Dear Sirs and Madams

British Columbia Securities Commission
Alberta Securities Commission
Financial and Consumer Affairs Authority of Saskatchewan
Manitoba Securities Commission
Ontario Securities Commission
Autorité des marchés financiers
Financial and Consumer Services Commission, New Brunswick
Superintendent of Securities, Department of Justice and Public Safety, Prince Edward Island
Nova Scotia Securities Commission
Office of the Superintendent of Securities, Service NL
Northwest Territories Office of the Superintendent of Securities
Office of the Yukon Superintendent of Securities
Nunavut Securities Office

Re: CSA Consultation Paper 43-401 – Consultation on National Instrument 43-101 Standards of Disclosure for Mineral Projects

Thank you for the opportunity to contribute to the process.

In this response letter, I copied the consultation letter and have inserted my comments, in bold beneath each question.

In my comments, I used “CSA” to encompass all Canadian securities administrators and their staff.

Introduction

In this response document I am providing comments on more than just the questions raised by the CSA. Many of the prefaces to the questions require comment because they are either confusing, obviously biased, or written by someone that does not understand the mining industry.

Many of the issues discussed are not consistent with the overall industry’s established and common practices, or with current guidance provided by the industry’s learned and professional societies such as the Canadian Institute for Mining, Metallurgy and Exploration (CIM).

A. Improvement and Modernization of NI 43-101

The disclosure items in the Form have generally remained unchanged since NI 43-101 was adopted in 2001, with some reorganization for advanced stage properties in 2011.

1. Do the disclosure requirements in the Form for a pre-mineral resource stage project provide information or context necessary to protect investors and fully inform investment decisions? Please explain.

Comment:

First, what is a "*pre-mineral resource stage*"? This is not a defined term in the CIM companion policy or NI 43-101 and is difficult to address without specific knowledge of what is meant. I have assumed that it refers to "early stage exploration property", but that assumption may not be valid.

Second, it is not the purpose of NI 43-101 to "*fully inform investment decisions*". The NI 43-101 Technical Report is only part of the information required for investment decisions. Anyone that "*fully relies*" on an NI 43-101 Technical Report is foolish in my opinion. The purpose of the NI 43-101 Technical Report is to provide an accurate, complete, unbiased, timely, and not misleading summary of the technical work done on the project and a discussion of risks associated with the project. The current requirements provide the framework for that summary.

2. a) Is there an alternate way to present relevant technical information that would be easier, clearer, and more accessible for investors to use than the Form? For example, would it be better to provide the necessary information in a condensed format in other continuous disclosure documents, such as a news release, annual information form or annual management's discussion and analysis, or, when required, in a prospectus?

Comment:
In short, no. The technical report, in theory, provides an accurate, complete, unbiased, timely, and not misleading summary the technical work done. It is a snapshot of the entire project. Disclosing that information piecemeal in news releases, AIFs or other avenue will result in incomplete, biased, and potentially misleading disclosures because there is little or no way to enforce the prescribed format and information requirements in the Technical Report.

b) If so, for which stages of mineral projects could this alternative be appropriate, and why?

Comment:

There are no stages where an alternative to an NI 43-101 Technical Report is appropriate.

3. a) Should we consider greater alignment of NI 43-101 disclosure requirements with the disclosure requirements in other influential mining jurisdictions?
Comment:

NI 43-101 is the standard by which all other jurisdictions are judged and which all other jurisdictions turn to for a basis for their requirements. That status has been earned largely because of a very symbiotic relationship between the regulators and the industry being regulated. The disclosure requirements are, for the most part, viewed by industry as reasonable and useful, and the industry has had a hand in crafting the requirements. The inclusion of the CIM Companion Policy by reference provides a mechanism for rapidly adjusting

policy and guidelines to meet current industry needs that is not equaled elsewhere. Nor is it likely to be. The NI 43-101 format and disclosure requirements are widely used by exploration and mining companies as a framework for internal reporting whether or not they have a requirement to file in any Canadian jurisdiction. All other jurisdictions should be aligning with NI 43-101. That said, there is room for improvement as indicated in my responses in subsequent sections.

b) If so, which jurisdictions and which aspects of the disclosure requirements in those jurisdictions should be aligned, and why?

Comment:

There are no jurisdictions with which disclosure requirements should be aligned.

4. Paragraph 4.2(5)(a) of NI 43-101 permits an issuer to delay up to 45 days the filing of a technical report to support the in circumstances outlined in paragraph 4.2(1)(j) of NI 43-101. Please explain whether this length of time is still necessary, or if we should consider reducing the 45-day period.

Comment:

I started writing geological sections of NI 43-101 Technical Reports in 2003. For any other than the simplest report on only exploration activities, we needed more time and had to request extensions. The 45-day window grew out of experience and is quite reasonable. Today, many of the Technical Reports are extremely complex and lengthy, and, quite honestly, not the summaries intended in the 2003 guidelines, but that is for another section. The 45-day period is, in fact, too short for some that require multiple QPs and extensive Section 15 through 22 review and analysis with subsequent peer and legal review.

In recent years, CSA staff have observed mining issuers making use of new technologies to conduct exploration on their properties, including the use of drones. During the COVID-19 pandemic, we received inquiries from qualified persons about the possible use of remote technologies to conduct the current personal inspection.

5. a) Can the investor protection function of the current personal inspection requirement still be achieved through the application of innovative technologies without requiring the qualified person to conduct a physical visit to the project?

Comment:

In my opinion, no. Drones are extremely useful for exploration and widely used for mining. They produce extraordinary maps and save lives and save hundreds of manhours and on and on, but there is no "hands-on" the project. If the project is remote, someone has to go there to operate the drone. If the project is not remote why can the QP not visit the site? In extraordinary times, such as Covid-19 lockdowns, I believe it more sensible to provide an avenue for QPs to author reports without a current personal inspection but with significant warning language and specific permission from the regulatory agency for which the NI 43-

101 Technical Report is authored. When the extraordinary times are over, personal inspections should resume. This should also be an avenue for remote exploration properties that have no drilling, trenching, etc. And, where does it end? I can see drill rigs and large and small trucks on Google Earth™ images. Will we someday use those images in lieu of personal inspections? I see this as a camel's nose under the tent-type issue. If his nose gets completely under, soon the tent is collapsed and personal inspections will be a thing of the past, replaced by technology that has questionable value. I see this as a significant detriment of objective reporting of the technical and scientific aspects of a project.

b) If remote technologies are acceptable, what parameters need to be in place in order to maintain the integrity of the current personal inspection requirement?

Comment:

None.

B. Data Verification Disclosure Requirements

Mineral projects commonly pass through the hands of several property holders, each generating exploration and drilling data. Using data collected from former operators prior to the current issuer's involvement in the project (legacy data) may be legitimate, but this data needs to be carefully verified, and transparently documented in technical reports. CSA staff see inadequate data verification disclosure at every project stage, from early stage exploration properties to feasibility studies.

Describing sample preparation, security, analytical procedures, and quality assurance/quality control (QA/QC) measures is critical to an understandable mineral resource estimate. Qualified persons must state their professional opinion on those processes, explain the steps they took to verify the integrity of the data, and state their professional opinion whether the data suits the purpose of the technical report. CSA staff emphasized these requirements in both CSA Staff Notice 43-309 Review of Website Investor Presentations by Mining Issuers and CSA Staff Notice 43-311 Review of Mineral Resource Estimates in Technical Reports (CSA Staff Notice 43-311).

Data verification as defined in section 1.1 and outlined in section 3.2 of NI 43-101 applies to all scientific and technical disclosure made by the issuer on material properties. For example, data verification:

- requires accurate transcription from the original source, such as an original assay certificate,
- is not adequate when limited to transcribing data from a previous technical report,
- is not limited to technical reports but also to other disclosure such as websites, news releases, corporate presentations, and other investor relations material, and
- is not limited to the drill hole database and must be completed for all data in a technical report.

6. Is the current definition of data verification adequate, and are the disclosure requirements in section 3.2 of NI 43-101 sufficiently clear?

Comment:

First, the comment *"Using data collected from former operators prior to the current issuer's involvement in the project (legacy data) may be legitimate."* implies that work by former operators was somehow substandard or worse, those former operators were dishonest. I am quite offended by that comment as I have been around long enough to have collected data that you are considering not "legitimate". Legacy data are the basis for many projects and are included in most. Best practices require us to use those data unless they can be demonstrated to somehow be not useable. With reasonable verification, most legacy data are useable because the quality of the work was comparable to what we do today. Those data may not be accompanied by quality control (QC) equivalent to that in common use today, but many of the legacy data have check assays and sometimes duplicates. In many cases, laboratory QC is available. Reassaying rejects and pulps and twin hole drilling and assaying are commonly used to verify that the assays are reasonably accurate and precise. Assay certificates are commonly available for verification of the values. To even imply that all legacy data are somehow suspect as is done in your comment is a serious disservice to the legacy workers on whose shoulders we stand.

As for Q6, the definition of "data verification" is adequate. Minor adjustments to CIM guidelines might be useful, but the definition is fine.

Item 12: Data Verification of the Form addresses a core principle of NI 43-101 and is a primary function of qualified persons. Mining Reviews demonstrate that disclosure in this item is often non-compliant. For example, we do not consider any of the following to be adequate data verification procedures by the qualified person:

- QA/QC measures conducted by the issuer or laboratory;
- database cross-checking to ensure the functionality of mining software;
- reliance on data verification by the issuer or other qualified persons related to previously filed technical reports; and
- unqualified acceptance of legacy data, such as disclosing that former operators followed "industry standards".

In addition, qualified persons frequently limit data verification procedures to the drill hole data set, resulting in a general failure to meet the disclosure requirements of Item 12 of the Form, which apply to all scientific and technical information in a technical report.

7. How can we improve the disclosure of data verification procedures in Item 12 of the Form to allow the investing public to better understand how the qualified person ascertained that the data was suitable for use in the technical report?

Comment:

First, how many Technical Reports have material deficiencies in the data verification section – 1%, 5% or 50%? This sort of unqualified statement provides no basis for comment. I suspect that the failure rate is closer to 1% than 5%, but who knows? This type of blanket accusation without supporting evidence has no place in this type of document.

Second, some comments on your comments:

- **I agree that QAQC is not data verification. It is an integral part of the analytical process; however, I consider review of project QAQC as an important aspect of data verification. It is as important as a database audit for example. If QAQC is missing or deficient in any way, there may be an adverse impact on the mineral resource classification so verification of QAQC is important;**
- **The comment *"database cross-checking to ensure the functionality of mining software"* suggests to me that the people responsible for writing this document really don't understand the process of Mineral Resource estimation. QPs for data acquisition and for Mineral Resource estimation are typically different people. Data housed in some database management software on a server somewhere is the responsibility of the data acquisition QP and is largely irrelevant to Mineral Resource estimation. Those data are extracted from the database, migrated to the Mineral Resource estimation software, stored in that software, and used. If that data extraction or migration is in any way compromised, the Mineral Resource estimate is compromised. We, the industry, learned decades ago that we had to verify the data extraction and migration or our Mineral Resource estimates would be compromised. Is this the only data verification required? No, it is not, but it is very important;**
- **I am not certain that I understand *"… data verification by the issuer or other qualified persons related to previously filed technical reports."* Is this restricted to previous reports or any data verification by the issuer? This seems to be saying that whatever was done for data verification by previous operators, QPs, etc. cannot be relied upon. Does this mean that twin drill holes done 10 years ago now must be redrilled a second time; reassays done three years ago by a different operator are now suspect, results of resampled core is suspect? Why, throughout this document, do you consider previous work to be questionable at best. The tone is that all previous work is misleading and those people responsible for generating and verifying those data were dishonest;**
- **While I agree that "*unqualified acceptance of legacy data*" may be a problem, I must ask, how frequently is this a problem? Is it a problem with one in five reports or one in five hundred reports? Your comment suggests that it is a very common problem that must be addressed. My experience says otherwise. If it is a problem, it is best addressed in the CIM guidelines, not in the Form.**

I would leave Item 12 as is and have CIM update language in their guidelines for best practices. I see changing the Item as a dangerous thing.

8. Given that the current personal inspection is integral to the data verification, should we consider integrating disclosure about the current personal inspection into Item 12 of the Form rather than Item 2(d) of the Form?

Comment:

I don't consider current personal inspections to be "*integral to the data verification*". Personal inspections are sometimes useful and contribute positively to data verification, but many times, they are simply boondoggles completed to satisfy Item 2(d) of the Form. All required data verification could have been done remotely. So, no, current personal inspections should remain in Item 2(d)of the Form.

C. Historical Estimate Disclosure Requirements

In spite of extensive guidance in the Companion Policy, CSA staff see significant non-compliant disclosure of historical estimates.

We remind issuers that non-compliance with section 2.4 of NI 43-101 can trigger the requirement to file a technical report under subsection 4.2(2) of NI 43-101. Examples of non-compliance include:

- failure to review and refer to the original source of the historical estimate,
- failure to include the cautionary statements required by paragraph 2.4(g) of NI 43-101, or inappropriate modification of such statements,
- failure to include required disclosure of key assumptions, parameters and methods used to prepare the historical estimate, and
- inappropriate disclosure by an issuer of a previous estimate.

9. Is the current definition of historical estimate sufficiently clear? If not, how could we modify the definition?

Comment:

The definition is clear and not in need of modification.

10. Do the disclosure requirements in section 2.4 of NI 43-101 sufficiently protect investors from misrepresentation of historical estimates? Please explain.

Comment:

Yes. As long as the historical estimate is clearly described as historical and accurately disclosed, investors are as protected as possible. Resolution of the failures cited above will not, in any way, provide additional protection to investors, but will add pages to the report.

D. Preliminary Economic Assessments

The disclosure requirements for preliminary economic assessments were substantially modified in 2011, resulting in unintended consequences requiring additional guidance published in CSA Staff Notice 43-307 Mining Technical Reports – Preliminary Economic Assessments in August 2012.

Mining Reviews continue to show that preliminary economic assessment disclosure remains problematic for issuer compliance and, more importantly, is potentially harmful to investors. While the inclusion of inferred mineral resources is a recognized risk to the realization of the preliminary economic assessment, CSA staff's view is that the broad, undefined range of precision of a preliminary economic assessment also contributes to that risk. This range of

precision is incongruent with one of the core principles of NI 43-101, which is that investors should be able to confidently compare the disclosure between different projects by the same or different issuers. In addition, CSA staff see evidence of modifications to cautionary language required by subsection 2.3(3) of NI 43-101 that render this provision less effective.

11. Should we consider modifying the definition of preliminary economic assessment to enhance the study's precision? If so, how? For example, should we introduce disclosure requirements related to cost estimation parameters or the amount of engineering completed?

Comment:

Since when can investors "*confidently compare disclosure between different projects*" at any level of confidence? All projects that I have worked on stand alone, have their own positives and challenges, and were done differently even if by the same people. Exploration, metallurgy, Mineral Resource estimation, Mineral Reserve estimation, and economic evaluations are all done differently. None are directly comparable. Different aspects of a mining project are material to major mining companies and junior mining companies. This document seems to be hinting that CSA will be requiring standard procedures and assumptions in the future. That would be the only way to produce an evaluation that would be useful to directly compare projects and that sort of evaluation would not be optimal for any deposit. Indeed, it would penalize some projects and unrealistically improve others.

In answer to Q11, No. PEAs are necessary what-if assessments used to determine the direction to be taken for additional exploration and evaluation. PEAs essentially begin when the first mineralization is encountered and continue until a PFS is indicated. Those that appear in Technical Reports may be the first, but more likely, they are the fifth or tenth PEA performed on a property. The PEA is an avenue of disclosure that allows an issuer to communicate with investors the potential of a project based on what is seen at a preliminary level. The range of precision is necessary as the data are preliminary, incomplete, and many of the interpretations subject to significant change with additional exploration.

12. Does the current cautionary statement disclosure required by subsection 2.3(3) of NI 43-101 adequately inform investors of the full extent of the risks associated with the disclosure of a preliminary economic assessment? Why or why not?

Comment:

The current cautionary statement disclosure is adequate to inform investors of the risks. No cautionary statement can inform investors of "*the full extent of risks*" for a project at PEA level. At some point, investors must have some knowledge of the industry that they are investing in. Technical Reports are not intended to teach investors about the industry or de-risk a project, but rather to fairly and accurately describe the project, discuss obvious risks and opportunities, and discuss the direction management is taking with the project. De-risking the entire

project at PEA stage is not possible and that appears to be the goal of this proposal.

13. Subparagraph 5.3(1)(c)(ii) of NI 43-101 triggers an independence requirement that may not apply to significant changes to preliminary economic assessments. Should we introduce a specific independence requirement for significant changes to preliminary economic assessments that is unrelated to changes to the mineral resource estimate? If so, what would be a suitable significance threshold?

Comment:

No. Subparagraph 5.3(1)(c)(ii) of NI 43-101 is, in my opinion, not warranted at all. There is no reason to believe that independent QPs are any more honest, or dishonest, than non-independent QPs. Throughout this document, QPs and especially non-independent QPs are accused, across the board, of high crimes and misdemeanors that most of us have never, and will never, commit. There is a background message that seems to be stating that CSA is smarter than the QPs with first-hand knowledge of projects and that CSA can second guess better than QPs can do anything from first-hand knowledge of the project. This is actually quite offensive.

In 2011, we broadened the definition of preliminary economic assessment in NI 43-101 in response to industry concerns that issuers needed to be able to take a step back and re-scope advanced properties based on new information or alternative production scenarios. In this context, the revised definition was based on the premise that the issuer is contemplating a significant change in the existing or proposed operation that is materially different from the previous mining study.

CSA staff continue to see considerable evidence of preliminary economic assessment disclosure, subsequent to the disclosure of mineral reserves, which is potentially misleading and harmful to investors. In many cases, issuers continue to disclose an economic and technically viable mineral reserve case, while at the same time disclosing a conceptual alternative preliminary economic assessment with more optimistic assumptions and parameters. In many cases, the two are mutually exclusive options.

14. Should we preclude the disclosure of preliminary economic assessments on a mineral project if current mineral reserves have been established?

Comment:

This question shows an astounding lack of understanding of the mining industry by CSA. I am working on a project now that has an operating open pit mine with two active PEAs on the underground potential beneath the open pit and an extension to the open pit on mineralization discovered several years after mining began. So, we have a Mineral Reserve and two active PEAs that, under this proposed rule, would not be allowed. Your proposal would preclude our discussing the underground and open pit extension potential publicly. This is a significant disservice to the project as the underground may ultimately have more value than the open pit. Fortunately, this project doesn't report in Canada and we can fairly and accurately report the Mineral Reserve and results of PEAs to the

shareholders and potential investors. Those shareholders, and potential investors, can then determine if the mine and additional mineralization investigated by PEA meet their investing objectives.

The only way to accomplish your goal in Q14 is to completely drill a project out before any production commences and that, in most cases, will never happen. It is, in many cases, a colossal waste of money and time.

In some cases, issuers are disclosing the results of a preliminary economic assessment that includes projected cash flows for byproduct commodities that are not included in the mineral resource estimate. This situation can arise where there is insufficient data for the grades of the by-products to be reasonably estimated or estimated to the level of confidence of the mineral resource. We consider the inclusion of such by-product commodities in the preliminary economic assessment to be misleading

15. Should NI 43-101 prohibit including by-products in cash flow models used for the economic analysis component of a preliminary economic assessment that have not been categorized as measured, indicated, or inferred mineral resources?

    Please explain.

    Comment:

    No. With proper cautionary language and sensitivity analysis, by-products should be disclosed. If the result is positive, then there is reason to change the exploration process and disclosing the value of by-products discloses to the investor why the change is happening. A negative result discloses to the investor why the by-product will not be pursued.

E. Qualified Person Definition

CSA staff have substantial evidence that the current qualified person definition is not well understood, and have seen an increase in practitioners with less than 5 years of experience as professional engineers or geoscientists acting as qualified persons in technical reporting. CSA staff have directed many comments to issuers informing them that the qualified person does not meet the requirements of NI 43-101 in the circumstance under review.

16. Is there anything missing or unclear in the current qualified person definition? If so, please explain what changes could be made to enhance the definition.

    Comment:

    There is nothing missing or unclear in the current qualified person definition. What is missing and unclear it the CSA proclivity to reinterpret the definition to fit their personal preferences. Recently, one QP was reportedly rejected because he/she didn't have five years' experience after receiving their professional credentials. Nowhere is that the case. The professional credentials are based on education and experience and all that I am aware of require five years' experience before the professional credential will be issued. What is happening now smacks of CSA punishing those QPs or issuers they don't like. This is not the rule of law,

but arbitrary and capricious behaviour on the part of CSA that requires training of CSA personnel, not redefining qualified persons.

Currently, the qualified person definition requires the individual to be an engineer or geoscientist with a university degree in an area of geoscience or engineering related to mineral exploration or mining.

17. Should paragraph (a) of the qualified person definition be broadened beyond engineers and geoscientists to include other professional disciplines? If so, what disciplines should be included and why?

Comment:

Restricting the qualified person to a geoscientist or engineer was an oversight that has begged for changing for many years. All modern mining projects require assistance from geoscientists, metallurgists, mining and other engineers, legal professionals, permitting specialists, environmental professionals, and marketing specialists. As it stands now, geologists and mining engineers must take responsibility for permitting, environment, marketing, legal, and other specialties with limited relief in Item 3 Reliance on other experts. In most cases, our experience lets us know what is reasonable and what may not be, but we are not specialists in those fields. Each of those specialties should have provisions for QPs.

Qualified person independence

The gatekeeping role of the qualified person is essential for the protection of the investing public. CSA staff see evidence of issuers and qualified persons failing to properly apply the objective test of independence set out in section 1.5 of NI 43-101. The Companion Policy provides certain examples of specific financial metrics to consider. This list is not exhaustive. There are multiple factors, beyond financial considerations, that must also be considered in determining objectivity, including the relationship of the qualified person to the issuer, the property vendor, and the mineral project itself.

18. Should the test for independence in section 1.5 of NI 43-101 be clarified? If so, what clarification would be helpful?

Comment:

Since when are QPs "gatekeepers". Our role is to inform management and investors fairly and accurately not select the information that is released. Gatekeepers do that.

No clarification is needed. Seems; however, that by implication of this question CSA considers non-independent QPs to be liars, thieves, and cheats and "independent" QPs to be saints. I know that is not the case, indeed, I know of a few QPs that will write whatever the CEO wants. There is no reason why issuers QPs cannot produce objective reports.

Named executive officers as qualified persons

CSA staff are concerned that the gatekeeping role of the qualified person conflicts with the fiduciary duties of directors and officers. We have seen situations where the self-interest of such individuals in promoting an attractive outcome for the mineral project overrides their professional public interest obligation as a gatekeeper.

19. Should directors and officers be disqualified from authoring any technical reports, even in circumstances where independence is not required?

Comment:

No. Again, the implicit assumption that everybody except independent QPs are liars, thieves, and cheats. Most directors and officers are men and women of integrity and they will not compromise their integrity. There are some bad apples, yes. There are also some independent QPs that will write whatever the CEO wants. Both are reprehensible, but both exist. There are avenues to discipline those that cross the line. Those avenues should be pursued. Blanket prohibitions are not the solution.

F. Current Personal Inspections

The current personal inspection requirement in section 6.2 of NI 43-101 is a foundational element of the qualified person's role as a gatekeeper for the investing public. It enables the qualified person to become familiar with conditions on the property, to observe the property geology and mineralization, and to verify the work done on the property. Additionally, it provides the only opportunity to assess less tangible elements of the property, such as artisanal mining or access issues, and to consider social licence and environmental concerns. The current personal inspection is distinctly different from conducting exploration work on the property; it is a critical contributor to the design or review, and recommendation to the issuer, of an appropriate exploration or development program for the property.

20. Should we consider adopting a definition for a "current personal inspection"? If so, what elements are necessary or important to incorporate?

Comment:

Here we see "gatekeeper" again. This implies that QPs pick and choose what is released. That should never be the case. All information should be released fairly and accurately.

There is no reason for a definition of "current personal inspection" in NI 43-101.

CSA staff's view is that qualified persons must consider their expertise and relevant experience in determining whether they are suitable to conduct the current personal inspection. For example, geoscientists are generally not qualified to conduct elements of the current personal inspection related to potential mining methods or mineral processing. Similarly, engineers may not be qualified with respect to elements of the geoscience. In such cases, more than one qualified person may be required to conduct a current personal inspection, particularly for an advanced property.

21. Should the qualified person accepting responsibility for the mineral resource estimate in a technical report be required to conduct a current personal inspection, regardless of whether another report author conducts a personal inspection? Why or why not?

Comment:

In some cases, the mineral resource estimator is a geoscientist qualified to conduct a personal inspection. In some cases, they are statisticians or engineers with limited geological background and a personal inspection would have little or no value. So, no there is no reason to require that the mineral resource estimator conduct a personal inspection.

22. In a technical report for an advanced property, should each qualified person accepting responsibility for Items 15-18 (inclusive) of the Form be required to conduct a current personal inspection? Why or why not?

Comment:

While I would agree that a personal inspection by all QPs for advanced projects would be ideal, in most cases it is not necessary. Personal inspections by a very senior mining engineer can answer the questions posed by other QPS for these sections. That minimizes the cost and disruption caused by personal inspections. The result is the same.

We expect issuers to consider the current personal inspection requirement in developing the timing and structure of their transactions and capital raising. Subsection 6.2(2) of NI 43-101 does allow an issuer to defer a current personal inspection in limited circumstances related to seasonal weather, provided that the issuer refiles a new technical report once the current personal inspection has been completed. However, this provision has been used infrequently since it was adopted in 2005. In rare circumstances where issuers do rely on this provision, CSA staff see significant non-compliance with the refiling requirement.

23. Do you have any concerns if we remove subsection 6.2(2) of NI 43-101? If so, please explain.

Comment:

I have significant concerns about removing subsection 6.2(2). It should be expanded to include relief for pandemics and other Acts of God. For exploration-stage projects, personal inspections are useful, but should not be required.

As for expecting *"… issuers to consider the current personal inspection requirement in development and structure of their transactions and capital raising.*", does the author of this statement have any experience in the mining industry or any experience raising capital? Current personal inspections are largely irrelevant to fundraising. Indeed, in many cases, funding opportunities are literally spur-of-the-moment things that are here today and gone to someone else tomorrow. A company has one shot at funding in many cases and current personal inspections are not even considered.

G. Exploration Information

CSA staff continue to see significant non-compliant disclosure of exploration information, including inadequate disclosure of:

- the QA/QC measures applied during the execution of the work being reported on in the technical report,
- the summary description of the type of analytical or testing procedures utilized, and
- the relevant analytical values, widths and true widths of the mineralized zone.

24. Are the current requirements in section 3.3 of NI 43-101 sufficiently clear? If not, how could we improve them?

Comment:

What is "significant non-compliant disclosure"? Is it one in 100 reports, one in 20 reports, or one a year?

Section 3.3 is clear. Additional guidance would only be appropriate in the CIM guidelines.

H. Mineral Resource / Mineral Reserve Estimation

In CSA Staff Notice 43-311 published in June 2020, a comprehensive review of disclosure in technical reports identified several areas of inadequate disclosure of mineral resource estimates.

Reasonable prospects for eventual economic extraction

CIM Definition Standards guidance states that a qualified person should clearly state the basis for determining the mineral resource estimate and that assumptions should include metallurgical recovery, smelter payments, commodity price or product value, mining and processing method, and mining, processing and general and administrative costs. Revisions to the CIM Definition Standards in 2014 and CIM Best Practices Guidelines in 2019 emphasized the requirement for the practitioner to clearly articulate these assumptions and how the estimate was developed.

Mining Reviews provide evidence of technical reports that lack adequate disclosure on metal recoveries, assumed mining and processing methods and costs, and constraints applied to prepare the mineral resource estimate to demonstrate that the mineralized material has reasonable prospects for eventual economic extraction.

25. Should Item 14: Mineral Resource Estimates of the Form require specific disclosure of reasonable prospects for eventual economic extraction? Why or why not? If so, please explain the critical elements that are necessary to be disclosed.

Comment:

No. Between instructions for Item 14 of the Form and CIM definition standards, the requirements for disclosure of reasonable prospects is quite clear. What is not at all clear is – what beyond the instructions and definition standards CSA will require today or tomorrow. The rules seem to change with the seasons or possibly the mood of the reviewer. Again, the CSA is bent on second guessing QPs and deciding that the QPs are wrong.

Data verification

Disclosure of a mineral resource estimate is a significant milestone for an issuer. CSA Staff Notice 43-311 noted that disclosure of data verification procedures and results was one of the weakest areas in the mineral resource estimate review, stating that in technical reports reviewed by CSA staff, more than 20% had incomplete disclosure concerning the qualified person's data verification procedures and results.

26. a) Should the qualified person responsible for the mineral resource estimate be required to conduct data verification and accept responsibility for the information used to support the mineral resource estimate? Why or why not?

Comment:

The only time that a mineral resource estimate is possibly a significant milestone with investors breathlessly awaiting the results is for a junior company reporting the first mineral resource estimate on a property. Beyond that, mineral resource estimates are a routine part of the exploration and development process and updated as material changes are noted.

The hyperbole is really not appropriate in this document.

The premise for this question is that the QP for mineral resource estimation is also responsible for data collection. This is simply not the case for many, possibly most, mineral resource estimates. Mineral resource estimation is a team effort that requires input from numerous specialty areas including geology, data collection, metallurgy, mining, permitting, social, marketing, and potentially others. The QP for data collection contributes to the mineral resource estimate and that QP relies on his/her contribution.

As for Q26, in many cases, possibly most, the QP responsible for mineral resource estimation is not in any way qualified to comment on data collection and should not be required to conduct data validation beyond verifying that the data used for mineral resource estimation are the same as the data in the database. The QP responsible for data collection and QAQC should conduct data validation and the QP responsible for mineral resource estimation should rely on that work.

b) Should the qualified person responsible for the mineral resource estimate be required to conduct data verification and accept responsibility for legacy data used to support the mineral resource estimate? Specifically, should this be required if the sampling, analytical, and QA/QC information is no longer available to the current operator. Why or why not?

Comment:

The QP responsible for mineral resource estimation is not qualified to comment on data collection and should not be required to conduct data validation of legacy data beyond validating that the data used for mineral resource estimation are the same as the data in the database. The QP responsible for data collection and QAQC should conduct validation of legacy data. If "… *the sampling, analytical, and QA/QC information is no longer available* …", how do we even know of the

data? If this is intended to mean that details of sampling, analysis and QAQC are not available but the data are available, then there are various ways to validate those data and that validation should be the responsibility of the QP responsible for data collection and QAQC, who is not necessarily the QP for Mineral Resources.

Risk factors with mineral resources and mineral reserves

Paragraph 3.4(d) of NI 43-101 requires issuers to identify any known legal, political, environmental and other risks that could materially affect the potential development of the mineral resources or mineral reserves. In addition, Items 14(d) and 15(d) of the Form require the qualified person to provide a general discussion on the extent to which the mineral resource or mineral reserve estimate could be materially affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors.

Many technical reports only provided boilerplate disclosure about potential risks and uncertainties that are general to the mining industry. Failure to set out meaningful known risks specific to the mineral project make mineral resource and mineral reserve disclosure potentially misleading.

27. How can we enhance project specific risk disclosure for mining projects and estimation of mineral resources and mineral reserves?

Comment:

The "boilerplate disclosure" you are complaining about typically encompasses 90%, or more, of the material risks to the project. Most risks to Mineral Resources and Mineral Reserves are common to all mining projects. What are "meaningful known risks"? What is "meaningful" to you may well be irrelevant to the responsible QP. Who is correct? Throughout this document and by recent CSA actions, it is obvious that the CSA considers themselves to be correct in all cases and that their second-guesses are better than the QP's informed opinion.

It is difficult to discern the point of this question. Is the CSA attempting to de-risk the mining industry? If so, you will fail. Current reporting requirements require a general discussion of risks to the project. Those requirements are adequate. What may be useful is to have the CSA improve their communication with the industry and inform the industry of their expectations. A discussion can then begin. Prescribing one size fits all requirements is never the answer and always fails.

I. Environmental and Social Disclosure

In recent years, CSA staff have seen an increase in public and investor awareness of environmental and social issues impacting mineral projects. Item 4: Property Description and Location and Item 20: Environmental Studies, Permitting and Social or Community Impact of the Form allow for disclosure of relevant environmental and social risk factors for the mineral project.

However, these disclosure requirements related to environmental and social issues have remained largely unchanged since NI 43-101 was adopted in 2001.

28. Do you think the current environmental disclosure requirements under Items 4 and 20 of the Form are adequate to allow investors to make informed investment decisions? Why or why not?

Comment:

I think that the environmental disclosure requirements are adequate to inform investors of the current situation at the effective date of the Technical Report. That information can then be used by investors as part of their due diligence that includes other sources of information. The combined sources are the basis of an informed decision, not just the Technical Report.

29. Do you think the current social disclosure requirements under Items 4 and 20 of the Form are adequate to allow investors to make informed investment decisions? Why or why not?

Comment:

I think that the environmental disclosure requirements are adequate to inform investors of the current situation at the effective date of the Technical Report. That information can then be used by investors as part of their due diligence that includes other sources of information. The combined sources are the basis of an informed decision, not just the Technical Report.

30. Should disclosure of community consultations be required in all stages of technical reports, including reports for early stage exploration properties?

Comment:

Based on the wording of this question, my answer is no, there should be no requirement to disclose community consultations beyond a comment that they are happening as a routine part of the process. Community consultations are frequently extremely sensitive negotiations that can, and have, adversely affected all parties when disclosed, largely because of misunderstanding of what is actually happening in the negotiations. Prescribing disclosure requirements will most likely have significant adverse impacts.

J. Rights of Indigenous Peoples

We recognize Indigenous Peoples to include First Nations, Inuit and Métis Peoples in Canada. We also recognize that issuers have projects in jurisdictions outside of Canada, and those jurisdictions will have Indigenous Peoples.

The unique legal status of Indigenous Peoples has received national and international recognition. For many projects, the rights of Indigenous Peoples overlap with legal tenure, property rights and governance issues. We believe that disclosure of these rights, and the Indigenous Peoples that hold them, forms an essential part of an issuer's continuous disclosure obligations.

Item 4 of the Form requires disclosure of the nature and extent of surface rights, legal access, the obligations that must be met to retain the property, and a discussion of any other significant factors and risks that may affect access, title, or the right or ability to perform work on the

property. We are interested in hearing whether other disclosures should be included in the Form, or the issuer's other continuous disclosure documents, that relate to the relationship of the issuer with Indigenous Peoples whose traditional territories underlie the property.

31. What specific disclosures should be mandatory in a technical report in order for investors to fully understand and appreciate the risks and uncertainties that arise as a result of the rights of Indigenous Peoples with respect to a mineral project?

Comment:

It is not possible "… *to fully understand and appreciate the risks and uncertainties that arise* …" in an NI 43-101 Technical Report. That goal, while lofty, is not achievable and quite beyond the purview of QPs. Technical Reports are summaries of work completed as at the effective date of the report. Many social reports are thousands of pages and "… *to fully understand and appreciate the risks and uncertainties that arise* …" requires study of the entire report(s). It is quite impossible to do more that broadly summarize in the Technical Report.

This entire section suggests that all interactions are negative and that negotiations with Indigenous Peoples are problems that require specific disclosure. That is insulting to Indigenous Peoples and to the industry which has worked effectively worked together on numerous projects. There have been some problems, but those are best resolved by negotiations, not disclosure in NI 43-101 Technical Reports.

Beyond the fact that the project may fall within Indigenous Peoples' purview, no prescribed disclosures are necessary. Most projects that fall within Indigenous Peoples' traditional or legislated territories will require negotiations with the affected Indigenous Peoples. In many cases, more than one Indigenous group is involved. Negotiations can be extremely sensitive and premature release of information can have adverse consequences for all parties involved. Once negotiations with all parties are complete, a summary of the outcome is typically included as part of the Technical Report. Prescribing what is released and when is detrimental to effective management of exploration and mining projects.

Item 4(d), Item 4(e), and Item 4(g) require adequate disclosure of the issuer's "*title to, or interest in, the property including surface rights, legal access, the obligations that must be met to retain the property, and the expiration date of claims, licences or other property tenure rights;". This includes rights obtained from Indigenous Peoples.*

32. What specific disclosures should be mandatory in a technical report in order for investors to fully understand and appreciate all significant risks and uncertainties related to the relationship of the issuer with any Indigenous Peoples on whose traditional territory the mineral project lies?

Comment:

Again, we see "… *to fully understand and appreciate* …". This is simply not possible in the realm of NI 43-101 Technical Reports which are, by definition, summaries of work completed to date.

Beyond what is prescribed now in Item 4(d), Item 4(e), and Item 4(g), nothing should be required.

33. Should we require the qualified person or other expert to validate the issuer's disclosure of significant risks and uncertainties related to its existing relationship with Indigenous Peoples with respect to a project? If so, how can a qualified person or other expert independently verify this information? Please explain.

Comment:

As it stands now, no QP for any Technical Report has standing to validate anything related to Indigenous rights. QPs are geoscientists and engineers, not attorneys or social specialists. Indigenous Peoples' rights are the purview of legal and social specialists who are precluded from being QPs.

The only validation possible is review of signed legal documents. That validation would require legal input and is largely not necessary.

I find this entire section extremely offensive. There is an underlying premise that Indigenous Peoples are a problem to be surmounted with only risk and uncertainty when, in fact, the mining industry has successfully partnered with numerous Indigenous Peoples and the results have been very positive. There have certainly been less positive outcomes, but those are becoming fewer as the industry understands the needs and wishes of Indigenous Peoples and Indigenous Peoples understand the realities of mining and become partners in the work. By working together, both groups have benefited. None of which should require specific disclosure or comment is this type of document.

K. Capital and Operating Costs, Economic Analysis

Capital and operating costs assumptions are integral to the financial and economic analysis of mineral projects. We see longstanding evidence, including industry-based case studies, of significant variance between disclosed cost estimates in technical reports and actual costs as projects are developed. This variance can have negative impacts on investors who rely on financial disclosure in technical reports.

Capital and operating costs

34. Are the current disclosure requirements for capital and operating costs estimates in Item 21 of the Form adequate? Why or why not?

Comment:

This consultation paper states that there is "long-standing" evidence for something but does not provide examples. It also making blanket accusations of malfeasance by mining companies and ignoring those projects that came in on time and under budget.

The preamble suggests that all studies are flawed because the exact dollar amount indicated in the estimates is not met. These are estimates that improve from PEA to PFS to FS, but they are estimates that may not be realized. That is one of the "*boiler plate*" risks cited in all Technical Reports because it is a risk to all mining projects.

Item 21 clearly and succinctly describes principles-based requirements for disclosure that applies to any type of mining study, operation, or deposit. More prescriptive rules are not needed and would be counterproductive. No two deposits or operations are exactly the same, so QPs need to be allowed the flexibility to select the most appropriate accuracy and contingency for the project.

35. Should the Form be more prescriptive with respect to the disclosure of the cost estimates, for example to require disclosure of the cost estimate classification system used, such as the classification system of the Association for the Advancement of Cost Engineering (AACE International)? Why or why not?

Comment:

See my response to Q34.

36. Is the disclosure requirement for risks specific to the capital and operating cost assumptions adequate? If not, how could it be improved?

Comment:

Item 15 and Item 25 require discussion of risks to mineral reserves. Those requirements are adequate. More prescriptive requirements are not needed.

Economic analysis

As stated above, a core principle of NI 43-101 is to require disclosure that will allow investors to be able to confidently compare the disclosure between different projects by the same or different issuers. Standardized disclosure is fundamental to this principle.

37. Are there better ways for Item 22 of the Form to require presentation of an economic analysis to facilitate this key requirement for the investing public? For example, should the Form require the disclosure of a range of standardized discount rates?

Comment:

I most strongly disagree with the CSA statement that an economic analysis is a core principle and that "*standardized disclosure is fundamental to this principle.*" Standardized disclosure might work for a specific deposit type and size in a regional framework, but will not work across the board for all deposit types and sizes. Item 22 provides a principles-based requirements that can be molded to fit any deposit type and size.

How can anyone "*confidently compare the disclosure*" of a porphyry copper deposit owned by a major mining company and a VMS deposit owned by a junior company. Their goals are distinctly different, materiality is different, scales are different – there is nothing to compare except possibly the IRR. Where did the

"*confidently compare*" concept come from? It is not part of NI 43-101 and has never been. NI 43-101 Technical Reports have always been a reliable way to present an accurate, complete, unbiased, timely, and not misleading summary of the technical work done on a project.

L. Other

38. Are there other disclosure requirements in NI 43-101 or the Form that we should consider removing or modifying because they do not assist investors in making decisions or serve to protect the integrity of the mining capital markets in Canada?

Q38 Comment 1:

The definition of Qualified Person seems to be a moving target to be changed at the whim of any regulator. In one case I am aware of, the regulator disqualified a QP because that QP did not have 5 years' experience beyond receipt of their professional credentials. That flies in the face of the definition and requirements of QP and is arbitrary and capricious at best and vindictive and malicious at worst. The regulators must be required to follow the same rules that they impose on the industry or chaos reigns.

Q38 Comment 2:

This consultation paper is rife with comments that strongly suggest that the author does not have any significant experience with the topic being discussed. I have seen and heard about comments from regulators about aspects of technical reports for which the commenting regulator has no experience at all. Mineral Resource estimation is an example. Many of the comment in this paper indicate to me that the author doesn't really understand the process.

Should not the regulators have the same experience requirements that are imposed on QPs? I think that they should. How can someone with no experience with assaying find fault with data collection? How can someone with no experience in Mineral Resource estimation find fault with Mineral Resource estimates? I submit that they cannot, no matter how many checklists they have and any findings by those with no experience simply erodes the confidence that industry has in the regulators.

Q38 Comment 3:

In recent years, regulators have become increasingly hostile to the industry they are charged with regulating. This consultation paper shows significant examples of that – QP opinions based on first-hand knowledge of a project are dismissed by second-guessing regulators with no experience on a project and very little if any experience with the topic in question. Throughout this document, QPs are essentially accused of dishonesty. Broad-brush accusations and condemnations of the industry are rife.

The NI 43-101 model has worked very well because the regulated knew that to improve investor confidence in the industry, significant new regulations were needed. Most companies jumped on board and the industry and government worked out the first NI 43-101 version. Industry knew the rules and, I think, has largely lived within and honored the limits of those rules, the above-mentioned, unsubstantiated accusations notwithstanding. From time to time, either the regulations or the supporting guidelines were modified to reflect changing conditions and expectations. We, the industry, expected that from time to time, we would make mistakes or misinterpret the rules and for years, a simple phone call or meeting was all that was needed to resolve the conflict. Now, any misdeed, whether real or imagined by the regulators is sent to the issuer with threats of defaulting issuer listing or other punishment. There is no room for discussion with regulators – they are right and we in the industry are wrong – period.

This antagonistic attitude and antagonistic actions have significantly eroded confidence in the regulators. To many of us, it appears that the regulators are each in their own little world where the rules are what they say they are and they are unquestionable. We have been moving quite rapidly from the rule of law to the rule of regulators which is in no way conductive to investor confidence. Regulators should review reports and provide an accurate, complete, unbiased, timely, and not misleading review of the technical work. We are seeing biased, misleading, and apparently vindictive reviews of our technical work. Second-guessing by regulators is the norm and QPs are always wrong. This must change.

Q38 Comment 4:

As a QP and professional geologist, my behaviour is governed by ethics rules promulgated by licensing groups and learned societies with which I am affiliated and by law in some cases. Breaches of those ethics rules can lead to significant penalties including, in the extreme, incarceration. Breaches of ethics by CSA members seems to be the norm. On one project that I am aware of, the regulator determined that an NI 43-101 Technical Report was deficient because there had been no personal inspection. No personal inspection was performed by the QP because of lockdowns during the current pandemic. Whether or not the regulator had the authority to allow the rule to be bent is a question for another time. But what is important is that the issuer was given 10 days to refile the report with a current personal inspection or go on the defaulting issuer list. The regulator assumed that the issuer could not refile within the time allotted and immediately placed the issuer on the defaulting issuer list. We filed the report on day 10 of the 10-day window, I know, I completed the personal inspection, authored the report, and was the QP, but the damage to the issuer was already done. Was this simple arrogance, vindictiveness, or a malicious attempt to destroy the company? I don't know but it was incredibly unethical and it did significant damage to the reputation of the issuer that was totally unwarranted. I would be called in front of one or

more disciplinary committees for such a breach and rightly so. Why not the regulator? Are they above the laws and rules that everyone else must live with? Apparently, they are.

Thank you for allowing me to participate in this discussion.

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