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



Canadian Securities
Administrators

Autorités canadiennes
en valeurs mobilières

CSA CONSULTATION PAPER 43-401

CONSULTATION ON NATIONAL INSTRUMENT 43-101 STANDARDS OF DISCLOSURE FOR MINERAL PROJECTS

April 14, 2022, Introduction

Canada plays a leading role in mining capital formation¹ and National Instrument 43-101 *Standards of Disclosure for Mineral Projects (NI 43-101)* is recognized globally as the pre-eminent standard for mineral project disclosure.

The purpose of this consultation paper (**Consultation Paper**) is to obtain feedback from stakeholders about the efficacy of several key provisions of NI 43-101, priority areas for revision, and whether regulatory changes would address concerns expressed by certain stakeholders. The information we gather will assist the Canadian Securities Administrators (**CSA** or **we**) in considering ways to update and enhance the current mineral disclosure requirements, to provide investors with more relevant and improved disclosure, and to continue to foster fair and efficient capital markets for mining issuers.

This Consultation Paper should be read together with NI 43-101 and Form 43-101F1 Technical Report (the **Form**). Unless defined, terms used in this Consultation Paper have the meanings given to them in NI 43-101.

The CSA are publishing this Consultation Paper for a 90-day comment period. In addition to any general comments that you may have, we also invite comments on the specific questions set out in the Consultation Paper.

The comment period will end on July 13, 2022.

Current Framework

Summary

NI 43-101 governs disclosure of scientific and technical information concerning mineral exploration, development, and production activities by mining issuers for a mineral project on a property material to the issuer. The disclosure, whether oral or written, must be based on information provided by or under the supervision of a qualified person, and specified terminology is required when disclosing mineral resources and mineral reserves. NI 43-101 also requires a mining issuer to file a technical report at certain times, using the prescribed format of the Form, prepared by one or more qualified persons who may need to be independent of the issuer and the mineral property.

The intended audience of a technical report is the investing public and their advisors who, in most cases, will not be mining experts. (A non-technical, Technical Report can be the source of some issues? This is a fundamental problem as verification and validation of scientific and technical information require a technical information; “context” is insufficient. There is no way around this and still fulfill the purpose of disclosure. Other than to take the word of the QP. Is this instance then, this becomes no more than a corporate presentation and we should remove the word “Technical”?) The technical report should include sufficient context (opinion?) and cautionary language (disclaimers?) to allow a reasonable investor to understand the nature, importance and limitations of the data, interpretations and conclusions summarized in the report (opinion and disclaimers may cover the letter of the “law” as currently contemplated and applied by regulatory bodies but this does not always address the spirit of the “law” ... fulsome and functional disclosure for informed decision making).

History

NI 43-101 was first adopted in 2001, and most recently amended in 2011 when the CSA adopted new versions of NI 43-101, the Form and the Companion Policy 43-101CP to National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (the **Companion Policy**) that:

- eliminated or reduced the scope of certain requirements,

¹ In the year ended December 31, 2020, S&P Global Market Intelligence reported that over 50% of global mining capital formation by public mining issuers emanated from Canada.

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- reflected changes that had occurred in the mining industry,
- provided more flexibility to mining issuers and qualified persons in certain areas, including to accept new foreign professional associations and designations, and reporting codes as they arise or evolve, and
- clarified or corrected areas where the previous disclosure requirements were not having the effect we intended.

Since NI 43-101 was last revised in 2011, the mining industry has experienced market highs and lows and has seen numerous changes, including:

- an update by the Canadian Institute of Mining, Metallurgy and Petroleum (**CIM**) of the CIM Definition Standards for Mineral Resources and Mineral Reserves (**CIM Definition Standards**) and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (**CIM Best Practice Guidelines**),
- emerging demand for commodities related to the growth in green energy and carbon neutral initiatives,
- increased investor awareness of the risks related to mineral project development, including demand for information about the environmental and social impacts, and
- an overhaul by other influential mining jurisdictions (including Australia and the United States) of their mineral resource/mineral reserve reporting codes and associated disclosure standards, including updates to the Committee for Mineral Reserves International Reporting Standards (**CRIRSCO**) template, which is the established international standard for the public reporting of exploration targets, exploration results, mineral resources and mineral reserves.

Since 2011, the CSA has continually monitored the mineral disclosure requirements in NI 43-101 and gathered data evidencing deficiencies identified through continuous disclosure reviews, prospectus reviews, and targeted issue-oriented reviews (collectively, **Mining Reviews**). These deficiencies include:

- qualified persons failing to properly assess their independence, competence, expertise or relevant experience related to the commodity, type of deposit or the items for which they take responsibility in technical reports,
- poor quality of scientific and technical disclosure in technical reports for early stage exploration properties for new stock exchange listings,
- inadequate mineral resource estimation disclosure, including disclosure related to reasonable prospects for eventual economic extraction,
- misuse of preliminary economic assessments, and
- inadequate disclosure of all business risks related to mineral projects.

Consultation Questions 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.

i *In some regards, no. There are potential shortfalls in the current disclosure requirements:*

1 *Indiscriminate use of the term verification (without validation); these are formal audit terms that are either absent or misapplied in the form. Proper use in proper context would improve the efficacy of the form (i.e. protect and inform investors). A glossary of key functional/technical terms (vs. scientific) would help all stakeholders in this regard (e.g., verification, validation, risk, benchmark, consultation, engagement etc.).*

2 *Disclaimers on historical data; many early stage properties under investigation are based on historical work that cannot be verified to true measure (e.g., actual collection and prep). Therefore, more latitude on reporting historical work with appropriate context, should be considered. It is as important to not exclude information when considering “fulsome disclosure”, either knowingly or*

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out of fear of over promotion. It is not uncommon to exclude poor prospecting / sampling results because they “were not verified” by the QP.

3 *This should not be extended to historical resource estimates. There is no benefit to the public to report the grade/tonnage of an historical estimate that can, in no practical way, be verified or validated to any degree, without a new resource estimate. Historical estimates (disclaimed or otherwise) are largely promotional content that the regulatory bodies usually bristle at elsewhere in public disclosure.*

4 *There is undue reliance on the QP opinions throughout the Form wherein, “opinion” is allowed to supersede the verification data presented. An “opinion should only be acceptable to the degree that it is validated by benchmarks. **Benchmarking needs to be a key procedure throughout the Form (i.e. formally defined and required).***

5 *Site visit requirements are quite weak and serve only to provide a false sense of security to the investor. There should be more descriptive (verification and validation) procedures around this, beyond a tick box.*

6 *The current, intense focus, on headings and sections is largely for the regulatory review convenience and does not, in and of itself, provide a valid protection of the investing public.*

7 *Sampling (in ALL forms) needs to be better validated and verified with details and benchmarks. Selective sampling of bulk material, surface material and drill core has become rampant. Micro-sampling of veins (e.g., <0.5 m) is a selective bias used to generate ultra-high “assay-tonne” values that are demonstrably not valid (i.e. we know that a 30/50 g FA assay-tonne is not representative of orebody tenor let alone the interval). There are effectively no rules around bulk samples and this is exploited to get around the more formal oversight of resource estimation “disclosure.”*

8 *Land access, surface rights and permitting are critical elements at the very earliest stage of mineral exploration and provide significant investor risk from both access and timeline perspectives. This needs to be an enhanced section/discussion wherein stakeholders and workflow (e.g., permit and access timelines) need to be clearly identified and fully discussed.*

a *Investors need to be aware of the workflow (e.g., what work/access permits and when) and all relevant parties in order to make an informed investment decision.*

b *Issuers need to be transparent about the current process(es) and future process(es) relevant to the implied or proposed project development.*

c *This may take the form of an enhanced ESG section (please do not call it the ESG section); wherein it can also be described by appropriate maturity levels (e.g., exploration, development or production ... each with general workflow elements that also allow for site specific requirements).*

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?*

1 *Yes, there could be an abbreviated version of the form (technical report) for pre-resource projects.*

2 *It could be a more simplified Technical Report/Form for an “early stage property” (i.e. pre-resource). I do not think that NR, AIF or MD&A would be the proper avenues for this type of disclosure (it may facilitate transcription into some regulatory filings since many are cut-and-paste now). There would be problems with standardization, formats and oversight outside of a Technical Report/Form. A quick review of these types of documents (e.g., reporting drill results) demonstrates the piecemeal nature of “technical” disclosure.*

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

1 *As above, early stage / pre-resource (i.e. a valid current resource)*

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- 2 *Resource disclosure needs to be significantly enhanced and not more abbreviated.*
 - a *How do you discuss the critical elements of a resource that directly impact its quality and validity in a non-technical, technical report?*
3. a) Should we consider greater alignment of NI 43-101 disclosure requirements with the disclosure requirements in other influential mining jurisdictions?
 - 1 **NO**, we should construct and produce our own forms and policies that are based on sound, best-in-class project management, technical, scientific, business and social processes and benchmarks. We are by default the most influential mining jurisdiction, so why would we follow. We should incorporate all information (including that from other jurisdictions) but matching for the sake of matching does not protect the public and often compounds legacy issues.
- c) If so, which jurisdictions and which aspects of the disclosure requirements in those jurisdictions should be aligned, and why?
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 disclosure 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.
 - 1 *This is not necessary.*
 - 2 *The report should be filed at the same time as disclosure. This is far too much time for “unsubstantiated” information to be in the public realm. Why is “in a rush” an acceptable rationale for this? The enhanced disclosure that may (or may not) accompany the primary press release is generally insufficient for validation and verification purposes (i.e. informed investment decision). If issuers need the information out quicker, start your work earlier, manage your timelines better and manage investor expectations more responsibly.*

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?
 - 1 *Only because the current “site visit” has become a tick box exercise.*
 - 2 *Otherwise this does not achieve the same purpose (i.e. validity) of a site visit. These are great tools to use on a site visit to enhance the efficacy of a proper (valid) site visit.*
- c) If remote technologies are acceptable, what parameters need to be in place in order to maintain the integrity of the current personal inspection requirement?
 - 1 *See discussion below #20.*

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 (*boilerplate “QA/QC” statements are out of date; you mean validation, verification and benchmarking, both historical and current, are critical*). 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 (*There is no need for opinions so why continuously invite them; QP’s must present their verification [process and data] and validate with benchmarks to support a professional assessment and or conclusion; there should be much less room for opinions ... I do think this is where several problems originate*). CSA staff emphasized these requirements

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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?*

1. *No.*
2. *Please take a step back in the review of this area; start with validation (fit to purpose) both historical and current (i.e. Technical Report disclosure) and verification (fit to spec) both historical and current (i.e. Technical Report disclosure). There are many audit procedures that are available and relevant to the process that are excluded both from the form and practice due to lack of qualifications of QP. The Form should tap into formal audit procedures for its structure and guidance in this area.*
3. *Note that there are two “technical” elements to most reviews (i.e. grade/tenor and geometry/spatial); Many of the issues alluded to in the introduction are related to geometry and volumes as opposed to simply grade “verification.” Does verifying a selective sample protect the public?*
 - o *This current Item highlights the narrow perspective of the CSA with regards to QA/QC (versus a quality management system) and the even more narrow perspective with regards to analytical values (i.e. +/- 3SD).*
4. *Think about the question above ... “suits the purpose.” This then is validation not verification. Was/is the sampling (in all contexts) valid (then) and is my verification process valid (now).*

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?*

1. *Please see previous comment ... as above ... this requires a proper understanding and application of **validation**, **verification** and **benchmarking** by the CSA. Suitable place to put a glossary of these key terms (e.g., risk) and formal audit terms and processes (by qualified persons).*

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2. *Note, verification of an invalid process (including "personal inspections") provides no measurable benefit (e.g., verification by comparing ID3 to OK using the same data/parameters). It may be verification but it does not validate either method or the result.*
 3. *A re-write of the Form (e.g., Item 12) in this context would be required and would facilitate the efficacy of the Form, the reviewability of the disclosure and the protection of the public (enhanced public confidence).*
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?
1. *Would be OK to the degree that it would need to demonstrate that the elements of the inspection are valid for the purpose of the technical report (e.g., exploration potential, resource, access, infrastructure etc.).*

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?
1. *Yes, reasonably clear.*
10. Do the disclosure requirements in section 2.4 of NI 43-101 sufficiently protect investors from misrepresentation of historical estimates? Please explain.
1. *No.*
 2. *You are counting on the (unsubstantiated) belief that a person will read the technical disclaimer and thus appropriately discount the "value" of the historical estimate. This falls into the plausible denial area. These features (please the issuers and CYA) generally serve to confuse both the issuers and the public.*
 3. *"Historical Estimates" (i.e. pre NI 43-101) should only be disclosed to the degree that one existed, the metals involved and the type of mining contemplated (e.g., OP or UG). In this case they must be noted as part of a fulsome disclosure.*
 - a. *Categories that are not current (i.e. CIM definitions) should not be referenced in any context.*
 - b. *In the case where categories are referred to using the same terms as current (e.g., measured, indicated, inferred or "reserves") then they should be demonstrably consistent with current standards and BP, if they are to be disclosed.*

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.

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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 (I do not think the severity and frequency is recognized.)* to the realization of the preliminary economic assessment, CSA staff's view is that the *broad, undefined range of precision (What does this mean?)* 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 *(Do you mean benchmarking? The CSA compares disclosure. The public needs accurate information)*. 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 *(So CSA encourages boilerplate disclaimers?)*.

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?

- 1 *Yes. Firstly describe what it is ... not what it is not!*
 - a *"First, by definition, it cannot be a PFS or FS. Second, a PEA can only demonstrate the potential viability of mineral resources."*
- 2 *Not sure of the use of the term "precision" in this context ... if you are referring to OOM and confidence levels then there must be some prescription here. Is +/- 100% useful to the investor?*
 - a *Using the same headings does not impact PEA "precision."*
- 3 *Take a step back ... what is the purpose of a PEA? The word "purpose" does not even occur in the staff notice.*
 - a *Is it potential viability? No?*
 - b *Is it a scenario analysis? Yes.*
 - i *Used to identify and assess the economic and technical parameters of a particular development scenario wrt the current resource (e.g., risk/sensitivity)*
- 4 *Question: Cost estimation ... Answer: Benchmarking*
 - a *Prescriptive (benchmarking) ... same metals, same methods, same jurisdictions, same time etc.*
 - i *Can make these sequential criteria such that level of confidence can be determined and there is little to no opportunity to describe the famous "unique" situation. Even if this is a critical or energy metal.*
 - 1 *e.g., Should not accept \$2.00 /t mining costs when the identical operation next door is \$3.85 /t. This is where "opinions" get you and where benchmarks are most effective.*

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?

- a *The answer is no.*
 - i *"If the disclosure includes the results of an economic analysis of mineral resources, an equally prominent statement that mineral resources that are not mineral reserves do not have demonstrated economic viability."*
- b *You cannot present an "economic analysis" and then tell the investor that this does not demonstrate "economic" viability. This is willful ignorance and a CSA problem, not an issuer problem. If you use technical parameters (modifying factors) by virtue of economic assumptions you are creating some form of "reserves" concept. Again this just sets the stage for confusion and mismanagement of public expectations from the start.*

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- c *The biggest issue here: If PEA's are allowed to exist (since you can NEVER disclaim away the "economic" value), then addressing the intrinsic assumptions and parameters (i.e. costs, technical parameters, discount rates and inferred resources) is the better approach.*
 - i *Add some clarity here with regards to benchmarking (and other input assumptions) and you may find less PEA's (good thing) and more accurate PEA's (better thing).*
 - ii *Inferred resources are the elephant in the room ... this must be fixed.*
 - 1 *If you are not addressing inferred resources (LA GRANDE POUBELLE) then you are not addressing the biggest risk element (aside from discount rates).*
 - 2 *Either remove Inferred resources or become prescriptive and state that Inferred resources can make up no more than 25% of proposed LOM material.*
 - 3 *How many projects do not have a resource when a resource estimate is commissioned? There should be a reasonable number (e.g., 5-10%) rejected (by QP) for insufficient information if the process is truly valid.*
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?
- 1 *Something like this may work:*
 - a *(iii) a 50 percent or greater change in the total discounted pre-tax NPV on a property material to the issuer, since the issuer's most recently filed independent technical report in respect of the property.*

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?
- 1 *These scenario analyses should be allowed in some form (not PEA). They can be valid and most companies do undertake these types of studies (e.g., "scoping study" / "options analysis" on adding a new process workflow element).*
 - a *Should consider bulk samples in this context as well.*
 - 2 *However, if the "Reserve" case (PFS/FS) is the base case that is being modified (especially LOM tonnage/grade) by this new "preliminary economic assessment" then the reserves are by extension being modified and past "reserves" should be removed or retracted until they can be re-established as new reserves given the new economic assessment and application of standard modifying factors etc.*

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

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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.

1 Yes.

2 *If you cannot validate and verify both the grade and distribution (plus metallurgical performance etc.) how can you develop any level of confidence (is +/- 100% useful to protect the public). Each element/metal should be able to stand on its own merit (re. verification and validation) through the entire disclosure scrutiny.*

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. (It is important to note here that if a QP, a P. Geo. or P. Eng., is noted by CSA staff to implicitly or explicitly practice outside of their area of expertise, then the QP is breaching the "professional code of conduct" of their respective association. This becomes a professional practice issue that is outside the authority of the CSA, other than to file a complaint to the representative professional body. Does the CSA follow the proper course of action in these cases?).*

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.

1 *The "definition" is so general that it is unclear by nature. It is understood and just "abused" to some degree. So how can the public validate the expertise of the QP?*

a *Not sure how this is only limited to practitioners with less than 5 years but presumable the CSA data supports this statement.*

2 *There is (must be) an assumption of integrity to a large degree but this area needs to be improved to capture appropriate first principle geological / engineering experience and expertise and demonstrate the same to the public.*

a *e.g., many resources modellers are QP's because of completing resource models (a software expertise in large part) versus QP's in geological (sensu lato) setting and ore controls of a particular deposit (also with some computer skills).*

i *The basic notion of a unicorn Geo. or Eng. is part of the issue with the QP concept.*

ii *Software skills are not recognized as technical SME to my knowledge.*

b *I would again refer CSA staff to the notion that they may be entering the authority of professional associations. The better course of action here could include enhanced communication structure(s) with these associations.*

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?

1 *Yes. Should included requirements for additional training and experience at least.*

a *For example what education and or experience is required to assess quality management systems? None!*

i *The vast majority of "QP's" have little to no training in many of these areas.*

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- b *Why can an engineer draft a financial model for a PEA?*
- c *There are many areas (ESG, Risk, Financial, Quality, etc.) that additional training and specific experience pathways are available and should be required for a QP to sign off as a QP in that area or sub-discipline.*
- d *The basic notion of a unicorn Geo. or Eng. is a problem.*

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, which 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?*
- 1. *It is sufficient and broad in scope (perhaps not in application).*

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.

18. *Should directors and officers be disqualified from authoring any technical reports, even in circumstances where independence is not required?*
- 1 *Yes.*

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 fewer 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?*
- 1 *Yes*
 - a *Once again consider the concepts of verification and validation.*
 - b *What is the purpose (identify elements in context of risk or potential for deviation from the predicted or expected)?*
 - i *Can be technical, environmental, social, governance (please include governance).*
 - c *What did you do on site, why did you do it and what were the results (outcome) as related to the initial purpose of that element (valid)? Discuss limitations and failures (e.g., access, conditions, flaws etc.) with relevance to potential impact (risk) of **your conclusions**, at least (if not the larger scope of potential impacts to the project workflow).*
 - d *It is important to explicitly describe the purpose (validity) of more actions.*

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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 (are generally) 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?*

1 *Yes.*

2 *"The qualified person accepting responsibility for the mineral resource estimate" ... Then by definition of a qualified person they should be qualified for a personal inspection and should complete a personal inspection. If your "qualified person" (resource) is not a qualified person (geology) then you have a genuine issue with "qualified person".*

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?*

1 *Yes, if there is an opportunity to conduct a valid personal inspection as related to the area of oversight then why would that not be the case.*

2 *Yes, if it provides improved information (e.g., assumptions and design parameters) and thus more accurate results.*

3 *If issuers can spend \$25,000 for a booth at a trade show they can spend \$2,500 to provide higher quality, more accurate, fulsome data/disclosure.*

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.*

1 *No.*

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?*

1 *No.*

2 *There is extremely limited understanding of quality systems in exploration data disclosure. Far too many "QP's" have no formal training or experience in quality, risk, and formal audit techniques (e.g., verification, validation, benchmarking etc.)*

3 *There is limited understanding of validity (i.e. Is this a valid analytical technique? Is this a valid CRM? Is this a valid control chart? Is this a valid result in my control chart? Is this a valid presentation of the relevant data? Is this a valid assessment of the process/system? Is my conclusion a valid conclusion based on the data/information disclosed?)*

4 *Improper use (interpretation) of control charts. QP conclusion does not match the data shown. (+/- 3 SD is the only metric used ... there are dozens more)*

Notices

- 5 *Extremely limited and or poor data disclosure; impossible for someone (e.g., public) to verify or validate the results and even the most qualitative level. For example, data points jumbled on graph or chart (e.g., duplicate analysis scatter plots).*
- 6 *There is a myopic focus on narrow interpretations of analytical results (control charts) to the exclusion of too much other information. Every process can be subject to a quality review.*
- 7 *Other data to consider ... could add size of drill hole (cf. weight of sample etc.)?*
- 8 *Could add down hole survey information (or add the 3D coordinate of each high-grade sub-interval when it is required to be broken out). Collar location and dip are not sufficient information alone. Drill hole deviation make it impossible to compare (in 3D) data from different drill holes. The ubiquitous "star" plots on long sections are not just useless, they are almost always misleading disclosure.*
- 9 *Justification (effects) of sample bias and selective sampling. Explicitly state that by taking a smaller sample you are introducing a significant sample bias that will positively skew analytical results.*
 - a. *Should revise requirements to tabulate all individual samples in the full reported interval wherein any significant higher grade zones exist.*
 - b. *More explicit disclosure on intervals and sample thresholds for low/no assay inclusion in reported intervals. This used to be a standard requirement but has now fallen by the wayside.*
 - c. *Prohibit composite presentations (e.g., all reported using 2 m minimum mining width over some arbitrary CoG). Reporting these "composites" as the "high-grade" interval versus the actual sample interval is deceptive.*
- 10 *More emphasis on 3D perspective views would help investors. The long-sections with everything projected to a single plane is more often than not, convenient for promotion yet very unrepresentative of the spatial relationships.*
- 11 *Estimated width of zones is a constant issue! If you know the orientation of the drill hole and have the geology (sensu lato) measurements AND/OR present a section with interpreted mineralized zones ... then you know the true thickness of mineralization. It is inconsistent to connect the intercepts for a PR figure (e.g., cross-section) and then claim that you do not know the true width.*

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.

24. **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.**

- 1 *Yes.*
- 2 *Benchmark all assumptions.*
 - a *Provide benchmark data, not opinions. There are more than enough data in the public domain to accomplish this when site specific data might not be available yet.*
 - b *Mining, milling and SG&A ...*
 - c *Include recoveries*
 - d *Prohibit 100% recovery opinion*
 - e *BP should show the formula*

Notices

- 3 *Tabulate assumptions and add clause(s) explicitly identifying benchmarks and or other factors that impact level of confidence for each. Identification of confidence level is particularly important disclosure for the public and far more useful than disclaimers.*
- 4 *Explicitly describe ore controls in context of geostats and geometric assumptions.*
 - a *Justify a 100-200-300 m search ellipse for a 1 m high-grade quartz (Au) vein (the orebody) that is typically sampled at <0.5 m.*
 - b *Variogram models often bear little resemblance to the measured data. Largely because of insufficient drillhole spacing from which to accurately capture the primary ore control features.*
 - c *More often than not, "Inferred" resources are "Pass 3/4". "Pass 3/4" parameters are designed so that they "fill" the remainder of the "domain" with blocks. Sometimes disclosed but other times not or disclosure with ambiguous language and variography charts that demonstrate absolutely no systematic controls (i.e. not valid)*
 - i *How does this relate to potential economic extraction? How does this relate to level of information (e.g., drill hole and or 3D sample support)? How does this relate to the ore controls (geological controls, sensu lato) and potential economic extraction (e.g., MSO)?*

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?

1. *Yes of course. Why not?*
2. *Validate AND verify data, procedures and assumptions.*
3. *Add benchmarks to support assumptions and conclusions.*

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?

1. *Yes of course. Why not if it is being used to generate a conclusion?*
2. *Validate and verify data, procedures and assumptions.*
3. *If data cannot be verified and validated then how can it be used. It does not imply that it is perfect but there must still be a reviewable process of verification and validation signed off by the QP when using that data to produce any assumption/conclusion (e.g., a mineral resource). Explicit level of confidence statements should support a QP decision.*

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?

1. *Explicitly define risk (properly). The public (and many QP's) do not have a solid grasp of risk.*

Notices

2. *Provide an explicit checklist.*
3. *Proponents/QP must go through the list and identify pass/fail, concerns, comments observations, potential risk etc. (e.g., frequency: High-Med-Low and severity: semi-quantified or quantified cost impact) etc.*
4. *A simple tabular disclosure element could suffice with an opportunity to expand discussion in text, as required.*
5. *One must understand that “not check/assessed” is perfectly acceptable “disclosure.” So why the fear of prescription?*

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?

- 1 *No*
- 2 *Does not have the explicit condition to tabulate the requirements for “exploration/development/production.” What do I formally need to have in place to complete the proposed work?*
- 3 *These milestones (e.g., permits and authorizations) are mostly well known for any project and can be tabulated by the issuer at the very earliest stage of the project. A simple list of permits/permissions etc. that would be required to advance the project as planned or proposed (i.e. current context). A general statement of associated timelines, if known or prescribed would be a best practice element.*
- 4 *A more advanced version (best practice?) would make this a checklist of what is completed, what is in progress and the associated timelines (+/- risk).*

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?

- 1 *No.*
- 2 *Really a limited view of social if the only reference is “social license.”*
- 3 *Need a formal description (and section) of ESG strategy and policy with progress and performance benchmarks*
 - a *Not actual performance and benchmark results unless relevant to permit/permission progress in #28.*

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

- 1 *Yes*
- 2 *Governance ... disclosure ... transparency.*
- 3 *“Consultation” now takes place for prospecting and drilling so why would it not be discussed from day one.*
 - a *Also note that “Consultation” is a formally defined term and not correct in the current context used by the CSA. Should be changed to community/stakeholder engagement.*

Notices

- 4 *Identify stakeholders and note i) engagement (not "consultation") program(s) and general progress. Link to # 28.*
- 5 *All of these can be linked in a better organized Form. The current organization and grouping (i.e. Item 20) are outdated and not reflective of ESG as group of interrelated processes. The easiest and most effective solution is to incorporate a formal (more comprehensive) item to contain the ESG elements that will provide functional internal and external consistency. Popping items in here and there to provide lip service to this top risk category is not the best approach. This current review is a terrific opportunity to address this if it is recognized as an interrelated system and not an add-on skill/paragraph solely for environmental practitioners.*

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, which 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?*

- 1 *Identification of stakeholders*
 - a *e.g., Ontario government provides an affected FN list with application for exploration plans and permits.*
 - b *Otherwise generate a list for a project and note source of information used.*
- 2 *Note communication / engagement progress (e.g., they have / have not been contacted and dialogue / negotiations with X are ongoing).*
- 3 *Note formal agreements, if in place (e.g., IBA or Exploration agreements).*
 - a *Should all legal agreements/encumbrances should be disclosed?*

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?*

- 1 *List of stakeholders and required permissions and consents (esp. indigenous surface rights holders) for planned or proposed activities (e.g., construction and production for a PEA).*
 - a *Note that benchmarks (re. decisions and agreements) are entirely appropriate here.*
- 2 *A key item is existing negative relationships. If a key stakeholder (e.g., with some authority to delay or defer a project) has publicly/formally stated opposition to the project this might be included with the technical disclosure in some context along with potential courses of action (if necessary).*
 - a *I understand that there is no project that is not subject to some dissenting opinions but there are differences in the risk profiles.*

Notices

33. Should we require the qualified person or other expert to validate (*validate or verify?*) 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.

1 *Perhaps.*

2 *If you can conduct a site visit you can conduct an email/phone survey / interview of stakeholder contacts (provided by the issuer) to get a brief description of status/progress. I visit a lab and sub-contractors (including engagement consultants) when I conduct due diligence on projects.*

a *Again this is an area where a description of stakeholders and QP verification and validation process/ results including "no contact" or "no response" is still useful to the investor.*

3 *There is not much more practical depth for a QP to go into this topic but it should not be ignored/avoided altogether.*

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?

1 *No.*

a *Always demonstrably inconsistent with any current comparable operation or development project.*

b *Far too optimistic and virtually no evidence that they have been or can be achieved.*

c *"Overly promotional" comes to mind.*

2 *Need formal benchmarking against comparable/relevant projects.*

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?

1 *There should be more prescription (e.g., benchmarking) but the prescription of the cost estimate classification system provides no better method of validation.*

2 *Really need to focus on the concept of benchmarking and develop a robust program and guidelines for the whole Form ... instead of treating elements section by section.*

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

1 *No*

2 *Should provide a Risk Matrix (i.e. frequency vs severity). The current NPV sensitivity tables provide a generalized severity "impression" but misrepresent frequency as equally distributed about the Base Case. Note, in most instances the company alludes only to the upside opportunities and thus skews the implied risk probably (frequency) only to the positive.*

3 *A Risk Matrix (identified as such) would properly weight the probability (how ... by benchmarking of course) the sensitivity distribution and apply that to the NPV to demonstrate the risk from the Base Case).*

Notices

- a *If, in benchmarking, 75% of the data (e.g., mining costs) were 50% above my “base case” I can appropriately weight that NPV calculation to present a more accurate representation of value risk.*

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?

Standardization is fundamental to make reviews easy; it does not protect the public. The best interest of the public is served by fulsome disclosure of accurate, relevant and timely information. So an informed decision can be made.

1. *Five percent is not reasonable or acceptable.*
 - a. *This is a demonstrable and deliberate overstatement of value that has serious market consequences. The WACC for a junior mining company is in the high teens to mid-20% range considering dilution and fees, let alone potential interest (e.g., LIBOR+) rates.*
2. *The form should prescribe rates of 8% (absolute minimum), 10%, 12% and 15% and “recommend that the public consider the higher end of this range for earlier stage projects as the cost of capital is by necessity higher”.*
 - a. *To be more prescriptive one could set the base case by maturity level (e.g., PEA=15%, PFS=12% and FS =10%).*
3. *There is no project considered for construction by any major mining company (WACC 10-12%) that is analysed using a rate of less than 10%. Therefore, presenting any scenario less than this to the public is misleading. Any objections to this contradict the “purpose” of NI 43-101.*
4. *If issuers and the industry want to attract investment, they should want to put the most accurate information forward. Therefore, there is little legitimate evidence to refute higher discount rates.*
 - a. *Are we protecting the public or the promotion?*
 - b. *A more appropriate discount rate will shine a light on more marginal projects that in fact are more at downside risk due to the sensitivity of capital distribution (key relationship with NPV).*

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?

- i. *Inferred resources have become the bane of legitimate disclosure and the basis of many of the issues that the CSA has identified herein let alone those that the public are most often concerned about. They are the highest risk element.*
 1. *This needs to be fixed broadly (e.g., CIM) and thoroughly (e.g., PEA).*
 2. *There is no difference from “salting” core to “salting” a block model.*
 3. *NI 43-101 (disclosure) is far out of date (disconnected) from current resource estimation / modelling processes (from geostats, to estimation, to MSO/Whittle etc.). It is considered a “black-box process” by regulators and therefore not subject to the same verification, validation and benchmarking scrutiny as other areas/topics in the Form.*
 4. ***Many consider the Inferred resource estimate a non-culpable activity because, by definition, more work is required to “upgrade.” They treat the PEA in much the same way and thus adding the two together has created an unacceptably high tolerance for risk by QP’s, regulators and issuers alike.***
- ii. *Add a thorough description of key terms: RISK, BENCHMARKING, VALIDATION, VERIFICATION etc.*
- iii. *Add a detailed section for bulk samples. Can be in the “sample section” or new “Validation” and Verification Section” but as it is, this Item not sufficiently addressed to cover the many potential issues with selectivity in bulk samples and misrepresentation of results.*

Notices

1. *Most samples are selective and unrepresentative. False comparisons to “block model” estimates are rife, wherein by virtue of selectivity (in extraction or handling) the material processed is effectively that from a much higher CoG. Yet it is compared (always favourably) to a block model grade, that is based on a much lower CoG. If one compares the bulk sample (actual CoG) to the appropriate value e.g., from a grade-tonnage curve and similar CoG, the results are much more in line (or less favourable). Disclosure of the actual CoG (with supporting information) of a bulk sample MUST be a requirement. The extraction/processing methods must reflect the proposed mining and processing methods for the sample to be “valid.” The grade and setting of the mineralization must reflect the character of the planned ROM for the sample to be “valid.” And so on ...*
- iv. *The form needs to improve disclosure around MSO’s for PEA and sample support ... far too often the parameters are such that MSO capture isolated high-grade blocks derived from single high-grade samples (inferred of course) used to produce “fill blocks” with grade ... to generate “mill feed” and ultimately, revenue to the financial model.*

Comments and Submissions

We invite participants to provide input on the issues outlined in this Consultation Paper.

Please submit your comments in writing on or before July 13, 2022. Please send your comments by email in Microsoft Word format.

Please address your submission to all of the CSA as follows:

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

Deliver your comments only to the addresses below. Your comments will be distributed to the other participating CSA.

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We cannot keep submissions confidential because securities legislation in certain provinces requires publication of the written comments received during the comment period. All comments received will be posted on the websites of each of the Alberta Securities Commission at www.albertasecurities.com, the Autorité des marchés financiers at www.lautorite.qc.ca and the Ontario Securities Commission at www.osc.gov.on.ca. Therefore, you should not include personal information directly in comments to be published. It is important that you state on whose behalf you are making the submission.

Questions

Please refer your questions to any of the following: **British**

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NOTE: Steve King has edited the original document to add his comments in *red italicized* text and highlighted the original reference question or clause in *blue text*.

Notices