear inconsistent with, or without apparent consideration of, the structural controls of the mineralization.

Estimating mineral resources without applying an appropriate geological model could produce estimates that are contrary to the definition of mineral resources and to industry best practices.

For example, the definition of mineral resource incorporated in the Mining Rule provides that:

“The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge”.

The CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (the CIM MRMR Guidelines) state:

“Geological interpretation is a fundamental element of MRMR estimation. ... The conceptual geological model and ideas regarding the genesis of the deposit should be presented and considered in their relation to the resultant MRMR model...”

“Mineralization may be defined or limited by some combination of structure, lithology and alteration envelope. These limits or boundaries should be used to constrain the interpolation of grade within the MRMR model.”

TOPICAL ISSUES AND GUIDANCE

We believe that the application of a geological model and constraints on mineralization is required by the definition of mineral resources and by industry best practices. We think also that the geological model and constraints are material information required to be included in the technical report to comply with the requirements of the Form.

We may question the compliance of the technical report or the suitability of the mineral resources for public disclosure if the technical report does not provide the details of a geological model that is consistent with the deposit type or does not apply reasonable constraints on mineralization.

c) Relevant experience of QP

The definition of QP includes the requirement that a QP have experience relevant to the subject matter of the mineral project and the technical report. Mineral resource estimation is a highly specialized field that requires knowledge and experience in both mineral resource estimation and the mineral deposit type. With the wide availability of generic geostatistical and mine-planning software comes the risk that estimates are being done by QPs who might not have sufficient knowledge and expertise to ensure they are producing reasonable and reliable estimates prepared in accordance with industry best practices. The CIM MRMR Guidelines state:

“In the case of computer based modeling, the QP responsible for the development of the MRMR model, should have appropriate knowledge of the methodology employed, the critical input assumptions utilized and be aware of the inherent limitations of the software chosen.”

QPs must be able to satisfy themselves (and their peers, if necessary) that they have sufficient relevant experience to prepare the estimates for the deposit type in question. They must also summarize this relevant experience in their certificate of qualified person filed with the technical report.

5. Mining Studies

a) Premature disclosure of mining studies

We have encountered a few situations where companies are disclosing the commencement of mining studies (pre-feasibility studies or feasibility studies) prior to establishing or disclosing mineral resources. Effectively, the companies appear to be conducting exploration to establish mineral resources concurrently with studies to determine the technical and economic feasibility of any mineral resources they may demonstrate in the future.

Disclosure of ongoing mining studies prior to establishing mineral resources could be misleading, contrary to established mineral exploration practices, and contrary to the definitions of mining studies as incorporated into the Mining Rule.

Mining studies are comprehensive studies based on measured and indicated mineral resources or proven and probable mineral reserves. By disclosing the commencement of a mining study, a company may be implying that it has sufficient information to estimate the size, grade, and geometry of a mineral deposit suitable for use in a mining study. In other words, the company is implying that it has a mineral resource when it does not.

In the absence of a mineral resource, we do not think a company has sufficient information on which to base a mining study. We also do not think a company can reasonably conclude that further exploration will result in the delineation of mineral resources suitable for inclusion in a mining study.

A company can conduct studies and other work that it could later incorporate into a mining study. However, we caution companies not to refer to this work as part of a mining study, if they are doing this work prior to establishing a suitable mineral resource.

APPENDIX A

The Mining Rule Compliance Measures with reference to sections of the Mining Rule

| | |
|--|--|
| No gross metal value | s. 2.3(1) prohibits the disclosure of gross metal or mineral value |
| No restricted econ. anal. | s. 2.3(1)(b) restricts the disclosure of economic analyses using inferred mineral resources, historical estimates, and exploration targets |
| Names QP | s. 3.1 requires companies to name the QP responsible for the disclosure |
| Assay results | s. 3.3(2)(c) requires specific details when disclosing assay results |
| Sample details | s. 3.3(2)(a)-(b) requires disclosure of specific sample details |
| No restricted MRMR | s. 2.3(1)(a) restricts disclosure of estimates that are not MRMR |
| Uses MRMR categories | s. 2.2(a) requires the use of only accepted MRMR categories |
| No values up to | s. 3.3(2)(c) requires a summary of relevant assay results and selectively disclosing only the best assay results is generally misleading |
| Historical estimates | s. 2.4 requires specific information and cautionary statements when disclosing historical estimates |
| MRMR category details | s. 2.2(b)-(d) sets out specific requirements for disclosing MRMR categories |
| Sample widths | s. 3.3(2)(c) requires disclosure of sample widths and true widths |
| Assay lab | s. 3.3(2)(f) requires disclosure of analytical procedures and laboratory details |
| Written MRMR details | s. 3.4 requires disclosure of specific details of MRMR |
| Data verification | s. 3.2 required details of what QP did to verify data being disclosed |
| Exploration targets | s. 2.3(2) sets out the requirements for disclosing exploration targets |
| Pre-Feasibility/Feasibility Studies | s. 2.3(4) restricts the use of these terms to the CIM definitions |
| Quality Assurance/Quality Control | s. 3.3(1)(c) requires disclosure of the quality assurance program and quality control measures used during exploration |
| Preliminary Economic Assessment | s. 2.3(3) sets out the requirements for disclosing PEAs |

CONTACT INFORMATION

Questions and comments on this report can be submitted to:

British Columbia Securities Commission
P.O. Box 10142, Pacific Centre
701 West Georgia Street
Vancouver, BC V7Y 1L2
www.bcsc.bc.ca

Robert Holland, P.Geo., Chief Mining Advisor
(604) 899-6719
rholland@bcsc.bc.ca

Ian McCartney, P.Eng., Senior Geologist
(604) 899-6519
imccartney@bcsc.bc.ca



British Columbia
Securities Commission