



26 September, 2016

Brent J. Fields
Secretary, Securities and Exchange Commission
100 F Street, NE,
Washington, D.C.
USA 20549-1090

Re: File Number S7-10-16 - Request for Extension of Time to Submit Comments in Response to SEC Proposed Rule for Modernization of Property Disclosure Requirements for Mining Registrants

Dear Mr. Fields:

Amec Foster Wheeler (www.amecfw.com) designs, delivers and maintains strategic and complex assets for its customers across the global energy and related sectors. Employing around 36,000 people in more than 55 countries the company operates across the oil and gas industry – from production through to refining, processing and distribution of derivative products – and in the mining, clean energy, power generation, pharma, environment, and infrastructure markets.

Amec Foster Wheeler is the product of a number of mergers and acquisitions of companies that were established as long ago as 1907 in North America, and 1848 in Britain. The AMEC name was introduced in 1982. The acquisition of Foster Wheeler took place in 2014. The company is a publicly-traded corporation listed on the London Stock Exchange and its American Depositary Shares are traded on the New York Stock Exchange, and is held by a large number of individual private investors.

Amec Foster Wheeler serves many of the world leaders in the mining industry. The company maintains mining offices across Canada, the USA and Australia, as well as in Santiago, Chile; Lima, Peru; Johannesburg, South Africa; and London, England. In more than 80 countries, we have provided a full range of services for mining projects including:

- ▶ supervision of drilling and sampling
- ▶ prospect evaluation
- ▶ reserve/resource assessment/validation
- ▶ metallurgical testwork supervision
- ▶ process evaluation/flowsheet selection
- ▶ mine planning and design
- ▶ feasibility studies
- ▶ risk and operability assessment
- ▶ operations and maintenance consulting.
- ▶ project economics/financial analysis
- ▶ environmental/geotechnical engineering
- ▶ detailed engineering and procurement
- ▶ construction/construction management
- ▶ project management
- ▶ design-build services
- ▶ plant start-up and commissioning
- ▶ operator training

Amec Foster Wheeler is recognized by the mining industry and the international finance community for the production of NI 43-101 Technical Reports, Competent Persons Reports, and other audit/due diligence work. The company has provided services to virtually all of the world's major mine developers and operators, as well as mid-sized mining companies, "juniors", and lending institutions.



We therefore have followed with great interest the Securities and Exchange Commission's proposed rulemaking for the modernization of mining property disclosure requirements in the United States (the SEC Proposed Rules).

Amec Foster Wheeler staff are involved with a large number of mining and exploration companies who report in multiple jurisdictions, and we are frequently involved in preparation of documents that will be subject to the SEC Proposed Rules. Our staff participate on committees that prepare mining disclosure standards and best practice guidelines, and serve on committees that advise securities regulators on mining disclosure standards.

We have an understanding of the practicalities and difficulties in complying with mining disclosure standards in other jurisdictions. Staff have first-hand experience with the diverse nature of the mining industry, including diversity of deposit types, mining methods, business models of companies, and the types of information that investors and financiers can request when making investment decisions in the company, and information that corporate management requires when deciding to advance a project.

We thank the Commission for the opportunity to provide comment on the SEC Proposed Rules and attach our responses, which were prepared by the undersigned with input from other senior technical staff at Amec Foster Wheeler.

Yours sincerely,

Greg Gosson

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Comments Provided by Amec Foster Wheeler on the United States Securities and Exchange Commission's Modernization of Property Disclosures for Mining Registrants

COMMENT 1

SEC Request for Comment

The Commission's current mining disclosure regime consists of disclosure requirements located in Item 102 of Regulation S-K and disclosure policies located in Guide 7. Has this disclosure regime caused uncertainty for mining registrants? If so, would establishing a sole regulatory source for mining disclosure by rescinding Guide 7 and including the disclosure requirements for mining registrants in a new Regulation S-K subpart, as proposed, reduce this uncertainty?

Response

Yes, in our view Guide 7 has caused uncertainty for registrants.

The new Regulation S-K as currently presented, while to be commended, will not reduce the uncertainty, but instead is likely to add both to compliance burdens, compliance costs, and provide more confusion to the industry. More than half of the requirements pertain to accounting issues and do not pertain to the establishment of a mining disclosure code.

The proposed approach is the correct direction for the industry; however, we recommend that the SEC Proposed Rules require some amendments to remove some additional uncertainty that has been created with the draft as proposed.

The mining industry is a diverse industry, in that there are different types of deposits, different commodities, different mining and processing methods, and different project locations (high Arctic, tropics, high elevation). There are also diverse ways in which a registrant can have an interest in a mining project (direct ownership, joint venture, royalty interest, or option agreement). The business model taken by different registrants may be significantly different: one registrant may have the objective of adding value to project before it is developed so that the project can be on-sold, whereas a different registrant may be only seek to acquire advanced projects for development and operation. A third business model is for a company to be solely a royalty holder.

The type of disclosure that investors expect has evolved over time. In our view, investors in the mining industry have become more sophisticated, are more capable of understanding scientific and technical information, and have increased expectations of the types of information being provided to them by the registrants they wish to invest in. We consider that any securities regulation must adapt to that changing environment.

Mining disclosure rules in our view must be periodically revised and updated to reflect changes in the industry, and to incorporate guidance from mining standards-setters such as the Society for Mining, Metallurgy and Exploration (SME), and the Canadian Institute of Mining, Metallurgy and Petroleum (CIM).

We note that NI 43-101 in Canada relies on the CIM for definitions of mining terms and guidance on industry-accepted practices. NI 43-101 incorporates by reference the definitions of mining terms, and references the industry-accepted practice guidelines. NI 43-101 has undergone periodic reviews and updates to keep the regulation current.

In order for the SEC Proposed Rules to retain relevance, and to not become stale-dated, we recommend a similar approach to periodic reviews and updates be taken by the SEC.

COMMENT 2

SEC Request for Comment

Should we amend Item 102 of Regulation S-K by eliminating the instruction that refers mining registrants to the information called for in Guide 7 and instead instruct them to refer to, and if required, provide the disclosure under new Regulation S-K subpart 1300, as proposed? Should we instead retain Guide 7 and Item 102 of Regulation S-K as separate sources for mining disclosures? If so, how should they apply to registrants?

Response

Yes, Item 102 of Regulation S-K should be amended by eliminating the instruction that refers mining registrants to the information called for in Guide 7 and instead instruct them to refer to, and if required, provide the disclosure under new Regulation S-K subpart 1300; however, additional changes are recommended to subpart 1300.

COMMENT 3

SEC Request for Comment

Should the disclosure standard under the revised mining disclosure rules be whether a registrant's mining operations are material to its business or financial condition, as proposed? Why or why not? If not, what standard should we adopt for determining whether a registrant must provide the mining disclosure under the revised rules? Why?

Response

Materiality as defined using the 10% and 30% "asset" tests under the revised mining disclosure rules is not recommended to be incorporated.

The text in the SEC Proposed Rules assumes that all data will be subject to materiality tests. There are definitely some areas that require materiality tests such as disclosure requirements for material properties and obligations because of material changes to previously-disclosed information. However, there are certain disclosure requirements that should never be subject to a materiality test. These include the requirement that

any disclosure of Mineral Resource or Mineral Reserve estimates must use the accepted classifications and nomenclature set out in the CRIRSCO family of codes. We do not want a registrant to be able to make public disclosure of Mineral Resource or Mineral Reserve categories on non-material properties or non-material information that does not follow the CRIRSCO family of codes (i.e. they should only use the terms Proven Mineral Reserve, Probable Mineral Reserve, Measured Mineral Resource, Indicated Mineral Resource and Inferred Mineral Resource), as this would create confusion in the marketplace and harm the credibility of the compliant disclosure on the material properties. Another example would be in the case of a pre-feasibility or feasibility study on a non-material property; there should be no materiality test on the prohibition of the use of Inferred Mineral Resources in the economic analysis or production schedule in the pre-feasibility or feasibility study.

Both asset and bright-line tests are an extremely unreliable method of predicting the factors on which investors make investing decisions, and are potentially misleading to investors. Bright-line and asset tests overly emphasize production over exploration. Such tests do not factor into the mining reality that many deposits have a finite mine life, reach exhaustion, and have to be replaced; very few mining assets are long-term multi-decade producers. Particularly for many underground mines, but also for some open pit operations, it is not practical to drill out and estimate the entire deposit prior to initiating mining. It is common practice to replace Mineral Resources and Mineral Reserves as access is gained to the lower and lateral extents of a deposit. The apparent asset value of the mine will typically not factor in future and likely extensions to the mine life. Knowledgeable investors understand this for most deposits, but the securities rule will not factor this information into the asset tests as proposed. The proposed bright-line test will likely significantly undervalue many long-lived assets, and may unduly emphasize the value of short mine-life assets. Our comments are as equally applicable to sand and gravel, mineral sands, industrial minerals, coal, potash, and iron ore deposits as they are to conventional hard-rock mining operations.

In summary, bright-line tests in the mining industry are generally a poor assessment of materiality. The determination of materiality of a property should be principles-based, and should be based on what is likely to affect an investor's decision to invest in the registrant. Bright-line tests should be discouraged because properties that should be material frequently fail a bright-line test, and properties that meet the bright-line test are not, in fact, material.

This exact issue has been recognized by Canadian Securities Regulators and they have provided the following guidance in the Companion Policy 43-101CP:

"In making materiality judgements, an issuer should consider a number of factors that cannot be captured in a simple bright-line standard or test, including the potential effect on both the market price and value of the issuer's securities in light of the current market activity. An assessment of materiality depends on the context. Information that is immaterial today

could be material tomorrow; an item of information that is immaterial alone could be material if it is aggregated with other items.”

The following are examples of where using an asset or bright-line test could confuse investors:

- A project is not material to the business or financial condition of the registrant, but the project is consistently in the media due to social or environmental concerns (e.g. blockades, emissions failures, or proximity to protected areas), thereby affecting the registrant’s reputation or affecting the amount of management time and corporate resources that must be devoted to the property;
- A project has not been evaluated in any significant manner, but the registrant holds property adjacent to a major new discovery and geological trends indicate the host formations/structures trend onto the registrant’s property; the potential of such a project is of considerable interest to an investor, but the project would not figure as a major corporate asset based on a bright-line test;
- A project may have had considerable money spent on it, but in an investor’s mind has been “drilled-and-killed”; the amount of money expended would classify the project as an asset, but for the corporate future it would not be as relevant as a less-developed property that retains significant exploration or other upside potential;
- A project at the end of its mine-life may be carrying significant reclamation and rehabilitation costs that could continue for a significant period. The project will have depleted Mineral Resources and Mineral Reserves and is likely to have had the capital costs amortized over the mine life. From an asset test, this would not meet the requirements for a material property but it could be material to investors;
- A project may be strategically important to a registrant’s future. For example, in a joint venture where one member holds most of the fixed mining assets on an adjacent property it is the fact that the mining activity will eventually extend on to the JV property that would be highly material to investors. This potential would not factor in a bright-line test;
- Changes to political regimes or government legislation could render a previous major asset undevelopable (e.g. open pit mining above defined elevations) and non-material, or conversely allow a project that was low in the development pipeline to be rapidly advanced (e.g. significant changes to windfall taxation imposts) and therefore suddenly is material to the registrant.

Junior mining and exploration companies typically do not have producing mining assets. A common business model for such companies is to show the potential of a property, and sell the project or company to a major mine operator. The property potential would

not factor into a bright-line test and is another reason to remove bright-line tests for materiality from the SEC Proposed Rules.

COMMENT 4

SEC Request for Comment

Are the quantitative and qualitative factors described in this section relevant to the determination of the materiality of a registrant's mining operations? Why or why not? Are there other factors, such as those identified in Canada's Companion Policy 43-101CP to National Instrument 43-101, General Guidance, that a registrant should consider for the materiality determination instead of or in addition to the factors described in this section? Should we include these or other factors as part of the rule provision governing the materiality determination? If so, which factors should we include in the rule?

Response

For many undeveloped mining properties, the use of quantitative factors to determine materiality are imperfect. For these properties, it is the qualitative factors that really matter to an investor's perception of the value of a registrant and its properties.

The SEC Proposed Rules should use a principles-based definition of materiality, and should not incorporate bright-line tests.

See also our response to [Comment 3](#).

COMMENT 5

SEC Request for Comment

Should we adopt the proposed presumption that a registrant's mining operations are material if they consist of 10% or more of its total assets? Would a percentage higher or lower than 10% be better than the proposed threshold? Why or why not? Should it be a presumption, as proposed, or should it be a bright line requirement? If the former, how might the presumption be rebutted? Is there another quantitative factor, such as revenues, that a registrant should consider instead of or in addition to the proposed asset test?

Response

No, the proposed presumption that a registrant's mining operations are material if they consist of 10% or more of its total assets should not be adopted.

Asset definition and bright-line requirements should not be considered.

Quantitative factors are not the answer to determination of materiality as they are too prescriptive and frequently result in an incorrect determination of materiality. Materiality should be defined on a principles basis.

See also our response to [Comment 3](#).

COMMENT 6

SEC Request for Comment

When assessing the materiality of its mining operations, should we require a registrant to aggregate all of its mining properties, regardless of size or type of commodity produced, including coal, metalliferous minerals, industrial materials, geothermal energy, and mineral brines

Response

We agree with the concept of aggregation, but we consider that the SEC Proposed Rules should define how properties can be aggregated.

We do not agree that very different commodities should be aggregated, for example coal properties should not be aggregated with metalliferous metals properties. We also do not agree that properties in different jurisdictions should be amalgamated. For example gold properties in Chile should not be aggregated with gold properties in South Africa.

We recommend that the Canadian Securities Regulators' guidance in Companion Policy 43-101CP be considered as a basis for aggregation in the SEC Proposed Rules:

“definitions that include “property” – The Instrument defines two different types of properties (early stage exploration, advanced) and requires a technical report to summarize material information about the subject property. We consider a property, in the context of the Instrument, to include multiple mineral claims or other documents of title that are contiguous or in such close proximity that any underlying mineral deposits would likely be developed using common infrastructure”.

See also our response to [Comment 51](#), [Comment 91](#), and [Comment 99](#).

COMMENT 7

SEC Request for Comment

When assessing the materiality of its mining operations, should we require a registrant to include, for each property, as applicable, all related activities from exploration through extraction to the first point of material external sale, including processing, transportation,

and warehousing, as proposed? Why or why not? Is “the first point of material external sale” the appropriate cut-off or should we use some other measure? Are there certain activities that we should exclude from the materiality determination, even if they occur before the first point of material external sale? If so, which activities, for which minerals or companies, and why? Are there certain activities after the point of first material external sale that we should include? If so, which activities, for which minerals or companies, and why?

Response

This question is only relevant if the SEC Proposed Rules retain the bright-line test proposal. It becomes irrelevant if a principles-based definition of materiality is used. Please see also our response to [Comment 3](#).

If a registrant is required to include, for each property, as applicable, all related activities from exploration through extraction to the first point of material external sale, including processing, transportation, and warehousing, then there are some clarifications and distinctions that would need to be made in the SEC Proposed Rules.

Examples include the following:

- When assessing materiality of a mining project, vertically-integrated producers will find the process complex. Materiality may not necessarily be related to first point of material external sale. Security of supply may be the main driving factor for the existence of the mine. For example, a potash producer selling raw potash on the world market may not realize significant profits; however, if that producer takes the potash and adds phosphate and nitrate, then a premium can be paid in the market for the final product, but that final product has only a portion of the mined product in it. Specialty metals and other industrial minerals have similar points at which value can be added;
- Clarity of the definition of the term “external” is required. In the case where an entity or parent company sets up corporations to separately manage mining operations and smelting and refining operations, does the concept of “external” occur when the mining operation ships product from the mine gate, or does it occur when the smelting/refining operation makes the sale? The same question would arise in the case of a mining operation which is operated as a joint venture, and where product is sold to a related party of one of the joint venture members;
- A royalty company only has rights to a royalty stream; it has no rights to assets such as the mine, plant and other infrastructure, and therefore a fixed asset test does not apply in terms of assessing materiality. An investor may determine materiality of a royalty stream to a royalty company on different, qualitative criteria. For an operating mine, the investor may put a premium on the royalty company since operating mines are likely already making royalty payments.

Conversely, where the royalty company holds a significant royalty interest in a greenfields project, the investor may not consider this as being material, since there may be significant capital investments that have to be made to get into production, and/or there may be a significant time delay to operations finally being sufficiently stable to pay the royalty. In either case, a bright-line test would not aid a royalty company in determining what properties are actually material.

COMMENT 8

SEC Request for Comment

Are there specific qualitative or quantitative factors relating to the environmental or social impacts of a registrant's properties or operations that a registrant should consider in making its materiality determination?

Response

This question is only relevant if the SEC Proposed Rules retain the bright-line test proposal. It becomes irrelevant if a principles-based definition of materiality is used. Please see also our response to [Comment 3](#).

If the bright-line test is retained, there are additional considerations. The comment request ignores the fact that permitting, political, governmental, and marketing factors can have just as big an impact as factors relating to environmental or social impacts. If comment is requested on social and environmental considerations, then these additional factors should be included.

COMMENT 9

SEC Request for Comment

Should we require vertically-integrated companies, such as manufacturers, to provide the disclosure required under new Regulation S-K subpart 1300, as proposed? Why or why not?

Response

Yes, vertically-integrated companies, such as manufacturers with “ownership interest in mining projects” (see next paragraph), should be required to provide the disclosure required under new Regulation S-K subpart 1300.

We do not consider that entities that have agreements such as off-take agreements should be subject to the SEC Proposed Rules, hence our suggestion that the SEC Proposed Rules use the phrase “ownership interest in mining projects”.

We also do not want a manufacturer that has only a small portion of its business that is mining-related to be able to ignore mining disclosure standards, or to be able to use terminology and mining disclosure standards that differ from the CRIRSCO family of codes as this would potentially create confusion in the marketplace, and potentially harm the credibility of compliant disclosure of mining companies that are subject to the SEC Proposed Rules.

COMMENT 10

SEC Request for Comment

Should we require a registrant with multiple properties to provide the disclosure required by proposed Regulation S-K subpart 1300, as proposed? Why or why not?

Should we require a registrant with multiple properties, none of which is individually material, but which in the aggregate constitute material mining operations, to provide only summary disclosure concerning its combined mining activities, as proposed? Why or why not?

Response

Yes, registrants with multiple properties should be required to provide the disclosure required by proposed Regulation S-K subpart 1300.

The SEC Proposed Rules should stipulate that a registrant that is a mining or exploration company must have at least one material mineral property.

The Canadian experience in the early days of NI 43-101 was that corporations would state that because the corporation had so many properties, none were material. There were some major mining companies listed in Canada that did not provide technical reports on operating mines in the period from the introduction of NI 43-101 in 2001 to the 2011 update. This was one reason for the text in Companion Policy 43-101 CP to identify that:

“An actively trading mining issuer, in most circumstances, will have at least one material property”.

See also our response to [Comment 6](#).

COMMENT 11

SEC Request for Comment

Are there difficulties that a registrant with multiple properties could face when determining if disclosure is required under the proposed rules? If so, how should our mining disclosure rules address such difficulties?

Response

In a situation that no single property will meet the bright-line asset test, a registrant with multiple properties may never need to disclose technical data. The SEC Proposed Rules should make it clear, using a principles-based definition of materiality, which properties are likely to influence investors' decisions, such that the result is that all registrants will have at least one material property.

COMMENT 12

SEC Request for Comment

Should we require more detailed disclosure about individual properties that are material to a registrant's mining operations, as proposed? Why or why not?

Response

If technical report summaries on material properties are required to be submitted in a public forum, and follow a pre-set format, then there should be sufficient information for a reasonably informed market. The compilation of the first disclosure of this information is likely to be onerous; however, subsequent reports would be less burdensome.

Canadian reporting companies and a number of reporting companies globally that produce Competent Person Reports, should be able to generate the technical report summary required under the SEC Proposed Rules. We note, however, that changes would have to be made to these reports to meet the technical report summary format requirements as currently proposed in the SEC Proposed Rules.

COMMENT 13

SEC Request for Comment

Should we require a royalty company, or a company holding a similar economic interest in another company's mining operations, to provide all applicable mining disclosure if the underlying mining operations are material to its operations as a whole, as proposed? Why or why not? Should disclosure for such companies be required under other circumstances?

Response

We consider that royalty companies should be subject to the SEC Proposed Rules in that they must present terminology and standards of disclosure that are consistent with other mining companies. This is to avoid confusion of terms, and to maintain credibility of the marketplace.

We recognize that royalty companies may not have access to mining property information to allow them to prepare all of the content of a technical report summary. Therefore, there should be some allowances or carve-outs for a royalty company to not be required to provide certain content.

We suggest that the exemption provided to royalty companies under NI 43-101 be incorporated, with appropriate modifications for the US, into the SEC Proposed Rules:

“Exemptions for Royalty or Similar Interests

9.2 (1) An issuer whose interest in a mineral project is only a royalty or similar interest is not required to file a technical report to support disclosure in a document under subsection 4.2 (1) if

(a) the operator or owner of the mineral project is

(i) a reporting issuer in a jurisdiction of Canada, or

(ii) a producing issuer whose securities trade on a specified exchange and that discloses mineral resources and mineral reserves under an acceptable foreign code;

(b) the issuer identifies in its document under subsection 4.2 (1) the source of the scientific and technical information; and

(c) the operator or owner of the mineral project has disclosed the scientific and technical information that is material to the issuer.

(2) An issuer whose interest in a mineral project is only a royalty or similar interest and that does not qualify to use the exemption in subsection (1) is not required to

(a) comply with section 6.2; and

(b) complete those items under Form 43-101F1 that require data verification, inspection of documents, or personal inspection of the property to complete those items.

(3) Paragraphs (2) (a) and (b) only apply if the issuer

(a) has requested but has not received access to the necessary data from the operator or owner and is not able to obtain the necessary information from the public domain;

(b) under Item 3 of Form 43-101F1, states the issuer has requested but has not received access to the necessary data from the operator or owner and is not able to obtain the necessary information from the public domain

and describes the content referred to under each item of Form 43-101F1 that the issuer did not complete; and

(c) includes in all scientific and technical disclosure a statement that the issuer has an exemption from completing certain items under Form 43-101F1 in the technical report required to be filed and includes a reference to the title and effective date of that technical report.”

COMMENT 14

SEC Request for Comment

Should we permit a royalty company, or other similar company holding an economic interest in another company’s mining operations, to provide only the required disclosure for the reserves and production that generated its royalty payments, or other similar payments, in the reporting period, as proposed? Why or why not? If not, what additional disclosure should be required by such registrants?

Response

The SEC Proposed Rules should not be distinguishing between royalty and streaming companies and mining or exploration companies that also happen to hold royalty interests. We suggest that the term “royalty holder” be used in the SEC Proposed Rules in place of “royalty company”.

It is not clear whether the information requirement is being restricted to Mineral Reserves and producing mines. We consider that exploration properties and properties with Mineral Resources and no Mineral Reserves can be equally material to a royalty holder.

We consider the requirement to report on “reserves and production that generated its royalty payments, or other similar payments, in the reporting period” to be extremely difficult to comply with and should be removed. To illustrate the issue, consider a mining operation that produces copper as the main commodity, but also has by-product gold and silver. A royalty holder with a 5% interest in the by-product elements will find it very difficult to separate out the Mineral Reserves that provide their royalty portion and it could result in a highly-skewed representation of the mine.

COMMENT 15

SEC Request for Comment

Should we require a royalty company, or other similar company holding an economic interest in another company’s mining operations, to describe its material properties and file a technical report summary for each such property, as proposed? Should we allow a royalty or other similar company to satisfy the technical report summary requirement

by incorporating by reference a current technical report summary filed by the producing mining registrant for the underlying property, as proposed? Are there circumstances (e.g. when a royalty company purchases a royalty agreement and is not reasonably able to gain access to such information) in which a royalty or similar company should not be required to file a technical report summary concerning the underlying property?

Response

We suggest that the exemption provided to royalty companies under NI 43-101 should be incorporated into the SEC Proposed Rules (see our response to Comment 13).

We do not see how a company can incorporate by reference a technical report summary prepared for another registrant without obtaining the permission of the operating company and the report authors. The authors would need to confirm that the technical report summary was current for the purposes required by the royalty company. A further issue would be that some of the content of the technical report summary may not be applicable to the royalty company.

There is a risk when a royalty company is unable to obtain access to the underlying information to do data verification and due diligence. Any errors in the technical report summary document would not be able to be identified, exposed or corrected, and therefore the royalty company would be taking responsibility for those issues when identified.

See also our response to [Comment 99](#).

COMMENT 16

SEC Request for Comment

Should we define “exploration stage property,” “development stage property” and “production stage property,” as proposed? Why or why not? Would these definitions facilitate compliance by registrants with properties in more than one stage of operation?

Response

We do not agree with the definitions as proposed. We consider the proposed templates are too prescriptive for an industry that displays a wide range of activities.

In our experience, “development-stage” in the mining industry generally refers to a greenfields deposit that is in the evaluation stage (i.e. advanced technical studies supporting Mineral Reserves), whereas the SEC Proposed Rules definition of “development-stage” would capture mining operations where production has been temporarily suspended. We do not consider it appropriate to classify these types of mothballed operations with greenfields deposits.

Many mining operations have portions that are in the exploration stage, in the development stage, and production stage and therefore it will be extremely difficult for a registrant to attach a single label descriptor to the property.

To illustrate this point:

- An open pit mine that has exhausted its Mineral Reserves and is in the final stage of cleanup of stockpiles, and is exploring and developing the underground extension of the deposit with significant capital costs and risk, would be inappropriately labelled as a production-stage property, whereas a more accurate label would be exploration-stage (or possibly development stage);
- Certain alluvial mining operations switch from exploration to development to production and back to exploration over a relatively short period of time;
- There are a number of mines that invest in infrastructure to access a deposit prior to Mineral Reserves being established, as the operators cannot establish sufficient confidence in the Modifying Factors to qualify Mineral Reserves without the underground access in place. Our view is that the industry-accepted definition of a development stage property would adequately capture this scenario, but the SEC Proposed Rule definition would not.

COMMENT 17

SEC Request for Comment

Should we also revise the definitions of “exploration stage issuer,” “development stage issuer” and “production stage issuer,” as proposed? Why or why not? Should the definition of “development stage issuer” and “production stage issuer” depend on having “at least one material property”, as proposed? Should we instead base the definitions on consideration of the characteristics of all mining properties? For example, if a registrant has a single development-stage material property that constitutes 10% of its mining assets, with the remainder of the mining assets all constituting exploration stage properties, should the registrant be able to identify itself as a development stage issuer?

Response

As noted in our response to Comment 16, we think that the definitions as proposed are too prescriptive for an industry that displays a wide range of activities. We do not think the definitions are useful or appropriate.

We do not consider that establishing definitions of issuers based on consideration of the characteristics of all mining properties would be useful.

We do not agree with bright-line tests being used for establishing materiality of a mining project.

Creating arbitrary distinctions for an issuer based on property status could force a registrant to use a label in their filings that does not reflect what the registrant's main business purpose is.

Their disclosure on each of their material mineral properties should make it clear to investors what type of registrant they are, without having to use the arbitrary labels.

To illustrate this point:

- An exploration registrant may have its main focus as exploration of greenfields projects, but also hold a royalty interest in a small producing property. Because of the minor revenue stream from the royalty interest, the registrant would be classified as a producing issuer. However, this does not reflect the main business activity of the registrant, which is actually exploration.

COMMENT 18

SEC Request for Comment

Would the two proposed sets of definitions appropriately classify the particular stage of a registrant's mining operations? Should the definitions be property-based and dependent on whether mineral resources or reserves have been disclosed, are being prepared for extraction, or are being extracted, as applicable, on one or more material properties? Would having two proposed sets of definitions create unnecessary complexity or investor confusion?

Response

No, the two sets of definitions do not appropriately classify the particular stage of a registrant's mining operations.

We do not agree with the definitions being property-based. We do not consider that establishing definitions of issuers based on consideration of the characteristics of all mining properties would be useful. A registrant's disclosure on each of their material mineral properties should make it clear to investors what type of company they are, without having to use the arbitrary labels.

We believe that requiring a registrant to self-identify themselves in one of these arbitrary categories will create unnecessary complexity and is likely to cause investor confusion.

COMMENT 19

SEC Request for Comment

Should the proposed rules specify that a registrant that does not have mineral reserves on any of its properties, even if it has mineral resources or exploration results, or even if it is engaged in extraction without first disclosing mineral reserves, cannot characterize itself as a development or production stage company, as proposed? Why or why not?

Response

See our response to [Comment 16](#), [Comment 17](#) and [Comment 18](#).

As explained in these comments, we consider these arbitrary definitions do not reflect the diversity of the mining business.

The disclosure on each material mineral property should provide the necessary information for an investor to determine the nature of a registrant's business, and therefore the use of these arbitrary categories would not be required.

We note that in Canada, there are two categories of mineral properties for the purposes of content requirements in technical reports.

- The term “early-stage exploration property” is used when defining the exemption that can be granted for a site visit delay. It is not used in any other context in NI 43-101;
- The term “advanced property” is used for properties that have:
 - “(a) mineral reserves, or
 - (b) mineral resources the potential economic viability of which is supported by a preliminary economic assessment, a pre-feasibility study or a feasibility study; and is used to assess which properties must have Items 16–22 content completed in a technical report.”

We note that under Canadian rules, a registrant is not required to characterize itself as being a particular type of issuer.

COMMENT 20

SEC Request for Comment

Should we require, as proposed, that the determination of mineral resources, mineral reserves and material exploration results, as reported in a registrant's filed registration statements and reports, be based on and accurately reflect information and supporting documentation prepared by a qualified person? Why or why not? Would imposing a

qualified person requirement help mitigate the risks associated with including disclosure about a registrant's mineral resources and exploration results in SEC filings, given that mineral resources and exploration results reflect a lower level of certainty about the economic value of mining properties? Why or why not?

Response

Yes, we agree that a Qualified Person should be named when disclosing information on Mineral Resources, Mineral Reserves and material exploration results.

However, recognizing standard mining industry practices, not all of this information is prepared by Qualified Persons. We recommend that the SEC Proposed Rules amend the requirements such that a Qualified Person is named as approving the disclosure of Mineral Resources, Mineral Reserves and material exploration results.

We note that the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) has recognized that the preparation of Mineral Resources and Mineral Reserves is a team effort, where multiple technical disciplines collaborate in the estimation process. Not all of the team members may be Qualified Persons. A Qualified Person then takes overall responsibility for the estimate.

The statement in the question “*given that mineral resources and exploration results reflect a lower level of certainty about the economic value of mining properties*” is not valid. For example, a property with Mineral Reserves that have high costs (e.g. high capital costs to develop or high operating costs) or high risks (e.g. political risk) may be considered by an investor to have limited perceived value, whereas an exploration stage project that may not have any Mineral Reserves may be considered by an investor to have significantly higher value due to its location, or grades encountered, or likely costs for exploitation.

We are concerned that the question pre-supposes a very simplistic view of a diverse business environment for the mining industry.

COMMENT 21

SEC Request for Comment

Should the registrant be responsible for determining that the qualified person meets the qualifications specified under the new subpart's definition of “qualified person” as proposed? Why or why not? If not the registrant, who should be responsible for this determination?

Response

The registrant should be responsible for verifying that the Qualified Person to be named is the appropriate Qualified Person for the particular type of information being disclosed.

The Qualified Person should be responsible for determining what type of information they are qualified to provide an opinion on.

Therefore in our view, the responsibility for the determination of who is a Qualified Person should be a joint decision by the registrant and the Qualified Person who is to be named. We recommend that the SEC Proposed Rules takes a similar approach.

COMMENT 22

SEC Request for Comment

Should we, as proposed, require a registrant to obtain a technical report summary from the qualified person, which identifies and summarizes the information reviewed and conclusions reached by the qualified person about the registrant's exploration results, mineral resources or mineral reserves, before it can disclose those results, resources or reserves in SEC filings? Why or why not? Should we instead require a registrant to obtain an unabridged technical report, rather than a technical report summary, before it can disclose exploration results, mineral resources or mineral reserves in SEC filings? Should we require the technical report summary to be dated and signed, as proposed? Why or why not?

Response

Yes, a registrant should obtain a technical report summary; however, we do not agree with the triggers for filing of technical reports as proposed in the SEC Proposed Rules; please see also our response to [Comment 24](#).

We consider that having a technical report (whether this is a NI 43-101 Technical Report in the Canadian context, a Competent Person's report, or the technical report summary as currently proposed in the SEC Proposed Rules) on file on a registrant's material property that supports their disclosure provides useful information for investors. Technical reports, because they are also examined by industry peers, can also provide a useful check on information veracity in the marketplace.

We consider that having technical reports available as a permanent record is also important to the market as a whole. Having a website under the control of a securities regulator that forms a permanent record of the disclosure by a registrant is essential. We do not consider that allowing a registrant to simply file such documentation on their own website, where it can be modified or removed, provides the same rigour to market disclosure.

With regards to exploration results, please also see our response to [Comment 24](#).

Although we acknowledge that the process of preparing the technical report summary is useful for identifying any potential errors in the information or disclosure that will be publicly filed; there will always be a trade-off between the timely disclosure obligations of the registrant and the provision on a timely basis of a technical report summary. The preparation of the technical report summary can delay timely disclosure of new information.

The Canadian experience was initially to allow a 30-day period between the disclosure that triggered a requirement to file a NI 43-101 Technical Report and the actual filing of the NI 43-101 Technical Report. In 2005, this time period was extended to 45 days (in most cases).

We recommend that the SEC Proposed Rules allow a time period between the triggering of a technical report summary and the filing of the technical report summary to strike an appropriate balance between facilitating timely disclosure and providing adequate time for preparation of a technical report summary that contains the appropriately reviewed supporting scientific and technical information.

We are not clear as to the intent of the phrase “*obtain an unabridged technical report*”. Does “obtain” mean that the report must be available to the regulators, but not to the investor? We understand requiring the supporting information to be available for inspection by securities regulators or professional associations should there be a question regarding disclosure of information in a technical report. Does the request assume that the unabridged technical report will be filed for investor information? We note that filing a typical feasibility study document, which can run to 25–30 volumes, would be expensive to “Edgarize” and may be difficult to download from the central report repository. We also make the following points in relation to unabridged pre-feasibility and feasibility studies:

- Public disclosure of trade-off studies, such as those that are performed to select optimal locations of surface infrastructure, could potentially significantly compromise a company’s ability to negotiate with stakeholders;
- Disclosure of market entry strategies would result in giving away of market competitive information to the detriment of the company and its shareholders, and potentially nullify that strategic approach;
- Execution plans can frequently have timeline milestone dates that are selected for the purposes of the study. These dates are predicated on assumptions such as obtaining finances, permits, and awarding contracts, which may not come to fruition;
- There is a significant amount of detail in these documents (e.g. process and instrumentation design drawings, validation of methods and data in the Mineral

Resource estimate, geotechnical analysis, baseline environmental studies) that is highly technical and would not be useful information for the typical investor in valuing the project;

- Terms of impact benefit agreements are typically confidential;
- Capital cost estimates are generally based on direct vendor quotes or on proprietary database information maintained by the major mining and engineering companies. Disclosure of confidential pricing and tendering data from vendors may compromise future competitive bidding between vendors. In addition, making this information public would be providing market competitive information to the detriment of the company and its shareholders.

We agree that typically a full study document would be prepared for, or by, the registrant, in support of Mineral Reserves for projects that are not in operation, even though the expectation is that they will only file a summary of that document. For operations, we generally see that registrants prepare life-of-mine plans and supporting memoranda, but may not prepare a formal pre-feasibility or feasibility study report.

We note that the Australasian Securities Exchange document entitled “ASX Mining Reporting Rules for Mining Entities: Frequently Asked Questions: Transition to new disclosure rules” (December 2013): states that:

“From 1 December 2014, clause 29 of the JORC Code 2012 will require Ore Reserves to be “defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors”.

It should be noted that Clause 29 of the JORC Code does not require a formal Pre-Feasibility or Feasibility Study, but rather “studies at Pre-Feasibility or Feasibility level”. That is the information related to the Modifying Factors must be at “Pre-Feasibility or Feasibility level”.

We request that the SEC Proposed Rules clarify whether a formal pre-feasibility or feasibility study will always be required in all instances, or whether “*studies at Pre-Feasibility or Feasibility level*” would suffice.

The SEC Proposed Rules do not define what is meant by “dated and signed”.

We recommend that a technical report summary effective date be defined in the SEC Proposed Rules. In Canada, initially there was confusion about what was meant by an NI 43-101 Technical Report date and frequently there were three different interpretations:

- The signature date in the NI 43-101 Technical Report;
- The date the NI 43-101 Technical Report was filed with the regulators;
- The cut-off date for the information included in the NI 43-101 Technical Report.

The Canadian Securities Regulators clarified that the date that was important to the investor was the effective date, which was defined as:

“effective date” means, with reference to a technical report, the date of the most recent scientific or technical information included in the technical report”.

Under NI 43-101, the effective date is required to be stated on the NI 43-101 Technical Report title page, the signature page, and the Qualified Person author’s certificate page.

The signature of Qualified Person that is required for the document being filed with the SEC should be in an electronic (conformed) format, not a manual (physical) signature.

As a general comment, we believe that the term “technical report summary” that is used in the SEC Proposed Rules appropriately distinguishes the SEC document from the term “Technical Report” which is a defined term under NI 43-101. We consider that it is appropriate that the SEC has its own term, as there is likely to be some differences between an NI 43-101 Technical Report and the technical report summary in the SEC Proposed Rules.

COMMENT 23

SEC Request for Comment

If we require, as proposed, that a registrant obtain a technical report summary from the qualified person, should we also, as proposed, require that the registrant file the technical report summary as an exhibit to the relevant registrant statement or other Commission filing when one is required? Why or why not?

Response

We agree that technical report summary documents should be filed as they provide useful information to investors, and can be reviewed by industry peers. A filed document can simplify a registrant’s disclosure in later disclosure documents (e.g. news releases, investor presentations) as the registrant can refer to that filed document that has the project detail, rather than having to repeat similar content from document to document.

We suggest that the proposed triggers for the preparation and filing requirements of a technical report summary as set out in the SEC Proposed Rules be amended. As drafted, the requirements could be unduly burdensome (see also our response to [Comment 24](#)).

COMMENT 24

SEC Request for Comment

Should we require, as proposed, a registrant to file the technical report summary when the registrant is disclosing mineral reserves, mineral resources or material exploration results for the first time or when there is a material change in the mineral reserves, mineral resources or exploration results from the last technical report filed for the property? Why or why not? Should we instead require a registrant to file the technical report summary more frequently, such as with every Commission filing, or less frequently?

Response

We agree that a technical report summary filing should be triggered by first-time disclosure of Mineral Resources or Mineral Reserves on a material property, or by material changes to previously-disclosed Mineral Resources or Mineral Reserves on a material property.

We do not agree that first time disclosure of exploration results on a material property or material changes to exploration results from the last technical report summary filed for the material property should be triggers for filing of a technical report summary.

In terms of frequency of technical report summary filing, we note that annual updates to Mineral Resources and Mineral Reserve estimates should not be a technical report trigger unless the update results in a material change to those estimates.

We do not agree that every filing with the SEC should trigger the requirement for a technical report summary.

We make the following additional comment specifically to junior companies with early-stage exploration properties that do not have defined drill targets:

- A material change to the exploration information could occur every few weeks in an active exploration program. It is difficult to assess materiality of exploration information at the time the work is performed; it is far easier to determine what is material information in hindsight. A registrant might file an updated technical report every time a news release on exploration results (e.g. ongoing geochemical sampling or geophysical programs, geological mapping), in an abundance of caution of trying to meet the SEC Proposed Rules. Not only would there be a lot of time and cost to the registrant in preparing these updates, but there would be a flurry of these technical documents being filed that may become burdensome for the SEC to administer. As long as there is an initial technical report summary on the exploration property, it is our view that news releases would provide sufficient information to update an investor on the

property, and a technical report update would not be warranted. The technical report summary would be updated when a filing obligation that triggers the technical report is reached (e.g. annual disclosure document, prospectus filing, or other offering document).

We make the following additional comment specifically to exploration properties with defined drill targets that have do not have estimated Mineral Resources or Mineral Reserves:

- There should be a technical report summary on file that describes the important information (e.g. geological setting, permitting, work conducted, recommendations for additional work) on the property that was triggered by a specific filing (e.g. annual disclosure document, prospectus filing, or other offering document). We consider that requiring a technical report summary update with every disclosure of drill results in a news release to be unwarranted, and potentially burdensome to the SEC and the industry. As stated above, as long as there is an initial technical report summary on the exploration property, it is our view that news releases would provide sufficient information to update an investor on the property, and a technical report update would not be warranted. The technical report summary would be updated when a filing obligation that triggers the technical report is reached (e.g. annual disclosure document, prospectus filing, or other offering document).

We note the SEC Proposed Rules are tying technical report triggers to what we call milestones of the Projects (e.g. changes in Mineral Resource or Mineral Reserve estimates), which we agree with. We consider that technical report summary triggers for early-stage exploration properties (i.e. those without Mineral Resource estimates) should be tied to events related to filings of the company (milestones of the company, such as annual disclosure documents, prospectus filings, information circulars or other offering documents). We do not consider completion of work programs such as geophysical programs on early-stage exploration properties appropriate triggers for technical report summaries.

In an operating mine, companies routinely replace their depleted Mineral Resources and Mineral Reserves through exploration and upgrade of existing Mineral Resources to Mineral Reserves. This can result in no significant change to the Mineral Resource or Mineral Reserve estimates between each update. However, over time, the Mineral Resources and Mineral Reserves supported by the technical report summary will have been mined out, and the new estimates will have migrated to a different part of the deposit. This migration is likely to be a material change in the estimate, even though the overall tonnage and grade may have generally been maintained. The SEC Proposed Rules should request companies to recognize this reality when the registrant assesses whether or not a material change in the estimates has occurred, and therefore whether a technical report summary has been triggered.

COMMENT 25

SEC Request for Comment

Should we require, as proposed, a registrant to obtain the written consent of the qualified person to the use of the qualified person's name and any quotation or other use of the technical report summary in the registration statement or report prior to filing the document publicly with the Commission? Why or why not?

Response

For reports other than those prepared on early-stage exploration projects, the SEC Proposed Rules should recognize that there are likely to be multiple Qualified Persons who co-author the technical report summary. The current wording could lead to a misconception that a single Qualified Person author must take overall responsibility for a technical report summary. See also our response to [Comment 109](#).

We note that to expect one of the technical report summary authors to accept responsibility for the other disciplines that are outside of their field of practice is against the professional and ethical standards imposed by most engineering and geoscientific and other professional associations or professional regulating bodies.

The SEC Proposed Rules do not make it clear if a Qualified Person approving the information in a news release must be an author of the technical report summary, or whether this approval of content can be provided by a different Qualified Person who is not a technical report summary author. We note that Qualified Person authors of technical report summaries may not always be available to provide written consents for disclosure, for example:

- They may have left that employment or the industry in general;
- They may be now working for a competitor and have a conflict of interest;
- They may not be available on a timely basis; or simply due to circumstances such as medical or other reasons, may not be available at all.

Hence we suggest that the SEC Proposed Rules allow provision for another Qualified Person to approve the scientific and technical content being disclosed.

We agree that Qualified Person authors should provide written consent to the filing of a technical report summary with the SEC. We do not agree that the Qualified Person should consent to inclusion of their name in any other, subsequent documents that refer to the technical report summary that may be filed with the SEC. We consider that making such a request of a Qualified Person is good practice, but it should not be compulsory. The Qualified Persons who authored the technical report summary should not be the

only Qualified Person who can provide approval for disclosure. We make the following points:

- The disclosure document may be making a simple reference to the existence of the technical report summary, and the naming of the authors for the citation should not require the Qualified Person author's approval;
- A number of previous technical reports can be cited in documentation in a similar manner; and to require each of these Qualified Person authors to provide written consent to that reference is burdensome and does not provide value to the registrant or the marketplace;
- Where a Mineral Resource estimate was prepared by an independent Qualified Person, or a former employee, the registrant must be able to include that Mineral Resource statement in various disclosure documents without having to obtain written permission from the original resource estimator. We consider that the Qualified Person who prepared the estimate and the Qualified Person who is approving the current disclosure should both be named; and neither Qualified Person should be required to provide written consent.

We note that the 2011 update of NI 43-101 made provision for a separate Qualified Person to "approve" public disclosure of technical and scientific information that was prepared by another Qualified Person. We believe that this change helped alleviate the difficulty in obtaining consents from authors of NI 43-101 Technical Reports for later use of information from those reports. We suggest that the SEC Proposed Rules should incorporate wording to the effect that a Qualified Person has prepared, supervised, or approved the information in the disclosure document, but should not require the Qualified Person who originally prepared the technical report summary to be the only Qualified Person who can provide written consent.

We consider that the SEC Proposed Rules should provide clear guidance and sample text as to the wording of the written consent. We note that the wording requirements for a consent to a 20-F filing are different to those required with a 40-F filing.

If a consent format that is similar to the 20-F format is used, it imposes an obligation for the Qualified Person to have significantly more involvement with the document being prepared, and also pre-supposes that the Qualified Person will have on-going or recent familiarity with the project.

What are the expectations for a Qualified Person prior to providing the consent:

- Is the expectation that the Qualified Person must confirm that the technical report summary is still current at the time of this current filing? (i.e. there is no change to the material information [new material facts or material changes] in the technical report summary at the time of the new filing). We note that for an active property, this may require an extensive review, and potentially updated

site visits. This would result in additional costs and time delays, since the Qualified Person would have to make their time available to do this review. It could also significantly delay a registrant making timely disclosure or meeting regulatory filing deadlines;

- Does the Qualified Person have to confirm the appropriate “context” of information derived from their technical report summary in the new filing document? We note that this may extend the responsibility of the Qualified Person to matters that are well beyond the preparation of the technical report (e.g. the context of statements on corporate strategy; timelines for project advancement; availability of finance).

We believe that it will be potentially burdensome to both the Qualified Person and to the registrant to ask a Qualified Person author to provide written consent to all of a registrant’s disclosure on material properties.

We recommend that the SEC Proposed Rules make a distinction between the Qualified Persons who authored a technical report summary, versus Qualified Persons who can approve the content of scientific and technical information in any later written disclosure. The SEC Proposed Rules should accommodate the concepts that a Qualified Person can either prepare or supervise the preparation of scientific and technical information, or approve such information that was prepared by another Qualified Person.

It appears that the SEC is restricting the requirement for involvement of Qualified Persons to documents that are filed with the SEC; it does not appear to be extended to written information provided in other media, such as corporate websites and social media. We consider that Qualified Person involvement should be mandatory for disclosure of all written scientific and technical information on material properties, and a Qualified Person should be named as having approved such disclosure for material properties. We do not, however, consider that a written consent is required.

COMMENT 26

SEC Request for Comment

Should we require that a registrant identify the qualified person that prepared the technical report summary and disclose whether the qualified person is an employee, as proposed? Why or why not? Should we also require a registrant to name the qualified person’s employer if other than the registrant, and disclose whether the qualified person or the qualified person’s employer is an affiliate of the registrant or another issuer that has an ownership, royalty or other interest in the property that is the subject of the technical report summary, as proposed? Why or why not?

Response

The context of this question is unclear as to whether it is referring to the technical report summary being filed, or whether there is an assumption that a technical report summary is already on file and the issue relates to subsequent disclosure that extracts or summarises information from the technical report summary.

Assuming that the technical report summary is already filed, then we do not believe that the registrant should name the Qualified Person authors that prepared the technical report summary as a separate Qualified Person approving the disclosure should be sufficient. As noted in our response to [Comment 25](#), requiring approvals from the original Qualified Person was shown in the Canadian and other jurisdictional contexts to be a difficult process.

The Qualified Person should also be identified as being independent or not independent of the corporation filing the disclosure document. We do not agree with the requirement to name the employer of a Qualified Person as being compulsory, as this may have changed since they prepared the technical report summary and the current employer may not be agreeable to the registrant's current disclosure (for example if it is a competitor of the registrant). To resolve this issue, a Qualified Person should be allowed to identify themselves as independent of the registrant, or name the employer they were with at the time the technical report summary was prepared.

Where the Qualified Person is not independent of the issuer, then the reason why the Qualified Person is not considered to be independent of the registrant or the property should be provided. We agree that SEC Proposed Rules should recognize that non-independence can be related not just to the issuer, but to the property being reported on. For example, vendors of a property (e.g. option agreement to purchase), holders of a royalty interest in a property, or a holder of an adjacent property may not be considered independent by investors.

COMMENT 27

SEC Request for Comment

Should we require a registrant to state whether the qualified person is independent of the registrant? Why or why not? If we were to require the registrant to state whether the qualified person is independent of the registrant, should we define "independent" for purposes of that requirement? If so, how? For example, should we base the definition of independence on comparable provisions under Canada's NI 43-101? Similar to the Canadian provisions, should we provide examples of when a qualified person would not be considered to be independent? If so, what examples should we provide? Alternatively, similar to the Commission's rule regarding when an accountant is not independent, should we provide that a qualified person is not independent if the qualified person is not capable of, or a reasonable investor with knowledge of all relevant facts

and circumstances would conclude that the qualified person is not capable of, exercising objective and impartial judgment on all issues encompassed within the qualified person's engagement? Are there any other alternative standards on which we should base a definition of independence for the purpose of the qualified person requirement?

Response

The context of this question is unclear as to whether it is referring to naming the Qualified Person authors of the technical report summary being filed, or whether it pertains to naming of any Qualified Person in a registrant's disclosure.

We agree that Qualified Person authors should be identified as independent or not independent in a technical report summary that is being filed. We do not consider that independence statements from those Qualified Person authors are required for subsequent disclosures that extract or summarize the information from the technical report summary. We think that where information on independence of the Qualified Persons is already on file in a technical report summary, a registrant should not have to repeat this each time it makes reference to those Qualified Person authors in its subsequent disclosure.

In instances where disclosure is approved by a Qualified Person, such as:

- Disclosure of information derived from or summarized from the technical report;
- Disclosure of new information on the property that is not in the technical report summary;

we note that the current industry practice for a non-independent Qualified Person is to provide their name, job title, and professional designation, and employer at the end of the disclosure document. For independent Qualified Persons, the current industry practice is generally to provide their name, job title, professional designation, and a notation that they are independent of the issuer.

It is our position that where a Qualified Person is named who approved disclosure, some context as to independence should be provided.

We agree that the definition of independence to be incorporated in the SEC Proposed Rules should use the comparable provisions under Canada's NI 43-101.

We are not aware of any alternative standards that could be applicable.

COMMENT 28

SEC Request for Comment

Should we require that a registrant's disclosure of exploration results, mineral resources or mineral reserves in a SEC filing be based on the determination of a qualified person that is independent of the registrant? If so, should we impose such a requirement only under certain circumstances, such as when the filing discloses resources or reserves by the registrant for the first time; a material change in previously disclosed resources or reserves that has occurred or is likely to occur; or a 100% or greater change in the total mineral resources or reserves on a material property, when compared to the last disclosure? In each case, why or why not?

Response

We believe that there are limited circumstances that would require Qualified Person authors of a technical report summary to be independent of a registrant.

In Canada, these circumstances are where there are milestone events:

- First-time reporting issuer in Canada;
- Certain prospectus filings (long-form prospectus, valuation report required under Canadian securities law);
- First time disclosure of Mineral Resources or Mineral Reserves;
- 100% change in Mineral Resources or Mineral Reserves from the last independent NI 43-101 Technical Report filed;
- First disclosure of the results of a preliminary economic assessment (PEA).

We consider that Qualified Person author independence requirement triggers would also be appropriate milestones under the SEC Proposed Rules for independent technical report summaries.

Canada provides exemptions to independence requirements where companies are classed as "producing issuers".

"producing issuer" means an issuer with annual audited financial statements that disclose

(a) gross revenue, derived from mining operations, of at least \$30 million Canadian for the issuer's most recently completed financial year; and

(b) gross revenue, derived from mining operations, of at least \$90 million Canadian in the aggregate for the issuer's three most recently completed financial years;"

In the case of first-time reporting in Canada, the producing issuer must have securities traded on a specified exchange (ASX, JSE, LSE Main Market, NASDAQ, NYSE, HKSE) to be allowed to prepare non-independent technical reports. We consider that similar exemptions for independence requirements for Qualified Person authors of technical report summaries should be allowed in the SEC Proposed Rules.

Because we consider that the SEC Proposed Rules should accommodate Qualified Persons being named who approve disclosure of information prepared by others, the independence requirements should be restricted only to Qualified Person authors of technical report summaries in certain circumstances. We do not believe that requiring an independent Qualified Person be named in any other SEC filing is appropriate.

We agree that the following disclosure should require independent Qualified Person authors on a technical report summary (except for producing issuers as noted above):

- First time disclosure of Mineral Resources or Mineral Reserves;
- 100% change in Mineral Resources or Mineral Reserves.

We note that the 100% change must be in comparison to the last independent technical report summary filed by the registrant. It would not be reasonable to require this as a 100% change from previously-filed disclosure. To illustrate this point, a registrant could disclose a 90% increase in the Mineral Resources or Mineral Reserves in one document, a further 90% increase in the next disclosure, ad infinitum, and would never hit an independent technical report summary trigger.

We do not agree that “*a material change in previously disclosed resources or reserves that has occurred or is likely to occur*” should be an independent technical report summary trigger. A material change to a Mineral Resource or Mineral Reserve estimate should not be an independent technical report summary trigger; the trigger should only be a 100% change to a Mineral Resource or Mineral Reserve estimate in comparison to the last independent technical report summary filed by the registrant. The phrase “or is likely to occur” is ambiguous, and should be clarified or not included.

We think that the some guidance should be provided to accompany the SEC Proposed Rules statement regarding “*100% or greater change in the total mineral resources or reserves on a material property*”, in a similar manner to that provided in the Companion Policy 43-101CP:

“Hundred Percent or Greater Change – Subparagraph 5.3(1)(c)(ii) of the Instrument requires the issuer to file an independent technical report to support its disclosure of a 100 percent or greater change in total mineral resources or total mineral reserves. We interpret this to mean a 100 percent or greater change in either the total tonnage or volume, or total contained metal or mineral content, of the mineral resource or mineral reserve. We also interpret the 100 percent or greater change to apply to

mineral resources and mineral reserves separately. Therefore, a 100 percent or greater change in mineral resources on a material property will require the issuer to file an independent technical report regardless of any changes to mineral reserves, and vice versa.”

COMMENT 29

SEC Request for Comment

Alternatively, rather than requiring the qualified person to be independent, should we require, when the qualified person is affiliated with the registrant or another entity having an ownership or similar interest in the property, that a person independent of the registrant and qualified person review the qualified person's work? If so, what qualifications should the independent reviewer possess? If we require an independent review when the qualified person is affiliated with the registrant, should the review be for all disclosures of mineral resources, mineral reserves and material exploration results, or only those that are related to material properties? Should this review be required only in certain circumstances, such as when the filing discloses resources or reserves by the registrant for the first time; a material change in previously disclosed resources or reserves that has occurred or is likely to occur; or a 100% or greater change in the total mineral resources or reserves on a material property, when compared to the last disclosure? Should we instead adopt an independent review requirement for the work of an affiliated qualified person in all circumstances? In each case, why or why not?

Response

We believe that the independence requirements of Qualified Persons should apply to limited milestone events within a project or milestone events of a registrant.

We believe that there will be limited benefit to the registrant or to investors to have an independent Qualified Person review the work of a Qualified Person employed by, or affiliated with the registrant due to the additional costs and time burden that would result. It would likely interfere with a registrant's ability to meet timely continuous disclosure obligations. The cost that will result from implementing this type of review will outweigh any benefit derived.

We do not believe that a requirement for an independent reviewer for any disclosure by a registrant should be included in the final SEC Proposed Rules.

COMMENT 30

SEC Request for Comment

Should we require the registrant to disclose any material conflicts of interest that could reasonably affect the judgment or decision making of the qualified person, such as

material ongoing business relationships between the registrant and the qualified person or the qualified person's employer?

Response

We do not believe that a Qualified Person who is an employee of a registrant or an affiliate of a registrant would necessarily have a conflict of interest when acting as a Qualified Person. The interests of a Qualified Person, acting reasonably, using professional and ethical standards and their own competence, should be aligned with the interests of the registrant. However, we do agree that a Qualified Person who is an employee of a registrant or an affiliate of a registrant would be perceived as being not independent.

Qualified Persons should be required to state if they independent or non-independent. Requiring a Qualified Person to also state that they are in a conflict of interest position because they are an employee of the registrant or affiliate of the registrant presupposes that they will not meet the professional and ethical standards of a Qualified Person.

COMMENT 31

SEC Request for Comment

Would the proposed technical report summary filing requirement impose a significant burden on registrants? If so, which registrants and why? Are there changes that we could make to this proposed requirement to alleviate any such burden?

Response

As currently proposed in the SEC Proposed Rules, the technical report requirement is a significant burden on registrants for the following reasons:

- The requirement to file a technical report summary with each disclosed material exploration result on a material property; the burden will be disproportionately borne by junior exploration companies that do not have a producing property, or Mineral Reserve estimates. The threshold for materiality will be lower for the junior exploration companies, and they will be hitting the technical report summary trigger more frequently than will the major mining companies;
- The requirement to file a new technical report summary should not be triggered by an annual update to the Mineral Resource or Mineral Reserve estimates; it is both onerous and expensive for companies to update technical report summaries on an annual basis. Material changes to Mineral Resources and Mineral Reserves caused by depletion should not on their own be viewed as a report trigger. The requirements for annual technical report summaries on

updated Mineral Resources and Mineral Reserves would disproportionately affect any registrant with such estimates;

- Requiring a registrant to provide proprietary or confidential information in the technical report summary would be detrimental to the registrant and its shareholders, and would be burdensome. This requirement would affect all registrants;
- The requirement that all technical report summaries must be prepared by independent Qualified Persons, or if prepared in-house by non-independent Qualified Persons, be reviewed by independent Qualified Persons is un-necessarily burdensome to all registrants;
- The proposal that every filing with the SEC is supported by a technical report summary is also un-necessarily burdensome to all registrants.

We recommend that:

- The trigger for technical report summaries should be limited to material properties, and to certain milestones of the project or milestones of the registrant disclosed on those material properties:
 - First-time disclosure of Mineral Resources or Mineral Reserves;
 - Material changes to previously-disclosed Mineral Resource or Mineral Reserve estimates;
 - Results of economic analysis of Mineral Resource estimates (scoping studies or preliminary economic assessments; see also responses to [Comment 28](#), [Comment 63](#) and [Comment 70](#));
 - First-time reporting registrant in the US;
 - Offering document where securities are offered (e.g. prospectus, rights offering, take-over bid, offering memorandum);
- The requirement for a technical report summary to be prepared by independent Qualified Persons be restricted to certain milestones of the project or milestones of the registrant that disclosed information on those material properties:
 - First-time disclosure of Mineral Resources or Mineral Reserves;
 - 100% changes to previously-disclosed Mineral Resource or Mineral Reserve estimates since the last independent technical report summary;
 - Results of economic analysis of Mineral Resource estimates (scoping studies or preliminary economic assessments; see also responses to [Comment 28](#), [Comment 63](#) and [Comment 70](#));
 - Prospectus filings;

- The registrant be allowed to rely on a previously-filed technical report summary if that technical report summary is still current;
- Allow a producing issuer exemption such that producing issuers filing technical report summaries do not have to have those reports prepared by independent Qualified Persons;
- Exemptions should be available for technical report summary content (see our response to [Comment 28](#)).

COMMENT 32

SEC Request for Comment

Should we define a qualified person in part to be a mineral industry professional with at least five years of relevant experience in the type of mineralization, as described here and in the proposed rule, and type of deposit under consideration and in the specific type of activity that person is undertaking on behalf of the registrant, as proposed? Why or why not? Should we specify the particular type of professional, such as a geologist, geoscientist or engineer, required under the definition? The years of experience required under the proposed definition is consistent with the CRIRSCO-based codes. Is five years the appropriate number of years to constitute the minimum amount of relevant experience required under the definition in our rules? Should we require a lesser or greater number of years of relevant experience (e.g., 3, 7, or 10 years)?

Response

We do not agree with the CRIRSCO-based definition of a Qualified Person as suggested in the SEC Proposed Rules and consider that the definition under NI 43-101 would be more appropriate:

- We do not believe that the definition should use the phrase “mining industry professional” as it is too broad;
- Five years of experience in a particular style of mineralization or deposit type does not recognize how dynamic the mining industry is with the discovery of new deposit types and mineralization styles, and how new commodities can suddenly become economically attractive;
- Based on the CRIRSCO definition for a Qualified Person to have a “*minimum of five years relevant experience in the style of mineralisation or type of deposit under consideration and in the activity which that person is undertaking*”, the requirement would, for some specialized commodities or unique deposit types, result in a very limited pool of Qualified Persons. This would be an unfair burden on the industry to select only from this narrow group when a more principles-based definition would expand the group to those Qualified Persons who can potentially apply their broader knowledge effectively as a Qualified Person.

In our view a Qualified Person should have at least five years of experience in the mining industry that is relevant to their professional degree or area of practice. The amount of relevant experience in the actual deposit type or mineralization style under consideration should not be quantified as a minimum amount.

We recommend that the SEC Proposed Rules define which professional disciplines can act as Qualified Persons.

We agree that the person taking responsibility for a portion of a technical report summary should be the most appropriate Qualified Person for that information. Restricting a list of professional disciplines can result in an arbitrary decision whereby the most appropriate person cannot act as the Qualified Person. For example:

- A hydrometallurgical specialist graduates with a doctorate in physical chemistry and has 40 years of experience in hydrometallurgy in active operations. The degree obtained does not fall under the categories of “engineer” or “geoscientist” and therefore the specialist would not be a qualified person;
- A specialist in the field of botany, zoology, biochemistry would be the most appropriate person to take responsibility for the specialized baseline studies supporting permit applications, particularly environmental permits. Again most of the degrees awarded in these disciplines would not meet the categories of “engineer” or “geoscientist” and therefore these types of specialist would not be a qualified person.

We note that one of the outcomes of having too narrow a definition of a Qualified Person is that it could result in one of the technical report authors who has a geoscience or engineering degree to take responsibility for information that would generally be considered outside of their field of practice.

We recommend a principles-based definition of the professional disciplines that can act as Qualified Persons be adopted in the final SEC Proposed Rules. A principles-based definition should allow appropriately academically-qualified and industry-experienced professionals to be Qualified Persons in their field of practice.

We recommend that the industry experience and relevant experience requirement for Qualified Persons be based on that which is defined in NI 43-101:

“(b) has at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these, that is relevant to his or her professional degree or area of practice;

“(c) has experience relevant to the subject matter of the mineral project and the technical report;”

We note that NI 43-101 does not follow the CRIRSCO definitions, in that NI 43-101 does not specify the number of years of relevant experience that is required in a mineralization style or deposit type, it simply requires relevant experience. The NI 43-101 definition in our view recognizes the dynamism that underpins the mining industry.

We also note that the SME Guide and the JORC Code provides explicit guidance that five years of relevant experience is not always necessary:

“The key word ‘relevant’ also means that it is not always necessary for a person to have five years experience in each and every type of deposit to act as a Competent Person if that person has relevant experience in other deposit types”.

We consider that the SEC Proposed Rules should require a Qualified Person to have at least five years of mining industry experience relevant to their degree or area of practice. The assessment of the amount of relevant experience in a mineralization style or deposit type for the information that the Qualified Person is taking responsibility for should be left up to the professional and ethical judgement of the individual Qualified Person.

COMMENT 33

SEC Request for Comment

Should we define a qualified person to be an individual, as proposed? Or should we expand the definition, in cases where the registrant engages an outside expert, to include legal entities, such as an engineering firm licensed by a board authorized by U.S. federal, state or foreign statute to regulate professionals in mining, geosciences or related fields? Why or why not? If we expand the definition in this manner, should the firm or the responsible individual sign the technical report summary and provide the required written consent? Similarly, what professional experience should be required and how would a firm satisfy the professional experience requirement? Should we adopt qualified person requirements for firms that are different than the proposed requirements for individual qualified persons? If so, what should these requirements be?

Response

We consider that a Qualified Person should be an individual.

We do not believe the definition should be expanded to include *“an engineering firm licensed by a board authorized by U.S. federal, state or foreign statute to regulate professionals in mining, geosciences or related fields”*.

We consider that the ethical and professional obligations expected of a Qualified Person can only be met by an individual.

We do not agree that professional experience of a firm necessarily extends to those individuals who are currently preparing a technical report summary. The individual(s) who may have provided that expertise to a firm in the past may no longer work for the firm. It is not a reliable measure of the competency of a consulting firm that they have previously done similar work.

There are situations, however, where we consider that an authorized signatory of the consulting company that the Qualified Person worked for at the time the technical report summary was prepared can provide written consent as an alternative when the Qualified Person author is unavailable to provide the consent. We consider this alternative would only be used in limited circumstances, such as:

- The Qualified Person no longer works for the consulting firm;
- Medical issues preclude obtaining a Qualified Person's signature;
- The Qualified Person has since passed away;
- The person named is no longer a Qualified Person as they are no longer a member of a recognized professional association.

Canadian Securities Administrators recognized the difficulties faced by mining and exploration companies in obtaining written consents from Qualified Persons for use of a NI 43-101 Technical Report or information from a NI 43-101 Technical Report after it was filed. The 2011 revision to NI 43-101 made it so that only one written consent was required from a Qualified Person author under NI 43-101 rules and that consent was at the time of filing of the NI 43-101 Technical Report. Consequential amendments were also made to other securities regulations that required consents from the authors of expert reports, including NI 43-101 Technical Reports. The amendments allowed an alternative consent to the Qualified Person being prepared by an authorized signatory of the consulting firm that employed the Qualified Person at the time the NI 43-101 Technical Report was prepared. The authorized signatory must be an engineer or geoscientist with experience in the mining industry and registered with a recognized professional association under NI 43-101, but the authorized signatory is not required to meet the relevant experience requirement normally expected of a Qualified Person. We recommend that the SEC considers similar allowances to avoid the potential burden on the industry that will result from attempts to obtain consents from individuals who may no longer be available.

COMMENT 34

SEC Request for Comment

Do the proposed instructions provide the appropriate guidance for what may constitute the requisite relevant experience in the particular activity involved and in the particular

type of mineralization and deposit under consideration? Is there different or additional guidance that we should provide in this regard?

Response

We consider that the five year relevant experience requirement is too restrictive. It does not reflect the dynamic nature of the mining industry where new mineralization styles and deposit types, commodities of interest, and extractive methods can mean that there actually are very few individuals who can meet the five-year relevant experience requirement in those circumstances.

We suggest no stated number of years of relevant experience be included in the definition, as the principle should be that a Qualified Person could face their peers and explain to those peers how they have the necessary amount and type of relevant experience in the subject matter to act as a Qualified Person. See also our responses to [Comment 32](#) and [Comment 39](#).

We consider that the SEC Proposed Rule do not provide allowances for a qualified Person to rely on and disclaim responsibility for information prepared by what the Canadian rules describe as “other experts”, where that information is outside the field of practice of a Qualified Person. These include taxation, legal, environmental, political, social, and certain commodity marketing and pricing information, which are outside the purview of any Qualified Person. See also our responses to [Comment 109](#) and [Comment 114](#).

COMMENT 35

SEC Request for Comment

Should we define a qualified person in part to be an eligible member or licensee in good standing of a recognized professional organization at the time the technical report is prepared, as proposed? Why or why not? Should we require an organization to meet the six criteria specified in the proposed definition in order to be a recognized professional organization, as proposed? Should the definition of a qualified person take into account whether, and the extent to which, a person has been disciplined by their professional organization? If so, how? Should the definition specify that the organization must require, rather than require or encourage, continuing professional development? Are there different or additional criteria that we should require for an organization to be a recognized professional organization?

Response

We agree that Qualified Persons must be members or licensees in good standing of a recognized professional organization at the time the technical report summary is

prepared. We do not fully agree with the definition as proposed in the SEC Proposed Rules for a professional organization.

We note that the SEC Proposed Rules state:

“For an organization to be a “recognized professional organization,” it must be either recognized within the mining industry as a reputable professional association, or be a board authorized by U.S. federal, state or foreign statute to regulate professionals in the mining, geoscience or related field”.

“Furthermore, the organization must:

- *admit eligible members primarily on the basis of their academic qualifications and experience;*
- *establish and require compliance with professional standards of competence and ethics;*
- *require or encourage continuing professional development;*
- *have and apply disciplinary powers, including the power to suspend or expel a member regardless of where the member practices or resides; and*
- *provide a public list of members in good standing.”*

We read this as stating that the professional organization must be either a reputable organization, or be a State Board, and meet the above five listed bullet points.

We recommend that the SEC Proposed Rules consider a wording amendment to avoid any doubt as to what is expected of a professional association (see also our responses to [Comment 36](#)), such that the requirement that is currently proposed in the SEC Proposed Rules:

“have and apply disciplinary powers, including the power to suspend or expel a member regardless of where the member practices or resides”

is amended to read:

“have and apply disciplinary powers, including the power to suspend or expel a member regardless of where the member practices or resides”, or where the mineral property is located” [emphasis added].

We consider that the type and extent of any disciplinary action taken against a Qualified Person is the responsibility of the professional association to which the Qualified Person actively belongs. As long as the professional association considers the Qualified Person to be of adequate character and ethical fitness, and is professionally capable, such that they will allow a current membership, this should be sufficient for the purposes of definition of a Qualified Person. We do not believe this should be an SEC responsibility.

We believe that the professional association should not require continuing professional development, rather that the professional association should “require or encourage”, as this is the approach adopted by many of the professional associations.

The professional associations and membership categories accepted for the purposes of meeting the definition of a Qualified Person under the SEC Proposed Rules should be published as a formal list that is promulgated by the SEC and updated from time to time.

We consider that the SEC Proposed Rules should be revised to avoid any doubt as to what is expected of a professional association (see also our responses to [Comment 36](#) and [Comment 37](#)).

COMMENT 36

SEC Request for Comment

What factors should we consider in determining whether a professional association is recognized as reputable with regards to the definition of a recognized professional organization? Are the examples we provided appropriate factors for determining whether a professional association is recognized as reputable or are other factors more appropriate? Should any of these factors be incorporated into the final rules?

Response

We agree that a reputable professional organization must be prepared to enforce ethics and compliance, must apply disciplinary powers, and incorporate the power to suspend or expel a member regardless of where the member practices or resides.

We agree that in general, principles-based approaches to definitions are preferable. There has been confusion in the mining industry as to which professional associations are recognized as reputable with regards to the definition of a recognized professional organization, and therefore, we recommend that the SEC establishes a formal list of recognized professional associations that is updated from time to time.

We do not agree that the proposed factors “*the frequency and quality of an association’s peer-reviewed publications, the number and global distribution of its members, and whether and to what extent the association publishes guides or standards that are accepted and used in the industry*” are appropriate. It is unclear to us how an association can have peer-reviewed publications; these are performed at the individual level. In our opinion, many of the standards and guidelines that the mining industry and securities regulators rely upon are published by learned societies, and not by professional associations.

We consider that the following factors should be included in the SEC Rules.

For an organization to be a “*recognized professional organization*,” it must be recognized within the mining industry as a reputable professional association. Furthermore, the organization must:

- Admit eligible members primarily on the basis of their academic qualifications and experience;
- Establish and require compliance with professional standards of competence and ethics;
- Require or encourage continuing professional development;
- Have and apply disciplinary powers, including the power to suspend or expel a member regardless of where the member practices or resides; and no matter where the mineral property is located;
- Provide a public list of members in good standing;
- Be on a public list of approved professional associations that is promulgated and maintained by the SEC.

We note that many professional associations have more than one membership category and not all membership categories may meet the criteria that are proposed for definition of a Qualified Person’s experience, and educational record.

We consider that having the SEC promulgate its own list of recognized professional associations and stating the membership categories accepted for each, will provide clarity and certainty to the industry, and avoid confusion.

COMMENT 37

SEC Request for Comment

Instead of the proposed flexible approach, should we require that a qualified person be a member of an approved organization listed in an appendix to the mining disclosure rules or in a document posted on the Commission’s website? If so, how should the Commission determine which organizations to approve and how frequently should the Commission update the approved organization list?

Response

Yes, a Qualified Person must be a member of an approved association and have the appropriate membership category of that association. We consider that a list of approved associations and accepted membership categories should be developed and maintained by the SEC, and should be provided in a format that is readily accessible to the mining industry and investing public.

To determine which organizations can meet the definition under the SEC Proposed Rules, the SEC should have a set of criteria that is used to rate each association. Such criteria should include:

- Recognized by the mining industry or government as being a credible organization;
- Bylaws that give the association the authority over its members;
- Admission criteria related to academic qualifications and experience;
- References attesting to an applicant's professional experience and ethical fitness;
- Code of ethics;
- Procedures for investigation of complaints made against a member;
- Ability to discipline members;
- Requires or encourages continuous professional development.

We note that while NI 43-101 uses a principles-based definition of a professional association, earlier versions of the Instrument included the list of such accepted associations in the Rule. This limited the ability of the Canadian Securities Regulators to amend the list, since they would have to amend the Rule. In the 2011 update, the problem was resolved by moving the list from the Rule to the Companion Policy, which allowed greater flexibility in making changes to the list. We recommend that the SEC adopt a similar approach to allow changes to the list when:

- An association or membership category is no longer being acceptable to meet the professional association required for the Qualified Person definition;
- A new association or membership category is identified as being acceptable for the Qualified Person definition.

We note that the Canadian Securities Regulators have updated the list of recognized professional associations twice since June 2011.

COMMENT 38

SEC Request for Comment

Should we, as proposed, require a registrant to disclose the recognized professional organization(s) that the qualified person is a member of, and confirm that the qualified person is a member in good standing of the organization(s)?

Response

We consider that when a Qualified Person is named in a disclosure document, the Qualified Person's professional designation abbreviation should be included the first time the Qualified Person is named. For example, such abbreviations could include: P.Geo., P.Geol, P.Eng., P.E., C.E., CPG, RM SME, FAusIMM, MAusIMM (CP), EurGeol, CSi MIMMM, Pr.Sci.Nat., MAIG, FAIG.

We consider that somewhere in a technical report summary, each Qualified Person should include the full name of the professional organization to which they belong, and the membership category if appropriate to that professional organization.

We recommend that the SEC Proposed Rules include a requirement to provide a Certificate of Qualified Person author that is prepared by each Qualified Person, which is included in the technical report summary. The certificate should include professional designation membership category, the name of the professional association, and the registration or membership ID of the Qualified Person.

We note that it is not unusual for a Qualified Person to hold multiple professional qualifications, for example a Qualified Person may be registered in their home jurisdiction and registered in the jurisdiction that hosts the mineral property that is the subject of the technical report summary. As a consequence, we also recommend that each Qualified Person be asked, in their Certificate of Qualified Person, to provide a full list of all of the registered organizations they belong to, with appropriate membership categories, and provide the registration or membership identification number for each.

See also our responses to [Comment 32](#), [Comment 33](#), [Comment 34](#), [Comment 35](#), [Comment 36](#), and [Comment 37](#).

COMMENT 39

SEC Request for Comment

Are there different or additional conditions that a person should have to satisfy in order to meet the definition of qualified person? For example, should we require that a person have attained a particular level of formal education (bachelor's degree, master's degree, or doctorate) in order to be a qualified person? If so, what level of education would be appropriate? Would such a minimum education requirement disqualify a significant percentage of persons from being considered as qualified persons who otherwise possess the requisite relevant experience?

Response

A qualified person as defined should hold a university degree or equivalent accreditation; the minimum expectation should be a bachelor's degree or equivalent. Post-graduate education should not be a specific requirement.

There may be persons who have sufficient experience but no formal accreditations who may be disqualified; however, our experience in Canada, Africa, and Australia is that while there were significant percentages of such industry professionals in the 1950s–1970s, in the mid-2010s, this is no longer the case, and the significant majority of current industry practitioners have a college or university degree.

COMMENT 40

SEC Request for Comment

Is the definition of qualified person too restrictive, thus increasing the cost and difficulty associated with finding a qualified person? Alternatively, should the definition be more restrictive, to help ensure a qualified person has an appropriate level of training and expertise? In either case, why?

Response

In our view, the definition is appropriate, except for the following:

- “a mineral industry professional with at least five years of relevant experience in the type of mineralization and type of deposit under consideration and in the specific type of activity that person is undertaking on behalf of the registrant”;
- Restricting professional discipline areas to those of engineering and geoscientists.

We have previously noted that we consider the amount of relevant experience requirement should be left to the Qualified Person to decide (see our responses to [Comment 32](#) and [Comment 34](#)).

We also previously noted that there are other university or college degrees that are relevant to the mining industry that could be an appropriate discipline to sign on some aspects of a mineral project (see our responses to [Comment 32](#)).

We do not consider that the definition needs to be more restrictive. Any more restrictions would likely reduce the pool of individuals who would be eligible to be a Qualified Person on specific subject matters. Reducing the available Qualified Person pool would create an unnecessary burden on the mining industry to source an eligible Qualified Person.

We believe that additional restrictions would not be necessary if the Qualified Person definition includes the following principles for guidance:

- A Qualified Person is someone who can explain and justify their decisions to their peers;
- A Qualified Person is someone who can recognize the need for and seek expertise from other experts when preparing a professional opinion.

COMMENT 41

SEC Request for Comment

Instead of prescribing qualifications for the qualified person, should we instead require a registrant to provide detailed disclosure regarding the qualifications of the individual who prepared the technical report summary? Why or why not?

Response

We agree that all Qualified Person authors of a technical report summary should provide more detailed disclosure on their qualifications and experience in the subject matter. We consider the most appropriate way of including this in a technical report summary is to have each Qualified Person provide a Certificate of Qualified Person that would:

- Provide the Qualified Person's name, professional designation, and employer name;
- Provide the title of the technical report summary, and the effective date, to which the Certificate of Qualified Person applies;
- Provide a Qualified Person's academic qualifications, including degree name, date conferred, and the name of the academic institution attended, for each degree obtained;
- Provide a list of all relevant professional association memberships, including designations, full name of the professional association, and professional association membership number or identification number;
- Include a short summary of their relevant experience that enables them to prepare and take responsibility for the information that they are providing in the technical report summary;
- State that they meet the definition of a Qualified Person for the information for which they are taking responsibility in the technical report summary;
- Provide the dates and durations of site visits, if any. If no site visit has been undertaken, then the Qualified Person should state that they have not visited site;

- Include a list of the sections of the technical report summary for which they are taking responsibility;
- Identify if they are, or are not, independent of the registrant and mineral property;
- State that they have read the SEC Rules and that the sections of the technical report summary they prepared have been prepared in accordance with those SEC Rules;
- State that in their opinion, that as of the effective date of the technical report summary, those sections of the technical report summary that they prepared contain all scientific and technical information that is required to be disclosed so as to make those sections not misleading.

We note that when identifying those sections of the technical report summary for which a Qualified Person is taking responsibility, guidance should be provided. General language such as. “I am responsible for the geology information” is not acceptable and should be avoided. A Qualified Person should cite the specific section(s) and subsection number(s) in the technical report summary.

Our suggestion in relation to citing relevant experience is not meant to be a requirement for a Qualified Person to provide essentially a copy of their curriculum vitae. Nor is it meant to have a Qualified Person simply state that they have relevant experience. We are seeking to ensure that the text provided would be useful to an investor to understand that the Qualified Person has sufficient experience and background in that subject matter to provide an professional opinion.

COMMENT 42

SEC Request for Comment

Should we require a registrant to disclose material exploration results for each of its material properties, as proposed? Why or why not? Alternatively, should we permit registrants to provide exploration results in a summary form?

Response

Unfortunately, in our view, the definition of “exploration results” under the CRIRSCO Template:

“18. Exploration Results include data and information generated by mineral exploration programmes that might be of use to investors but which do not form part of a declaration of Mineral Resources or Mineral Reserves.”

allows an interpretation that we consider could be confusing to the industry. We do not recommend that the SEC uses this definition without additional clarification.

There is an apparent distinction between data and information generated by exploration programs that are either:

- Part of a declaration of Mineral Resources or Mineral Reserves; or
- Potentially of use to investors, but which do not form part of a declaration of Mineral Resources or Mineral Reserves.

We strongly disagree with this distinction since exploration results are the basis of the assumptions used in the geological model, and form the basis of the Mineral Resource and Mineral Reserve estimates. Mineral Resource and Mineral Reserve estimates are not simply based only on sampling (primarily drilling) information. Much of the generative process of exploration activity, such as testing of generative hypotheses, geological mapping, remote sensing, geochemical sampling, geophysical surveying, geometallurgy, and evaluation of mineralization controls, are also used as inputs to the geological model, and drive the fundamental understanding of the geological and grade continuity. Exploration results do not become something other than exploration results once a Mineral Resource or Mineral Reserve is declared.

We recommend that the SEC Proposed Rules provide more clarification as to the distinction between information that is used in an exploration technical report summary and information that would be used in a technical report summary that includes Mineral Resources and Mineral Reserves.

We suggest that the NI 43-101 definition may be more appropriate:

“exploration information” means geological, geophysical, geochemical, sampling, drilling, trenching, analytical testing, assaying, mineralogical, metallurgical, and other similar information concerning a particular property that is derived from activities undertaken to locate, investigate, define, or delineate a mineral prospect or mineral deposit.”

We are unclear in the SEC Proposed Rules in regards to this statement as to what other information would be available:

*“A registrant must not use exploration results **alone** to derive estimates of tonnage, grade, and production rates, or in an assessment of economic viability”;* [emphasis added]

For example, what additional information would be combined with the exploration results to allow estimates of tonnage and grade? Is this referring to information such as metallurgical testwork results, geotechnical studies, or marketing studies?

We disagree with the stated purpose of exploration results in the SEC Proposed Rules:

“A proposed instruction would explain that when determining whether exploration results are material, a registrant should consider their importance in assessing the value of a material property or in deciding whether to develop the property. This instruction is consistent with the purpose of exploration activity, which is to determine whether a mining property contains a deposit that is economically viable and worth developing or to reduce the uncertainty surrounding that determination.”

We consider that the definition *“to determine whether a mining property contains a deposit that is economically viable and worth developing or to reduce the uncertainty surrounding that determination”*, is too narrow. There are other ways in which exploration results are used:

- Generative programs to determine whether a property or area is prospective;
- Evaluate which deposit types may occur in that particular setting;
- Refine exploration concepts and strategies by testing the responses of known mineralization to various geophysical and geochemical tools;
- Assessment of which exploration programs should be funded.

We consider that evaluation of *“whether a mining property contains a deposit that is economically viable and worth developing”* occurs much later in the exploration cycle, and there may be a significant amount of exploration results generated prior to that phase of an exploration program. In certain circumstances, those exploration results would be material to a registrant.

Use of the term *“mining property”* has the appearance of presupposing that some type of economic deposit has already been identified. We suggest that the term *“mineral property”* be used instead, reflecting common industry terminology.

We also consider that the following text in the SEC Proposed Rules may be confusing to the mining industry:

“Prior to establishing the economic viability to an acceptable degree of certainty, exploration results are also used to assess the potential value of the property. Hence, we believe that when determining whether exploration results are material, registrants should consider how the exploration results affect the valuation of a property or the decision to develop the property.”

We consider that this paragraph has inherent contradictions with the definition proposed for exploration results in the SEC Proposed Rules. If exploration results *“that are not part of a disclosure of mineral resources or reserves”*, are excluded, it is difficult to see what information would remain that would support a decision to develop a property.

We disagree with the use of the phrase *“because of the level of risk associated with exploration results”*, because a well-managed exploration program:

- Mitigates the risk of inappropriately spending funds on an exploration program on a mineral property;
- Reduces the risk of exploring in the wrong area, or using the wrong deposit model;
- Results in collection of additional data that provide more confidence in the geological and grade continuity.

We note that much of the text used in this section of the SEC Proposed Rules regarding exploration information appears to be directed toward estimation of tonnes and grade of an exploration target, rather than exploration results themselves (*“geological, geophysical, geochemical, sampling, drilling, trenching, analytical testing, assaying, mineralogical, metallurgical, and other similar information concerning a particular property that is derived from activities undertaken to locate, investigate, define, or delineate a mineral prospect or mineral deposit.”*)

If the SEC is concerned with the disclosure of estimates of tonnes and grade of an exploration target, then that term needs to be defined in the SEC Proposed Rules.

“Therefore, we believe exploration results are insufficient to support disclosure of estimates of tonnage, grade, or other quantitative estimates. Tonnage and grades should only be part of mineral resource and reserve estimates, which must include an assessment of geologic and grade or quality continuity and overall geologic uncertainty”

This section would then need to be rewritten to make that clear.

We note that there is a contradiction in *“exploration results are insufficient to support disclosure of estimates of tonnage, grade, or other quantitative estimates”* since the information used to perform Mineral Resource and Mineral Reserve estimates are exploration results, and are used to estimate tonnes and grades. Exploration results are used to assess *“geologic and grade or quality continuity and overall geologic uncertainty”* when performing Mineral Resource and Mineral Reserve estimates.

We believe the basis of this misunderstanding of exploration results and exploration information in the SEC Proposed Rules is caused by the confusion of estimates of tonnes and grades of an exploration target, with estimates of tonnes and grades in Mineral Resource and Mineral Reserves. If there is a particular issue with estimates of tonnes and grades of an exploration target, then this should be specifically addressed in the SEC Proposed Rules, rather than the confusing statements currently presented regarding exploration results.

We further note that the portion of the definition of exploration results as proposed in the SEC Proposed Rules:

“that are not part of a disclosure of mineral resources or reserves”

does not recognize the fundamental principles of interpretation of geology and development of geological models, deposit models, and eventually resource estimates. There is no bright-line demarcation between an exploration result and a resource estimate. Resource estimation is a process that reassesses and reinterprets itself. As newer information from exploration programs becomes available, this feeds into reassessments of data and interpretations such as the geological models, controls on mineralization, mineralogy, structural controls, geometallurgy, and geological and grade continuity, resulting in improved estimates. This distinction between exploration results and the exploration information supporting Mineral Resource estimates has not been made in the Canadian context and it has not been found to be necessary.

In summary, we do not consider that the requirement for a registrant to disclose material exploration results for each of its material properties, as proposed, is appropriate. We believe that there are fundamental internal inconsistencies in the text as proposed that will result in confusion to the industry. We also consider that there are inconsistencies in the stated approach with other mining disclosure standards. The issue that the SEC appears to be trying to address is the estimate of tonnage and grade of an exploration target in the SEC Proposed Rules on exploration results; however in our view extending this to apply to all exploration results is inappropriate.

We do not agree with the SEC Proposed Rules requiring a registrant

“to disclose material exploration results for each of its material properties, as proposed”.

See also our responses to [Comment 44](#), [Comment 46](#), [Comment 99](#), [Comment 104](#), [Comment 109](#), and [Comment 113](#).

We do not consider that the SEC Proposed Rules should be defining how a registrant presents its exploration results for general disclosure, and the SEC Proposed Rules should not require a registrant to use a narrowly-defined format. The types of exploration results that are generated are quite diverse, and can vary considerably depending on the type of deposit being explored, the techniques being employed, and the phase of the exploration program. We recommend that the SEC Proposed Rules does not require a summary form for general presentation of exploration results.

See also our responses to [Comment 99](#), [Comment 104](#), [Comment 109](#), and [Comment 113](#).

COMMENT 43

SEC Request for Comment

Should we define exploration results as data and information generated by mineral exploration programs (i.e., programs consisting of sampling, drilling, trenching, analytical testing, assaying, and other similar activities undertaken to locate, investigate, define or delineate a mineral prospect or mineral deposit) that do not form part of a disclosure of mineral resources or reserves, as proposed? Why or why not? Are there other characteristics that we should include in the definition of exploration results? Are there other activities that we should include as examples of mineral exploration programs? Are there activities that we should exclude as examples of mineral exploration programs?

Response

We do not agree with the definition as proposed. In particular, we do not agree with the last phrase “*that do not form part of a disclosure of mineral resources or reserves*” being incorporated in the definition. Exploration results do not become something other than exploration results once a Mineral Resource or Mineral Reserve is declared.

See also our response to [Comment 42](#).

We also suggest that “mapping” be part of the named activities that meet the definition to cover exploration activities such as geological mapping, structural mapping, and remote sensing satellite imagery interpretation.

We consider that the term “sampling” should be specifically expanded to make it clear that it incorporates both geochemical and geophysical surveys.

We do not see any activities in the proposed definition that should be excluded.

COMMENT 44

SEC Request for Comment

What are the risks that could result from requiring disclosure of material exploration results? Should we prohibit the use of exploration results to derive estimates of tonnage, grade, and production rates, or in an assessment of economic viability, as proposed? Why or why not? Would prohibiting the use of exploration results for these purposes, as proposed, adequately protect investors from the increased risk associated with including information having a lower level of certainty about the economic value of mining properties?

Response

Risks can arise from disclosure of any type of information. We consider that naming a Qualified Person who either prepared or is approving the release of exploration results, mitigates the risk of exploration information being disclosed in a potentially misleading way.

Using the Canadian and Australian examples, where an appropriate organization that has a process for guidance to the industry provides feedback and sets industry-accepted standards, the SEC should not endeavor to create a list of what information would be considered potentially misleading when disclosing exploration results, but ask national standard setters within the US mining industry (e.g. the Society for Mining, Metallurgy and Exploration (SME)) to provide this type of guidance.

Exploration results should be allowed to be used to estimate potential tonnage and grade ranges of an exploration target. There should be no prohibition on disclosure of tonnes and grade ranges as exploration targets, as long as the disclosure includes appropriate context and cautionary statements. However, tonnes and grades of exploration targets should not be included in economic analyses or production schedules of a mineral project.

Our view is that tonnes and grade estimates of exploration targets are part of the public information that is already available to investors in the marketplace. These estimates are made available through many channels, including mining analysts, and newsletter and blog writers. By prohibiting registrants from disclosing similar information prepared by a Qualified Person with a stated basis and assumptions being made clear, and appropriate cautionary language, the SEC Proposed Rules would deny investors the ability to compare the registrant's viewpoint with that of analyst or letter writers.

We also note that registrants can be requested by permitting authorities to disclose information on the potential likely size of an operation, through documents such as environmental impact assessments, and plans of operation assessments. Such assessments frequently end up in the public domain, and therefore the estimates of tonnages and grades of exploration targets also become public. We recommend that a registrant be allowed to disclose these estimates with the accompanying estimate basis and assumptions being made clear, using appropriate cautionary language.

This disclosure of tonnes and grade of exploration targets is allowed in the jurisdictions that use the CRIRSCO family of codes. Many companies are already reporting tonnes and grades of exploration targets in their filings in their home jurisdictions, so this disclosure is already available for investors to read and factor into their investment decisions.

We suggest that the SEC Proposed Rules consider the following in relation to public disclosure of exploration targets:

- Require that the estimate of the tonnage and grade range is prepared by, or supervised by, a Qualified Person;
- Require that the tonnage and grade range be clearly identified as an exploration target to ensure that the estimate cannot be interpreted as being a Mineral Resource or Mineral Reserve estimate;
- Require that cautionary language statements be incorporated into the disclosure rules to ensure that an investor can understand the uncertainty in the exploration target estimates;
- Require that exploration targets be estimated on the basis of three-dimensional physical sampling techniques (e.g. drill holes, channel and trench samples) and not just on two-dimensional data (e.g. rock chip samples) in conjunction with non-physically sampled data (geophysical surveys);
- The basis for, and assumptions used, in the estimate must be provided, and the Qualified Person should provide an explanation of how the tonnage and grade ranges were estimated;
- Appropriate illustrations should accompany the information.

We do not consider that prohibiting the use of exploration results in an exploration target is beneficial to the industry. As these types of information are already in the marketplace, a prohibition by the SEC is more likely to have the effect of driving the discussion by the registrant of the exploration targets underground.

Where information is likely to be viewed by an investor as being important when making an investment decision, then such information should be prepared by or supervised a Qualified Person and be disclosed by a registrant. The registrant would be responsible for how the information is disclosed.

We do not consider that “*having a lower level of certainty*” is, on its own, a valid reason for non-disclosure of exploration targets. We note that mining companies routinely disclose information on mining properties that have different levels of certainty/uncertainty (e.g. pre-feasibility study results are less certain than those arising from feasibility studies; Probable Mineral Reserves are less certain than Proven Mineral Reserves; Mineral Resources have a lower level of certainty than do Mineral Reserves), and investors have learned to understand this, and factor such uncertainties into their investment decisions.

COMMENT 45

SEC Request for Comment

When determining whether exploration results are material, should a registrant consider their importance in assessing the value of a material property or in deciding whether to

develop the property, as proposed? Why or why not? Are there other circumstances that would better define when exploration results are material? If so, what are those circumstances?

Response

We do not agree that a registrant should apply a bright-line test when determining if exploration results are material. See also our responses to [Comment 3](#), [Comment 4](#), [Comment 6](#), [Comment 7](#), [Comment 62](#), and [Comment 105](#).

The definition should be principles-based. We consider that the results should be considered material if they would likely influence an investor's decision to trade shares in the registrant.

There are no other circumstances that should be used to define when exploration results are material.

COMMENT 46

SEC Request for Comment

We are proposing to require the disclosure of material exploration results for each material property. Should we also require disclosure of material exploration results when the registrant has determined that it has in the aggregate material mining operations but no individual properties are material? Would disclosure of material exploration results for its properties in the aggregate (when none is individually material) provide additional meaningful disclosure for investors? If so, how should a registrant disclose such exploration results? Should it provide such results in summary form? Or should it provide detailed disclosure about all material exploration results for all of its properties?

Response

We recommend that the SEC Proposed Rules include a requirement to disclose material exploration results on a timely basis, as this would be similar to requirements in most of the jurisdictions that use one of the CRIRSCO family of codes.

We consider that any registrant that identifies itself as a mining or exploration company should at have at least one material mineral property. We note that the Companion Policy 43-101CP states that:

“An actively trading mining issuer, in most circumstances, will have at least one material property”

We recommend that a similar position be adopted by the SEC.

The SEC Proposed Rules defined mining operations:

“Consistent with current staff guidance, we are proposing to define “mining operations” to include all related activities from exploration through extraction to the first point of material external sale”

We recommend that the SEC make the important distinction between mineral properties that are at the exploration stage, i.e. strictly exploration properties, versus mineral properties that are currently undergoing mine development, are actively being mined, or are preparing to restart operations. We believe the distinction is necessary when determining the requirements for disclosure of exploration information on a registrant’s mineral properties. Exploration information derived from a property with a material mining operation may not in itself be material, and therefore may not need to be disclosed to investors. If an exploration stage property is material to a registrant, then disclosure of exploration information from that property should be mandatory. We note that for companies that do not derive cash flows from operating mines, exploration results are a key item of information that investors use to value the company’s properties, and therefore the company. Investors should have access to exploration results on a timely basis.

Exploration results are diverse, and the information available will depend on the type of deposit, type of exploration being performed, the stage of the exploration program, the results available, and the status of the interpretation of those results. We believe that the registrant’s management, in conjunction with a Qualified Person, are the most appropriate sources to determine what information is presented to investors, and how that information is best presented. We do not consider that the SEC should be prescriptively deciding what information is required, and how it is presented to investors.

We consider that disclosure of details of exploration programs should be at the discretion of the registrant. However, some basic considerations could be incorporated into guidance from the SEC, such as those defined in Section 3.3, paragraph 1 of NI 43-101:

*“(a) the material results of surveys and investigations regarding the property;
(b) the interpretation of the exploration information; and
(c) the quality assurance program and quality control measures applied during the execution of the work being reported on.”*

COMMENT 47

SEC Request for Comment

Should we require a registrant with material mining operations to disclose mineral resources in addition to mineral reserves, as proposed? Why or why not?

Response

Yes, we consider that Mineral Resources should be allowed to be disclosed.

We note that most jurisdictions that use the CRIRSCO family of codes require Mineral Resource disclosure as well as Mineral Reserve disclosure.

We recommend that the SEC Proposed Rules allow Mineral Resources disclosure irrespective of whether Mineral Reserves have been estimated on a particular mineral property.

COMMENT 48

SEC Request for Comment

What are the risks that could result from requiring a registrant with material mining operations to disclose its mineral resources? How could the Commission mitigate those risks?

Response

We believe that the investing public in the United States who are interested in companies with mineral properties are able to distinguish between the term “Mineral Resource” and the term “Mineral Reserve”. We do not believe that the disclosure of Mineral Resources in itself represents a risk to the credibility of information in the marketplace or that Mineral Resources could be misunderstood to be Mineral Reserves.

However, we consider that certain information should be required when disclosing Mineral Resource and Mineral Reserve estimates, such that this distinction is clear.

- Mineral Resources are based on conceptual evaluation of reasonable prospects of eventual economic extraction;
- Mineral Reserves have economic viability demonstrated through the application of Modifying Factors; the type of mining study that supports the Mineral Reserve estimate should be disclosed (i.e. Pre-feasibility study, feasibility study or life-of-mine plan);
- Where economic analyses have been performed on Mineral Resource estimates, then disclosure of those results should have appropriate accompanying cautionary language that economic viability has not been demonstrated.

See also response to [Comment 47](#).

COMMENT 49

SEC Request for Comment

Under the proposed rules, a registrant with material mining operations could choose not to engage a qualified person to determine whether a mineral deposit is a mineral resource, with the result that the registrant would not be required to disclose mineral resources that may exist. Should the rules, as proposed, preclude a registrant from disclosing mineral resources in an SEC filing if it has elected not to engage a qualified person to make the resource determination? Alternatively, should the rules permit a registrant to disclose mineral resources in an SEC filing, despite not having engaged a qualified person to make the resource determination, in certain instances? If so, in what instances would it be appropriate to permit such disclosure?

Response

We consider that any public disclosure of a Mineral Resource or Mineral Reserve should include the name of a Qualified Person who prepared, supervised or approved that disclosure.

We do not believe that the person preparing the estimate must be a Qualified Person; however we believe that the person taking responsibility for the public disclosure must be a Qualified Person.

We do not agree that because a resource estimate was not prepared by a Qualified Person that this precludes a registrant from disclosing the estimate, particularly if the estimate constitutes material information on the mineral project. A registrant should disclose the information, and have a Qualified Person perform sufficient due diligence to allow that Qualified Person to take responsibility for the disclosure of the Mineral Resource estimate, and be named in the disclosure document.

COMMENT 50

SEC Request for Comment

Should we define the term “mineral resource,” as proposed? Why or why not? In order for material to be classified as a mineral resource, should there be reasonable prospects for its economic extraction, as proposed? Why or why not?

Response

We are pleased that the SEC Proposed Rules have tried to incorporate much of the CRIRSCO definition of a mineral resource.

However, we recommend that the definition use the exact wording from the CRIRSCO Template:

“A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

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

We consider that the inclusion of the term “eventual” makes it clear that the assumptions used to meet the economic context of the definition are forward-looking, such that the assumed commodity price should be an industry consensus of the future long-term commodity price, and not a backward-looking historical price. See also our response to [Comment 51](#).

The Mineral Resource definition should require an estimator to consider reasonable prospects of eventual economic extraction; however, the assumed commodity price used should be based on a forward-looking price, not a backward historical price. See also our response to [Comment 67](#), [Comment 78](#), [Comment 79](#), and [Comment 80](#).

COMMENT 51

SEC Request for Comment

Should the definition of mineral resource include mineralization, including dumps and tailings, as proposed? Should the definition of mineral resource also include geothermal fields and mineral brines, as proposed? Why or why not? Is there any other material that should be explicitly included in the definition of mineral resource?

Response

Yes, the definition should incorporate dumps and tailings. Additional clarification should be included to ensure that solid materials such as slag heaps (dumps), stockpiles, heap or dump leach pads, and backfill materials, are included in the definition.

We strongly do not agree that the definition of mineral resource should include geothermal fields. Much of what is proposed in the SEC Proposed Rules is inappropriate for a geothermal project, and make it difficult to see how a registrant with geothermal projects could comply with the Proposed Rules. We note:

- The units in a geothermal resource or reserve estimate are units of energy per specified time period, as opposed to tonnes and grades of a solid mineral project;

- Geothermal energy is a renewable resource, which is not the case for a solid mineral deposit;
- Most geothermal energy estimates use probabilistic measures rather than the deterministic estimation methods commonly used in solid mineral projects;
- The investing community that follows geothermal energy projects is not necessarily the same as the investing community that follows mineral projects;
- There are a number of different codes for reporting of geothermal resources and reserves, and these are currently not harmonized. It would be difficult for the SEC to regulate an industry that is still in the process of establishing consistent standards.

Geothermal systems are dynamic, a fact recognized in definitions of these systems over time: (the definitions following are sourced from Williams et al., 2011; https://www1.eere.energy.gov/geothermal/pdfs/updating_classification_geothermal_resources_presentation.pdf):

“AGI Glossary of Geology (earlier USGS) definition - “any regionally localized geological setting where naturally occurring portions of the Earth’s thermal energy are transported close enough to the Earth’s surface by circulating steam or hot water to be readily harnessed for use.””

“Provisional National Geothermal Data System definition – “A body of material in the Earth from which energy may be extracted as heat in a fluid circulated through the body and transported to an external point of use.””

“Draft definition for this study – “A geothermal system is any localized geologic setting where portions of the Earth’s thermal energy may be extracted from a circulating fluid and transported to a point of use. A geothermal system includes fundamental elements and processes, such as fluid and heat sources, fluid flow pathways, and a caprock or seal, which are necessary for the formation of a geothermal resource.””

Although the geothermal industry is in the process of establishing standards of disclosure and classification of geothermal resources and reserves, these standards and classifications are not currently accepted geothermal industry-wide, and in our view it would be confusing to the capital markets to have this type of information presented as if it was the same as mineral project information. We consider that the geothermal energy industry is as different from the minerals industry as the oil and gas industry is different from the minerals industry. We note that the oil and gas industry has its own separate reporting requirements and suggest that the geothermal industry be accorded its own separate reporting requirements.

We also do not agree that the definition of Mineral Resource should include mineral brines. The CRIRSCO family of codes includes the term “solid” in their definition of a mineral resource in order to exclude fluid systems such as mineral brines from being

captured under the definition. Mineral brine reservoirs are dynamic systems, and the methodology for estimation of brine resources and brine reserves is significantly different to that used in Mineral Resource and Mineral Reserve estimates, since brine resource and brine reserve estimates also require temporal measurements of fluid flow and brine chemistry.

We recommend that the SEC Proposed Rules include an allowance for disclosure of historical estimates, similar to the allowances provided in NI 43-101 and in the SAMREC code:

““historical estimate” means an estimate of the quantity, grade, or metal or mineral content of a deposit that an issuer has not verified as a current mineral resource or mineral reserve, and which was prepared before the issuer acquiring, or entering into an agreement to acquire, an interest in the property that contains the deposit”

COMMENT 52

SEC Request for Comment

Should the definition of mineral resource exclude oil and gas resources as defined in Regulation S-X, gases (e.g., helium and carbon dioxide), and water, as proposed?

Why or why not? Is there any other material that should be explicitly excluded from the definition of mineral resource?

Response

Yes, the definition of a mineral resource should exclude oil and gas resources as defined in Regulation S-X, gases (e.g., helium and carbon dioxide), and water. There are well established reporting requirements and classification standards for reporting of oil and gas deposits. There is no need to confuse the oil and gas industry and their investors with a new set of standards that are not really appropriate to that industry.

We consider that the SEC Proposed Rules should incorporate similar guidance to that accompanying the definition of a mineral resource in the CIM Definition Standards such that the material of economic interest is a natural occurrence:

*“Material of economic interest refers to diamonds, **natural** solid inorganic material, or **natural** solid fossilized organic material including base and precious metals, coal, and industrial minerals.” [emphasis added]*

We are concerned that without this guidance, publically disclosed estimates of Mineral Resources or Mineral Reserves could potentially include non-natural materials, such as the amount of copper contained in an abandoned sub-sea cable, or the amount of

platinum group elements or gold contained in electronic equipment in a municipal dump; disclosure of such estimates on non-natural materials would be confusing to the industry and to investors.

COMMENT 53

SEC Request for Comment

Should the definition of mineral resource include the requirement that a qualified person estimate or interpret the location, quantity, grade or quality continuity, and other geological characteristics of the mineral resource from specific geological evidence and knowledge, including sampling, as proposed? Why or why not? Are there other geological characteristics that we should explicitly require a qualified person to estimate or interpret when determining the existence of mineral resources?

Response

Yes. Mineral Resource estimates must be based on three-dimensional, physical sampling that provides information on geological characteristics, including location, quantity, grade, or quality continuity.

The definition should confine Mineral Resources to solids, and the proposal to include geothermal and brines should be removed.

The definition should remain principles-based.

Since Mineral Resource estimates can apply to numerous deposit styles and commodities, there is a danger if too prescriptive a definition is prepared that it will cause unintended consequences for specific deposits/commodities.

It is recommended that guidance be provided that clarifies that “geological characteristics” could include consideration of aspects such as metals leaching/acid rock drainage potential, geotechnical parameters (e.g. rock quality designation), metallurgical testwork results, contaminant elements and minerals (e.g. arsenic, cadmium, mercury, talc, clays), and modelling of elements that would affect recovery, mineral processing, or the environment, (e.g. carbonate, sulfide sulfur).

COMMENT 54

SEC Request for Comment

Should we require a registrant to classify its mineral resources into inferred, indicated and measured mineral resources, as proposed? Why or why not? If not, what classifications would be preferable and why?

Response

Yes, the SEC Proposed Rules should require that registrants classify Mineral Resources as Measured, Indicated and Inferred when such estimates are made public.

The Measured, Indicated and Inferred categories are well established internationally, and using these terms will match both the CRIRSCO templates, and current industry practices.

Use of the terms would harmonize the US definitions with other international securities regulations and level the playing field for US reporting companies. It would also allow comparability between US reporting companies and those companies reporting in other jurisdictions.

We do not think that there are any other terms that are preferable to those in the CRIRSCO family of codes.

We recommend that the SEC Proposed Rules allow, in the case of coal estimates, a registrant to replace the term “Mineral Resource” with “Coal Resource” (Measured Coal Resource, Indicated Coal Resource, Inferred Coal Resource); similarly “Mineral Reserve” with “Coal Reserve” (Proven Coal Reserve, Probable Coal Reserve).

COMMENT 55

SEC Request for Comment

Should we define “inferred mineral resource” as proposed? Why or why not? Should we require the disclosure of inferred mineral resources although quantity and grade or quality with respect to those mineral resources can be estimated only on the basis of limited geological evidence and sampling, as proposed? Should we require a qualified person to describe the level of risk associated with an inferred mineral resource based on the minimum percentage that he or she estimates would convert to indicated or measured mineral resources with further exploration, as proposed? Should we permit rather than require a registrant to disclose inferred mineral resources because of the high level of geologic uncertainty associated with that class of mineral resource? Should we prohibit the disclosure of inferred mineral resources for that reason?

Response

No, we do not agree with the proposed definition of Inferred Mineral Resources.

We believe that the SEC Proposed Rule should use the definition of Inferred Mineral Resources as set out in the CRIRSCO Template. The CRIRSCO definition has been accepted by most of the other main mining jurisdictions globally. Creating a different

definition to that of the internationally-accepted definition would potentially create confusion in the marketplace.

Inferred Mineral Resources, as defined in the CRIRSCO family of codes, have already been disclosed to US investors through registrant's non-SEC filings, such as investor presentations and website disclosures. The SEC expressed concern over the potential for investors to misunderstand the limitations on Inferred Mineral Resources. In our view, this term has become well understood by the investment community over the past decades.

We consider that disclosure of Inferred Mineral Resources should only be required if it is material information. If the Inferred Mineral Resources are not material information, then the SEC Proposed Rules should be amended to permit the disclosure, but not require it.

A Qualified Person should not be required to describe the level of risk associated with the estimate. We note that the CRIRSCO definition of Inferred Mineral Resources already establishes that an Inferred Mineral Resource must:

“An Inferred Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.”

The lower level of confidence does not allow a Qualified Person to assign a percentage with any level of real accuracy of how much of the estimate could be upgraded to higher confidence categories with further exploration. Asking a Qualified Person to state an estimated percentage of likely conversion may potentially expose a Qualified Person to liability if that estimated percentage is later found to be incorrect.

We believe the mining industry has found the appropriate context in which to disclose Inferred Mineral Resources, and the investment community has learned the appropriate level of value to apply to Inferred Mineral Resources in that context.

COMMENT 56

SEC Request for Comment

Should we prohibit the use of inferred mineral resources to make a determination about the economic viability of extraction, and preclude the conversion of an inferred mineral resource into a mineral reserve, as proposed? Would these proposed prohibitions be sufficient to mitigate the added uncertainty that could result from the requirement to disclose inferred mineral resources? Are there circumstances that would justify a qualified person's use of inferred mineral resources to make a determination about the

economic viability of extraction, or that would allow the conversion of an inferred mineral resource into a mineral reserve? Should we permit the use of inferred mineral resources to make a determination about the economic viability of extraction as long as the qualified person and registrant disclose the high level of risk associated with such mineral resources? If so, what would be the potential effects on registrants and investors?

Response

We do not consider that it is necessary to protect investors from viewing disclosure that includes Inferred Mineral Resource estimates. Investors are generally well informed as to the confidence that can be placed on conceptual mining studies that incorporate Inferred.

We agree that Inferred Mineral Resources cannot be converted to Mineral Reserves.

We believe that it is appropriate for the SEC Proposed Rules to allow Inferred Mineral Resources to be used in production schedules and cash flows of conceptual mining studies. These are studies that are performed at a conceptual, scoping-study level (less than pre-feasibility standard), and are frequently used by the mining industry:

- To provide an initial assessment of different development options for a mining operation;
- For strategic planning purposes to support which project in the company's project portfolio is funded at which time;
- For budgetary purposes;
- To provide the first technical basis for communicating with local community stakeholders as to the types of mining operation that are planned;
- To initiate the permitting process;
- To raise finance for future activities on the project (additional exploration, development, detailed technical studies).

We believe these types of study are commonly performed by the mining industry and the results should be made available to investors to provide supporting information on the early-stage analysis of a mineral project.

We note that because the studies are so common, we consider that it is most appropriate for the registrant to be allowed to have control of the preparation and disclosure of the study materials. This includes the involvement of Qualified Persons in preparation and presentation of the results of the studies.

We recommend that as part of the allowance for registrants to publicly disclose the results of these types of studies, that:

- Registrants are required to provide text that clearly identifies that the study is conceptual;
- The study does not demonstrate economic viability;
- Qualified Persons are named.

We note that conceptual studies of deposit viability are also performed by industry specialists in the media that recommend mining stocks to investors through newsletters. The SEC Proposed Rules would not apply to these authors or the content of their newsletters. We consider that allowing a registrant to present their own version of a conceptual study would act as a balance.

COMMENT 57

SEC Request for Comment

Should the definition of “inferred mineral resource” provide that such mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, as proposed? Should we require a registrant, when disclosing inferred resources, to provide a legend or cautionary statement about the geological uncertainty associated with inferred resources? If so, what should such legend or cautionary statement say and where in the SEC filing should it be disclosed?

Response

The definition of an Inferred Mineral Resource should be restricted to the exact text of the definition that has been established by national standard setters in the global mining industry in the CRIRSCO template.

We note that geological confidence should not be the only factor that results in an estimate being classified as Inferred. For example:

- In a kimberlite pipe, the geological continuity may be well established through conventional drilling techniques, but the distribution of the diamond size, quality, and value may require large bulk samples to provide a sufficient sample size to establish diamond size, quality, and values to support higher-confidence category classifications;
- An absence of metallurgical testwork could also restrict the classification of a well-drilled mineral deposit to Inferred. In this instance, the grade and geological continuity is well established, but the metallurgical recovery is still relatively unknown.

We do not believe that requiring a registrant to provide cautionary statements in regard to geological uncertainty of Inferred Mineral Resources is necessary. Requiring

prescriptive statements is not beneficial to the industry. There must be sufficient flexibility for a Qualified Person to explain the assumptions used when performing estimates.

We note again that limitations on the confidence category of a Mineral Resource estimate should not be restricted to the uncertainty in geological continuity. We recommend that there is no specific caution statement required for disclosure of Inferred Mineral Resources. Assuming that the CRIRSCO template definition for Inferred is used then the uncertainty is implicit in the classification category. The CRIRSCO confidence categories, including Inferred, are well understood by the mining industry.

COMMENT 58

SEC Request for Comment

Should we define “indicated mineral resource,” as proposed? In particular, should the definition depend on a qualified person’s ability to estimate quantity and grade or quality using adequate geological evidence and sampling, as proposed? Should the definition of “adequate geologic evidence” be based on a qualified person’s ability to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit, as proposed? Should we require a qualified person to describe the level of risk associated with indicated mineral resources based on the confidence limits of relative accuracy at a particular confidence level for production estimates for one-year periods, as proposed? Should we, instead, allow the qualified person to provide a qualitative discussion of the uncertainties in place of confidence limits if he or she so chooses? Why or why not?

Response

No, we do not agree with the proposed definition of Indicated Mineral Resources, because it is not clear whether the SEC Proposed Rule is requiring the exact text in the CRIRSCO definition of Indicated.

We believe that the SEC Proposed Rule should use the exact definition of Indicated Mineral Resources as set out in the CRIRSCO Template.

We do not agree that a Qualified Person should be required to describe the level of risk associated with Indicated Mineral Resources based on the confidence limits of relative accuracy at a particular confidence level for production estimates for one-year periods.

The reasons are:

- The definition of Indicated Mineral Resources in the CRIRSCO Template is principles-based, and is based on the professional judgement of the Qualified Person on a number of different factors. Each factor will have its own

accompanying uncertainty, and it is by reviewing all of these in combination that allows the Qualified Person to determine the most appropriate confidence classification;

- To require a Qualified Person to explain each element of uncertainty or confidence for each element in a manner that an investor would understand, could be difficult, and potentially cause unnecessary confusion;
- The requirement could potentially also expose a Qualified Person to liability for their opinion on the confidence of a particular factor, if, with later information, this factor is shown to be different.

We do not believe that it is appropriate to use a specific geostatistical evaluation method in isolation to determine uncertainty and therefore to classify a level of confidence. Geostatistics is one of the supporting tools used by a Qualified Person when determining the appropriate confidence category for a Mineral Resource estimate, but it is not, and should not, be the only tool used. We note that the geostatistical evaluation method is not widely used, and therefore may not be available to all Qualified Persons.

We note that there are other scientific and technical factors than geostatistical evaluation that are incorporated by Qualified Persons into confidence classifications, such as metallurgical, environmental and social factors. These can also contribute significantly to the confidence classification that can be applied to the estimate.

The accuracy implied by a statistical test of estimation methods does not, in our view, fully capture the differences in the estimate that can occur if a different interpretation of the geological model is used. Two different Qualified Persons using the exact same data may have different geological model interpretations. Both geological interpretations could be equally valid. We consider that there is a risk that an investor could be misled by the stated accuracy range implying a precision on the estimate that does not exist. Stating that an estimate has an accuracy range of $\pm 15\%$ does not mean that the actual tonnage, grade, or metal content will be within 15% of those estimates. The relevant confidence categories used to classify Mineral Resources captures this other uncertainty that can arise when interpreting the geological model. We are concerned that an investor would focus on the apparent numeric quantification of accuracy rather than the Mineral Resource confidence category assigned, and assume a higher degree of precision in an estimate than is warranted.

We agree that a qualitative discussion of the uncertainties is appropriate and important information for an investor and thus, should be required disclosure. The determination of what level of detail is provided and what is included in the disclosure should be at the discretion of the Qualified Person due to the complexity of the issues that a Qualified Person must consider.

For example, there may be some items that may be readily mitigated and therefore a Qualified Person may consider these to have less influence on a confidence

classifications; other uncertainties may require significant additional study, or may never be able to be fully mitigated and therefore will have more influence on a confidence classification.

COMMENT 59

SEC Request for Comment

Should the definition of “indicated mineral resource” include that such mineral resource has a lower level of confidence than what applies to a measured mineral resource and may only be converted to a probable mineral reserve, as proposed?

Response

The definition in the SEC Proposed Rules should follow the exact wording used in the definition set out in the CRIRSCO Template. The CRIRSCO Template definition includes that an Indicated Mineral Resource has a lower level of confidence than what applies to a Measured Mineral Resource, and includes that an Indicated Mineral Resource may only be converted to a Probable Mineral Reserve.

COMMENT 60

SEC Request for Comment

Should we define “measured mineral resource,” as proposed? In particular, should the definition depend on a qualified person’s ability to estimate quantity and grade or quality on the basis of conclusive geological evidence? Should we base the definition of “conclusive geologic evidence” on a qualified person’s ability to apply modifying factors in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit, as proposed? Should we require a qualified person to describe the level of risk associated with measured mineral resources based on the confidence limits of relative accuracy at a particular confidence level for production estimates for periods of less than one year, as proposed? Should we, instead, allow the qualified person to provide a qualitative discussion of the uncertainties in place of confidence limits if he or she so chooses? Why or why not? Are there particular challenges to complying with the proposed requirement to disclose numerical estimates of the level of confidence for each class of mineral resource?

Response

The definition in the SEC Proposed Rules should follow the exact wording used in the definition set out in the CRIRSCO Template.

Any change in wording in the definition of Measured used by the SEC Proposed Rules as opposed to the internationally-accepted text of the definition in the CRIRSCO

Template is likely to cause confusion and uncertainty in the mining industry to understand what the industry and Qualified Persons must do differently to meet the SEC Proposed Rules.

We believe the use of the term “conclusive” does not recognize that Mineral Resources are estimates that are based on sampling and interpreted data, and that a level of uncertainty will always exist. Incorporating a requirement that a Qualified Person must provide “conclusive geological evidence” is potentially exposing the Qualified Person to liability as we believe that it is too high a standard for a Qualified Person to meet.

Our response to the question on confidence limits and relative accuracies for Measured Mineral Resources is the same response as we provided in [Comment 58](#) for Indicated Mineral Resource confidence limits and accuracies. We do not agree that a Qualified Person should be required to describe the level of risk associated with Measured Mineral Resources based on the confidence limits of relative accuracy at a particular confidence level for production estimates for periods of less than one year. The reasons are:

- The definition of Measured Mineral Resources in the CRIRSCO Template is principles-based, and is based on the professional judgement of the Qualified Person on a number of different factors. Each factor will have its own accompanying uncertainty, and it is by reviewing all of these in combination that allows the Qualified Person to determine the most appropriate confidence classification;
- To require a Qualified Person to explain each element of uncertainty or confidence for each element in a manner that an investor could understand, is would be difficult and potentially cause unnecessary confusion;
- The requirement could potentially also expose a Qualified Person to liability for their opinion on the confidence of a particular factor, if, with later information, this factor is shown to be different.

We do not believe that using a specific geostatistical evaluation method alone to determine uncertainty and therefore to classify a level of confidence is appropriate. This ignores the other elements that Qualified Persons use when determining the appropriate confidence category for a Mineral Resource estimate. There are a range of approaches currently used when classifying Mineral Resources. We note that the geostatistical evaluation method is not widely used, and therefore may not be available to all Qualified Persons.

There are other scientific and technical factors than geostatistical evaluation that are incorporated by Qualified Persons into confidence classifications, such as metallurgical, environmental and social factors. These can contribute significantly to the confidence that can be applied to the estimate.

We agree that a qualitative discussion of the uncertainties is appropriate. We consider that this type of information should be required disclosure. The determination of what level of detail is provided, and what is included in the disclosure should be at the discretion of the Qualified Person.

For example, there may be some items that may be readily mitigated and therefore a Qualified Person may consider these to have less influence on a confidence classification; other uncertainties may require significant additional study, or may never be able to be fully mitigated and therefore will have more influence on a confidence classification.

As noted above, there are challenges to complying with the proposed requirement to disclose numerical estimates of the level of confidence for each class of mineral resource and therefore this technique should be one of a number of options available to the Qualified Person. In many cases it may be potentially misleading to investors, as this can incorrectly convey an ability to numerically quantify uncertainty in all types of deposits and resource estimates. There is also potential to expose a Qualified Person to liability for their opinion on the confidence of a particular factor, if, with later information, this factor is shown to be different.

COMMENT 61

SEC Request for Comment

Should the definition of “measured mineral resource” include that such mineral resource has a higher level of confidence than what applies to either an indicated mineral resource or an inferred mineral resource and may be converted to a proven mineral reserve or to a probable mineral reserve, as proposed?

Response

Yes, we agree with the concept that a Measured Mineral Resource has a higher level of confidence than what applies to either an Indicated Mineral Resource or an Inferred Mineral Resource and may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve and should be part of the definition of Measured.

We strongly recommend that the definition in the SEC Proposed Rules follow the exact text in the definition of Measured Mineral Resources in the CRIRSCO Template.

COMMENT 62

SEC Request for Comment

Should we require the disclosure of numerical estimates of the level of confidence associated with each class of mineral resource, as proposed? Why or why not? Should

we instead follow the practice in the CRIRSCO-based codes and require only the disclosure of all material assumptions and the factors considered in classifying mineral resources? Why or why not?

Response

We do not believe that requiring a Qualified Person to disclose numerical estimates of the level of confidence associated with each class of mineral resource is necessary or appropriate, as explained in our responses to [Comment 58](#) and [Comment 60](#).

We disagree with the statement that the CRIRSCO family of codes “require only” the disclosure of all material assumptions and the factors considered in classifying Mineral Resources. These codes use principles-based requirements for the type of information that must be publicly reported, including for Mineral Resources. The principles in the CRIRSCO Template are as follows:

*“Transparency requires that the reader of a Public Report is **provided with sufficient information, the presentation of which is clear and unambiguous, so as to understand the report and not to be misled**” [emphasis added]*

*“Materiality requires that a Public Report contains **all the relevant information which investors and their professional advisers would reasonably require, and reasonably expect to find in a Public Report, for the purpose of making a reasoned and balanced judgement regarding the Exploration Results, Mineral Resources or Mineral Reserves being reported**” [emphasis added]*

The CRIRSCO family of codes provide more detailed guidance to the Qualified Person as to how these principles can be met.

We recommend that the SEC Proposed Rules include a principles-based requirements for the type of information that must be included with public disclosure of Mineral Resource estimates. We recommend that the bolded parts of the CRIRSCO Template definitions (see above) of materiality and transparency be the basis of the principles-based requirements in the SEC Proposed Rules.

COMMENT 63

SEC Request for Comment

Should we require that a registrant’s disclosure of mineral resources be based upon a qualified person’s initial assessment, which supports the determination of mineral resources, as proposed? Why or why not? Is there another form of analysis or means of disclosure that would be more appropriate for the determination and disclosure of mineral resources? Would disclosure of the material risks associated with mineral

resource determination be an adequate substitute for the initial assessment requirement?

Response

We agree that initial assessments of technical and economic factors should be undertaken by Qualified Persons to establish reasonable prospects of eventual economic extraction. We agree that this information should be provided by the Qualified Person to the registrant with the resource statement.

We disagree with how the SEC Proposed Rules use the term “Modifying Factors” in the definition of an “initial assessment”:

*“We propose to define an “initial assessment” as a preliminary technical and economic study of the economic potential of all or parts of mineralization to support the disclosure of mineral resources. As proposed, the initial assessment must be prepared by a qualified person and must include appropriate assessments of **reasonably assumed modifying factors** together with any other relevant operational factors that are necessary to demonstrate, at the time of reporting, that there are reasonable prospects for economic extraction.” [emphasis added]*

The definition of Modifying Factors in the CRIRSCO Template, and which is the accepted definition by the international mining standards setters is:

*“Modifying Factors are **considerations used to convert Mineral Resources to Mineral Reserves**. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.” [emphasis added]*

We believe that it is inappropriate to use the term “Modifying Factors” because, by definition, these are factors used to convert Mineral Resources to Mineral Reserves. Use of the term “Modifying Factors” when assessing Mineral Resources is a misuse of the definition.

We consider the principle for establishing reasonable prospects for eventual economic extraction under the CRIRSCO Template to be more appropriate:

“technical and economic factors likely to influence the prospect of economic extraction, including the approximate mining parameters”

We recommend that the phrase “*technical and economic factors*” replaces the phrase “*modifying factors*” in the definition of an “initial assessment”.

We do not believe that the use of the phrase “qualitative evaluation” in relation to Modifying Factors as follows:

*“must include a **qualitative evaluation** of modifying factors to establish the economic potential of the mining property or project.” [emphasis added]*

overcomes the inappropriate use of the term Modifying Factors when referencing considerations for establishing reasonable prospects of eventual economic extractions during the Mineral Resource estimation process.

The description of an “initial assessment” in the SEC Proposed Rules as:

“a preliminary technical and economic study of the economic potential of all or parts of mineralization”

in our view may create an expectation of a much more detailed and formal evaluation of the technical and economic factors than what is industry-accepted practice. We agree that certain mining companies have internal policies which require this type of study for selected deposits as part of the process of establishing Mineral Resources. However, in our opinion, it is inappropriate and unnecessarily burdensome for all registrants to perform this type of study for establishing reasonable prospects of eventual economic extraction for any or all of their deposits.

We also do not believe that all resource estimates, whether on a material property or not, or whether the information is material, must have a formal study report. The description of the “initial assessment” report appears to require such a report. This would be unnecessarily burdensome on the industry to prepare such reports for any and all Mineral Resource estimates, particularly if the SEC Proposed Rules will require technical report summaries for certain disclosure of Mineral Resource estimates (first time disclosure on material properties of Mineral Resource estimates, or a material change to those Mineral Resource estimates).

It is common industry practice for a memorandum to be prepared in support of any Mineral Resource statement that summarizes key assumptions, parameters and methods used in the estimate, including considerations of technical and economic factors.

We refer to the following statement in the SEC Proposed Rules:

“At the initial assessment stage, as proposed, a qualified person would be required to evaluate, at a minimum, the following modifying factors:

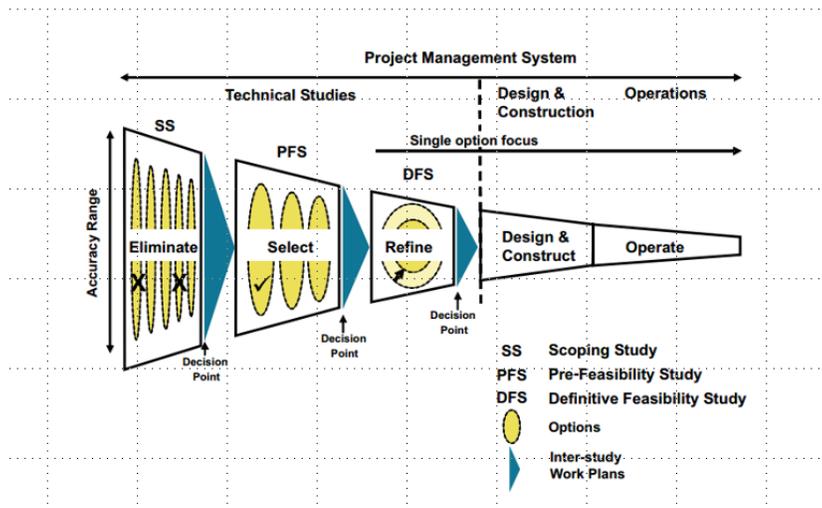
- *site infrastructure (e.g., whether access to power and site is possible);*
- *mine design and planning (e.g., what is the broadly defined mining method);*

- *processing plant (e.g., whether all products used in the preliminary economic assessment can be processed with methods consistent with each other);*
- *environmental compliance and permitting (e.g., what are the required permits and corresponding agencies and whether significant obstacles exist to obtaining those permits); and*
- *any other reasonably assumed modifying factors, including socio-economic factors, necessary to demonstrate reasonable prospects for economic extraction.*

We believe a qualitative evaluation of these listed factors, at a minimum, is necessary to determine the economic potential of a mining property. An assessment of the geological characteristics of the mined material would not be complete if it did not include a thorough evaluation and discussion of infrastructure, mine design, processing and environmental issues that could pose obstacles to the material's extraction."

This is a level of project definition and engineering that is well beyond what the industry and a Qualified Person typically use to establish reasonable prospects of eventual economic extraction.

The project development options are only explored during later mining studies. The figure below illustrates that development options are eliminated during scoping study (preliminary economic assessment) stage, are selected during the pre-feasibility study and refined in the feasibility study.



Note: Figure modified from Noort, D.J., and Adams, C., 2006: Effective Mining Project Management Systems: International Mine Management Conference Melbourne, Victoria, 16–18 October 2006, pp 87–96

Based on the requirements in the bullet point list, there appears to be an expectation in the SEC Proposed Rules that a Qualified Person will have access to these later mining study results, and that some of the processes of elimination and selection will already have been performed for the purpose of the resource estimate at the time the Mineral Resources are estimated.

We agree with the disciplines covered in the bullet point list referenced above, but disagree with the level of detail that is being requested. For example:

- We agree that the technical and economic factors considered by a Qualified Person would include a “*broadly defined mining method*” (i.e. open pit versus underground; selective underground mining methods versus bulk underground mining methods); however this does not equate to “*mine design and planning*”, which requires much more detail. Mine design and planning is performed by the mining engineer, and is applied when converting Mineral Resources to Mineral Reserves, but is not a generally-accepted industry practice when estimating Mineral Resources;
- When completing an initial Mineral Resource estimate, it is unlikely that there will be sufficient project definition or engineering to allow a Qualified Person to determine what permits will be required, which agencies will grant those permits, and where any obstacles exist to obtaining those permits.

It is not clear to us what the portion of the question is referring to:

“Is there another form of analysis or means of disclosure that would be more appropriate for the determination and disclosure of mineral resources?”

We are interpreting this to refer to disclosure of the technical and economic considerations used by the Qualified Person to establish reasonable prospects of eventual economic extraction, and would be provided with the public disclosure of the Mineral Resource estimate on a material property. Please also see our response to [Comment 50](#) in relation to the incorporation of “eventual” into the definition of a Mineral Resource.

The form of analysis in our view is not a formal mining study with an advanced level of project definition and engineering involvement. Rather it is a conceptual analysis of certain technical and economic considerations that could be included in a brief memorandum accompanying a resource statement. We are concerned that the current wording and explanation in the SEC Proposed Rules regarding the “initial assessment report” could be misconstrued to require premature assessment of future development options to a level of detail that cannot be supported at the resource estimation stage.

It is not clear what the SEC Proposed Rules are considering when they ask for another “*means of disclosure*” of Mineral Resources. We are assuming that this refers to the

type of information that would be useful to an investor when deciding what value they would apply to the estimate. We note that Mineral Resource estimates are typically presented in disclosure documents as tabulations of tonnes, grades/quality by classification confidence categories, with footnotes to the tables that include key assumptions, parameters, and methods:

- Assumptions could include mining method, through put rate, commodity price, exchange rate;
- Parameters could include selective mining unit, metallurgical recoveries, cut-offs, operating costs;
- Methods could include the estimation technique.

We would also expect to see disclosure of the name of the Qualified Person who prepared/supervised/approved the estimate and the effective date of the estimate.

We do not believe that disclosure of the material risks is an adequate substitute for the initial assessment requirement. The difficulty in our view is that many of the risk statements currently used within the industry are generalized, and do not provide meaningful specific risks to a resource estimate. The initial assessment is typically more specific and relates to that project in that specific setting in that particular jurisdiction. Our view is that the requirement should be to document the key assumptions, parameters and methods used to assess reasonable prospects of eventual economic extraction, and provide meaningful qualitative discussion on the Qualified Persons' interpretations of the risks to the Mineral Resource estimate.

COMMENT 64

SEC Request for Comment

If we require an initial assessment to support the determination of mineral resources, should we define "initial assessment," as proposed, to require the consideration of applicable modifying factors and relevant operational factors for the purpose of determining (at the resource evaluation stage) whether there are reasonable prospects for economic extraction? Should we instead only require consideration of modifying and operational factors at the reserve determination stage?

Response

No, we consider that the proposal for an initial assessment is taking the assessment of technical and economic factors to a level of detail that is not common industry practice.

We agree that there is an initial assessment done by Qualified Persons to assess technical and economic factors when considering reasonable prospects of eventual economic extraction in support of Mineral Resource estimates.

We also feel the use of the term “Modifying Factors” in the context of technical and economic considerations applied to Mineral Resources is inappropriate as “Modifying Factors” should only be used according to its definition when converting Mineral Resources to Mineral Reserves.

Please also see our response to [Comment 63](#).

COMMENT 65

SEC Request for Comment

Should we require an initial assessment to include cut-off grade estimation, as proposed? Why or why not?

Response

We consider that every Mineral Resource estimate will have cut-off criteria applied by the Qualified Person.

We believe that the use of the term “cut-off **grade**” as proposed in the SEC Proposed Rules is too specific. A more appropriate general term would be “cut-off” as the criteria used may be grade, but could also be net smelter return (NSR), and may also include quality (e.g. in the context of industrial minerals), or metallurgical characteristics (e.g. deleterious or contaminant elements; amenability to a specific process method).

We are concerned that because the disclosure as currently proposed uses “grade”, then the Qualified Person will be required to come up with a cut-off grade for the purposes of meeting a prescriptive rule requirement, when the cut-off is not based on grade alone. We also note that there are deposit types where there is no “grade”, in particular industrial minerals; the cut-off used is based on quality or other characteristics.

As there can be multiple determinations of what is included in the cut-off, the cut-off criteria must be provided by the Qualified Person to accompany any Mineral Resource estimate. The public disclosure of the estimate must provide this information. We consider that the cut-off criteria disclosed will include the cut-off that is applied, and the basis used by the Qualified Person for determining the appropriate cut-off.

There are also instances where a Qualified Person will use multiple cut-offs that may be related to stockpiling strategies, mineralization types, contaminant element contents etc. The SEC Proposed Rules needs to recognize the diversity of the industry and that different resource estimates may report more than one cut-off.

The cut-off selected must be shown to be reasonable and applicable to the proposed mining method. As a result, we consider that disclosure of the cut-off criteria should include a notation as to the mining method that is envisaged.

COMMENT 66

SEC Request for Comment

Should we require a qualified person to base cut-off grade estimation on assumed unit costs for surface or underground operations, as proposed? Is it appropriate to allow the qualified person to make an assumption about unit costs, as proposed, or should we require a more detailed estimate of unit costs at the resource determination stage? Is it appropriate to require the qualified person to disclose whether the unit cost estimates are for surface or underground operations, as proposed?

Response

We do not agree that a cut-off based solely on assumed unit costs for surface or underground operations is appropriate in all cases:

- Certain deposits have a natural cut-off grade for continuity; if a cut-off grade that is based on assumed unit costs is used that is lower than the natural cut-off grade, then the mineralization continuity requirement for a Mineral Resource estimate may not be met;
- Certain deposits can have areas of higher grade, and if a higher cut-off than a natural cut-off is applied, then the mineralization continuity requirement for a Mineral Resource estimate also may not be met.

We consider that a Qualified Person should be allowed to make the determination of appropriately assumed unit costs based on benchmarking to similar deposit types and types of operation in that jurisdiction. The level of detail that a Qualified Person may require would be different depending on the deposit type and mining method. For example, a deposit amenable to open pit mining methods may only require a simple optimized pit shell, and benchmarked assumed unit costs can be readily obtained. In the case of a more complex deposit (e.g. structural complexity, orientation and shape of the mineralization, geotechnical conditions) amenable to underground mining methods, more input from mining specialists is likely required. The resulting unit costs may require more deposit-specific assessments.

We recommend that the SEC Proposed Rules use a principles-based requirement for the unit costs that support considerations of reasonable prospects of eventual economic extraction, including cut-off determinations, and require the judgement of the Qualified Person to determine what is appropriate for the deposit, type of operation, and jurisdiction.

COMMENT 67

SEC Request for Comment

Should we also require a qualified person to base cut-off grade estimation on estimated mineral prices, as proposed? In this regard, should we require the qualified person to use a commodity price that is no higher than the average spot price during the 24-month period prior to the end of the last fiscal year, determined as an unweighted arithmetic average of the daily closing price for each trading day within such period, unless prices are defined by contractual arrangements, as proposed? Does a ceiling model based on historical prices best meet the goals of transparency, cost efficiency and comparability? Why or why not? Is there another model that would better meet these goals? If another price model better meets these goals, what should be the basis of estimated mineral prices for purposes of the initial assessment? Whatever price model we adopt, should it be used to determine the commodity price itself? Or should it be used, as proposed, to determine the ceiling of the commodity prices?

Response

We agree that an important input to determining appropriate cut-offs used in a Mineral Resource estimate is the commodity price of each economically-recoverable element (mineral).

We do not agree that the “24-month period prior to the end of the last fiscal year, determined as an unweighted arithmetic average of the daily closing price for each trading day within such period, unless prices are defined by contractual arrangements” is appropriate.

We note that it is a common practice within the mining industry to update Mineral Resources and Mineral Reserves as part of a registrant’s year-end reporting. In order to prepare the estimates for the year-end, the inputs to the updated Mineral Resources and Mineral Reserves will have a close-out date that is generally a few months prior to the fiscal year-end. The Qualified Person will not be able to determine the “24-month period prior to the end of the last fiscal year”. Recent industry experience has shown that there can be significant swings in commodity prices over a short period of time.

Using a single price for the Mineral Resources, Mineral Reserves and financial analysis does not reflect the reality that Mineral Resource estimates are prepared first, followed by Mineral Reserve estimates, and finally the financial analysis. There may be a number of months between each of these steps, and the mining study, particularly for detailed studies, can extend for more than a year. This could result in a situation where the Mineral Resource estimate uses a 24-month price that is different to the 24-month price used in the Mineral Reserves, and both of these could be different to the 24-month price used in the financial analysis. It would be impractical for a registrant to go back and

redo the estimates for the Mineral Resources and Mineral Reserves to match the 24-month price used for the financial analysis.

In a situation where the mining studies are completed, and there are a number of years required for permitting approvals, arranging mine finance, mine construction, prior to mining production, then the “24-month period prior to the end of the last fiscal year” requirement is too prescriptive and is not a good estimator of the price environment that will exist when production commences, let alone over the life of the mining operation.

We do not believe that a ceiling model is a unique way of meeting transparency. Transparency can be simply achieved by the disclosure of the commodity price used in the estimates.

We do not believe that the ceiling model is efficient, as a Qualified Person will have to guess a few months in advance, as explained above, what the 24-month price will be. We consider that the more efficient approach is to use readily-available industry consensus forecast long-term commodity prices.

We do not believe that the ceiling model provides comparability. Registrants have different year-end reporting dates, and therefore not all registrants will be using the same 24-month price.

Most international reporting jurisdictions in the mining industry allow long-term forecast commodity prices to be used for Mineral Resource and Mineral Reserve estimates, and financial analyses. Even in the case where the SEC currently restricts commodity prices to the maximum of the three-year historical price, many foreign companies reporting under SEC requirements disclose two different estimates, one using the forecast price that is disclosed in their home jurisdiction, and one using the SEC requirement for the three-year historical price maximum in SEC filings. We do not believe that the current scenario achieves comparability nor do we believe that requiring a 24-month price will provide any improvement to this.

We believe the mining industry generally-accepted practice of using long-term, consensus pricing is the better model. This model is efficient as the information is readily available in the public domain. We consider it is a better approach to achieve comparability between projects, as the model uses prices that are in line with what peers are using, prices that analysts are using to make recommendations to investors in the market, and prices that analysts are using when doing their own evaluations.

The goal of transparency of the commodity price used is achieved by requiring the assumed price to be stated with the Mineral Resource and Mineral Reserve estimates. We would expect that any initial assessment performed by a Qualified Person would include the basis for how the industry-consensus on long-term prices was determined. We would expect that a technical report summary that includes a Mineral Resource or

Mineral Reserve estimate, would also disclose the basis for the determination of the industry-consensus on long-term prices.

When a project is being developed, and there are a significant number of years required for permitting approvals, raising finance and mine construction activities, prior to production, the “24-month period prior to the end of the last fiscal year” price used in the mining study for that project will not reflect the pricing when production occurs. We consider that industry consensus on long-term prices is a better estimate of the likely commodity price environment when the Mineral Resources or Mineral Reserves are expected to be exploited, whereas historical prices only reflect past pricing that is not necessarily reflective of future market conditions. Historical prices will under-estimate future prices in a rising market, and over-estimate commodity prices in a falling market.

In relation to the question regarding whether the selected price should be ceiling of the commodity prices or the commodity price itself, we do not wish to see a prescriptive rule on the commodity price that is used. Instead, we would like to see a principles-based rule that allows transparency and comparability. In our view, the use of long-term consensus-based commodity pricing would achieve transparency and comparability.

We consider that long-term consensus-based commodity prices are prices that are derived from credible sources. Credible sources could include major mining companies, brokerages, analysts, major banks, commodities traders, and specialist companies that provide commodity price forecasts. We consider that these sources provide a cloud or cluster of prices from which the Qualified Person can select what they consider to be an appropriate long-term price.

We note, however, that there are situations where other factors should also be considered to allow flexibility on the selected price.

The SEC Proposed Rules should allow for the common mining industry practice of using different commodity price assumptions on the same deposit in a mining study, when estimating Mineral Resources and Mineral Reserves, and performing financial analyses.

There are two common issues that can be encountered when estimating Mineral Resources and Mineral Reserves:

- Commodity prices were higher at the time the Mineral Reserves were estimated than the commodity price assumptions when the Mineral Resources were estimated; this results in the Mineral Reserves having a lower cut-off for at least a portion of the deposit than the Mineral Resources cut-off. This can result in not all Mineral Reserve blocks having a corresponding Mineral Resource block;
- Alternatively, when the Mineral Reserves are estimated, the mine design has determined lower costs that assumed in the Mineral Resource estimate, resulting in a lower cut-off used for some or all of the Mineral Reserves. This

can also result in not all Mineral Reserve blocks having a corresponding Mineral Resource block.

To ameliorate this, many mining companies employ higher commodity price assumptions for Mineral Resources than Mineral Reserves. The use of the price differential ensures that each Mineral Reserve block has a corresponding Mineral Resource block that has been converted, such that the Mineral Reserve estimate is always a subset of the Mineral Resource estimate.

In most mining studies, it is common to find that the financial model is only completed when all cost inputs have been finalized. There is usually a significant time lag between the date of completion of the Mineral Resource estimate, the date of completion of the Mineral Reserve estimate and the date of completion of the financial analysis. The commodity price used for the financial analysis should therefore reflect the industry consensus view at the time of completion of the financial model. This may well result in three different consensus price views used: one for the Mineral Resource estimate, a separate price for the Mineral Reserve estimate, and a third for the financial analysis.

In certain situations in the mining industry, it is accepted practice to use a forecast short-term commodity price over a forecast long-term commodity price. Credible sources also provide such short-term pricing forecasts. Short-term pricing (approximately defined as within the next five year period) can be used in an operating mine plan for near-term production, with the pricing reverting to the long-term average over time. A similar approach is used for derivation of cut-offs, and in the Mineral Reserve estimates. Where a project has a very short mine life, use of the forecast long-term price may also not be applicable.

Based on the above, we recommend that the SEC takes a principles-based approach to allowing the Qualified Person to determine what commodity price is appropriate in the context of the specific mining project. The SEC should not require a prescriptive price that is very likely to be inappropriate in many situations.

Example wording could be:

“Commodity price forecasts should be consistent with what other Qualified Persons and companies are using on similar projects and in similar situations to the project, and should be derived from credible sources. Credible sources could include major mining companies, brokerages, analysts, major banks, commodities traders, and specialist companies that provide commodity price forecasts. We consider that these sources provide a cloud or cluster of prices from which the Qualified Person can select what they consider to be an appropriate price”.

COMMENT 68

SEC Request for Comment

Is the proposed 24-month period the most appropriate period for the estimated price requirement? Would a 12, 18, 30, or 36-month period, or some other duration, be more appropriate? Should the 24-month period, or other period be fixed and apply to all registrants, or should the period vary depending upon the type of commodity being mined and other factors?

Response

We do not believe that historical pricing should be used for future price assumptions. We agree that historical pricing curves are important to understand previous commodity price cycles; however, they should not be used to prescriptively predict the future. Therefore, we do not agree that any fixed term historical period should be incorporated in the SEC Proposed Rules.

A principles-based approach should be used for commodity pricing. See also our response to [Comment 67](#).

COMMENT 69

SEC Request for Comment

Should we require, as proposed, the same ceiling price for mineral resource and reserve estimation? If not, how should the prices used for mineral resource and reserve estimation differ? Would such criteria meet the goals of transparency, cost efficiency and comparability?

Response

No, the SEC Proposed Rules should not require the same ceiling price for Mineral Resource and Mineral Reserve estimation.

We believe the Qualified Person should be allowed to use a higher price for Mineral Resource estimates than is used in Mineral Reserve estimates, as this is common industry practice, and avoids the issues identified in Comment 67. We also believe that the Qualified Person should be able to use a different commodity price for the financial analysis where appropriate. A different commodity price should also be allowed for those Mineral Reserves that will be produced in the short term (approximately less than five years) as opposed to those Mineral Reserves that will be produced in the long term.

A principles-based approach should be used for commodity pricing to meet transparency, cost efficiency and comparability goals. See also our response to [Comment 67](#).

COMMENT 70

SEC Request for Comment

Should we require that for purposes of the initial assessment a qualified person must provide at least a qualitative assessment of all relevant modifying factors to establish economic potential and justify why he or she believes that all issues can be resolved with further exploration and analysis, as proposed? Are the modifying factors provided as examples in the proposed instruction and table the most appropriate factors to be included? Are there other factors that should be specified in the instruction and table in lieu of or in addition to the mentioned factors? Would presentation of the modifying factors in a table benefit investors, registrants and qualified persons?

Response

We agree that a Qualified Person must provide a qualitative assessment of all technical and economic factors in an initial assessment. We disagree with this being referred to as an assessment of Modifying Factors.

We agree that initial assessments of technical and economic factors should be undertaken by Qualified Persons to establish reasonable prospects of eventual economic extraction. We agree that this information should be provided by the Qualified Person to the registrant with the resource statement.

In our view, the Qualified Person should be required to document the key assumptions, parameters and methods used to assess reasonable prospects of eventual economic extraction, and should provide meaningful qualitative discussion on the risks to the Mineral Resource estimate.

We strongly disagree that a Qualified Person be required to “*justify why he or she believes that all issues can be resolved with further exploration and analysis.*” The mining industry deals with limited information, and Qualified Persons make judgement calls on how to interpret that information. It is accepted within the mining industry that new information can change those interpretations. It is unrealistic to expect the Qualified Person to “*justify why he or she believes that all issues can be resolved with further exploration and analysis*” as they cannot predict what interpretations will result when better information is available. This requirement should be removed from the SEC Proposed Rules.

The Modifying Factors provided as examples in the proposed instruction and table are not the most appropriate factors to be included in an initial assessment. The term

“Modifying Factors” should be restricted to use in mining studies that convert Mineral Resources to Mineral Reserves.

A number of the requirements in the initial assessments column in the table are only applicable to pre-feasibility and feasibility studies, as the types of information required are only performed as part of these studies. During the initial assessment performed in support of Mineral Resource estimate, a Qualified Person does not have the level of sample support and test work, site investigations, project definition and engineering required to answer these questions. The table cells with requested content on “site infrastructure”, “environmental compliance and permitting”, “other Modifying Factors”, “capital costs”, “operating costs” and “economic analysis” is appropriate content to be included for scoping studies or preliminary economic assessments, but not for an initial assessment in support of Mineral Resource estimates.

We believe that a Qualified Person’s assessment of risk should be appropriate to a Mineral Resource estimate, and should be limited to assessing reasonable prospects of eventual economic extraction and interpretation of geological and grade continuity, and not be based on the risk assessments that would be expected for a pre-feasibility or feasibility study.

We do not believe that presentation of the Modifying Factors in a table would benefit investors, registrants and qualified persons. The presentation could be potentially misleading as it does not represent the level of understanding of a project at the resource estimation stage.

COMMENT 71

SEC Request for Comment

Should we permit the qualified person to make assumptions about the modifying factors set forth in the proposed table at the resource determination stage, as proposed? Why or why not? Are there other assumptions that we should specify in lieu of or in addition to those already mentioned in the proposed table?

Response

A Qualified Person does not make assumptions about Modifying Factors at the resource determination stage; they make those assumptions at the Mineral Reserve stage. When preparing Mineral Resource estimates, a Qualified Person assesses technical and economic factors in support of reasonable prospects of eventual economic extraction. The SEC Proposed Rules should not permit assumptions about Modifying Factors set forth in the proposed table at the resource determination stage.

We consider that risk factors should be discussed, but as noted in the response to [Comment 70](#), this should be limited to assessing reasonable prospects of eventual

economic extraction and interpretation of geological and grade continuity, and not be based on the risk assessments that would be expected for a pre-feasibility or feasibility study.

COMMENT 72

SEC Request for Comment

Should we permit a qualified person to include cash flow analysis in an initial assessment to demonstrate economic potential, as proposed? Why or why not? If we should permit cash flow analysis in an initial assessment, should we require that operating and capital cost estimates in the analysis have an accuracy level of at least $\pm 50\%$ and a contingency level of $\leq 25\%$, as proposed? If not, what should the accuracy and contingency levels be? Should we require the qualified person to state the accuracy and contingency levels in the initial assessment?

Response

No, the cash flow analysis should not be included in an initial assessment report, as we believe that initial assessments should only report Mineral Resource estimates. In our view the initial assessment report should be a brief report or memorandum that provides the basis of the evaluation of the technical and economic considerations when determining reasonable prospects of eventual economic extraction for Mineral Resource declaration.

We recommend that the SEC Proposed Rules should provide an allowance for registrants to disclose economic analyses including the result of cash flows on Mineral Resources. The initial public disclosure of the economic analyses, including the results of cash flows on Mineral Resources, should be approved by the Qualified Persons responsible for the applicable section in the technical report summary.

We consider that the project description and evaluations in support of public disclosure of economic analyses including the result of cash flows on Mineral Resources should use the headings and content requirements for technical report summaries that are based on pre-feasibility or feasibility studies; however, the project definition and engineering being disclosed on Mineral Resources would be at a conceptual level.

We believe that there is sufficient guidance and documentation of accuracy and contingency levels for the different types of mining and engineering studies in the public domain. We recommend that the SEC Proposed Rules require that the Qualified Person to follow industry-accepted practices and allow the Qualified Person to use their discretion to determine the most appropriate accuracy and contingency levels for the type of deposit, the stage of development of the deposit, the jurisdiction the deposit is located in, and the project complexity.

The Qualified Person should be required to state the accuracy and contingency levels for the estimate, and the basis for the selection of these levels. We disagree that a Qualified Person should be required to meet a bright-line limit when considering the most appropriate accuracy and contingency values.

We note that the ranges presented for accuracy in the SEC Proposed Rules are narrower than the Class 5 study accuracy ranges incorporated in the AACE International Recommended Practice No. 47R-11 Cost Estimate Classification System – As Applied In The Mining And Mineral Processing Industries TCM Framework: 7.3 – Cost Estimating and Budgeting Rev. July 6, 2012:

*“Expected Accuracy Range: **Typical accuracy ranges for Class 5 estimates are -20% to -50% on the low side, and +30% to +100% on the high side, depending on the technological, geographical and geological complexity of the project, appropriate reference information and other risks (after inclusion of an appropriate contingency determination). Ranges could exceed those shown if there are unusual risks.** Declining quality and accessibility of ore bodies may be driving higher risks. The uncertainty varies by work type so that moderate ranges apply to structures, wider ranges apply to earthworks and infrastructure and narrower ranges apply to machinery (assuming applicable procurement data is available from similar past projects).”*
[emphasis added]

In our view, if an accuracy range is to be selected, then it should be a range promulgated by a recognized industry standard setter such as the AACE, and be an accuracy range that is reflective of the technological, geographical, and geological complexity of a project. Some deposits may require a wider accuracy range than that in the SEC Proposed Rules for an initial assessment, but that would not mean that the deposit initial assessment study would not meet the definition.

COMMENT 73

SEC Request for Comment

If we permit cash flow analysis in the initial assessment, should we prohibit the qualified person from using inferred mineral resources in the cash flow analysis, as proposed? Why or why not? Would there be disadvantages to registrants or investors if the use of inferred mineral resources in an initial assessment’s cash flow analysis is prohibited? Would there be advantages to prohibiting the use of inferred resources in an initial assessment’s cash flow analysis in the initial assessment?

Response

We believe that economic analyses that include Inferred (e.g. scoping studies, preliminary economic assessments) provide useful information to investors and the public disclosure of these types of economic analyses should not be prohibited.

In most jurisdictions that use one of the CRIRSCO family of codes, Inferred may be used in the production schedules and cash flows in such mining studies. There are restrictions and requirements on registrants when public disclosure of these studies is made.

Public disclosure of these types of economic analyses allows the registrant to provide relevant information to an investor on the likely scope of the project at an early stage. Mining analysts make these types of economic analyses available to the investing public, but do not include a technical report summary with their analyses. The registrant should be allowed the opportunity to publicly disclose their version of such an economic analysis, but must be supported by a technical report summary prepared by Qualified Persons.

In order to maintain the credibility of mineral project disclosure in the marketplace, we recommend that the SEC Proposed Rules include the requirement that if a registrant discloses economic analyses on a mineral project, then the registrant must file a technical report summary to support the disclosure. The requirement to file a technical report summary should be irrespective of whether or not the property is material to the registrant.

In our view, the disclosure of an economic analysis that would trigger the technical report summary filing would include disclosure of one or more of the following:

- Production schedule or life-of-mine plan;
- Mine life duration;
- Capital costs;
- Unit operating cost;
- Internal rate of return (IRR);
- Net present value (NPV).

We do not consider that disclosure of the tonnes and grades of Mineral Reserve or Mineral Resource estimates, or the discussion of the key parameters, assumptions and methods in the footnotes to the Mineral Reserve or Mineral Resource would equate to disclosure of an economic analysis on a mineral project. See also our comments on technical report summary triggers in our response to [Comment 24](#).

Our view is that there is no advantage in prohibiting the use of Inferred Mineral Resources in an economic analysis of Mineral Resources.

COMMENT 74

SEC Request for Comment

Should we prohibit the use of an initial assessment to support a determination of mineral reserves, as proposed? Why or why not?

Response

In our view, Mineral Reserves can only be declared following completion of a pre-feasibility or feasibility study, as outlined in the CRIRSCO family of codes. As noted in our response to [Comment 22](#), we consider that a full study report must be compiled, and that Mineral Reserves should not be declared with the support of only pre-feasibility or feasibility level documentation.

As noted in our responses to [Comment 56](#), [Comment 63](#), and [Comment 64](#), we believe that initial assessments should only report Mineral Resource estimates. We believe that the initial assessment report should be a brief report or memorandum that provides the basis of the evaluation of the technical and economic considerations when determining reasonable prospects of eventual economic extraction for Mineral Resource declaration.

COMMENT 75

SEC Request for Comment

Are we correct in thinking that use of Circulars 831 and 891 to classify mineral resources would not be appropriate under the proposed rules? Why or why not?

Response

Yes, the use of either Circular 831 or Circular 891 would not be appropriate to classify Mineral Resources or Mineral Reserves under the SEC Proposed Rules.

- Circular 831 would not apply as the definitions in the SEC Proposed Rules would supersede the definitions and terminology in that circular;
- Circular 891 would not apply as the definitions in the SEC Proposed Rules would supersede the definitions and terminology in that circular.

COMMENT 76

SEC Request for Comment

Should we establish a framework for mineral reserves determination and disclosure, as proposed? Why or why not? Is there another framework that would be preferable to the proposed framework? If so, what would be the advantages and disadvantages of the alternative framework?

Response

We agree that a framework is required for Mineral Reserves determination and disclosure.

We disagree with the framework as proposed, because it deviates from the framework established by the CRIRSCO family of codes. We recommend that the SEC Proposed Rules use the exact framework established by the CRIRSCO family of codes, as it is widely accepted, and understood by the investment community.

COMMENT 77

SEC Request for Comment

Should we define “mineral reserve,” as proposed? Are there conditions that we should include in the definition of mineral reserves instead of, or in addition to, those proposed to be included in the definition? Are there any conditions that we should exclude from the definition of mineral reserves? For example, should we modify the condition that mineral reserves be based on a pre-feasibility or feasibility study to only permit a feasibility study? Should we exclude in its entirety the condition that mineral reserves be based on a feasibility or pre-feasibility study? Are there terms that we should define differently? For example, should we define a mineral reserve as an estimate of tonnage and grade or quality that includes diluting materials and allowances for losses, instead of a net estimate, as proposed? Why or why not?

Response

We do not agree that Mineral Reserves should be defined as proposed.

As noted in our response to Comment 22, we recommend that the SEC Proposed Rules clarify whether a full stand-alone pre-feasibility or feasibility study will always be required in all instances, or whether “*studies at Pre-Feasibility or Feasibility level*” would be sufficient to support Mineral Reserve estimation.

We consider that mineral brines and geothermal energy should not be included with Mineral Reserves, see our response to [Comment 51](#).

We also consider that Mineral Reserves can be stated at either the pre-feasibility study stage or at the feasibility study stage. This is internationally accepted practice and we do not feel restricting Mineral Reserves to only feasibility studies is beneficial to the market or to the mining industry.

The SEC Proposed Rules should not exclude in its entirety the condition that Mineral Reserves be based on a feasibility or pre-feasibility study.

Under the SEC Proposed Rules, there are three types of Mineral Reserves based on points of reference (insitu, plant or mill feed, and saleable products), in two confidence categories (Proven and Probable):

- Proven or Probable insitu Mineral Reserves;
- Proven or Probable plant or mill feed Mineral Reserves;
- Proven or Probable saleable product Mineral Reserves.

This results in six types of Mineral Reserves in the SEC Proposed Rules rather than the two categories in the CRIRSCO family of codes. Prior to the 1997 Denver Accord, the mining industry was plagued by a plethora of different terms and categories of Mineral Resources and Mineral Reserves. This caused:

- Confusion within the industry and among the investment community;
- Harm in the credibility of the information disclosed by the mining industry;
- Lack of comparability between terms and categories used to report Mineral Resources and Mineral Reserves;
- Lack of comparability between mineral deposits.

For clarity, and to avoid confusion most jurisdictions agreed to defining Mineral Resources with three confidence categories, and Mineral Reserves using two confidence categories. We strongly recommend that the SEC Proposed Rules do not deviate from the CRIRSCO defined confidence categories of Mineral Resources and Mineral Reserves.

We do not agree that mining losses and dilution are a function of the efficiency of the processing method. Generally within the industry, mining losses are considered to be losses in mineralization that occur prior to delivery of material to the plant or mill. Reporting Mineral Reserves exclusive of mining losses and dilution does not provide the investor with a clearer picture of the efficiency of the processing method. The efficiency of the processing method is clearly stated in the key assumptions, parameters and methods in the footnotes of a Mineral Reserve statement, and would be included in the technical report summary. We consider that investors have access to information on the efficiencies of the processing method when Mineral Reserves are reported using the definitions in the CRIRSCO family of codes.

By requiring Mineral Reserves at three points of reference: in-situ, plant or mill feed, and saleable product, we are concerned that this may result in potentially misleading disclosure. For example:

- For most hard rock deposits, the reference point for quoting Mineral Reserves is at the point of delivery to the plant or mill. Coal operations, sand, gravel and other industrial minerals may use the reference point as being the saleable product;
- The terms “mill feed” and “saleable product” do not apply to every mining project or to every commodity. “Mill feed” for example would not be assumed as applicable for heap leach or direct shipping operations, since the term “mill” assumes that a process plant or mill is in use. The term “saleable product” would not be applicable to some industries such as fertilizer, where what is extracted out of the ground is a minor component of what is actually sold.

Using the example of a base metals operation, the mining industry reports Mineral Reserves at the reference point of the mill. The mining industry does not report the tonnes and grade using of the saleable product (e.g. a concentrate or cathode copper) confidence classifications. The information as to expectations of the concentrate grade and tonnage, or cathode copper grades and tonnages for future periods of production is generally provided in the forward-looking information in the form of production schedules. Requiring the mining industry to calculate the breakdown of the concentrate or cathode copper would be difficult for the industry, and we believe potentially could be confusing to investors.

Using the example of a diamond operation, the mining industry also reports Mineral Reserves at the reference point of the mill. The saleable products from a diamond mine are saleable parcels of diamonds (and if the diamond is of sufficient size or quality, a parcel may consist of a single diamond). Saleable parcels consist of the size of the parcel with numbers of stones in each parcel, and the average value of each stone. Diamond operations therefore cannot meet the requirement to report tonnes and grade of saleable product.

In summary, we consider that requiring three points of reference for Mineral Reserves is a prescriptive rule and does not recognize the diversity of the mining industry. We therefore recommend that the SEC Proposed Rules use the exact CRIRSCO Template definition wording for Mineral Reserves with regards to reference points.

“The reference point at which Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported”

We note that the SEC Proposed Rules are silent on whether a Mineral Reserve (or Mineral Resource) prepared under one of the CRIRSCO family of codes (e.g. SAMREC, JORC, PERC, CIM/NI 43-101) could potentially be acceptable without modification under the SEC Proposed Rules. We note that there is mutual recognition by securities regulators in jurisdictions that use one of the CRIRSCO family of codes to allow the disclosure of Mineral Resource and Mineral Reserve (Ore Reserve) estimates that were prepared under one of these codes. We recommend that the SEC Proposed Rules make a similar allowance.

COMMENT 78

SEC Request for Comment

Should we explicitly include a life of mine plan disclosure requirement in the technical studies required to support a determination of mineral reserves, as proposed? Why or why not?

Response

We recommend that the SEC Proposed Rules explicitly require disclosure of a life-of-mine plan (LOMP) in any report that discloses a financial analysis (i.e. cash flows, net present value, internal rate of return) supporting the determination of Mineral Reserves. We also consider that this requirement should be extended such that a LOMP must be included in any report that discloses a financial analysis of Mineral Resources.

We recommend that the SEC Proposed Rules clarify that the life-of-mine plan must include an annualized production schedule.

In the 2011 update to NI 43-101, the Canadian regulators provided an exemption to producing issuers to exclude the economic analysis section from the NI 43-101 Technical Report if no material expansion to the mine was contemplated in the NI 43-101 Technical Report. We recommend that the SEC Proposed Rules consider a similar exemption for not including the financial analysis section for producing issuers reporting on an operating mine where no material expansion is included in the report.

If the SEC Proposed Rules consider a similar exemption relating to disclosure of a financial analysis, consider whether a registrant should be required to provide the following:

- A production schedule on an annualized basis. We believe this information is useful to the investor as it provides more information on the throughput rates (tonnes and grade/quality), and the amount of commodity produced;
- A discussion of the taxes, royalties and other government levies or interests applicable to the mineral project or to production. We believe that this

information is useful to help an investor understand the nature of the burdens that the mine revenue is subject to;

- A discussion of the sensitivity of the mining operation, using qualitative statements, to variations in significant parameters (e.g. commodity price, grade, capital and operating costs).

In the context of the following text in the SEC Proposed Rules:

*“in either case, the required technical study would have to include a technically and economically feasible life of mine plan that supports the study’s demonstration that, at the time of reporting, extraction of the mineral reserve is economically viable under **reasonable investment** and **market assumptions**”* [emphasis added]

it is not clear what is meant by “reasonable investment assumptions”. Does this mean, for a greenfields project, that there is a certain rate of return that a project must achieve or it does not meet such a criterion? For a developed mine, if a mine can put off closure for a period by developing a satellite deposit that has a low rate of return and this delays expenditure on significant closure costs, does this qualify as a “reasonable investment assumption”? We consider that there are other factors that could result in a registrant’s decision to develop a project that are not related to considerations only of net present value or internal rate of return. Therefore, we consider that bright-line financial tests on “reasonable investment assumptions” should be avoided.

In relation to the following:

“Instruction 3 to paragraph (b)(96)(iv)(B)(21): To comply with paragraph (b)(96)(iv)(B)(21)(i) of this section, the qualified person must provide all material assumptions including discount rates, exchange rates, commodity prices, and taxes, royalties, and other government levies or interests applicable to the mineral project or to production, and to revenues or income from the mineral project.”

we believe that where a registrant makes disclosure of an economic analysis on a mining project; the analysis must include a post-tax (after-tax) cash flow analysis. We do not consider that it is appropriate to only present this type of information on a pre-tax basis, even if the disclosure includes a discussion of the type of taxes that the project is subject to.

We note that mining companies will frequently contend that the taxes paid are at the corporate level, where there are taxation considerations that can be applied that can offset or reduce the amount of taxation paid. These considerations are generally outside of, and not directly related to, the mining project. We believe that this type of argument should not be used to avoid presenting an after-tax evaluation of the mining project based on reasonable assumptions of what the imposts may be.

The wording in the SEC Proposed Rules:

*“Instruction 3 to paragraph (b)(96)(iv)(B)(21): To comply with paragraph (b)(96)(iv)(B)(21)(i) of this section, the qualified person must provide all **material assumptions** including discount rates, exchange rates, commodity prices, and **taxes**, royalties, and other government levies or interests applicable to the mineral project or to production, and to revenues or income from the mineral project.” [emphasis added]*

could result in a registrant taking the position that the material assumption was to show pre-tax financial analysis results only, and the registrant could assert that they are therefore in compliance with the instruction. We recommend that the SEC review the wording in the instruction to avoid this issue.

We note that the Canadian regulators consider presentation of only a pre-tax analysis is potentially misleading as it overstates the value of the project.

COMMENT 79

SEC Request for Comment

Should we require the use of a discounted cash flow analysis or other similar analysis to establish the economic viability of a mineral reserve’s extraction, as proposed? Why or why not? If so, should we require the use of a price that is no higher than a trailing 24 month average spot price in the discounted cash flow analysis, except in cases where sales prices are determined by contractual agreements, as proposed? Is there some other period (e.g., 12 or 36 months) or measure that should determine the price used in the discounted cash flow analysis?

Response

Yes, we consider that the industry standard is to provide a discounted cash flow analysis, and the SEC Proposed Rules should require a discounted cash flow analysis to provide comparability between projects. If a registrant uses a similar type analysis, the SEC Proposed Rules should have provision for the registrant to include this in addition to the discounted cash flow analysis. We note that the exemption for a “producing issuer” that we proposed in [Comment 78](#) would also need to be accommodated.

We do not consider that the “*use of a price that is no higher than a trailing 24 month average spot price in the discounted cash flow analysis*” should be a requirement under the SEC Proposed Rules.

We believe that if the SEC requires the presentation of the discounted cash flow analysis at no more than a trailing 24 month average spot price, then this should be performed

as, and presented as, a sensitivity case to the registrant's preferred base case evaluation. We also consider that the sensitivity analysis should be allowed to show sales prices that are higher than the trailing 24 month average spot price. In our view, a sensitivity analysis should provide an investor with a reasonable sensitivity range, and not have an arbitrary ceiling price based on the trailing 24 month average spot price.

In our view, use of any historical period for determining commodity price assumptions that is backward-looking, is inappropriate for forward-looking information. We consider that the assumed commodity price used in a financial analysis should be an industry consensus of the future long-term commodity price, and not a backward-looking historical price. See also our response to [Comment 51](#).

We do not wish to see a prescriptive rule on the commodity price that is used. Instead, we would like to see a principles-based rule that allows transparency and comparability. In our view, the use of long-term consensus-based commodity pricing would achieve transparency and comparability.

We consider that long-term consensus-based commodity prices are prices that are derived from credible sources. Credible sources could include major mining companies, brokerages, analysts, major banks, commodities traders, and specialist companies that provide commodity price forecasts. We consider that these sources provide a cloud or cluster of prices from which the Qualified Person can select what they consider to be an appropriate long-term price. We note that a Qualified Person should take responsibility for the selection of the most appropriate source for the long-term price. The credible source or sources should be identified by the Qualified Person, and the basis of the selection of the source explained. See also our response to [Comment 67](#).

COMMENT 80

SEC Request for Comment

Should we allow registrants to use an alternate price in addition to a price that is no higher than a trailing 24 month average spot price, as long as they disclose the alternate price and their justification? Alternatively, should we require every registrant to use a fixed 24 month trailing average price with the option to use an alternate price(s) that is reasonably achieved? Are there other pricing methods (e.g., management's long term view or using spot, forward or futures prices at the end of the last fiscal year to determine the ceiling price allowed) that we should require or permit registrants to use in discounted cash flow analysis? Would such pricing methods be transparent, easy for registrants to apply and investors to understand, and to the extent practicable, provide some degree of comparability?

Response

We are assuming that the SEC Proposed Rules are recommending the following two alternatives:

- A registrant has the option of providing an alternate price in addition to a price that is no higher than a trailing 24 month average spot price;
- A registrant has the option of providing an alternate price as a replacement for a price that is no higher than a trailing 24 month average spot price.

In the first scenario, we do not agree that evaluation of a financial analysis should use a price that is no higher than a trailing 24 month average spot price as the base case. We consider that results of a financial analysis using a price that is no higher than a trailing 24 month average spot price should only be disclosed as part of a sensitivity analysis.

The second scenario reflects our viewpoint that a registrant can select its preferred base case price based on reasonable assumptions.

As noted in our responses to [Comment 67](#) and [Comment 79](#), we consider that there are credible sources that can be used to establish a reasonable forward-looking price. In our view, the use of long-term consensus-based commodity pricing would be transparent, easy for registrants to apply and investors to understand, and to the extent practicable, provide some degree of comparability.

COMMENT 81

SEC Request for Comment

Should we define the terms “probable mineral reserve” and “proven mineral resource,” as proposed? Why or why not? If not, how should we modify these definitions?

Response

We disagree with the definitions as proposed for “probable mineral reserves” and “proven mineral reserves”. We have assumed that the term “proven mineral resource” is a typographical error.

The exact wording in the CRIRSCO Template definitions for both of these terms should be used.

There has been significant effort to harmonize the definition of mining terms that are used in the global marketplace to allow transparency, comparability, and to avoid confusion. Creation of any modifications to those terms we consider to be counter-productive.

We also believe that the approach the SEC Proposed Rules is taking to define an additional three types of reserves (insitu, plant, point of sale) is unnecessary:

- An in situ estimate is a Mineral Resource estimate;
- Requiring a statement of the Mineral Reserves as they were prior to application of dilution and mine loss considerations is already captured in the requirement to provide key parameters, assumption and methods within the CRIRSCO Template definition;
- The CRIRSCO Template definition of a Mineral Reserve already requires transparency on the point of reference that the Mineral Reserves are being quoted at.

COMMENT 82

SEC Request for Comment

Should we define “modifying factors,” as proposed? Are there any factors that we should include in the definition of modifying factors instead of or in addition to those already included in the definition? Are there any factors that we should exclude from the definition?

Response

Modifying Factors should be defined using the exact wording of the CRIRSCO Template definition. The CRIRSCO Template definition is a principles-based definition, so any other factors are already captured under the definition. Using this principles-based definition allows a Qualified Person to exclude or include factors that are appropriate to the deposit under consideration.

The text in the definition in the SEC Proposed Rules states:

*“We propose to define “modifying factors” as the factors that a qualified person must apply to mineralization or geothermal energy and then evaluate in order to establish the **economic prospects of mineral resources**, or the economic viability of mineral reserves”[emphasis added]*

The term “Modifying Factors” should not be used when referring to the technical and economic considerations applied at the Mineral Resource estimate stage when considering reasonable prospects of eventual economic extraction. The term should only be employed at the point of conversion of Mineral Resources to Mineral Reserves.

We also consider that defining the term Modifying Factors as

*“factors that a qualified person must apply to **mineralization or geothermal energy**”[emphasis added]*

is inappropriate:

- Modifying factors only apply when converting Mineral Resources to Mineral Reserves, and do not apply to mineralization;
- We believe geothermal energy is not an appropriate commodity to be covered by the SEC Proposed Rules (see also our response to [Comment 51](#)).

We note that the SEC Proposed Rules have included in the “definition of Modifying Factors”:

*“These factors would include, but not be restricted to, mining, **energy, recovery and conversion**, processing, metallurgical, economic, marketing, legal, environmental, infrastructure, social and governmental factors”* [emphasis added]

We consider that incorporation of these considerations that are more appropriate to mineral brines and geothermal energy is not suitable, as in our view, these commodities should not be covered by the SEC Proposed Rules (see also our response to [Comment 51](#)).

We note that guidance provided with the SEC Proposed Rules on Modifying Factors states:

*“For example, applying and evaluating processing factors means the qualified person must examine the characteristics of the mineral resource and determine that the material can be processed economically into saleable product **using existing technology**”* [emphasis added]

*Similarly, applying and evaluating legal factors means the qualified person must examine the regulatory regime of the host jurisdiction to establish that the registrant can comply (fully and economically) with all laws and regulations (e.g., mining, environmental, reclamation and permitting regulations) that are relevant to operating a mineral project **using existing technology**”* [emphasis added]

We do not agree that a Qualified Person can only examine processing or legal factors using existing technology. New technology should be allowed when considering Modifying Factors, if there is a demonstrated reasonable basis for use of that new technology.

We note that guidance provided with the SEC Proposed Rules on legal factors states:

*“Similarly, applying and evaluating legal factors means **the qualified person must examine the regulatory regime of the host jurisdiction to establish that the registrant can comply (fully and economically) with all laws and regulations** (e.g., mining, environmental, reclamation and*

permitting regulations) that are relevant to operating a mineral project using existing technology” [emphasis added]

We are very concerned with the above statement as a Qualified Person should not be expected to have the academic training and professional qualifications and experience necessary to examine the regulatory regime of the host jurisdiction.

The Qualified Person should also not be required to provide an opinion on the regulatory regime of the host jurisdiction or an opinion on the ability of the registrant to fully and economically comply with all laws and regulations.

It is unreasonable to require this of a Qualified Person, as these are legal matters that should be left to legal professionals to analyze and provide a legal opinion. Requiring a Qualified Person to provide or take responsibility for information outside his or her area of training and experience is against the professional practice restrictions established by most professional regulatory bodies (engineering, geoscience and legal associations).

In our view, the Qualified Person could, at most, agree that the source of the legal information is credible and then the Qualified Person must be able to disclaim responsibility for information and opinions provided by the legal expert.

We note that in our view, the list of instructions accompanying the definition of Modifying Factors is unnecessary if the exact wording used in the CRIRSCO Template definition and guidance of the terms “Mineral Resources”, “Mineral Reserves” and “Modifying Factors” is used.

COMMENT 83

SEC Request for Comment

Should we adopt the above discussed instructions, as proposed? Why or why not?

Response

We do not believe that the SEC Proposed Rules should adopt the above discussed instructions. See our responses to [Comment 76](#) through [Comment 82](#).

COMMENT 84

SEC Request for Comment

Should we define “preliminary feasibility study” and “feasibility study,” as proposed? Are there any terms and conditions that we should include instead of or in addition to those

included in the proposed definitions? Are there any terms or conditions under each definition that we should exclude?

Response

We believe the SEC Proposed Rules intend to use definitions for the terms “pre-feasibility” and “feasibility” that are the same as under the CRIRSCO Template. However, we note there are some variations in the wording of the definitions in the SEC Proposed Rules. We strongly recommend that the SEC Proposed Rules use the exact wording for the definitions as presented in the CRIRSCO Template. Our concern is even slight changes in wording, for example the addition of the text “*an effective plan to sell the product*” in the definition could cause unintended consequences to the mining industry such as unnecessary re-examination of preliminary feasibility and feasibility studies generated by the mining industry to determine if some modifications must be made to these studies to meet the definitions in the SEC Proposed Rules.

We disagree with some aspects that the SEC Proposed Rules have identified as being the key differences between a pre-feasibility study and a final or bankable feasibility study.

- We consider that a pre-feasibility study selects a preferred option, whereas a feasibility study refines the preferred option;
- The accuracy levels required for a pre-feasibility study ($\pm 25\%$) are too rigid, and do not reflect the diversity of mining project locations and mine project types;
- The contingency levels (15%) required for a pre-feasibility study are too rigid. In our experience, the contingency values compiled for capital cost estimates vary project to project. Each mining project has its own distinct risks to the capital cost estimate, and these risks are generally covered by the contingency allocation. We have observed in the industry that on-site infrastructure, tailings impoundment areas and off-site infrastructure cost estimates for pre-feasibility studies, are typically different from each other. We find that the norm in the mining industry is to have far less engineering definition for these areas. Other areas that can affect an estimate can include the project location and related construction costs. A project site in a country with well-developed infrastructure will have a different cost estimate and related contingency to a similar project that is situated in a country with limited or aged infrastructure. A project that is at high elevation will have a different cost estimate and related contingency to a similar project located at sea level. The climate in the project location may influence capital costs and contingencies; for example a project in a desert setting will have different costs and contingencies when compared to a similar project in the high Arctic or in a high rainfall tropical location. We have observed that contingency values for pre-feasibility studies have more generally ranged from 20% to 35%.

We do not agree that the definitions of preliminary feasibility and feasibility studies should include any other terms or conditions, or exclude any other terms and conditions. We recommend that the SEC Proposed Rules make it clear that a preliminary feasibility or feasibility study that meets the CRIRSCO Template definitions will be acceptable to the SEC.

We do not agree with the proposed instructions to the definitions of these studies in the SEC Proposed Rules.

Pre-feasibility Studies

We agree that a pre-feasibility study should include a description of the applicable taxes. However, the instruction that a registrant:

“must describe in detail applicable taxes and provide an estimate of revenues”

does not make it clear that revenues must be provided on a post-tax (after-tax) basis. We recommend the instruction wording be revised to ensure that registrants provide a financial analysis on an after-tax basis. We consider that providing a cash flow that shows only a pre-tax scenario is inappropriate.

In our view, the decision to undertake any mining study, or to progress a project to a more advanced study is a decision made by a registrant’s management and Board. These decisions are not made by a Qualified Person, and therefore a Qualified Person should not be required to justify such management decisions.

The CRIRSCO Template definition for a pre-feasibility study, which is principles-based, includes:

“sufficient for a Competent Person, acting reasonably, to determine if all or part of the Mineral Resource may be converted to a Mineral Reserve at the time of reporting.”

Therefore, if the study meets the definition in the CRIRSCO Template, then it meets the requirement in the SEC Proposed Rules:

“...the proposed rules would require a qualified person to include the justification for using a pre-feasibility study, if one is used, instead of a final feasibility study. This requirement would help ensure that investors are fully informed of the qualified person’s basis for determining that a pre-feasibility study is adequate given the particular facts and circumstances.”

A Qualified Person should not need to justify the use of a pre-feasibility study to support Mineral Reserve estimates, if the pre-feasibility study meets the CRIRSCO definition.

We note the requirement:

“It also should encourage a qualified person to consider carefully his or her decision to use a pre-feasibility study to support the determination of mineral reserves”

does not reflect modern industry practices:

- We believe that it is industry-accepted practice internationally that pre-feasibility studies are sufficient to support the determination of Mineral Reserves;
- Investors who follow the mining industry are familiar with Mineral Reserves being declared on the basis of a pre-feasibility study, and are aware of the limitations of this study stage.

We consider that completion of a pre-feasibility study is an important milestone in the advancement of a mineral project. If the SEC’s position is to prohibit declaration of Mineral Reserves supported by this study level, then, in our view, significant information potentially could be withheld from investors.

We disagree with how the SEC Proposed Rules have defined “high risk situations” that would require only the use of a final feasibility study to support declaration of Mineral Reserves:

“For example, a final feasibility study would be required in situations where the project is the first in a particular mining district with substantially different conditions than existing company projects, such as environmental and permitting restrictions, labor availability and skills, remoteness, and unique mineralization and recovery methods”

The idea that a greenfields project can only have a feasibility study to support Mineral Reserves is contrary to industry-accepted practice.

Many mining studies are performed by independent consultancies, who have wide experience of different deposits, mineralization styles, recovery methods, permitting conditions, infrastructure requirements; the studies are frequently not dependent on the experience of the registrant with its existing projects.

An important component of all pre-feasibility studies is the identification of mining project risks, and consideration of how to effectively manage those risks. We do not consider that identification of risk and development of mitigation plans is the sole purview of a feasibility study.

We agree that there are certain project risks to the detail and reliability of the application of Modifying Factors that can affect project economics, and therefore prevent the declaration of Mineral Reserves:

- We consider that there are certain external risks to a mining project such as pending changes to taxation or royalty regimes, governmental regulations, or the ability to export product, that are Modifying Factors which are outside the control of the registrant or the Qualified Person. The completion of a feasibility study over a pre-feasibility study would make no difference to the risk posed by such pending changes;
- We consider that there are internal risks to a mining project that can be controlled by a registrant. These risks could include insufficient geotechnical data, or insufficient metallurgical variability testwork data, that potentially could prevent confirmation of mine design or ability to produce a saleable product, and therefore prevent declaration of Mineral Reserves. This would be the case whether the study was at feasibility level, or pre-feasibility level.

We do not agree with the premise in the SEC Proposed Rules where a feasibility study could potentially resolve risk issues that can be addressed in a pre-feasibility study. If the issues cannot be resolved or mitigation plans proposed in a pre-feasibility study, then they are unlikely to be resolved or mitigated at the feasibility level.

We disagree with the instruction in the SEC Proposed Rules where a pre-feasibility study must

“define, analyze or otherwise address in detail”. [emphasis added].

For most projects, the details are only defined for the following:

“the required access roads, infrastructure location and plant area, and the source of all utilities (e.g., power and water) required for development and production”

once surface rights have been obtained, agreements concluded with stakeholders (land owners, local communities, local indigenous groups), and permitting authorities have granted the key permits. Obtaining agreements and permits often occurs only after the completion of a feasibility study; therefore it is unrealistic to make it a requirement to have these in hand prior to completion of a pre-feasibility study. The pre-feasibility and feasibility studies have to make certain assumptions regarding infrastructure locations or utility sources that may not be, as the project development timeline continues, found to be permissible, or have the appropriate social licence for construction. Requiring definition in detail of location of access roads, pipelines, or utility sources does not recognize the common industry practice of accepting that reasonable assumptions have to be made prior to conclusion of agreements with stakeholders and grant of key permits.

In relation to mine design:

*“the preferred underground mining method or surface mine pit configuration, with **detailed mine layouts** drawn for each alternative”*
[emphasis added]

we note that most pre-feasibility studies include provisional mine layout plans. Mine plans are refined during feasibility studies and detailed engineering. It is not clear to us what the term “*for each alternative*” would require from a registrant or Qualified Person.

In relation to environmental and permitting:

“the environmental compliance and permitting requirements or interests of agencies, non-governmental organizations, communities and other stakeholders, the baseline studies, and the plans for tailings disposal, reclamation and mitigation, together with an analysis establishing that permitting is possible;”

we note that the SEC Proposed Rules do not recognize the complexity that faces most registrants when evaluating a deposit, and determining the most appropriate development option. The requirement pre-supposes at the pre-feasibility study stage that the key environmental baseline studies are complete, the project design is finalized, and all permit requirements are known. In reality, some of these are only finalized during the feasibility study stage, and most of these are only finalized during the subsequent detailed engineering design phase.

We disagree with stating bright-line accuracy and contingency ranges that all mining studies must meet. Due to the diverse nature of the industry, the types of deposits, and local conditions, there must be more flexibility afforded to a Qualified Person to meet the principles of the definition of a pre-feasibility study without necessarily meeting such a bright-line test. A Qualified Person should explain the accuracy and contingency ranges used in the study, and explain the basis for those ranges.

We note that the ranges presented for accuracy in the SEC Proposed Rules are narrower than the Class 4 study accuracy ranges incorporated in the AACE International Recommended Practice No. 47R-11 Cost Estimate Classification System – As Applied In The Mining And Mineral Processing Industries TCM Framework: 7.3 – Cost Estimating and Budgeting Rev. July 6, 2012:

*“Estimate Expected Accuracy Range: **Typical accuracy ranges for Class 4 estimates are -15% to -30% on the low side, and +20% to +50% on the high side, depending on the technological, geographical and geological complexity of the project, appropriate reference information, and other risks (after the inclusion of an appropriate contingency determination).** The uncertainty varies by work type with moderate ranges applying to structures and plant commodities, wider*

ranges applying to earthworks and infrastructure and narrower ranges applying to equipment installation [emphasis added]

In our view, if an accuracy range is to be selected, then it should be a range promulgated by a recognized industry standard setter such as the AACE, and be an accuracy range that is reflective of the technological, geographical and geological complexity of a project. Some deposits may require a wider accuracy range than that in the SEC Proposed Rules for a pre-feasibility study, but that would not mean that the deposit pre-feasibility study would not meet the definition.

We disagree with this statement:

“a registrant would be required to take additional steps to support its determination of mineral reserves”

as it is our view that the industry-accepted practice for declaration of Mineral Reserves is the completion of a pre-feasibility study to determine if all or part of the Mineral Resources can be converted to Mineral Reserves. We recommend the instruction be removed from the SEC Proposed Rules.

We strongly disagree with the requirement in the SEC Proposed Rules that the Qualified Person must conclude that

*“**there are no obstacles** to obtaining permits and revenues from the mine's products” [emphasis added]*

It is not reasonable to expect that “no obstacles” will arise during the permit phase. Issues that can arise include:

- Technical considerations;
- Stakeholder intervention;
- Lawsuits;
- Regulatory changes;
- Change of government.

Any statement that specifies that “no obstacles” will be encountered during the permit phase could be inappropriate. In our view, requiring such a statement could potentially expose a Qualified Person to liability.

We also strongly disagree with the requirement in the SEC Proposed Rules that the Qualified Person must conclude that:

*“**there are no obstacles** to obtaining permits and revenues from the mine's products” [emphasis added]*

We consider that there are numerous obstacles to obtaining mine revenues, such as:

- Delays, e.g. obtaining mine finance, obtaining Board approval to develop a project, shareholder sentiment;
- Commodity price fluctuations;
- Demand for the commodity;
- Exchange rate fluctuations;
- Legislative changes e.g. greenhouse gas emission requirements.

Any statement that specifies that no obstacles will be encountered prior to obtaining mine revenues is likely to be potentially misleading to investors. In our view, requiring such a statement could potentially expose a Qualified Person to liability.

We also disagree with the assertion that the proposed instruction that states “*there are no obstacles to obtaining permits and revenues from the mine’s products*” is consistent with similar guidance under the CRIRSCO-based codes. CRIRSCO provides guidance in two places in the CRIRSCO Template:

In the guidance to the Mineral Reserves definition: “***The term ‘Mineral Reserves’ need not necessarily signify that extraction facilities are in place or operative, or that all necessary approvals or sales contracts have been received. It does signify that there are reasonable expectations of such approvals or contracts. The Competent Person should consider the materiality of any unresolved matter that is dependent on a third party on which extraction is contingent***” [emphasis added]

In Table 1: “***The status of titles and approvals critical to the viability of the project, such as mining leases, discharge permits, government and statutory approvals***” [emphasis added]

The CRIRSCO Template does not require that a Qualified Person state that “*there are no obstacles to obtaining permits and revenues from the mine’s products*”.

We agree that market studies (commodity research report) should be required to support Mineral Reserve estimates for non-freely traded commodities where there are barriers to market entry.

We recommend that the SEC Proposed Rules do not require disclosure of certain content of the commodity research report where this disclosure could:

- Break confidentiality agreements;
- Divulge planned market entry strategies that are proprietary to the company where the disclosure of the strategy could harm the company and its investors.

We recommend the Qualified Person in the pre-feasibility study:

- Confirm that they have reviewed the commodity research report;
- Confirm that the assumptions used in the pre-feasibility study are supported by the commodity research report;
- Confirm that the commodity research report was prepared by a credible source;
- State the name of the credible source;
- Disclaim responsibility for the contents of the commodity research report.

Feasibility Studies

We disagree with the instruction in the SEC Proposed Rules where a feasibility study must:

“define, analyze or otherwise address in detail” [emphasis added]

because for most projects, the details are only defined for the following:

“the required access roads, infrastructure location and plant area, and the source of all utilities (e.g., power and water) required for development and production”

once surface rights have been obtained, agreements concluded with stakeholders (land owners, local communities, local indigenous groups), and permitting authorities have granted the key permits. Obtaining agreements and permits often occurs only after the completion of a feasibility study; therefore it is unrealistic to make it a requirement to have these in hand prior to completion of the feasibility study. Both pre-feasibility and feasibility studies have to make certain assumptions regarding infrastructure locations or utility sources that may not be, as the project development timeline continues, found to be permissible or have the appropriate social licence for construction. Requiring definition in detail of location of access roads, pipelines, or utility sources does not recognize the common industry practice of accepting that reasonable assumptions have to be made prior to conclusion of agreements with stakeholders and grant of key permits.

It is not clear to us what level of detail will be required for the following:

“a finalized mining method, including detailed mine layouts and final development and production plan for the preferred alternative with the required equipment fleet specified, together with detailed mining schedules, construction and production ramp up, and project execution plans” [emphasis added]

since many of these requirements are based on certain assumptions regarding surface and access rights, and those assumptions are frequently changed during detailed

engineering as a result of negotiations with, for example, landholders and permitting authorities.

In relation to environmental and permitting:

“the final identification and detailed analysis of environmental compliance and permitting requirements, including the finalized interests of agencies, NGOs, communities and other stakeholders, together with the completion of baseline studies and finalized plans for tailings disposal, reclamation and mitigation;”

we note that the SEC Proposed Rules do not recognize the complexity that faces most registrants when evaluating a deposit, and determining the most appropriate development option. In reality, we consider that some of these are only finalized during the feasibility study stage, and most of these are only finalized during the subsequent detailed engineering design phase.

We agree that a feasibility study should include a description of the applicable taxes. However, the instruction that a registrant:

“must describe in detail applicable taxes and provide an estimate of revenues”

does not make it clear that revenues must be provided on a post-tax (after-tax) basis. We recommend the instruction wording be revised to ensure that registrants provide a financial analysis on an after-tax basis. We consider that providing a cash flow that shows only a pre-tax scenario is inappropriate.

We disagree with stating bright-line accuracy and contingency ranges that all mining studies must meet. Due to the diverse nature of the industry, the types of deposits, and local conditions, there must be more flexibility afforded to a Qualified Person to meet the principles of the definition of a feasibility study without necessarily meeting such a bright-line test. A Qualified Person should explain the accuracy and contingency ranges used in the study, and explain the basis for those ranges.

We note that the ranges presented for accuracy in the SEC Proposed Rules are narrower than the Class 3 study accuracy ranges incorporated in the AACE International Recommended Practice No. 47R-11 Cost Estimate Classification System – As Applied In The Mining And Mineral Processing Industries TCM Framework: 7.3 – Cost Estimating and Budgeting Rev. July 6, 2012:

“Estimate Expected Accuracy Range: Typical accuracy ranges for Class 3 estimates are -10% to -20% on the low side, and +10% to +30% on the high side, depending on the technological, geographical and geological complexity of the project, appropriate reference

information, and other risks (after inclusion of an appropriate contingency determination). *The uncertainty varies by work type with moderate ranges applying to structures and plant commodities, wider ranges applying to earthworks and infrastructure and narrower ranges applying to equipment installation.* [emphasis added]

In our view, if an accuracy range is to be selected, then it should be a range promulgated by a recognized industry standard setter such as the AACE, and be an accuracy range that is reflective of the technological, geographical and geological complexity of a project. Some deposits may require a wider accuracy range than that in the SEC Proposed Rules for a feasibility study, but that would not mean that the deposit feasibility study would not meet the definition.

We disagree with the SEC's assertion that:

"we do not believe that adoption of the proposed definition of feasibility study and the corresponding proposed instructions would significantly change existing disclosure practices of registrants".

In our view, there are a number of the instructions that are contrary to current industry practice, as detailed in the discussions above on this comment, and will result in significant changes to registrant's existing disclosure practices.

COMMENT 85

SEC Request for Comment

Should we permit the use of either a pre-feasibility study or a feasibility study to support the determination and disclosure of mineral reserves, as proposed? Why or why not?

Response

We believe that a registrant should be able to declare Mineral Reserves at either a pre-feasibility or feasibility study stage. See our detailed response in [Comment 84](#).

COMMENT 86

SEC Request for Comment

Should we require qualified persons to use a feasibility study in situations where the risk is high, as proposed? Why or why not? Are there other conditions, in addition to or in lieu of high risk situations, where we should require a feasibility study in support of mineral reserve disclosure?

Response

We do not believe that the requirement to provide a feasibility study in areas identified in the SEC Proposed Rules as “high risk” is warranted. See our detailed response to [Comment 84](#).

We do not consider that there are any

“other conditions, in addition to or in lieu of high risk situations, where” [the SEC Proposed Rules should] “require a feasibility study in support of mineral reserve disclosure”.

COMMENT 87

SEC Request for Comment

Should we adopt the proposed instructions about the use of a pre-feasibility study to support the determination and disclosure of mineral reserves? Are there any instructions that we should provide instead of or in addition to the proposed instructions for such use of a pre-feasibility study? Are there any instructions that we should exclude? Would the proposed instructions mitigate the risk of less certain disclosure that could result from the use of a pre-feasibility study to support the determination and disclosure of mineral reserves? If not, why not?

Response

We agree that Mineral Reserves can be declared with the support of a pre-feasibility study.

We also note our request to the SEC to clarify whether pre-feasibility level studies can be used in support of Mineral Reserve estimates in [Comment 22](#).

We do not agree with the adoption of the proposed instructions for a pre-feasibility study to support the determination and disclosure of Mineral Reserves. See our response to [Comment 84](#).

In our view, the proposed instructions would not mitigate the risk of less certain disclosure that could result from the use of a pre-feasibility study to support the determination and disclosure of Mineral Reserves. See our response to [Comment 84](#).

COMMENT 88

SEC Request for Comment

Should we adopt the proposed instructions for the use of a feasibility study to support the determination and disclosure of mineral reserves? Are there any instructions that we should provide instead of or in addition to the proposed instructions for such use of a feasibility study? Are there any instructions that we should exclude?

Response

We agree that Mineral Reserves can be declared with the support of a feasibility study.

We do not agree with the adoption of the proposed instructions for a feasibility study to support the determination and disclosure of Mineral Reserves. See our response to [Comment 84](#).

COMMENT 89

SEC Request for Comment

As part of the instructions for pre-feasibility and feasibility studies, should we define preliminary and final market studies as proposed?

Response

No, there should be no difference in the level of market study (commodity research report) performed in support of a pre-feasibility study or a feasibility study.

The commodity research report should support the commodity price used, and should support that there is a market for the product from the mine. The commodity research report should be simply required to be sufficient to support estimation of Mineral Reserves. The sufficiency of the study would be determined by the Qualified Person, and would be applicable to the commodity under consideration.

The Qualified Person should be responsible for determining that it is reasonable to rely on the commodity research report. A Qualified Person can rely on the information in the commodity research report only if it was prepared by a credible source. In our view, it is the Qualified Person who has to make the determination of the credibility of the source.

A Qualified Person should be allowed to rely on, and disclaim responsibility for, this information. See also our response to [Comment 34](#), [Comment 82](#), [Comment 96](#), and [Comment 114](#).

COMMENT 90

SEC Request for Comment

Should we require summary disclosure, as proposed, for all registrants with material mining operations? Why or why not? Should such summary disclosure require maps showing the locations of all mining properties, a presentation of the proposed information about the 20 properties with the largest asset values, and a summary of all mineral resources and reserves at the end of the most recently completed fiscal year, as proposed?

Response

We do not agree with the summary disclosure requirements in the SEC Proposed Rules for all registrants with material mining operations, as we consider that this is a redundant requirement. This type of information is already required in the summary of the registrant's business under other SEC annual disclosure document forms (e.g. 10-K, 20-F, 40-F).

We do not believe that summary disclosure will “*provide investors with an appropriately comprehensive and thorough understanding of a registrant's mining operations*”. The information provides a useful overview, but the level of detail required for an “*appropriately comprehensive and thorough understanding*” would only be provided in a technical report summary on a mining project.

We make the following additional comments.

If the objective of the SEC Proposed Rules with this disclosure requirement is to provide an investor with sufficient information to make an informed investment decision, including:

- Allowing comparability of value of projects held by one registrant to other mines and other companies;
- Providing sufficient information to understand a registrant's material mining operations at fiscal year's end;
- Understanding and evaluating the registrant's ability to replenish depleting Mineral Reserves;

then we do not consider that the summary table format and content requirements in Table 2 will achieve these aims. In our view, Table 2 of the SEC Proposed Rules will likely not achieve its intended objectives.

We consider that a technical report summary is a much better document to provide meaningful information in context that could allow an investor to better understand the

value of a project, to compare projects, and for operating mines to understand the ability of a registrant to replenish depleting Mineral Reserves.

We believe that a map showing the locations of material properties would be beneficial to investors. We do not agree that registrants should be required to provide maps showing the locations of “all mining properties”; the requirement should be restricted to material mining properties.

In our view, the SEC Proposed Rules should not use asset values as proposed, when determining which properties require summary disclosure. As noted in our response to [Comment 3](#), we believe that the asset value test will not necessarily capture material properties:

- In the case of a significant new discovery, the discovery itself would be material to the investors, but as a discovery it would not have a high asset valuation;
- In the case of a long-lived operation at the end of its production life, the mine may not be material to investors, but would be likely to have a high asset valuation.

We believe that the proposed requirement for summary information on 20 properties with the largest asset values is likely to be unduly burdensome. We note that most mining companies under NI 43-101 identify between five and eight material mineral properties; we do not consider that a specified number of properties is either useful or reasonable. We recommend that the SEC Proposed Rules only require summary information on material properties, as by definition, those properties are the properties that influence investment decisions.

We recommend that the SEC Proposed Rules only require disclosure of Mineral Resources and Mineral Reserves for material properties. Any other disclosure of Mineral Resources or Mineral Reserves on non-material properties should be at the registrant’s discretion.

We agree that the summary of Mineral Resources and Mineral Reserves on material properties should be reported in a registrant’s annual disclosure document filing. However, the SEC Proposed Rules should allow flexibility for registrants such that the effective date of the Mineral Resources and Mineral Reserves is determined at the registrant’s discretion. This is to allow a registrant to update Mineral Resources and Mineral Reserves some time prior to the financial year-end, so as to avoid the pressure of preparing the estimates at the same time as preparing all of the year-end financial data.

COMMENT 91

SEC Request for Comment

Should we permit registrants to treat multiple mines with interrelated mining operations as one mining property, as proposed? Should we instead require registrants to treat such mines as separate properties? Why or why not?

Response

We could not find a definition of the SEC's term "interrelated mining operations". We have interpreted the term to refer to a mining district (mining camp), where a number of mines share or feed into a central processing facility, or share major infrastructure (e.g. tailings, power facilities, rail facilities).

Using our interpretation, we agree that the SEC Proposed Rules should allow registrants to treat multiple mines with interrelated mining operations as one mining property in a technical report summary. As we do not consider that the Table 2 of the SEC Proposed Rules as proposed should be a reporting requirement for registrants, our view is that the registrant should be allowed to combine interrelated mining operations for reporting purposes within a technical report summary.

To avoid confusion, we recommend that the SEC Proposed Rules define what is meant by:

- Mineral project;
- Mineral property;
- Interrelated mining operation.

For example:

- A mineral project could involve multiple properties or other documents of title that are contiguous in relatively close proximity (mineral claims) such that any potential deposit on any one of the properties would likely share facilities if they were developed. This can refer to mineral claims where exploration is at an early stage and where no Mineral Resource or exploration target has yet been identified, or advanced properties where one or more deposits that have Mineral Resources have been identified, or a developed property with surrounding satellite deposits and exploration targets;
- A mineral property could be a mineral claim, or a group of contiguous mineral claims or mineral claims in close proximity where a Mineral Resource or exploration target has been identified;

- An interrelated mining operation would share facilities. An interrelated mining operation would involve more than one developed mine in such close proximity that facilities can be shared. By facilities, we mean facilities that are used in mining, processing or waste disposal. We do not consider that sharing of services such as management, human resources, environmental monitoring, or purchasing alone would constitute interrelationships.

In defining what is included in a technical report summary, we believe that the term “mineral project” should be used, such that any relevant information to a project is included in the technical report summary.

We consider that the technical report summary should include all relevant information on a project. If interrelated mines are sharing facilities such as the throughput capacity of a process plant, then those mines should be integrated into the one technical report summary.

COMMENT 92

SEC Request for Comment

Should we exclude registrants with only one mining property from the summary disclosure requirements, as proposed? Why or why not? Alternatively, should we use a different threshold than the proposed “only one” threshold for excluding a registrant from the summary disclosure requirements? If so, what threshold should we use and why would this threshold be more appropriate?

Response

We do not believe that a registrant with only one mining property should be excluded from the summary disclosure requirements.

In our view, Table 2 of the SEC Proposed Rules as proposed will not be a useful requirement, as it is unlikely to achieve its intended objectives.

If a property is a material property, then it is not relevant if it is the only material property or one of a number of material properties.

COMMENT 93

SEC Request for Comment

Regarding the proposed summary disclosure requirement for the 20 largest properties, should we require other information, in addition to or in lieu of the proposed items? Why or why not? For example, should we require the registrant to disclose the asset value

of each property included in its summary disclosure? Should we revise the proposed form and content of Table 2? If so, how should we revise the table's form or content?

Response

In our view, Table 2 of the SEC Proposed Rules as proposed is not a useful requirement, as it does not achieve its intended objectives. The table is neither efficient nor effective in providing an overview of a registrant's 20 largest properties.

We consider that a technical report summary is a much better document to provide meaningful information in context that could allow an investor to better understand the value of a project, to compare projects, and for operating mines to understand the ability of a registrant to replenish depleting Mineral Reserves.

COMMENT 94

SEC Request for Comment

Should the presentation of information about the mining properties with the largest asset values include the 20 largest properties, as proposed? Should this number be higher or lower? If so, what number is appropriate? Why? Should the summary disclosure include only those properties that represent 5% or more in asset value? Should we permit the summary disclosure to omit any property that represents 1% or less in asset value? Alternatively, should we require the specified information based on some criteria (e.g. revenues) other than asset value?

Response

In our view, Table 2 of the SEC Proposed Rules as proposed is not a useful requirement, as in our view it does not achieve its intended objectives. We consider that a technical report summary is a much better document to provide meaningful information in context that would allow an investor to better understand the value of a project, to compare projects, and for operating mines to understand the ability of a registrant to replenish depleting Mineral Reserves.

We make some general comments about the requirements for the presentation of information regarding mineral properties in the SEC Proposed Rules:

- We consider that the arbitrary selection of 20 properties is too high. We also do not agree with the assumption that a selection based on asset value is likely to capture most of a registrant's material properties and as such provide an appropriately comprehensive overview of the registrant's mining operations. In our view, all of the material properties should be supported by technical report summaries;

- We disagree with only an asset value criterion being used to determine which properties are subject to specific public disclosure requirements. In our view, the asset value or revenue from a project is only one contributor to the assessment of materiality. There are many other influences that can contribute to materiality, and materiality considerations are subjective. See also our response to [Comment 3](#) and [Comment 90](#).

COMMENT 95

SEC Request for Comment

Should we require summary disclosure to include information on mineral resources and reserves, as proposed? Why or why not? If mineral resources and reserves are required in summary disclosure, should we require their disclosure by class of mineral reserves (probable and proven) and resources (inferred, indicated and measured), together with total mineral reserves and total measured and indicated mineral resources, as proposed? Should we require the summary disclosure by commodity and geographic area or property containing 10% or more of mineral reserves or sum of measured and indicated mineral resources, as proposed?

Why or why not? In particular, is the proposed instruction to Table 3 regarding the scope of geographic area to be disclosed sufficiently clear, and if not, how should it be clarified? Should we require disclosure of mineral reserves and resources by some other attribute (e.g., segments), in addition to or in lieu of commodity and geographic area? If so, which attributes should we use and why? Should we revise the proposed form and content of Table 3? If so, how should we revise the table's form or content?

Response

We agree that a summary table of Mineral Reserves and Mineral Resources is important information for investors. The format of Table 3 appears reasonable.

However, we do not agree with the proposed instructions that accompany Table 3. Specifically, we do not agree with the instruction to:

“use a commodity price that is no higher than the average spot price during the 24-month period prior to the end of the last fiscal year, determined as an unweighted arithmetic average of the daily closing price for each trading day within such period and must disclose the price used.”

See our response to [Comment 67](#).

We agree that companies should be able to present tabulated Mineral Resources or Mineral Reserves by geographic area. However, the decision as to whether a registrant further subdivides information at a level of detail greater than an individual country

should be at the registrant's discretion. The current wording does not appear to allow this discretion. We suggest the instruction be modified to allow such an interpretation.

We consider that the decision to report Mineral Resources inclusive or exclusive of those Mineral Resources that have been converted to Mineral Reserves should be at the discretion of the registrant. However, we believe that it should be a requirement that the registrant makes it clear in its disclosure whether the Mineral Resources are reported inclusive or exclusive of those Mineral Resources that have been converted to Mineral Reserves. Our view is that a Qualified Person for Mineral Resources should only be taking responsibility for Mineral Resources. In our experience, reporting of Mineral Resources exclusive of Mineral Reserves is confined to disclosure on operating mines. For pre-feasibility studies and feasibility studies, we typically see Mineral Resources being reported inclusive of those Mineral Resources that have been converted to Mineral Reserves. The process of reporting Mineral Resources exclusive of Mineral Reserves requires the Qualified Person for Mineral Resources to understand how the Mineral Resources were converted to Mineral Reserves (including dilution, mine loss, engineering design used in pits or stopes). We believe this may require a Qualified Person for Mineral Resources to practice outside their discipline. In most cases, the determination of the Mineral Resources exclusive of Mineral Reserves is not a simple subtraction process.

We consider that the decision to report Mineral Resources or Mineral Reserves on a 100% or other ownership basis should be at the discretion of the registrant. We consider that the information on the registrant's interest in the property is important information and should be included with the reporting of Mineral Resource and Mineral Reserve estimates. Whether this is a footnote to the Mineral Resource and Mineral Reserve tables, or only reporting attributable Mineral Resources and Mineral Reserves should be at the registrant's discretion.

We recommend that the instruction to report Mineral Resources and Mineral Reserves in terms of saleable product be amended. The CRIRSCO family of codes requires the reporting of Mineral Reserves in the form of tonnes, grade, and confidence categories at a point of reference. The CRIRSCO family of codes do not specify that these Mineral Reserves have to be as a saleable product (see also our response to [Comment 77](#)). Many commodities do not lend themselves to a saleable product point of reference. The information on the form of saleable product from the mine (e.g. doré, concentrate, cathode copper) should be made clear in the registrant's other disclosure on the mineral project.

We agree with the requirement to disclose the classes (i.e. confidence categories) of Mineral Reserves (Probable and Proven) and Mineral Resources (Inferred, Indicated and Measured), together with total Mineral Reserves and total Measured and Indicated Mineral Resources as proposed.

In our view, the threshold of rules applying to:

“each property containing 10% or more of the registrant's mineral reserves or 10% or more of the registrant's combined measured and indicated mineral resources”

is not clear. What is the 10% measure based on? Tonnes? Metal content? Time period? For example:

- A company that is involved in bulk mining commodities such as iron ore can have very large tonnage low value Mineral Reserves and Mineral Resources in one or two mines, but could have high value low tonnage Mineral Reserves in other material properties that would not meet a 10% threshold because of the domination of the large bulk tonnage mine;
- An undeveloped project that has Mineral Reserves that meet the 10% threshold but does not contribute to cash flow could appear to be more significant than a developed mine that is making a significant contribution to cash flow but is below the 10% Mineral Reserve or Mineral Resource threshold;
- When comparing a mine with a high throughput rate and a relatively short mine life to a mine with a low throughput rate and a very long mine life, the contribution to the cash flows is very different. In this instance it is not just the value per tonne that is important, it could also be the period of time over which those tonnes are produced. Two mines that have the same reserve tonnage, one which has a short mine life, one with a longer, are equal when using a reserve measure, but are not equal when assessing the value of each operation to an investor.

In our view, bright-line tests should be avoided. It is more appropriate to use a materiality test to determine which properties should be included in certain disclosure.

We agree with the concept of reporting Mineral Resources and Mineral Reserves being grouped by geographic area. A company should be given the discretion to provide information on Mineral Resource and Mineral Reserve estimates in an annual disclosure document grouped by geographical areas. The level of detail for Mineral Resource and Mineral Reserve estimates on an individual mine basis for those geographic areas should be provided for material properties in the Mineral Resource and Mineral Reserve tables in the technical report summaries for those properties.

In our view, it should be left to the registrant's discretion as to how Mineral Resource and Mineral Reserve tables are presented in its annual report, whether by geographic area, commodity type, or other attributes.

We recommend that registrants be instructed to provide with Table 3, the following information on the Mineral Resource and Mineral Reserve estimates:

- The names of the Qualified Persons who prepared or supervised the preparation of the estimates;
- The effective date of the estimates;
- A summary of the key assumptions, parameters and methods used in the estimates.

COMMENT 96

SEC Request for Comment

Should we require the disclosure in Tables 2 and 3 to be made available in the eXtensible Business Reporting Language (XBRL) format? Why or why not?

Response

We do not believe any scientific or technical information on mineral projects, such as what is being requested for Table 2 and Table 3, should be required to be reported in the XBRL format.

We believe that requiring the information in the XBRL format will incur an additional burden on industry that is not warranted.

COMMENT 97

SEC Request for Comment

If we require the disclosure in Tables 2 and 3 to be made available in XBRL, are the current requirements for the format and elements of the tables suitable for tagging? If not, how should they be revised? In particular, are the proposed instructions for Tables 2 and 3 sufficiently specific to make the data reported in the tables suitable for direct comparative analysis? If not, how should the instructions be revised to increase the usefulness of having the data made available in XBRL, including the comparability and quality of XBRL data?

Response

We do not believe any scientific or technical information on mineral projects, such as what is being requested for Table 2 and Table 3, should be required to be reported in the XBRL format.

We believe that requiring the information in the XBRL format will incur an additional burden on industry that is not warranted.

COMMENT 98

SEC Request for Comment

If we require Tables 2 and 3 to be made available in XBRL, is there a particular existing taxonomy that should be used? Alternatively, what features should a suitable taxonomy have in this case?

Response

We do not believe any scientific or technical information on mineral projects, such as what is being requested for Table 2 and Table 3, should be required to be reported in the XBRL format.

We believe that requiring the information in the XBRL format will incur an additional burden on industry that is not warranted.

COMMENT 99

SEC Request for Comment

Should we require disclosure on individually material properties, as proposed? Why or why not? Should such disclosure require a description of the property, a history of previous operations, a description of the condition and status of the property, a description of any significant encumbrances to the property, a summary of the exploration activity for the most recently completed fiscal year, a summary of material exploration results for the most recently completed fiscal year, and a summary of all mineral resources and reserves, if mineral resources or reserves have been determined, as proposed?

Response

As noted in our response to [Comment 90](#), we do not believe that Table 2 in the SEC Proposed Rules provides a reasonably comprehensive summary of a registrant's mining operations. We do agree that a summary of the individually material mining properties should be included in a registrant's annual filings with the SEC.

We consider that some of the information that is being requested for individually material properties in the SEC Proposed Rules is the type of detail we would expect to see in a technical report summary, but that some of the requirements are requesting unnecessary detail for an annual disclosure filing. Examples of instructions that would require overly detailed presentation include:

- The requirement to provide a summary of the exploration activity for the most recently completed fiscal year;

- The requirement to provide a summary of material exploration results for the most recently completed fiscal year;
- The requirement to provide a description of any significant encumbrances to the property, including current and future permitting requirements and associated deadlines, permit conditions, regulatory violations and associated fines;
- The requirement to provide a brief description, including the name or number and size (acreage), of the titles, claims, concessions, mineral rights, leases or options under which the registrant and its subsidiaries have or will have the right to hold or operate the property, and how such rights are obtained at this location, indicating any conditions that the registrant must meet in order to obtain or retain the property. If held by leases or options or if the mineral rights otherwise have termination provisions, the registrant would have to provide the expiration dates of such leases, options or mineral rights and associated payments;
- The requirement to provide a history of previous operations.

In our view, the SEC Proposed Rule requirements omit information that we consider to be important. The summary that is being requested should be modified such that registrants are asked to include additional disclosure for mineral projects commensurate with the development stage of the project as follows:

- Project description and location;
- Accessibility, climate, local resources, infrastructure and physiography;
- History;
- Geological setting and mineralization;
- Exploration;
- Drilling and sampling;
- Analytical methods, and security of samples;
- Metallurgy and process;
- Mineral Resource estimates;
- Mineral Reserve estimates;
- Mining operations (including mining methods, proposed mine life and throughput rates, waste disposal);
- Environmental, social, permitting;
- Marketing;
- Capital and operating costs;

- Economic analysis.

We do not agree that all of the items as currently listed in the SEC Proposed Rules are “*necessary to enable an investor to have an informed understanding of a registrant’s material mining properties*”.

We consider that a royalty company should be required to follow mining disclosure standards, but should be given an exemption for the type of detailed information that they must provide because a royalty company may not have access to the underlying documents or have the ability to perform data verification. We recommend an exemption similar to that allowed under NI 43-101 for royalty or similar interests; see our responses to [Comment 13](#), [Comment 14](#), and [Comment 15](#).

COMMENT 100

SEC Request for Comment

Should we require that a registrant provide the property’s location, including in maps, accurate within one mile? Why or why not? If not, should we use a standard for degree of accuracy similar to that used in the CRIRSCO-based codes, such as PERC or SAMREC? Why or why not? If not, what level of accuracy should we require?

Response

We agree that a map showing the location of a mineral project is useful to an investor.

However, we disagree with the prescriptive requirement on map accuracies to be within one mile.

We recommend that the SEC Proposed Rules use a principles-based requirement, such as that in Form 43-101 F1, for illustrations:

“illustrated by legible maps, plans and sections, all prepared at an appropriate scale to distinguish important features.”

COMMENT 101

SEC Request for Comment

Should we require that a registrant provide in tabular format each of the summaries required for its exploration activity, material explorations results, and mineral resources and reserves, as proposed? Why or why not? Should we require all of the information specified in Tables 4-8 to be in tabular form? Why or why not? Should we revise the proposed form and content of these tables? If so, how should we revise the tables’ form or content?

Response

We disagree with the proposed requirements to include Table 4 to Table 8 in a disclosure document. We recommend that these requirements should be removed from the SEC Proposed Rules.

In our view, the level of summarization that registrants would have to undertake to populate the tables would not enhance an investor's understanding of the registrant's material mining properties. The requirements are overly prescriptive. There is no allowance for a registrant or a Qualified Person to determine the relevance or materiality of the work completed, or to only present information that would enhance an investor's understanding of the registrant's material mining properties.

Any useful information would potentially be lost in the clutter of irrelevant information. Due to the type of numerical information that is being requested in the tables, a registrant would need to provide additional commentary to understand the significance of the numerical information presented. We consider that it would be impractical to provide this additional context in the required table format.

We consider that it is likely to be overly burdensome on registrants to be asked to provide this type of detail, either in table format or text format, in an annual disclosure document. To provide the data in appropriate context will require a significant amount of space in an annual disclosure document. We believe that the type of information in Table 4 to Table 8 that is significant to investors can be provided by registrants on a timely basis through news releases.

Further comments on Table 4 to Table 8 are provided below.

Table 4

The approach taken in Table 4 is too simplistic and does not recognize the diversity of the mining industry, the diversity of exploration methods, and the diversity of the resulting data that may be used by registrants. In our view it does not reflect accepted industry practice to collate data in the manner prescribed; for example:

- Airborne geophysical data are not reported as samples, but in terms of survey area or number of line miles surveyed;
- Drilling programs can have significantly different intents, and information that is collected may not relate to a specific sampling point;
- The number and location of samples taken is likely to vary with the intent of the drill hole: early stage exploration drill holes may only sample a specific horizon, whereas infill drill holes may sample the entire hole from top to bottom; a metallurgical sample may only sample the mineralized horizon and a specified interval of non-mineralized material on either side of the zone of interest.

In our view, prescriptive requirements such as those in Table 4 end up with information that is not useful, or information that is aggregated in a confusing manner.

Table 5

We consider that the Table 5 requirements are impractical and overly burdensome. The same issues as identified above for Table 4 apply, but to a higher degree.

We consider that the table and its accompanying instructions represent highly prescriptive requirements that would not enhance an investor's understanding of a material mineral property.

It would likely be an unnecessary burden on the registrant to present the information requested in any meaningful way. The presentation of the necessary context for an investor to understand what is being presented would occupy an unreasonable amount of space in a registrant's annual disclosure document.

We note:

- For an early-stage exploration company with limited drilling, it may be possible to complete the table. For registrants with advanced projects, or large exploration programs, to expect the registrant to capture the volume of information in this table would be unreasonable;
- A number of lithologies can be encountered in a single deposit, and it is common to intersect alternating lithologies in a single drill hole. The result would be a large number of line item entry requirements in Table 5. To provide the context and relevance for each entry would be overwhelming to the registrant to prepare, and to the investor to sort through and understand;
- We believe that information such as drilled length versus true length (width), the base cut-off used for a particular composite sample, whether a top-cut has been applied, the nature of the mineralization encountered (whether vein, disseminated, or stockwork), analytical methods, partial versus whole assay methods, and which assay results should be reported of the multi-element suites that are analysed, would have to be discussed with appropriate context. However, to provide the context and relevance for each entry would be overwhelming to the registrant to prepare, and to the investor to sort through and understand.

In our view, disclosure is best left to the registrant and the Qualified Person as to what information should be disclosed, and how it should be presented, to provide investors with a more comprehensive view of a registrant's mining operations and help them make more informed investment decisions.

Table 6

We agree that Mineral Resources and Mineral Reserves should be presented in a summary form in table format. We also agree that information on the cut-off and metallurgical recovery should be included.

However, we strongly disagree with the approach contained in the SEC Proposed Rules that create two additional types of Mineral Reserves that go beyond what is accepted in the CRIRSCO family of codes. We consider that the requirement in the SEC Proposed Rules should be that the point of reference for the Mineral Reserves estimate is reported. There would only be one point of reference. For most deposits, the point of reference would be the point of plant/mill feed. For some deposits, it would be saleable product.

Mineral Reserves reported in compliance with the definition of Mineral Reserves in the CRIRSCO family of codes would never be reported as insitu. To require companies to provide this information as required in Table 6 would be against the law in certain jurisdictions, such as NI 43-101 in Canada.

Mineral Resources reported in compliance with the definition of Mineral Resources in the CRIRSCO family of codes are reported as insitu, and are not reported at a point of reference (mill/plant feed or saleable product).

See also our responses regarding:

- Mineral Reserves in [Comment 67](#), [Comment 77](#), [Comment 81](#), and [Comment 82](#);
- Key assumptions, parameters and methods in [Comment 63](#), [Comment 70](#) and [Comment 95](#);
- Commodity price assumptions in [Comment 67](#);
- Reporting of Mineral Resource estimates exclusive of Mineral Reserves in [Comment 95](#);
- Royalty interests in [Comment 13](#), [Comment 14](#), [Comment 15](#), and [Comment 104](#).

Table 7 and Table 8

We disagree with the required content in Table 7 and Table 8. The information required to complete the tables presupposes that all mining companies are collecting the required information to generate reliable reconciliation data for each of their mines. It is an industry-leading practice, but cannot currently be assumed to be a standard industry practice:

- An operation may have the information but may not have validated the data to ensure that it is reliable. Obtaining reconciliation data is typically a multi-year endeavor;

- An operation may only have depletion data, but may not be able to document other variables. To understand which of these variables apply individually or collectively can be difficult to determine;
- As a mine progresses, in some time periods reconciliation data may be reliable, but in other time periods some aspects of the operation change (mining method, ore type, ground conditions, part of the deposit being mined) and the reconciliation data are no longer reliable. In instances of such changes, it may take a registrant some years to collect the most appropriate information to re-establish reconciliation reliability.

Therefore, we consider the requirements to provide the information in Table 7 to Table 8 could be an undue burden on the mining industry.

COMMENT 102

SEC Request for Comment

Should we permit registrants to disclose estimates of mineral resources and reserves based on different price criteria, which may reasonably be achieved, in lieu of, or in addition to, the price which is no higher than the 24-month trailing average? Why or why not? What factors should we use to determine what may reasonably be achieved? Should we require all registrants to use the 24-month average spot price (or average over a different period) as the commodity price instead of as a ceiling? Why or why not?

Response

Please refer to our responses to [Comment 51](#), [Comment 67](#), [Comment 89](#) and [Comment 80](#).

COMMENT 103

SEC Request for Comment

Should we require the registrant to provide a comparison of the mineral resources and reserves as of the end of the last fiscal year against the mineral resources and reserves as of the end of the preceding fiscal year, with an explanation of any material change between the two, as proposed? Why or why not? Are there items of information that we should include in the comparison instead of or in addition to the proposed items of information? Are there any proposed items of information that we should exclude from the comparison?

Response

As noted in our response to [Comment 101](#), we consider the information required in Table 7 and Table 8 to be an undue burden on the mining industry.

COMMENT 104

SEC Request for Comment

If the registrant has not previously disclosed material exploration results, mineral reserve or resource estimates in a filing with the Commission or is disclosing material changes to its previously disclosed exploration results, mineral reserve or mineral resource estimates, should we require it to provide a brief discussion of the material assumptions and criteria in the disclosure and cite to any sections of the technical report summary, as proposed? Should we require registrants to file updated summary technical reports to support disclosure of material exploration results, mineral resources or mineral reserves when the registrant is relying on a previously filed technical report summary that is no longer current with respect to all material scientific and technical information, as proposed? Why or why not?

Response

We note that tying the trigger for the filing of a NI 43-101 Technical Report to disclosures filed with the commissions resulted in some Canadian issuers believing they could avoid the NI 43-101 Technical Report triggers by confining their disclosure to other forms (e.g. websites). As a result, the Canadian regulators amended the definition of “written disclosure” to include websites. We recommend that the SEC Proposed Rules take a similar approach such that it is not only SEC filings on a material mining property that can be a technical report trigger.

We note that the statement below:

“If the registrant has not previously disclosed mineral reserve or resource estimates in a filing with the Commission or is disclosing material changes to its previously disclosed mineral reserve or resource estimates, we are proposing that it provide a brief discussion of the material assumptions and criteria in the disclosure” [emphasis added]

appears to apply to all first-time disclosure of Mineral Resources and Mineral Reserves irrespective of whether the mineral project is material or not. We consider extending this requirement to disclosure on non-material properties is unnecessary:

- If the property is not material, the information is not required;
- The additional “*brief discussion of the material assumptions and criteria*” we also consider to be unnecessary if the property is not material to the registrant.

In relation to the following guidance in the SEC Proposed Rules:

“The disclosure of these assumptions and criteria, however, would need to include all of the material information necessary for investors to

understand the disclosed mineral resources or reserves” [emphasis added]

We are concerned with the statement that disclosure would need to include **all of the material information** [emphasis added]. Mineral Resources and Mineral Reserves are estimates based on the knowledge at the time; frequently later information is identified or collected that would have been material information necessary to understand the disclosed Mineral Resources and Mineral Reserves. Investors should not assume that registrants and Qualified Persons know all of the material information. During mining studies, assumptions and factors applied to Mineral Resources and Mineral Reserves frequently change with the stage of the project. We agree that key parameters, assumptions and methods used to support the estimates should be required to be provided, but we do not consider that the simplistic assumption that all material information is always and immediately available to registrants and Qualified Persons when a Mineral Resource or Mineral Reserve estimate is prepared. In our view, it is normal for a registrant to identify new material information as a project advances with additional testwork, analysis and engineering studies, and during operations.

We also note that in relation to the following instruction in the SEC Proposed Rules:

“For example, one key proposed instruction would explain that whether a change in exploration results, mineral resources, or mineral reserves, is material must be based on all facts and circumstances, both quantitative and qualitative”

in our opinion, the instruction is omitting an important word, and should be rephrased such that:

*“For example, one key proposed instruction would explain that whether a change in exploration results, mineral resources, or mineral reserves, is material must be based on all **known** facts and circumstances, both quantitative and qualitative”* [word and emphasis added]

In our view it is not possible for a registrant or a Qualified Person to know “*all facts and circumstances*” on a property, either at an early stage of exploration, or during Mineral Resource and Mineral Reserve estimation, or even during operation.

We note that the statement below in the SEC Proposed Rules:

“If the registrant has not previously disclosed material exploration results in a filing with the Commission, or is disclosing material changes to its previously disclosed exploration results, we are proposing that it must provide sufficient information to allow for an accurate understanding of the significance of the exploration results” [emphasis added]

appears to apply to all first-time disclosure of material exploration results irrespective of whether the mineral project is material or not. We consider extending this requirement to disclosure on non-material properties is unnecessary.

We again note that the SEC Proposed Rules presuppose that an accurate understanding of the significance of the exploration results is known at the time that the exploration results are collected and disclosed. In our view, much of this understanding only comes with hindsight, and additional interpretation, sampling and analysis.

We also note in relation to the clarification provided to registrants in determining a material change in exploration results:

“a change in exploration results that significantly alters the potential of the exploration target is considered material”

We consider that the SEC Proposed Rules do not consider the evolution of exploration potential of a particular mineral property. A registrant’s and a Qualified Person’s perception of the exploration potential of the particular mineral property may materially change many times during the execution of exploration programs. The actual exploration potential of a mineral property is only recognized after lengthy (often many decades) of exploration activity. Exploration potential of a particular property can also be driven by cyclical factors such as:

- New deposit models;
- Commodity prices (including future expectations of commodity prices);
- Investor sentiment (in spite of good potential for a particular deposit type or commodity to be present on a mineral property, there may be no interest in the marketplace for that deposit or commodity).

We do not consider that *“a change in exploration results that significantly alters the potential of the exploration target is considered material”* should be used as a basis for identifying a material change in exploration results, and this instruction should be removed from the SEC Proposed Rules.

We strongly disagree with the requirement bolded in the following text to *“require registrants to file updated summary technical reports to support **disclosure of material exploration results**, mineral resources or mineral reserves when the registrant is relying on a previously filed technical report summary that is no longer current with respect to all material scientific and technical information, as proposed”* [emphasis added], as we believe this may cause registrants to file updated technical report summaries more often than is reasonable. We believe it would likely be an unnecessary burden to the industry to prepare and file these updated technical report summaries in respect of exploration results.

We note in relation to junior exploration companies with a few material properties, all of which are in the early evaluation stage, the threshold for a material change to exploration results would likely be quite low. For example, where a company has an active drilling program, the results of a single hole or group of drill holes could be viewed as a material change. We believe filing updated technical report summaries every few drill holes is not beneficial to investors, and is burdensome to the registrant and the mining industry. Most registrants provide drill results to the investing public on a timely basis by way of news releases, and therefore the new material information is already available to investors. We consider that instead of requiring updated technical report summaries with each material change to exploration results, the registrant should only be required to review their technical report summary when they file their annual disclosure documents, and update the technical report summary if it is no longer current at that time.

We also note that technical report summaries can become no longer current due to external factors unrelated to the registrant's activities on the property. Such external factors can include:

- Changes to commodity prices;
- Changes to markets for those commodities;
- Exchange rate fluctuations;
- Changes to taxation, royalties;
- Changes in government regulations;
- Changes to mineral tenure;
- Political uncertainties or social unrest;
- Changes to external infrastructure (e.g. availability of grid power);
- Climate-related changes (e.g. drought, fire, or flood).

Some of these external factors may be of short duration. Under the SEC Proposed Rules, a company may consider that they are obliged to update a technical report summary even where they believe the external issue to be of a temporary nature. We believe that it is unnecessary and an undue burden for registrants to update their technical report summaries, particularly on advanced projects, because of changes to external factors that may be a material change to the outcomes of the project. For pre-feasibility and feasibility study, recasting the assumptions takes significant time, effort and costs. We consider that a presentation of the sensitivity of the financial analysis to such external factors should allow a registrant to consider the technical report summary to still be current in support of their continuous disclosure obligations. Sensitivity studies would allow a registrant some flexibility when determining when a technical report summary is still current.

In the case of a material change to Mineral Resources or Mineral Reserves, where the changes were instigated by the registrant, we agree that a material change to Mineral Resources or Mineral Reserves should, in most cases, require an updated technical report summary. In our view, however, there may be exceptions, such as:

- Where there is a reduction in attributable Mineral Resources or Mineral Reserves due to a change in ownership interest (e.g. changes in a joint venture interest), but the underlying Mineral Resources or Mineral Reserves themselves do not change, the project would not be affected, but there would be an apparent material change to the attributed Mineral Resources or Mineral Reserves that are reported;
- Reduction of Mineral Resources and Mineral Reserves by depletion in most cases should not be considered to be a material change to the Mineral Resource and Mineral Reserve estimates. The depletion by executing the mine plan should be predictable from the technical report summary and other disclosure made by the registrant.

We recommend that the SEC Proposed Rules clarify if there are any other changes that would require a technical report summary update other than material changes to material exploration results and material changes to Mineral Resources and Mineral Reserves. For example:

- Disclosure of an economic analysis of Mineral Resources subsequent to the Mineral Resource estimate being disclosed, and where there is no material change to the Mineral Resource estimate;
- An update to a pre-feasibility study or feasibility study where there is a material change to the economic outcome, without there being a material change to Mineral Resources or Mineral Reserves;
- A change is not considered to be a material change at the corporate level, but is a significant change at the project level (e.g. changes to recommendations, conclusions). This can be particularly important where the use of proceeds in a prospectus are not aligned with, or supported by, the recommendations in the technical report summary, because of recent changes to the company's plans for development of the project.

We recommend that the SEC Proposed Rules make it explicitly clear what the triggers will be for filing a technical report summary:

- What triggers the filing of an initial technical report summary;
- What triggers the requirement to file an update to a technical report summary that is already on file.

Due to the diversity of the mining industry, the SEC Proposed Rules should consider the use of instructions to clarify these requirements for the industry.

See also our response on technical report summary triggers in [Comment 28](#).

We recommend that the SEC Proposed Rules include a time period between the triggering of the technical report summary and the deadline for filing the technical report summary. Registrants have to balance their responsibilities between timely disclosure obligations and the obligations to file a technical report summary. Registrants may choose to “sit on” undisclosed material information while they are preparing a technical report summary. Alternatively, a registrant may rush the process of preparing a technical report summary. Either of these scenarios can have negative outcomes for investors and the registrant.

Under NI 43-101, issuers have 45 days, in most cases, to file an NI 43-101 Technical Report.

We note in relation to the following:

“Finally, a proposed instruction would explain that a report containing estimates of the quantity, grade, or metal or mineral content of a deposit or exploration results that a registrant has not verified as a current mineral resource, mineral reserve, or exploration results, and which was prepared before the registrant acquired, or entered into an agreement to acquire, an interest in the property that contains the deposit, would not be considered current and could not be filed in support of disclosure”

that the Canadian context will allow some exemptions in narrow circumstances, such as royalty interests and property acquisition.

Issuers that only hold a royalty interest in a property where there is a current technical report on file with a different issuer have the following exemption under NI 43-101:

“Exemptions for Royalty or Similar Interests

9.2 (1) An issuer whose interest in a mineral project is only a royalty or similar interest is not required to file a technical report to support disclosure in a document under subsection 4.2 (1) if:

(a) the operator or owner of the mineral project is

(i) a reporting issuer in a jurisdiction of Canada, or

(ii) a producing issuer whose securities trade on a specified exchange and that discloses mineral resources and mineral reserves under an acceptable foreign code;

(b) the issuer identifies in its document under subsection 4.2 (1) the source of the scientific and technical information; and

(c) the operator or owner of the mineral project has disclosed the scientific and technical information that is material to the issuer.”

We recommend that the SEC Proposed Rules include a similar allowance for royalty companies for the following reasons:

- It would be useful to the industry and not compromise the quality of the information available to investors;
- It is a practical means of allowing registrants to meet timely disclosure obligations;
- It will provide useful information to investors that would otherwise not be available from the company, as the company would have to expend considerable time and effort to provide information that is already out in the marketplace.

In the technical report triggers under NI 43-101 for an acquired property, there is the following exemption (4.2 (7))

(7) Despite subsection (4) and paragraph (5) (a), an issuer is not required to file a technical report within 45 days to support disclosure under subparagraph (1) (j) (i), if

(a) the mineral resources, mineral reserves or results of a preliminary economic assessment

(i) were prepared by or on behalf of another issuer who holds or previously held an interest in the property;

(ii) were disclosed by the other issuer in a document listed in subsection (1); and

(iii) are supported by a technical report filed by the other issuer;

(b) the issuer, in its disclosure under subparagraph (1) (j) (i),

(i) identifies the title and effective date of the previous technical report and the name of the other issuer that filed it;

(ii) names the qualified person who reviewed the technical report on behalf of the issuer; and

(iii) states with equal prominence that, to the best of the issuer's knowledge, information, and belief, there is no new material scientific or technical information that would make the disclosure of the mineral resources, mineral reserves or results of a preliminary economic assessment inaccurate or misleading; and

(c) the issuer files a technical report supporting its disclosure of the mineral resources, mineral reserves or results of a preliminary economic assessment;

(i) if the disclosure is also contained in a preliminary short form prospectus, by the earlier of 180 days after the date of the disclosure and the date of filing the short form prospectus; and

(ii) in all other cases, within 180 days after the date of the disclosure.

We recommend that the SEC Proposed Rules include a similar allowance for acquired properties with existing Mineral Resource and Mineral Reserve estimates.

COMMENT 105

SEC Request for Comment

Regarding the proposed requirement to disclose a material change in mineral resources or reserves, should we adopt an instruction that an annual change in total resources or reserves of 10% or more, or a cumulative change in total resources or reserves of 30% or more in absolute terms, excluding production as reported in Tables 7 and 8, is presumed to be material, as proposed? Why or why not? If not, should we remove the materiality presumptions altogether or use different quantitative thresholds from those proposed? If the latter, what alternative thresholds or measure(s) should replace the proposed presumptions of materiality?

Response

We strongly disagree with the proposed bright-line tests for determination of a material change. We do not agree that the SEC Proposed Rules should incorporate any such quantitative bright line tests. There are situations where a bright line test provides an incorrect assessment of materiality (see our responses to [Comment 3](#) through [Comment 7](#), and [Comment 62](#)).

We do not consider that Table 7 and Table 8 should be a requirement of registrants under the SEC Proposed Rules (see our response to [Comment 101](#)).

We note in relation to the following:

“A third proposed instruction would require that, when applying these quantitative thresholds for presumed materiality, the registrant should consider the change in total resources or reserves on the basis of total tonnage or volume of saleable product”

the assessment of materiality is being kept very narrow, and is being restricted to changes in tonnage and volume. In reality, other factors, such as external market conditions, grade (quality), cost of production, or risks to the project, may also affect materiality. The assessment of such factors, or a combination of these factors, do not lend themselves to a single bright-line test.

We consider that the SEC Proposed Rules should remove the materiality presumptions altogether, and instead use a principles-based approach (see our response to [Comment 3](#)).

COMMENT 106

SEC Request for Comment

Should we require the disclosure in Tables 4 through 8 to be made available in the XBRL format? Why or why not?

Response

We do not agree with the proposed requirement for Tables 4 through 8 in the SEC Proposed Rules and therefore we do not consider that provision in the XBRL format is either necessary or required.

COMMENT 107

SEC Request for Comment

If we require the disclosure in Tables 4 through 8 to be made available in XBRL, are the current requirements regarding for the format and elements of the tables suitable for tagging? If not, how should they be revised? In particular, are the proposed instructions for Tables 4 through 8 sufficiently specific to make the data reported in the tables suitable for direct comparative analysis? If not, how should the instructions be revised to increase the usefulness of having the data made available in XBRL, including the comparability and quality of XBRL data?

Response

We do not agree with the proposed requirement for Tables 4 through 8 in the SEC Proposed Rules and therefore we do not consider that provision in the XBRL format is either necessary or required.

COMMENT 108

SEC Request for Comment

If we require Tables 4 through 8 to be made available in XBRL, is there a particular existing taxonomy that should be used? Alternatively, what features should a suitable taxonomy have in this case?

Response

We do not agree with the proposed requirement for Tables 4 through 8 in the SEC Proposed Rules and therefore we do not consider that provision in the XBRL format is either necessary or required.

COMMENT 109

SEC Request for Comment

Should we require the qualified person to include in a technical report summary the 26 items, as proposed? Are there any items of information that we should include instead of or in addition to the proposed 26 sections of the technical report summary? Are there any items of information that we should exclude from the proposed technical report summary?

Response

We agree with the requirement in the SEC Proposed Rules to have registrants provide technical report summaries triggered by specific disclosure by the registrant. We also agree that the SEC Proposed Rules should include specific headings and content requirements under those headings for a technical report summary, together with clarifying instructions for a registrant and its Qualified Persons to follow.

A large number of mining companies that are SEC registrants are also reporting under NI 43-101 in Canada. We therefore recommend that the SEC Proposed Rules align the requirements in technical report summaries as closely as possible to those in Form 43-101F1 such that an NI 43-101 Technical Report can be filed with minimal changes to meet the requirements of a technical report summary. We have a real concern that any non-alignment between Form 43-101F1 and the technical report summary requirement in the SEC Proposed Rules will be detrimental to the objectives of the SEC Proposed Rules, and will pose an undue burden on the mining industry. We strongly recommend that the SEC Proposed Rules for the content of the technical report summary uses the same Item numbering, Item headings, and specific content requirements as those that are used in Form 43-101F1.

All reporting codes in the CRIRSCO family require that the Qualified Person is the most appropriate person to determine what scientific and technical content should be included in a technical report to ensure the credibility of the information. Securities regulators in these jurisdictions also require the Qualified Person to approve the subsequent disclosure of scientific and technical information and confirm that the content is appropriate and not potentially misleading. Any modifications of scientific and technical content based on legal interpretation risks changing the meaning and context, such that the disclosure can become potentially misleading.

As stated in our response to [Comment 51](#), we do not believe that geothermal projects or mineral brines should be subject to the SEC Proposed Rules as they do not fall under the definition adopted by the CRIRSCO family of codes for a Mineral Resource:

*“A Mineral Resource is a concentration or occurrence of **solid material** of economic interest in or on the Earth’s crust in such form, grade or quality*

and quantity that there are reasonable prospects for eventual economic extraction”[emphasis added]

Therefore, we do not believe that it is necessary in the SEC Proposed Rules to include separate items for 96(iv)(B)(7) “Hydrogeology” and 96(iv)(B)(8) “Geotechnical Data, Testing and Analysis”.

We strongly disagree with the SEC Proposed Rules omitting a section that allows a Qualified Person to explain where they have relied on other experts for information that is outside the expertise of a Qualified Person and is outside the type of information that would be prepared by a geoscientist or engineer (e.g. legal, social, environmental, permitting, market studies, commodity prices, taxation). It is unreasonable to require Qualified Persons to provide opinions on information outside of their discipline, which is contrary to their professional practice obligations as enforced by their professional regulatory bodies. It also could potentially expose the Qualified Person to liability resulting from errors or omissions that may occur in the information prepared by, or sourced from, others. See also our responses to [Comment 34](#) and [Comment 114](#).

It is common practice in Canada for engineering and consulting firms to include a notice in the front of a NI 43-101 Technical Report document regarding reliance on the information presented. We recommend that the SEC Proposed Rules includes an allowance for engineering and consulting firms to include a similar type of limited disclaimer, to that which is permitted under NI 43-101.

We have submitted the following comments in an effort to avoid confusion in the marketplace, allow use of existing documents and circumvent undue burdens to the mining industry in order to comply with preparation and filing of these technical report summaries when required.

We also provide comments with regard to the technical report summary requirements. All of our comments are subject to the earlier statement that in our view:

- Qualified Persons should be allowed to rely on and disclaim responsibility for information prepared by other experts, and such an item should be included in the SEC Proposed Rules on the technical report summary content;
- The requirement for geotechnical and hydrogeological information to be presented under individual item headings is unnecessary;
- The Item numbering, Item headings, and specific content requirements use those in Form 43-101F1.

In the discussion below, we first provide the reference to, and quote from the SEC Proposed Rules and our comments follow.

Technical Report Summary Preamble

paragraph (b)96(i)

We reiterate an earlier response that the SEC Proposed Rules need to be explicitly clear on the technical report summary trigger (see our response to [Comment 31](#)).

The requirement for initial assessment reports in the SEC Proposed Rules is a duplication of what would be filed in a technical report summary, and in our view is not necessary (see our response to [Comment 63](#)).

We disagree with the requirement in the SEC Proposed Rules that initial disclosure of exploration results, or material changes in exploration results should be triggers for filing of a technical report summary (see our response to [Comment 24](#)).

paragraph (b)(96)(iv)(A)(ii) “The qualified person must sign and date the technical report summary”

We agree that a Qualified Person should sign and date the technical report summary; however the Qualified Person should only take responsibility for the sections of the technical report summary that they prepared. We recommend the SEC Proposed Rules incorporates wording that makes it clear that many technical report summaries are likely be prepared by multiple Qualified Persons. Our concern is that the current wording will be interpreted that one Qualified Person only must take responsibility for the entire report. We note that this was commonly misunderstood when filing NI 43-101 technical reports in Canada (see our response to [Comment 25](#)).

paragraph (b)96(iii) “The technical report summary must not include large amounts of technical or other project data, either in the report or as appendices to the report”

We agree that this instruction is important and should be included to avoid unnecessary clutter and an unnecessarily large file, and avoid the misinterpretation that this level of detail is required in a technical report summary.

paragraph (b)96(iv)(A) “A technical report summary that reports the results of a preliminary or final feasibility study must provide all of the information specified in paragraph (iv)(B) of this Item”

We generally agree with this item.

paragraph (b)96(iv)(A) “A technical report summary that reports the results of an initial assessment must, at a minimum, provide the information specified in paragraphs (iv)(B)(1) through (13) and (iv)(B)(22) through (26)

of this Item, and may also include the information specified in paragraph (iv)(B)(21) of this Item”

We generally agree that a technical report summary that discloses a Mineral Resource estimate should provide the information specified in paragraphs (iv)(B)(1) through (13) and (iv)(B)(22) through (26) of this Item.

We disagree that if an economic analysis is being included on a Mineral Resource estimate that only content specified in paragraph (iv)(B)(21) should be included. In our view, the requirement should be to provide all content in paragraph (iv)(B) of the item, except the content in (iv)(B)(14), which would not be applicable. Restricting the information to only the economic analysis does not provide sufficient content for an investor to understand the proposed mine plan, proposed processing plan, infrastructure requirements, environmental, social and permitting considerations, likely product markets, and the capital and operating cost assumptions that underpin the economic analysis.

paragraph (b)96(iv)(A) “A technical report summary that reports material exploration results must, at a minimum, provide the information specified in paragraphs (iv)(B)(1) through (11) and (iv)(B)(22) through (26) of this Item”

We generally agree with this item.

We note that Instruction 4 of Form 43-101F1 allows the following:

“The qualified person may create sub-headings. Disclosure included under one heading is not required to be repeated under another heading”

We recommend that the SEC Proposed Rules incorporates similar allowances.

Executive Summary

paragraph (b)96(iv)(B)(1) “Executive Summary. Briefly summarize the most significant information in the technical report summary, including property description (including mineral rights) and ownership, geology and mineralization, the status of exploration, development and operations, mineral resource and mineral reserve estimates, summary capital and operating cost estimates, permitting requirements, and the qualified person’s conclusions and recommendations. The executive summary must

be brief and should not contain all of the detailed information in the technical support summary”

We disagree with the current wording. The wording implies that all of the stated content must be included as required for a compliant Executive Summary. We recommend the wording be modified to allow a Qualified Person to present only the information that is relevant to the current project status, such that exploration stage properties and those properties with Mineral Resources are not required to include content on “mineral reserve estimates, summary capital and operating cost estimates”.

Introduction

“96(iv)(B)(2) “Introduction. Disclose:

- (i) The registrant for whom the technical report summary was prepared;*
- (ii) The terms of reference and purpose for which the technical report summary was prepared;*
- (iii) The sources of information and data contained in the technical report summary or used in its preparation, with citations if applicable; and*
- (iv) The details of the personal inspection on the property by each qualified person or, if applicable, the reason why a personal inspection has not been completed”*

We agree that the registrant for which the technical report summary was prepared should be named. We recommend that the SEC Proposed Rules allow the subsidiary of the registrant to be named if applicable as long as the ownership relationship between the subsidiary and the registrant is explained in the technical report summary.

We agree that the report purpose should be stated, and that terms of reference should be included.

We agree that the sources of information and data should be cited.

We agree that a summary of the scope of the personal inspection of each Qualified Person who visited the property should be included. We do not agree that a presentation of the details of the site visit/personal inspection is either required or necessary. We disagree that it is reasonable to require that a Qualified Person that did not visit a property must provide reasons as to why a personal inspection was not completed.

- In our experience, there are common reasons why all Qualified Persons do not go to site that are beyond the control of a Qualified Person:
 - Logistical considerations;
 - Cost to the registrant;

- Reasons within the control of a Qualified Person that result in a Qualified Person choosing not to visit site can relate to the stage of the project. For example, a metallurgist may not obtain any relevant information from viewing a collar location for the drill hole from which the core for metallurgical testwork was obtained. Rather, the metallurgist is likely to prefer to visit the metallurgical testwork facilities.

Requiring a Qualified Person to make a statement as to why they did not make a site visit could be inappropriate.

Our recollection is that the reason for including the requirement for a Qualified Person to explain why no site visit was performed in the 2005 update to Form 43-101F1 was tied to the new exemption allowed in the 2005 edition of NI 43-101 when there was a delay in a site visit because of seasonal weather conditions. The wording under Item 2 of Form 43-101F1 was included to identify where a Qualified Person needed to provide the following information to meet the requirements under the delayed site visit exemption in section 6.2 (2) (c)

“the issuer discloses in the technical report, and in the disclosure that the technical report supports, that a personal inspection by a qualified person was not conducted, the reasons why, and the intended time frame to complete the personal inspection”.

Since the SEC does not have the requirement to explain a delayed site visit, then in our view, the SEC Proposed Rules should not include the requirement for a Qualified Person to explain why they did not visit the site.

Instruction to paragraph (b)(96)(iv)(B)(2): “The qualified person must state whether the technical report summary’s purpose was to report mineral resources, mineral reserves or material exploration results. The qualified person must also state, when applicable, that the technical report summary updates a previously filed technical report summary. When filing an update, the qualified person must identify the previous technical report summary by name and date”

We generally agree that the trigger for the technical report summary should be stated.

Property Description

paragraph (b)96(B)(3) “Property Description. Describe (i) The location of the property, accurate to within one mile, using an easily recognizable coordinate system”

We disagree with the accuracy requirements for the location of the property and recommend that this requirement be removed. See also our response to [Comment 100](#).

*paragraph (b)96(B)(3)(i) “The qualified person must provide appropriate maps, with **proper engineering detail** (such as scale, orientation, and titles) to portray the location of the property. Such maps must be legible on the page when printed” [emphasis added]*

We disagree with describing standard cartographic practices as “proper engineering detail” as this could be interpreted as requiring considerably more information than is reasonable.

paragraph (b)96(B)(3)(iii) “The name or number of each title, claim, mineral right, lease or option under which the registrant and its subsidiaries have or will have the right to hold or operate the property. If held by leases or options, the registrant must provide the expiration dates of such leases or options and associated payments”

We recommend that the SEC Proposed Rules replaces the term “associated payments” with wording to the effect of “obligations to exercise the option or retain the rights to the property”. We note that the requirement to exercise an option may involve completion of a work program or a mining study that is not tied to property payments.

paragraph (b)96(B)(3)(iv) “The mineral rights, and how such rights have been obtained at this location, indicating any conditions that the registrant must meet in order to obtain or retain the property”

It is unclear what level of detail would be required by “how such rights were obtained at this location”. Does this require a full history of tenure and ownership for that location? It is our view that a Qualified Person should not be required to prepare a lengthy project tenure history, or take responsibility for such. We recommend that the SEC Proposed Rules provide additional clarification as to what is expected.

paragraph (b)96(B)(3)(v) “Any significant encumbrances to the property, including current and future permitting requirements and associated timelines, permit conditions, and violations and fines”

We note that under NI 43-101, a Qualified Person is only required to describe:

“to the extent known, the permits that must be acquired to conduct the work proposed for the property, and if the permits have been obtained”

We recommend that the SEC Proposed Rules include similar language to that in Form 43-101F1 (4) (g) that a Qualified Person has to provide information “to the extent known”. In many cases it is not clear what permits will be required and what the permitting timeline will be, as these are dependent on how a registrant decides to execute a work program, or recommendations for future programs. The early results of a work program may also change the program, and permit requirements. These

changes are not always foreseeable when a technical report summary is being prepared.

It is not clear to us what a Qualified Person must provide to comply with “future permitting requirements and associated timelines”. We believe that this should be tied only to the recommendations in the technical report summary, and not taken to mean for future permitting requirements and timelines to develop a future mine. This uncertainty poses an unnecessary burden.

paragraph (b)96(B)(3)(vi) “Any other significant factors and risks that may affect access, title, or the right or ability to perform work on the property”

We agree with this requirement.

We note that the SEC Proposed Rules for the technical report summary content does not require the following information that is included in the Form 43-101F1 content:

*“(d) the nature and extent 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;*

*(e) to the extent known, the **terms of any royalties, back-in rights, payments, or other agreements and encumbrances to which the property is subject**;*

*(f) to the extent known, **all environmental liabilities** to which the property is subject [emphasis added]*

We recommend that the SEC Proposed Rules include this content in Section 96(B)(3). This information needs to be provided for all mineral properties. We note that advanced properties would have more detailed content under Section 96(B)(19). Our concern is that if this requirement is not included in Section 96(B)(3) then the content could be overlooked for technical report summaries on exploration properties and properties that only have Mineral Resource estimates. We are particularly concerned that the SEC Proposed Rules completely omit any discussion of surface rights.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

paragraph (b)96(B)(4) “Accessibility, Climate, Local Resources, Infrastructure and Physiography. Describe: (i) The topography, elevation, and vegetation; (ii) The means of access to the property, including highways, towns, rivers, railroads, and airports; (iii) The climate and the length of the operating season, as applicable; and (iv) The availability of

and required infrastructure, including sources of water, electricity, personnel, and supplies”

We generally agree with the information requirements in this section.

We note that Form 43-101F1 requires an issuer to discuss under Item 4:

*“(e) to the extent relevant to the mineral project, **the sufficiency of surface rights for mining operations, the availability and sources of power, water, mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, and potential processing plant sites**” [emphasis added]*

We strongly recommend that a similar requirement is included in the SEC Proposed Rules to discuss the sufficiency of surface rights for operations, and the availability of space that would be suitable to support mining operations and placement of major mining infrastructure such as tailings storage facilities, waste rock storage facilities, heap leach facilities, and stockpiles.

History

paragraph (b)96(B)(5) “History. Describe: (i) Previous operations, including the names of previous operators, insofar as known; and (ii) The type, amount, quantity, and general results of exploration and development work undertaken by any previous owners or operators”

We generally agree with this requirement, but recommend that the amount and type of detail that is included be at the discretion of the Qualified Person.

We note that Form 43-101F1 Item 5 has an allowance in this section to provide:

“(c) any significant historical mineral resource and mineral reserve estimates in accordance with section 2.4 of the Instrument”

It is unclear to us whether a historical estimate reported in this context would be allowed under the SEC Proposed Rules.

We also note that Form 43-101F1 Item 5 requires an issuer to disclose:

“(d) any production from the property”

We recommend that the SEC Proposed Rules incorporate a requirement for a registrant to disclose, to the extent known, any production from a property.

Geological Setting, Mineralization and Deposit

paragraph (b)96(B)(6) “Geological Setting, Mineralization and Deposit”

As noted earlier, we do not support changes in Item headings that may cause unnecessary changes to an existing NI 43-101 Technical Report that could be used to meet an SEC filing requirement. We recommend that the Form 43-101F1 headings be used, such that there are two separate items for “Geological Setting and Mineralization” and “Deposit Types”.

We note the omission of the word “Type” after “Deposit” in the SEC Proposed Rules completely changes the interpretation of what is to be addressed under that heading.

paragraph (b)96(B)(6)(i) “The regional, local, and property geology; (ii) The significant mineralized zones encountered on the property, including a summary of the surrounding rock types, relevant geological controls, and the length, width, depth, and continuity of the mineralization, together with a description of the type, character, and distribution of the mineralization”

We agree with these requirements.

paragraph (b)96(B)(6)(iii) “Each mineral deposit type that is the subject of investigation or exploration together with the geological model or concepts being applied in the investigation or forming the basis of exploration program”

We agree with these requirements, but consider that the content should be provided under its own Item heading “Deposit Types” as is the case under Form 43-101F1.

We note there is a typographical error in the phrase “forming the basis of exploration program” with omission of the word “the” prior to “exploration program”.

Instruction to paragraph (b)(96)(iv)(B)(6): “The qualified person must include at least one stratigraphic column and one cross-section of the local geology to meet the requirements of this paragraph”

We disagree with the requirement that a Qualified Person must include these types of figures. For early stage exploration properties, neither the stratigraphic sequence nor the local geological relationships may be known. In many deposit types, the regional stratigraphy may be known, but that may not be the case at the property level. We also note that a number of deposit settings do not readily lend themselves to stratigraphic columns, for example orogenic gold deposits, and porphyry systems. In the case of early-stage exploration, there may simply be insufficient information available to generate any meaningful geological cross-sections.

To require presentation of information that is either not yet known, or not relevant, is a burden to the industry and is potentially misleading. Requiring a Qualified Person to provide this type of information at an early project stage, when it is a fact of exploration that later information frequently and significantly changes initial interpretations, is unreasonable, and could potentially expose the Qualified Person to liability.

We recommend that the *Instruction to paragraph (b)(96)(iv)(B)(6)* removes the requirement for a stratigraphic column and cross section, and leaves inclusion of this type of illustration in a technical report summary to the discretion of the Qualified Person. We recommend that instead, the *Instruction to paragraph (b)(96)(iv)(B)(6)* requires the inclusion of at least one property geological map at an appropriate scale.

Hydrogeology

paragraph (b)96(B)(7) "Hydrogeology"

We do not consider that this separate Item heading is necessary if geothermal energy and mineral brines are not included in the SEC Proposed Rules. We consider that this information would be included, where appropriate to the project, in Items relating to mine planning, process operations, infrastructure, and environmental considerations.

Geotechnical Data, Testing and Analysis

paragraph (b)96(B)(8) "Geotechnical Data, Testing and Analysis"

We do not consider that this separate Item heading is necessary if geothermal energy and mineral brines are not included in the SEC Proposed Rules. We consider that this information would be included, where appropriate to the project, in Items relating mine planning, process operations, infrastructure, and environmental considerations.

Exploration

paragraph (b)96(B)(9) "Exploration"

We strongly disagree with the inclusion of drilling with other types of exploration information. We recommend the SEC Proposed Rules separates "Exploration" and "Drilling" into two Item headings. The reason for keeping the two areas separate in our view is that drilling comprises the single largest budget item for most exploration programs. Drilling also represents a significant project milestone. Separating the two also follows the format of Form 43-101F1.

paragraph (b)96(B)(9) "Describe the nature and extent of all relevant exploration work, conducted by or on behalf of, the registrant. (i) For all exploration work other than drilling, describe: (A) The procedures and parameters relating to the surveys and investigations; (B) The sampling

methods and sample quality, including whether the samples are representative, and any factors that may have resulted in sample biases; (C) The location, number, type, nature, and spacing or density of samples collected, and the size of the area covered”

We generally agree with these requirements.

paragraph (b)96(B)(9)(D) “The significant results of and the qualified person’s interpretation of the exploration information”

We do not agree with the requirement for a Qualified Person to provide their interpretation of the exploration data. This does not recognize that most mineral projects have numerous iterations of interpretation by different geologists over time. The Qualified Person should be expected to comment on these interpretations, but they should not be required to provide their own interpretation. In our view, it is bordering on unethical for a Qualified Person to take credit for interpretations performed by others. Therefore, we recommend that the wording be modified as follows:

paragraph (b)96(B)(9)(D) The significant results of and ~~the qualified person’s~~ interpretation of the exploration information [strikethrough added]

paragraph (b)96(B)(9)(ii) “For drilling, describe: (A) The type and extent of drilling including the procedures followed; (B) Any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results”

We agree with these requirements. However, as noted earlier, we consider that drilling information should be presented under its own Item heading.

paragraph (b)96(B)(9)(ii)(C) “The material results and interpretation of the drilling results”

If the term “material” is used, by definition, this would be information that an investor would consider important when making an investment decision, or information that was likely to have a significant effect on a registrant’s share price. We consider that this is too high a threshold to apply to what information needs to be included. The risk is that none of the results could be considered to be material to the registrant, yet the results would be significant for the understanding of the mineral project.

We recommend modifications to the wording such as:

A **summary** of the **significant** results and interpretation of the **relevant** drilling results

- The Qualified Person should only have to provide a summary. The convention for presenting information on assay information on drill information is in the form

of composites. We believe the Qualified Person needs to have the flexibility to present this type of information and avoid a lengthy list of detailed assay intervals that may be difficult for an investor to comprehend;

- We recommend that “material” be replaced by “significant” as this allows more flexibility for what the Qualified Person can include. We consider that this would allow a Qualified Person to provide adequate context to the drilling results;
- We consider that drilling information should be presented under its own Item heading. As a result, the word “relevant” should be added so that the last phrase reads “relevant drilling results” as the instruction for relevant data would need to be retained from the exploration Item definition.

Instruction 1 to paragraph (b)(96)(iv)(B)(9): “The technical report summary must comply with all disclosure standards for material exploration results under Regulation S-K Subpart 1300 (§§ 229.1301 et seq.)”

We agree that the SEC Proposed Rules must apply to the technical report summary, subject to our various responses to comments on those SEC Proposed Rules.

Instruction 2 to paragraph (b)(96)(iv)(B)(9): “For a technical report summary to support disclosure of material exploration results, the qualified person must provide information on all samples or drill holes to meet the requirements of paragraph (b)(96)(iv)(B)(9)(ii) of this section. If some information is excluded, the qualified person must identify the omitted information and explain why that information is not material”

In our view this instruction is unreasonable and should not be included. The requirement that “*the qualified person must provide information on **all samples or drill holes** to meet the requirements*” [emphasis added] is contradictory to the overarching statement in 96 A (9) “*Describe the nature and extent of **all relevant** exploration work, conducted by or on behalf of, the registrant*” [emphasis added].

Requiring information on all samples and drill holes for many projects is akin to a data dump:

- For a geochemical sampling or drill program, this would require lengthy tables for a large number of samples with a large number of elements analyzed per sample (many exploration programs routinely analyze for 45-element assay suites) that would take up many pages in the technical report summary;
- For a geophysical survey, information on each sample collection point is meaningless, as it is the presentation of the collated and interpreted data that is meaningful.

In our view the Qualified Person should be able to summarize the information and present only what is relevant, so that the presentation of the results and interpretations

can be understood by an investor. This instruction, as proposed, will pose an undue burden on registrants and would not provide the desired result of useful information for the investor.

The expectation that a Qualified Person identify omitted information and explain why it is not material is also unreasonable. Would this be expected on a sample by sample basis?

In our view, this proposed requirement does not recognize the complexity and diversity of exploration programs, the type of information that is collected, and how the information is processed by geoscientists. It is not a simple matter of looking at a single sample and deciding if that sample is material or non-material. Summarizing, aggregating, and omitting information has to be performed at a Qualified Person's discretion, and the Qualified Person should not have to justify what judgement calls were taken by other geoscientists and/or the Qualified Person.

Instruction 3 to paragraph(b)(96)(iv)(B)(9): "For a technical report summary to support disclosure of mineral resources or mineral reserves, the qualified person can meet the requirements of paragraph (b)(96)(iv)(B)(9)(ii) of this section by providing sampling (including drilling) plans, representative plans and cross-sections of results"

We believe that the SEC Proposed Rules are trying to capture the concept allowed under Form 43-101F1 Instruction 1 of Item 10 (c):

"For properties with mineral resource estimates, the qualified person may meet the requirements under Item 10 (c) by providing a drill plan and representative examples of drill sections through the mineral deposit"

The current SEC Proposed Rules wording does not explain why the reference to *paragraph (b)(96)(iv)(B)(9)(ii)*, which clearly states that the text refers to drill programs, would then need to clarify sampling plans as including drilling plans. It is unclear how a sampling plan and a representative plan differ. Cross-sections are only one type of visual representation; geologists use other perspectives and views to provide similar types of sections, for example longitudinal, oblique, and horizontal (plan) sections, but these are not cross-sections.

We recommend that the SEC Proposed Rules use the wording in the Form 43-101F1 instruction *"by providing a drill plan and representative examples of drill sections through the mineral deposit"* to avoid this ambiguity.

Instruction 4 to paragraph(b)(96)(iv)(B)(9): “Reports must include a plan view of the property showing locations of all drill holes and other samples”

In our view, the requirement should be that a registrant provides an illustration or figure for drill data. By drill data we are assuming the instruction is referring to drill collars, drill traces, and drill sample intervals. Therefore we disagree with the prescriptive requirement for this to be presented in plan view. It should be up to the Qualified Person to determine whether a plan or section view is the most appropriate and useful illustration of the type of drill data. For example, underground drilling conducted in a vertical fan is better illustrated in a vertical or oblique section than a plan view.

We also recommend that only those drill holes that the Qualified Person considers to be relevant should be required to be shown.

We consider that the requirement to provide plan views of “*locations of...other samples*” is also flawed:

- It should be at the discretion of the Qualified Person which samples are relevant, and therefore need to be shown;
- It does not recognize the diversity of the types of samples that are collected during exploration;
 - It is impractical for many of the data collected during geophysical surveys to be shown as point samples on a map. Even showing the flight lines of geophysical surveys does not provide the actual sample location. The useful information from these surveys is the interpreted image from the sampling, not the sampling itself;
 - Geochemical sampling, such as soil sampling, can be more meaningful to an investor when presented as an interpreted contour or “hot-cold” map, rather than showing the individual sample.

We recommend that Instruction 4 be amended to require a Qualified Person to provide illustrations or figures that show, where relevant, the locations and results of sampling programs using their discretion as to how that information is best presented.

Sample Preparation, Analyses, and Security

paragraph(b)(96)(iv)(B)(10) “Sample Preparation, Analyses, and Security. Describe: (i) Sample preparation methods and quality control measures employed prior to sending samples to an analytical or testing laboratory, sample splitting and reduction methods, and the security measures taken to ensure the validity and integrity of samples”

We agree with this requirement.

paragraph(b)(96)(iv)(B)(10)(ii) “Sample preparation, assaying and analytical procedures used, the name and location of the analytical or testing laboratories, the relationship of the laboratory to the registrant, and whether the laboratories are certified by any standards association and the particulars of such certification”

We generally agree with this requirement. However, we recommend that the SEC Proposed Rules include a qualifier that only “relevant information” is required to avoid the Qualified Person being required to provide unnecessary detail on the assay and analytical procedures, or the exact particulars of laboratory certification.

paragraph(b)(96)(iv)(B)(10)(iii) “The nature, extent, and results of quality control procedures and quality assurance actions taken or recommended to provide adequate confidence in the data collection and estimation process”

We generally agree with this requirement. However, we recommend that the SEC Proposed Rules include a qualifier that only “a summary of relevant information” is required to avoid the Qualified Person being required to provide unnecessary detail.

Instruction to paragraph (b)(96)(iv)(B)(10): “This item must also include the author’s opinion on the adequacy of sample preparation, security, and analytical procedures. If the analytical procedures used in the analysis are not part of conventional industry practice, the qualified person must state so and provide a justification for why he or she believes the procedure is appropriate in this instance”

We consider that the principle that should be met in the instruction is clearly outlined in the first sentence *“This item must also include the author’s opinion on the adequacy of sample preparation, security, and analytical procedures”*.

It is very unclear to us what the definition of “conventional industry practice” would entail. For example, many laboratories have different procedures:

- Sample sizes vary;
- Grind sizes vary;
- Different reagents are used, and concentrations of reagents can vary;
- Analytical methods vary (e.g. inductively coupled plasma (ICP), atomic absorption (AA), instrumental neutron activation analysis (INAA));
- Analytical methods vary (total versus partial assays);
- Detection limits vary.

The laboratories involved are all reputable, and provide their own approaches to achieving reliable and reproducible results. We do not believe that the Qualified Person should determine which of these laboratories is using “conventional industry practices”.

Therefore we disagree with the requirement for a Qualified Person to opine on what is outside “conventional industry practice”. The sentence “*If the analytical procedures used in the analysis are not part of conventional industry practice, the qualified person must state so and provide a justification for why he or she believes the procedure is appropriate in this instance*” should be omitted from the SEC Proposed Rules.

Data Verification

paragraph (b)(96)(iv)(B)(11) “Data Verification. Describe the steps taken by the qualified person to verify the data being reported on or which is the basis of this technical report summary, including:

- (i) Data verification procedures applied by the qualified person;*
- (ii) Any limitations on or failure to conduct such verification, and the reasons for any such limitations or failure; and*
- (iii) The qualified person’s opinion on the adequacy of the data for the purposes used in the technical report summary”*

We agree with these requirements.

Mineral Processing and Metallurgical Testing

paragraph (b)(96)(iv)(B)(12) “Mineral Processing and Metallurgical Testing. Describe:

- (i) The nature and extent of the mineral processing or metallurgical testing and analytical procedures;*
- (ii) The degree to which the test samples are representative of the various types and styles of mineralization and the mineral deposit as a whole”*

We agree with these requirements.

paragraph (b)(96)(iv)(B)(12)(iii) “The name and location of the analytical or testing laboratories, the relationship of the laboratory to the registrant, whether the laboratories are certified by any standards association and the particulars of such certification”

We generally agree with this requirement. However, we note that to our knowledge there is currently no certification of metallurgical laboratories by any standards associations in the manner in which analytical laboratories are certified, and we recommend that the statement “*whether the laboratories are certified by any standards*

association and the particulars of such certification” be removed from the requirement in the SEC Proposed Rules.

paragraph (b)(96)(iv)(B)(12)(iv) “The relevant results including the basis for any assumptions or predictions about recovery estimates. Discuss any processing factors or deleterious elements that could have a significant effect on potential economic extraction”

We agree with this requirement.

Instruction to paragraph (b)(96)(iv)(B)(12): “This item must include the qualified person’s opinion on the adequacy of the data for the purposes used in the technical report summary. If the analytical procedures used in the analysis are not part of conventional industry practice, the qualified person must state so and provide a justification for why he or she believes the procedure is appropriate, in this instance”

We agree with the requirement that “This item must include the qualified person’s opinion on the adequacy of the data for the purposes used in the technical report summary”.

We disagree with the requirement that “If the analytical procedures used in the analysis are not part of conventional industry practice, the qualified person must state so and provide a justification for why he or she believes the procedure is appropriate, in this instance”.

It is our experience that there is no conventional single industry practice that is used for metallurgical evaluations. Every deposit is considered to be unique and is individually studied using a metallurgical test process to determine the most appropriate method of recovering the element or material of interest. Much of the evaluation undertaken in a metallurgical program is not considered to be conventional analysis in that other work is completed outside determination of grades or quality, for example comminution testwork or mineralogical studies. We recommend the sentence is removed.

Mineral Resource Estimates

paragraph (b)(96)(iv)(B)(13) “Mineral Resource Estimates. If this item is included, the technical report summary must:

(i) Describe the key assumptions, parameters, and methods used to estimate the mineral resources, in sufficient detail for a reasonably informed person to understand the basis for and how the qualified person estimated the mineral resources”

We generally agree with this requirement. We recommend that the Qualified Person be allowed to summarize the information and only provide what is relevant.

We strongly recommend that the instruction be amended to explicitly require a Qualified Person to state the basis for determining that the material has reasonable prospects for eventual economic extraction.

paragraph (b)(96)(iv)(B)(ii) “Provide estimates of mineral resources for all commodities, including estimates of quantities, grade or quality, cut-off grades, and metallurgical or processing recoveries”

We generally agree with this requirement.

In many resource estimates, there may be two commodity classes that are estimated. There are commodities that are economic contributors that have reasonable prospects of eventual economic extraction, and there are commodities (e.g. penalty elements) that are relevant to considerations of reasonable prospects of eventual economic extraction. The implication is that a resource Qualified Person must estimate all commodities, and therefore “commodity” is too general a term.

We disagree with specifying a “cut-off grade”; the term should be just “cut-off”. See also our responses to [Comment 65](#) to [Comment 67](#), and earlier discussion in this comment.

We recommend that the SEC Proposed Rules be amended to require a statement of the Mineral Resource estimates together with footnotes that provide information on the key parameters, assumptions, and methods used.

paragraph (b)(96)(iv)(B)(iii) “Provide the qualified person’s opinion on whether all issues relating to all relevant modifying factors can be resolved with further work”

We strongly disagree with this requirement, in particular with the wording “**all issues relating to all relevant modifying factors**” [emphasis added]. The instruction presupposes that the Qualified Person will already know the results of as yet uncompleted further work, and whether that work can address all relevant Modifying Factors. The requirement asks a resource Qualified Person to make the determinations for a reserve Qualified Person on what the relevant Modifying Factors will be, and what testwork would need be conducted to address the application of those Modifying Factors.

We also disagree with requiring evaluation of Modifying Factors at the resource estimation stage. Modifying Factors by definition are only applied at a later evaluation stage, when converting Mineral Resources to Mineral Reserves, and are not applicable at the Mineral Resource estimate stage.

We recommend that this requirement be removed from the SEC Proposed Rules.

Instruction 1 to paragraph (b)(96)(iv)(B)(13): “The technical report summary must comply with all disclosure standards for mineral resources under subpart 1300 of Regulation S-K (§§ 229.1301 et seq.)”

We agree that whatever rules are relevant to Mineral Resource estimation must apply to the Mineral Resource section in the technical report summary. However, we have numerous points of disagreement with the SEC Proposed Rules as they apply to Mineral Resource estimates (see also our responses to [Comment 50](#) through [Comment 62](#)).

Instruction 2 to paragraph (b)(96)(iv)(B)(13): “The qualified person preparing the mineral resource estimates must round off, to appropriate significant figures chosen to reflect order of accuracy, any estimates of quantity and grade or quality”

We generally agree with this requirement, and we are pleased to see that the amount of rounding is left to the judgment of the Qualified Person.

We are unsure how a Qualified Person would round a quality value and recommend that “or quality” is deleted.

Instruction 3 to paragraph (b)(96)(iv)(B)(13): “The qualified person must classify mineral resources into inferred, indicated, and measured mineral resources in accordance with § 229.1303 and § 229.1304. The qualified person must state the uncertainty in the estimates of inferred, indicated, and measured mineral resources and discuss the sources of uncertainty and how they were considered in the uncertainty estimates. Uncertainty estimates for indicated and measured mineral resources must be stated in the form “±x% relative accuracy at y% confidence level over [annual, quarterly, or monthly] production quantities.” Uncertainty estimates for inferred mineral resources must be stated in the form “the qualified person expects at least z% of inferred mineral resources to convert to indicated or measured mineral resources with further exploration and analysis”

We strongly disagree with this instruction and recommend that it be removed. We consider that the uncertainty of the estimates is adequately captured in the confidence category assigned by the Qualified Person (Inferred, Indicated, Measured). See also our response to [Comment 70](#).

Instruction 4 to paragraph (b)(96)(iv)(B)(13): “The qualified person must consider all sources of uncertainty when reporting the uncertainty associated with each class of mineral resources. Sources of uncertainty that affect such reporting of uncertainty include sampling or drilling methods, data processing and handling, geologic modeling and estimation. The qualified person is not required to use estimates of confidence limits derived from geostatistics or other numerical methods to support the disclosure of uncertainty surrounding mineral resource classification. If the qualified person chooses to use confidence limit estimates from geostatistics or other numerical methods, he or she should consider the limitations of these methods and adjust the estimates appropriately to reflect sources of uncertainty that are not accounted for by these methods”

We disagree with the concept that a Qualified Person will know and understand “**all sources of uncertainty**” [emphasis added] that may apply to a Mineral Resource estimate at the time the estimate is prepared. In our view, a Qualified Person should only be expected to consider the uncertainties to the extent known at the time of the estimate, and consider only those uncertainties that are relevant to the estimate.

In our view there is a fundamental disconnect between Instruction 3 and Instruction 4 such that Instruction 4 cancels out Instruction 3. We recommend that Instruction 3 be removed, and Instruction 4 modified to allow the Qualified Person to use their professional judgement on the uncertainties that should be considered in Mineral Resource estimation and classification process.

Instruction 5 to paragraph (b)(96)(iv)(B)(13): “The qualified person must support the disclosure of uncertainty associated with each class of mineral resources with a list of all factors considered and explain how those factors contributed to the final conclusion about the level of uncertainty (i.e. confidence limits for indicated and measured mineral resources and the proportion of inferred resources expected to be converted to indicated or measured mineral resources with further exploration) underlying the resource”

We strongly disagree with this requirement as it is highly prescriptive. In our view, this does not recognize that a Qualified Person performing a Mineral Resource estimate will consider factors affecting uncertainty in combination with each other, and not in isolation, and not out of context. In many cases, uncertainties can be dealt with in later, more advanced studies, and it is difficult at the Mineral Resource estimate stage to presuppose what decisions will be made on likely impacts of uncertainties, and the future ability to mitigate those impacts.

We recommend that this instruction be removed.

Instruction 6 to paragraph(b)(96)(iv)(B)(13): “Sections 1303 and 1304 of Regulation S-K (§ 229.1303 and § 229.1304) notwithstanding, in this technical report summary mineral resource estimates may be inclusive of mineral reserves so long as this is clearly stated with equal prominence to the rest of the item. If the qualified person chooses to disclose resources inclusive of mineral reserves, he or she must also clearly state the mineral resources exclusive of mineral reserves in the technical report summary”

We strongly disagree with this requirement.

It is the registrant, not the Qualified Person, who chooses how to disclose Mineral Resources.

It is not the resource Qualified Person that determines the Modifying Factors that convert some or all of the Mineral Resources to Mineral Reserves (see also our response to Comment 95): that step is taken by the reserves Qualified Person. Reporting of Mineral Resources exclusive of Mineral Reserves in our experience is confined to disclosure on operating mines. For pre-feasibility studies and feasibility studies, we typically see Mineral Resources being reported inclusive of those Mineral Resources that have been converted to Mineral Reserves.

We recommend that the instruction be amended to require registrants to clearly state whether the Mineral Resource estimate is reported inclusive or exclusive of Mineral Reserves. The requirement to have a registrant always state the estimate as being exclusive of Mineral Reserves should be removed.

Instruction 7 to paragraph (b)(96)(iv)(B)(13): “The technical report summary must include mineral resource estimates of in-situ material, plant or mill feed, and saleable product”

We strongly disagree with this requirement and recommend that it be removed. The three points of reference are not industry standard practices, and the requirement is contrary to the CRIRSCO family of reporting codes.

See also our responses to [Comment 76](#) through [Comment 83](#).

Instruction 8 to paragraph (b)(96)(iv)(B)(13): “The qualified person must estimate cut-off grades based on assumed costs for surface or underground operations and commodity prices that are no higher than 24-month average prices. The qualified person may use sales prices as determined by applicable contractual agreements”

We strongly disagree with this requirement.

The reference should be to “cut-off” not to cut-off grades. See our responses to [Comment 65](#) to [Comment 67](#).

The instruction appears to be restricting evaluation of cut-offs to mining costs and commodity prices only. It does not appear to consider process costs, general and administrative costs, metallurgical recoveries, smelter and refining payabilities and costs, and royalty costs. See our responses to [Comment 65](#) to [Comment 67](#).

We consider the requirement to use a 24-month average metal price to be unreasonable as it does not represent industry standard practice and results in commodity prices that will be inappropriate at various points in the commodity price cycle. See our responses to [Comment 67](#) and [Comment 79](#).

We also recommend that Mineral Resource estimates be allowed to be reported using a higher commodity price than is used in the Mineral Reserve estimate. See our responses to [Comment 67](#) and [Comment 79](#).

We recommend that the Instruction on inputs to cut-off be restated to include:

- Mining costs;
- Processing costs;
- G&A costs;
- Royalty costs;
- Metallurgical recoveries;
- Smelter and refining costs and payabilities.

We recommend that the appropriate commodity price assumption be left to the judgement of the Qualified Person, and the Instruction be amended to incorporate that concept.

Instruction 9 to paragraph (b)(96)(iv)(B)(13): “Unless otherwise stated, cut-off grades also refer to net smelter returns, pay limits and other similar terms”

We do not agree that this instruction is necessary. We recommend that the SEC Proposed Rules use the general term “cut-off” and not “cut-off grade”. Refer also to our responses to [Comment 65](#) to [Comment 67](#).

Instruction 10 to paragraph (b)(96)(iv)(B)(13): “When the qualified person reports the grade or quality for a multiple commodity mineral resource as metal or mineral equivalent, he or she must also report the individual grade of each metal or mineral and the commodity prices, recoveries, and any other relevant conversion factors used to estimate the metal or mineral equivalent grade”

We generally agree with this requirement. However, it is not clear that the instruction also applies to the registrant when they make disclosure of Mineral Resources as metal or mineral equivalents. The wording currently appears to indicate that it is only the Qualified Person who must include the information, and does not make it explicit that the same requirement would apply to the registrant.

Mineral Reserve Estimates

paragraph (b)(96)(iv)(B)(14): “Mineral Reserve Estimates. If this item is included, the technical report summary must:

(i) Describe the key assumptions, parameters, and methods used to estimate the mineral reserves, in sufficient detail for a reasonably informed person to understand the basis for converting, and how the qualified person converted, indicated and measured mineral resources into the mineral reserves”

We agree with this requirement.

paragraph (b)(96)(iv)(B)(14)(ii): “Provide estimates of mineral reserves for all commodities, including estimates of quantities, grade or quality, cut-off grades, and metallurgical or processing recoveries”

We generally agree with this requirement.

We consider that “commodity” is too general a term for those commodities that have had economic viability demonstrated. The implication is that the reserves Qualified Person must estimate all commodities. Not all of the commodities estimated during the Mineral Resource estimation process are converted to Mineral Reserves. That does not necessarily mean that those omitted commodities do not retain reasonable prospects for eventual economic extraction, just that the commodities are not being considered at this stage in the Mineral Reserve estimation process. Other commodities may be estimated to assist in the evaluation of Modifying Factors (e.g. talc, clays, carbon, arsenic, sulfur content).

We recommend that the SEC Proposed Rules be amended to require a statement of the Mineral Reserve estimates together with footnotes that provide information on the key parameters, assumptions, and methods used.

paragraph (b)(96)(iv)(B)(14)(iii): “Provide the qualified person’s opinion on how the mineral reserve estimates could be materially affected by risk factors associated with or changes to any aspect of the modifying factors”

We generally agree that a Qualified Person be required to discuss material risk factors. In our view, the SEC Proposed Rules should be amended to require the Qualified Person to discuss the material risks “to the extent known” by the Qualified Person. It is not reasonable for a Qualified Person to be expected to foresee what risks may eventuate over the life of the project.

paragraph (b)(96)(iv)(B)(14)(iv): “If a pre-feasibility study is used to support mineral reserve disclosure, the qualified person must provide a justification for using a pre-feasibility study instead of a feasibility study”

We strongly disagree with this requirement and recommend that it be removed. See our responses to [Comment 84](#) through [Comment 88](#).

Instruction 1 to paragraph (b)(96)(iv)(B)(14): “The technical report summary must comply with all disclosure standards for mineral resources under subpart 1300 of Regulation S-K (§§ 229.1301 et seq.)”

We agree that whatever rules are relevant to Mineral Reserve estimation must apply to the Mineral Reserve section in the technical report summary. However, we have numerous points of disagreement with the SEC Proposed Rules as they apply to Mineral Reserve estimates (see also our responses to [Comment 76](#) to [Comment 83](#)).

Instruction 2 to paragraph (b)(96)(iv)(B)(14): “The qualified person preparing mineral reserve estimates must round off, to appropriate significant figures chosen to reflect order of accuracy, any estimates of quantity and grade or quality”

We generally agree with this requirement, and we are pleased to see that the amount of rounding is left to the judgment of the Qualified Person.

We are unsure how a Qualified Person would round a quality value and recommend that “or quality” be deleted.

Instruction 3 to paragraph (b)(96)(iv)(B)(14): “The qualified person must classify mineral reserves into probable and proven mineral reserves in accordance with § 229.1303 and § 229.1304”

We generally agree with this requirement. However, we strongly disagree with the requirement to state Mineral Reserves at three reference points (see also our responses to [Comment 76](#) to [Comment 83](#)).

Instruction 4 to paragraph (b)(96)(iv)(B)(14): “The technical report summary must include mineral reserve estimates of in-situ material, plant or mill feed, and saleable product”

We strongly disagree with this requirement. In our view, the SEC Proposed Rules should simply require a registrant to state the reference point for the estimate, and not prescriptively apply three reference points for each estimate (see also our responses to [Comment 76](#) to [Comment 83](#)).

Instruction 5 to paragraph (b)(96)(iv)(B)(14): “The qualified person must estimate cut-off grades based on detailed cut of grade analysis that includes long term prices that are no higher than the 24-month historical average prices. The qualified person may use the sales prices as determined by applicable contractual agreements”

We consider the requirement to use a 24-month average metal price to be unreasonable as it does not represent industry standard practice and results in commodity prices that will be inappropriate at various points in the commodity price cycle. See our responses to [Comment 65](#) to [Comment 67](#).

We recommend that the appropriate commodity price assumption be left to the judgement of the Qualified Person, and the Instruction be amended to incorporate that concept.

Instruction 6 to paragraph (b)(96)(iv)(B)(14): “When the qualified person reports the grade or quality for a multiple commodity mineral reserve as metal or mineral equivalent, he or she must also report the individual grade of each metal or mineral and the commodity prices, recoveries, and any other relevant conversion factors used to estimate the metal or mineral equivalent grade”

We generally agree with this requirement. However, it is not clear that the instruction also applies to the registrant when they make disclosure of Mineral Reserves as metal or mineral equivalents. The wording currently appears to indicate that it is only the Qualified Person who must include the information, and does not make it explicit that the same requirement would apply to the registrant.

Mining Methods

paragraph (b)(96)(iv)(B)(15): “Mining Methods. Describe the current or proposed mining methods and the reasons for selecting these methods as the most suitable for the mineral reserves under consideration”

We disagree with the wording of this section such that it only applies to properties with Mineral Reserves.

- There are pre-feasibility and feasibility studies that may be completed that do not result in declaration of Mineral Reserves. This could be due to uncertainty over changing external factors such as government regulations, tax rates, or royalty regimes. In these instances, a registrant would require more certainty in the assumptions before declaring Mineral Reserves. The study results in these situations are still useful to an investor, and the section on mining methods should still be provided in a technical report summary;
- We believe a preliminary economic assessment study type should be allowed in the SEC Proposed Rules, in which case this section on mining methods would apply to Mineral Resources.

paragraph (b)(96)(iv)(B)(15)(i): “Geotechnical and hydrological models, and other parameters relevant to mine designs and plans; (ii) Production rates, expected mine life, mining unit dimensions, and mining dilution and recovery factors; (iii) Requirements for stripping, underground development, and backfilling”

We agree with these requirements.

paragraph (b)(96)(iv)(B)(15)(iv): “Required mining equipment fleet and machinery, and personnel”

We generally agree with these requirements.

We do not agree with requiring personnel counts to be disclosed. Where personnel counts are required in separate Items of the technical report summary, arbitrary decisions are made on where to assign personnel whose activities span a number of functional areas (e.g. mechanics that serve the process plant and fleet) and therefore the numbers assigned under an Item heading can double-count staff, or alternatively, omit staff.

Personnel counts often do not reflect the actual numbers of personnel who have access through the mine gate, in particular, such counts generally do not include contractor staff, who can often exceed the number of Owner personnel.

Instruction to paragraph (b)(96)(iv)(B)(15): “The qualified person must include at least one map of the final mine outline”

We generally agree with this requirement. However, in our view, a map view is not always the best representation of existing or proposed underground mine development.

We recommend that the instruction be reworded such that the requirement is for a summary illustration of the proposed mine development that supports the Mineral Reserves. This removes the prescriptive map view requirement, and removes the

uncertainty as to what a “final mine outline” might be. We note that a “final mine outline” is very rarely certain in the mining industry.

Processing and Recovery Methods

paragraph (b)(96)(iv)(B)(16): “Processing and Recovery Methods. Describe the current or proposed mineral processing methods and the reasons for selecting these methods as the most suitable for extracting the valuable products from the mineralization under consideration”

We generally agree with this requirement. However, we recommend that this instruction be modified to allow a Qualified Person to present the information required in a summary form.

paragraph (b)(96)(iv)(B)(16)(i): “A description or flow sheet of any current or proposed process plant”

We generally agree with this requirement. However, we recommend that this instruction be modified such that a Qualified Person is required to provide a summary description of the current or proposed process plant, and is required to provide an illustrative flowsheet that shows a summary of the process route.

paragraph (b)(96)(iv)(B)(16)(ii): “Plant throughput and design, equipment characteristics and specifications”

We generally agree with these requirements. However, we recommend that this instruction be modified to allow a Qualified Person to present the information required in a summary form, such as a table for equipment characteristics and specifications.

paragraph (b)(96)(iv)(B)(16)(iii): “Current or projected requirements for energy, water, process materials, and personnel”

We generally agree with these requirements. However, we do not agree with requiring personnel counts to be disclosed.

Instruction 1 to paragraph (b)(96)(iv)(B)(16): “If the processing method, plant design or other parameters have never been used to successfully extract the valuable product from such mineralization, the qualified person must so state and provide a justification for why he or she believes the approach will be successful in this instance”

It is unclear to us what the SEC intends by the phrase “successfully extract”. We assume it means a mineral process method that is technically feasible and economically viable. In our view, this would not necessarily require that the method has been successfully

used at an industrial scale, but that sufficient pilot or demonstration plant testing has been performed to indicate technical feasibility and economically viability.

We generally agree with an instruction to the mineral process Qualified Person that they must identify whether a proposed processing method has shown successful extraction, and whether there is an existing plant using that process method at an industrial scale. If that is not the case, then the Qualified Person should identify the potential risks to relying on this method in the mine design, and what recommendations they have for risk mitigation. We do not agree that a Qualified Person should be required to provide justification for why they believe the approach will be successful.

Instruction 2 to paragraph (b)(96)(iv)(B)(16): "If the processing method, plant design or other parameters have never been used to successfully extract the valuable product from such mineralization and is still under development, then no mineral resources or reserves can be disclosed on the basis of that method"

We strongly disagree with this instruction and recommend that it be removed from the SEC Proposed Rules.

In our view, this instruction will potentially stifle innovation, and restricts the mining industry to using existing and conventional technologies only.

We believe that the confidence categories used in Mineral Resource and Mineral Reserve estimates adequately addresses uncertainties in technical and economic considerations (Mineral Resources) or Modifying Factors (Mineral Reserves). If there is a high risk with the proposed mineral process method, then this would be reflected in the confidence category assigned to the Mineral Resource or Mineral Reserve estimates that assume that method.

Infrastructure

paragraph (b)(96)(iv)(B)(17): "Infrastructure. Describe the required infrastructure for the project, including roads, rail, port facilities, dams, dumps and leach pads, tailings disposal, power, water and pipelines, as applicable"

We agree with these requirements.

Instruction to paragraph (b)(96)(iv)(B)(17): "The qualified person must include at least one map showing the layout of the infrastructure"

We generally agree with this requirement.

The current wording could be interpreted that providing a map that shows only existing infrastructure locations would meet the requirement. We recommend that this instruction be modified so that it is clear that both proposed and existing infrastructure should be shown on the map.

We note that Form 43-101F1 includes a requirement to show the “*the location and surficial outline of mineral resources, mineral reserves*”. We recommend that a similar instruction be included in the infrastructure Item.

Market Studies

paragraph (b)(96)(iv)(B)(18): “Market Studies. Describe the market for the products of the mine, including justification for demand or sales over the life of the mine (or length of cash flow projections)”

We agree with the requirement for a technical report summary to include a description of the market for the mine product. We recommend, however, that the Qualified Person be allowed to summarize this information. We also recommend that the instruction be modified to require that the information is provided on the basis of “to the extent known”.

Market studies are the realm of experts, and are not within the purview of a Qualified Person. It is unreasonable to require a Qualified Person to justify future demand or sales of any commodity.

We recommend that the phrase “*including justification for demand or sales over the life of the mine (or length of cash flow projections)*” be removed.

We also recommend that a similar approach to that taken in Item 19 of Form 43-101F1 be adopted in relation to market studies:

“Confirm that the qualified person has reviewed these studies and analyses and that the results support the assumptions in the technical report”.

paragraph (b)(96)(iv)(B)(18)(i): “Information concerning markets for the property’s production, including the nature and material terms of any agency relationships and the results of any relevant market studies, commodity price projections, product valuation, market entry strategies, and product specification requirements”

We generally agree with this requirement.

We note that disclosure of market entry strategies in particular can be a very sensitive subject for mining companies. We recommend that the SEC Proposed Rules adopt a similar approach to that in Item 19 of Form 43-101F1 that a Qualified Person should only have to confirm that they have reviewed these “relevant market studies, commodity price

projections, product valuation, market entry strategies, and product specification requirements”, and that the results of these studies support the assumptions in the technical report summary. The Qualified Person should be allowed to rely on studies performed by credible market experts, and should not be expected to perform these studies themselves.

paragraph (b)(96)(iv)(B)(18) (ii): “Descriptions of all material contracts required for the issuer to develop the property, including mining, concentrating, smelting, refining, transportation, handling, hedging arrangements, and forward sales contracts. State which contracts have been executed and which are still under negotiation. For all contracts with affiliated parties, discuss whether the registrant obtained terms, rates or charges the same as could be obtained had the contract been negotiated at arm’s length with an unaffiliated third party”

We generally agree with these requirements.

We are concerned that the final requirement, where the SEC Proposed Rules ask a registrant to “*discuss whether the registrant obtained terms, rates or charges the same as could be obtained had the contract been negotiated at arm’s length with an unaffiliated third party*” is unduly burdensome. In our view, for a vertically-integrated company to provide evidence that the rates or charges would have been the same under a contract negotiated at arm’s length with an unaffiliated third party, could potentially require the registrant to solicit information such as quotes, tenders, conditions and indicative terms.

We consider that asking a Qualified Person to state whether the terms, rates or charges are within industry norms is a more reasonable standard to meet.

We recommend that the clauses “*discuss whether the registrant obtained terms, rates or charges the same as could be obtained had the contract been negotiated at arm’s length with an unaffiliated third party*” are removed, and replaced with “*discuss whether the terms, rates, or charges are within industry norms*”.

Environmental Studies, Permitting, and Social or Community Impact

paragraph (b)(96)(iv)(B)(19): “Environmental Studies, Permitting, and Social or Community Impact. Describe the environmental, permitting, and social or community factors related to the project. Include:

- (i) The results of environmental studies (e.g. environmental baseline studies or impact assessments);*
- (ii) Requirements and plans for waste and tailings disposal, site monitoring, and water management during operations and post mine closure;*

- (iii) Project permitting requirements, the status of any permit applications, and any known requirements to post performance or reclamation bonds;*
- (iv) Requirements and plans for social or community engagement and the status of any negotiations or agreements with local communities;*
- (v) Mine closure plans, including remediation and reclamation plans, and the associated costs”*

We generally agree with these requirements. However, we recommend that the Qualified Person be allowed to summarize the information and present only the information that is relevant. We also recommend that the Qualified Person be required to provide the information “to the extent known”.

paragraph (b)(96)(iv)(B) (19)(vi): “The qualified person’s opinion on the adequacy of current plans to address any issues related to environmental, permitting and social or community factors”

We strongly disagree with this requirement and recommend that it be deleted. We do not believe that a Qualified Person will have all of the information at the time of the preparation of the technical summary report to foresee and address “*any issues related to environmental, permitting and social or community factors*”, or that the current plans will address all of the issues that may arise.

We recommend instead that the Qualified Person be required to discuss any environmental, permitting and social or community issues, to the extent known, that could materially impact the issuer’s ability to extract the mineral resources or mineral reserves.

Instruction to paragraph (b)(96)(iv)(B)(19): “The qualified person must include descriptions of any commitments to ensure local procurement and hiring”

We disagree with this instruction and recommend it be deleted. In our experience, such commitments are generally only concluded at the end of the permitting process, and the information is highly sensitive until final agreements are concluded.

Capital and Operating Costs

paragraph (b)(96)(iv)(B)(20): “Capital and Operating Costs. Provide estimates of capital and operating costs, with the major components set out in tabular form. Explain and justify the basis for the cost estimates including any contingency budget estimates. State the accuracy level of the capital and operating cost estimates”

We generally agree with these requirements. See also our responses to [Comment 72](#) and [Comment 84](#).

Instruction to paragraph (b)(96)(iv)(B)(20): "To assess the accuracy of the capital and operating cost estimates, the qualified person must take into account the risks associated with the specific engineering estimation methods used to arrive at the estimates. As part of this, the qualified person must take into consideration the accuracy of the estimation methods in prior similar environments. The accuracy of capital and operating cost estimates must comply with § 229.1302"

We generally agree with these requirements. We have a concern that a narrow interpretation of "the risks associated with the specific engineering estimation methods used to arrive at the estimates" may result. We note that engineering estimates can be significantly affected by the level of project definition, for example if an assumption is made as to where a certain item of infrastructure is located and later it is found that a permit cannot be obtained for that location, or if the local conditions are significantly different from what was assumed. We recommend that additional guidance be incorporated into the instruction such that the Qualified Person understands that the term "the risks associated with the specific engineering estimation methods used to arrive at the estimates" incorporates both project definition risks and the actual estimation process risks.

Economic Analysis

paragraph (b)(96)(iv)(B) (21): "Economic Analysis. Describe:

(i) The key assumptions, parameters, and methods used to demonstrate economic viability"

We generally agree with this requirement.

We consider that the Qualified Person should be allowed to provide the information in summary format.

paragraph (b)(96)(iv)(B)(21) (ii): "Results of the economic analysis, including annual cash flow forecasts based on an annual production schedule for the life of project, and measures of economic viability such as net present value (NPV), internal rate of return (IRR), and payback period of capital"

We generally agree with this requirement. We consider the wording to be an improvement on the wording in Item 22 of Form 43-101F1.

We note a concern that the requirement does not specifically address that the registrant must present the results of the economic analysis on a post-tax basis. We consider that providing cash flow analyses on a pre-tax basis only to be potentially misleading.

paragraph (b)(96)(iv)(B) (21)(iii): “Sensitivity analysis results using variants in commodity price, grade, capital and operating costs, or other significant input parameters, as appropriate, and discuss the impact on the results of the economic analysis”

We agree with this requirement.

Instruction 1 to paragraph (b)(96)(iv)(B)(21): “The qualified person may, but is not required to, include an economic analysis in an initial assessment. If an initial assessment includes this item, the economic analysis must be based on only measured and indicated mineral resources. The qualified person must not include inferred mineral resources in any economic analysis”

We note that we have a different interpretation of an initial assessment, see our responses to [Comment 63](#) through [Comment 74](#).

We agree that a registrant be allowed to include an economic analysis of Mineral Resources in a technical report summary, and provide the relevant information supporting the analysis under the Item headings relating to mining operations, processing facilities, infrastructure, environmental, permitting, social considerations, market studies, capital and operating costs, and risks and opportunities.

We consider that the inclusion of Inferred Mineral Resources in an economic analysis of Mineral Resources should be allowed:

- This type of analysis is allowed in Canada, and in most other jurisdictions subject to the CRIRSCO family of codes;
- The results of the study are useful to an investor, and in some cases represents material information on the project, and the ability to advance the project;
- Mining analysts already do these types of studies and include Inferred in the economic analysis; such studies are made public. Allowing a registrant to perform its own evaluation under the supervision of Qualified Persons provides balance to the analyst viewpoints.

Therefore we recommend that the SEC Proposed Rules allow economic analyses to be performed on any category of, or combination of, Mineral Resource confidence categories.

Instruction 2 to paragraph (b)(96)(iv)(B)(21): “If the qualified person includes an economic analysis in an initial assessment, the qualified person must also include a statement, of equal prominence to the rest of this section, that, unlike mineral reserves, mineral resources do not have demonstrated economic viability”

We generally agree with this requirement.

We again note that we have a different interpretation of an initial assessment, see our responses to [Comment 63](#) through [Comment 74](#).

We note that there should also be a requirement to include additional cautionary language when the economic analysis includes Inferred Mineral Resources.

Instruction 3 to paragraph (b)(96)(iv)(B)(21): “To comply with paragraph (b)(96)(iv)(B)(21)(i) of this section, the qualified person must provide all material assumptions including discount rates, exchange rates, commodity prices, and taxes, royalties, and other government levies or interests applicable to the mineral project or to production, and to revenues or income from the mineral project”

We agree with this instruction. We consider, however, that the Qualified Person should be allowed to summarize the information presented.

We strongly recommend that the SEC Proposed Rules include an instruction that registrants with operating mines that meet a defined revenue threshold value derived from mining operations can exclude the requirements to provide an economic analysis, unless a material expansion of the mining operation is included in the technical report summary.

We note that in our view, the sensitive information for a registrant in an economic analysis is restricted to the results of the financial analysis, and the cash flows, NPV, IRR, and sensitivity analysis. We do not consider that the production schedule is generally sensitive information.

Adjacent Properties

paragraph (b)(96)(iv)(B)(22): “Adjacent Properties. Where applicable, a qualified person may include relevant information concerning an adjacent property if:

(i) Such information was publicly disclosed by the owner or operator of the adjacent property;

(ii) The source of the information is identified;

(iii) The qualified person states that he or she has been unable to verify the information and that the information is not necessarily indicative of the mineralization on the property that is the subject of the technical report; and

(iv) The technical report clearly distinguishes between the information from the adjacent property and the information from the property that is the subject of the technical report summary”

We agree with these requirements.

Other Relevant Data and Information

paragraph (b)(96)(iv)(B)(23): “Other Relevant Data and Information. Include any additional information or explanation necessary to provide a complete and balanced presentation of the value of the property to the registrant. Information included in this item must comply with subpart 1300 of Regulation S-K (§§ 229.1301 et seq.)”

We disagree with the clause “*value of the property to the registrant*”. This implies an economic analysis as a measure of the value of the property to the registrant. Exploration stage projects will not have such an analysis, and projects with Mineral Resource estimates will not necessarily have the analysis either.

We note that to meet the requirements under the phrase “*complete and balanced presentation of the value of the property*”, then Inferred Mineral Resources, historical estimates, exploration targets and exploration potential would all have to be considered in some type of economic analysis.

We recommend that the requirement be amended to state “*Include any additional information or explanation necessary to make the technical report summary understandable and not misleading*”.

paragraph (b)(96)(iv)(B)(24): “Interpretation and Conclusions. The qualified person must summarize the interpretations of and conclusions based on the data and analysis in the technical report summary. He or she must also discuss any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration results, mineral resource or mineral reserve estimates, or projected economic outcomes”

We agree with these requirements.

paragraph (b)(96)(iv)(B)(25): “Recommendations. If applicable, the qualified person must describe the recommendations for additional work with associated costs. If the additional work program is divided into phases, the costs for each phase must be provided along with decision points at the end of each phase”

We generally agree with these requirements. We are pleased that the number of phases of work that can be envisaged is not restricted to only two phases of work.

paragraph (b)(96)(iv)(B)(26): “References. Include a list of all references cited in the technical report summary in sufficient detail so that a reader can locate each reference”

We generally agree with this requirement. However, we note that there will always be references to registrant documentation that will never be in the public domain because they are either internal to the registrant, or confidential. In these instances, a reader would be able to locate the document, but would not be able to review it. We recommend that the phrase “*in sufficient detail so that a reader can locate each reference*” is removed.

COMMENT 110

SEC Request for Comment

As previously noted, the qualified person would have to apply and evaluate relevant modifying factors to assess prospects of economic extraction or to convert measured and indicated mineral resources to proven or probable mineral reserves. These would include a variety of factors such as economic, legal, and environmental as discussed more fully above. For example, to apply and evaluate legal factors the qualified person must examine the regulatory regime of the host jurisdiction to establish that the registrant can comply (fully and economically) with all laws and regulations (e.g., mining; environmental, including regulations governing water use and impacts, waste management, and biodiversity impacts; reclamation; and permitting regulations) that are relevant to operating a mineral project using existing technology. Should we expand proposed Item 601(b)(96)(iv)(B)(19)(vi) to provide additional specific examples, in addition to those set forth in Items 601(b)(96)(iv)(B)(19)(i)-(iv), of “issues related to environmental, permitting and social or community factors” that the qualified person must include in the technical report summary? For example, should we expressly require that the qualified person include a discussion of other sustainability issues such as how he or she considered issues related to managing greenhouse gas emissions or workforce health, safety and well-being? Are there other items for which it would be appropriate to require the qualified person to include a discussion in the technical report summary? If so, please provide examples and explain why.

Response

We clarify that Modifying Factors apply to conversion of Mineral Resources to Mineral Reserves only, technical and economic considerations are used when assessing reasonable prospects of eventual economic extraction during Mineral Resource estimation. See also our responses to [Comment 22](#) and [Comment 24](#).

We recommend that rather than having a prescriptive list of discussion requirements that must be discussed in paragraph (b)(96)(iv)(B)(19), the wording used should be principles-based, such that discussion of any issues related to environmental, permitting

and social or community factors are left up to the Qualified Person to determine in the context of the project, extraction methods proposed and the project location. In our view, this approach would allow the Qualified Person to determine “any other items” that would be appropriate for the Qualified Person to discuss.

We strongly disagree with the premise that a Qualified Person would be in the position to determine that “the registrant can comply (fully and economically) with all laws and regulations”. We question whether any other expert would have that ability to make that statement. In our view, it is very unlikely that a Qualified Person could reasonably state that a registrant could fully and economically comply with all laws and all regulations in all jurisdictions at all times.

See also our response to [Comment 114](#).

COMMENT 111

SEC Request for Comment

Should we require, as proposed, a qualified person who prepares a technical report summary that reports the results of a preliminary or final feasibility study to provide information for all 26 items? If not, which items should not be required? Should we require, as proposed, a qualified person who prepares a technical report summary that reports the results of an initial assessment to provide, at a minimum, the information specified in paragraphs (iv)(B)(1) through (13) and (iv)(B)(22) through (26) of proposed Item 601(b)(96)?

Response

We generally agree that technical report summaries on preliminary or final feasibility studies should provide information for all 26 items. However, our agreement is subject to our notes on the 26 items as provided in the response to [Comment 109](#).

We believe all 26 items should also be addressed in a technical report summary that discloses a preliminary economic assessment of Mineral Resources. See also our responses to [Comment 63](#) and [Comment 109](#).

A technical report summary that reports only exploration results may not necessarily have information that would be populated in paragraph (b)(96)(iv)(B)(12) and the Qualified Person should be allowed to note that the Item is not applicable for that project. Likewise, where paragraph (b)(96)(iv)(B)(13) is not relevant, as there is no Mineral Resource estimate, the Qualified Person should be allowed to indicate that the section is not applicable.

We agree that a Mineral Resource estimate without an economic analysis should not include paragraphs (b)(96)(iv)(B)(14) through paragraph (b)(96)(iv)(B)(21).

COMMENT 112

SEC Request for Comment

The proposed rules would permit a qualified person who prepares a technical report summary that reports the results of an initial assessment to use mineral resources in economic analysis (and provide the information specified in paragraph (iv)(B)(21) of proposed Item 601(b)(96)). Should we permit a qualified person to do so if he or she wishes?

Response

We agree that a Qualified Person should be allowed to present the results of an economic analysis of Mineral Resources (see also our response to Comment 109).

We disagree with the information being provided being restricted to only paragraph (b)(96)(iv)(B)(21) content. In our view, the Qualified Persons should also fill out the required content of paragraph (b)(96)(iv)(B)(14) through paragraph (b)(96)(iv)(B)(20) when reporting these results (see also our response to [Comment 109](#)).

COMMENT 113

SEC Request for Comment

Should we require a qualified person who prepares a technical report summary that reports material exploration results to provide, at least, the information specified in paragraphs (iv)(B)(1) through (11) and (iv)(B)(22) through (26) of proposed Item 601(b)(96), as proposed?

Response

We generally agree that technical report summaries that report material exploration results should provide information in those Items as noted. However, our agreement is subject to our notes on these Items as provided in the response to [Comment 109](#).

COMMENT 114

SEC Request for Comment

Should we preclude a qualified person from disclaiming responsibility if he or she relies on a report, opinion, or statement of another expert who is not a qualified person in preparing the technical report summary, as proposed? Why or why not?

Response

We believe that a Qualified Person should not be allowed to disclaim responsibility for information that they have prepared and that is within their area of practice. We also believe that it is appropriate for a Qualified Person to take responsibility for information prepared as part of a team effort where other members of the team are qualified in the areas of geoscience or engineering.

Due to the nature of Mineral Resource and Mineral Reserve estimation, in particular Mineral Reserve estimation, Qualified Persons are required to use information prepared by other experts when determining reasonable prospects of eventual economic extraction (Mineral Resources) or applying Modifying Factors (Mineral Reserves). This always includes consideration of legal, political, social, environmental, marketing, and taxation information. The Qualified Person needs to be able to reasonably rely on credible sources for this information, but should not be responsible for information provided by these other experts.

We strongly disagree with precluding a Qualified Person from disclaiming responsibility if they rely on a report, opinion, or statement of another expert who is not a qualified person in preparing the technical report summary.

A Qualified Person under the international reporting codes and best practice guidelines within the mining industry is expected to seek input from other experts when considering information that is outside of their professional area of practice, and is outside of the type of information that would normally be prepared by a Qualified Person. This includes:

- Legal (all laws and regulations);
- Political;
- Environmental (social);
- Tax matters;
- Marketing;
- Commodity price forecasts.

Although a Qualified Person is expected to present this type of information in a mining study and the subsequent technical report summary, in other jurisdictions the Qualified Persons are allowed to rely on other experts for the information, and to disclaim responsibility for it.

We strongly disagree with the SEC Proposed Rules requiring that a Qualified Person take responsibility for the types of issues that are identified in paragraph (b)(96)(iv)(B)(19) of the proposed technical report summary.

Such a requirement could, among other risks, expose the Qualified Person to sanction by their professional regulating body for acting outside their discipline. As a result, it will contribute to the difficulty in having properly-qualified Qualified Persons participate in preparing documents for disclosure to the public.

COMMENT 115

SEC Request for Comment

Should we require that the technical report summary not include large amounts of technical or other project data, either in the report or as appendices to the report, as proposed? Why or why not? Should we require a qualified person to draft the technical report summary to conform, to the extent practicable, with plain English principles under the Securities Act and Exchange Act, as proposed?

Response

We agree that the technical report summary should “not include large amounts of technical or other project data, either in the report or as appendices to the report”. The intended audience of a technical report summary in our view does not need the level of detail.

We generally agree that a technical report summary should be presented using plain English with the understanding that the intended audience for the technical report summary should be considered to be a reasonably informed investor. It should be acceptable for a Qualified Person to use scientific and technical terms in a technical report summary without having to provide a detailed glossary of terms.

COMMENT 116

SEC Request for Comment

Should we require registrants to describe the internal controls that they use to help ensure the reliability of their disclosure of exploration results and estimates of mineral resources and mineral reserves, as proposed? Should we require that such internal controls disclosure address quality control and quality assurance programs, verification of analytical procedures, and comprehensive risk inherent in the estimation, as proposed? Are there other items, in addition to or in lieu of those proposed items, that should be included in such disclosure? Are there items that should be excluded from the proposed internal controls disclosure requirement? In each case, why or why not?

Response

We that agree that there should be internal controls on a registrant’s exploration program to establish and monitor quality assurance.

It is common industry practice to have QA/QC programs when undertaking mineral exploration. Resource and reserve estimators typically perform verification and validation steps in the estimation process. Some companies also have internal controls, and disclosure controls and procedures for corporate governance purposes. It appears that elements of each of these concepts are inappropriately combined in the “Requirements for Internal Controls Disclosure”.

As a result, we believe it will be confusing to the mining industry to understand how to comply with the requirements.

We recommend that the SEC review the objective and provide clear instructions for the mining industry to achieve the objective.

COMMENT 117

SEC Request for Comment

Should we require registrants to describe the internal controls that they use to help ensure the reliability of their disclosure of exploration results and estimates of mineral resources and mineral reserves, as proposed? Should we require that such internal controls disclosure address quality control and quality assurance programs, verification of analytical procedures, and comprehensive risk inherent in the estimation, as proposed? Are there other items, in addition to or in lieu of those proposed items, that should be included in such disclosure? Are there items that should be excluded from the proposed internal controls disclosure requirement? In each case, why or why not?

Response

Please see our response to [Comment 116](#).

COMMENT 118

SEC Request for Comment

Should we amend Form 20-F to conform it to the disclosure requirements of subpart 1300 of Regulation S-K and Item 601(b)(96), as proposed?

Response

We generally agree that there need to be consequential amendments to Form 20-F to allow it to conform with the disclosure requirements of subpart 1300 of Regulation S-K and Item 601(b)(96).

We generally agree that technical report summary filing requirements applicable to domestic registrants should apply as well to foreign private issuers registering securities or reporting pursuant to Form 20-F.

We believe that the current wording used would appear to require a registrant to file an updated technical report summary with each annual filing. In our view, the SEC Proposed Rules should provide an exemption for this requirement if a current technical report summary is already on file.

We disagree that the disclosure requirements in the SEC Proposed Rules are substantially similar to NI 43-101. Our concern is that Canadian registrants that are not subject to the Multijurisdictional Disclosure System (MJDS) would be unfairly burdened with preparing substantially different information and documents on their mineral projects in order to comply with the proposed rules. We therefore disagree with the elimination of the foreign or state law exemption under Item 102 and Guide 7. We note, however, that if the SEC Proposed Rules were truly more aligned with both NI 43-101 and the concepts in the CRIRSCO Template, then this issue would not be as problematic in our view.

COMMENT 119

SEC Request for Comment

Should foreign private issuers that use or refer to Form 20-F for their SEC filings be subject to the same mining disclosure requirements as domestic mining registrants, as proposed? Why or why not?

Response

We generally agree that technical report summary filing requirements applicable to domestic registrants should apply as well to foreign private issuers registering securities or reporting pursuant to Form 20-F.

COMMENT 120

SEC Request for Comment

Should we continue to permit Canadian issuers to provide disclosure under NI 43-101, as they are currently allowed to do pursuant to the foreign or state law exception, as an alternative to providing disclosure under the proposed rules? If so, what would be the justification for such differential treatment?

Response

We agree that Canadian issuers should be permitted to provide disclosure under NI 43-101, as they are currently allowed to do pursuant to the foreign or state law exception, as an alternative to providing disclosure under the SEC Proposed Rules:

- NI 43-101 has been in force in Canada for over 15 years;
- Many of the investors in Canadian reporting companies are based in the US, and are familiar with these disclosure standards;
- The disclosure standards are law, not guidelines;
- The Canadian companies are subject to regulatory oversight by full-time, technically-trained mining staff at the Canadian Securities Regulators, IIROC, and Canadian stock exchanges;
- The securities commissions, CIM, and stock exchanges in Canada have all provided extensive guidance on good practices in the mining industry and require a high standard of mining disclosure;
- There is a website that retains archival information on properties and companies in the form and context that the information was originally filed with the regulators.

It is our understanding that the SEC has allowed the disclosure by Canadian companies using NI 43-101 for over 15 years and, consequently, the type of information that will be provided by Canadian issuers using NI 43-101 should be familiar to the SEC.

Continuing with the status quo in our opinion does not affect the SEC, will significantly reduce the compliance cost burden for Canadian companies who are registrants in the US compared to the SEC Proposed Rules and will benefit US investors.

COMMENT 121

SEC Request for Comment

Should we amend Form 1-A to require Regulation A issuers engaged in mining operations to refer to, and if required, provide the disclosure under subpart 1300 of Regulation S-K, in addition to any disclosure required by Item 8 of that Form, as proposed? Why or why not? Alternatively, should the disclosure requirements in proposed subpart 1300 apply to only some Regulation A issuers (e.g., Regulation A issuers in Tier 2 offerings)? Should we instead exempt all Regulation A issuers from the proposed subpart 1300 disclosure requirements?

Response

We have limited familiarity with Form 1-A and Regulation A, and are not in a position to make informed comment.

COMMENT 122

SEC Request for Comment

In lieu of imposing full subpart 1300 disclosure requirements on Regulation A issuers, should we limit, in whole or in part, the proposed subpart 1300 disclosure requirements for issuers in Regulation A offerings? If so, should these requirements be limited only for issuers in Tier 1 offerings? Why or why not? Further, which provisions of proposed subpart 1300 should, and should not, apply to issuers in Regulation A offerings? For example, should we require compliance with Item 1302's requirement to file the technical report summary as an exhibit only in Tier 2 offerings?

Response

We have limited familiarity with Form 1-A and Regulation A, and are not in a position to make informed comment.

COMMENT 123

SEC Request for Comment

Would limiting disclosure of the information required under proposed subpart 1300 for issuers in Regulation A offerings increase the risk of inaccurate disclosure in such offerings or otherwise increase risks to investors?

Response

We have limited familiarity with Form 1-A and Regulation A, and are not in a position to make informed comment.

COMMENT 124

SEC Request for Comment

We seek comment and data on the magnitude of the costs and benefits identified as well as any other costs and benefits that may result from the adoption of the proposed rules. In addition, we are interested in views regarding these costs and benefits for particular types of covered registrants, such as smaller registrants or registrants currently reporting according to CRIRSCO-based disclosure codes.

Response

We are an engineering firm and as such it is not appropriate for us to comment on costs or benefits that may arise for registrants.

COMMENT 125

SEC Request for Comment

We seek information that would help us quantify compliance costs. In particular, we invite comment from registrants or other mining companies that have had experience reporting under any of the CRIRSCO-based disclosure codes. For example, what are the costs associated with the qualified person requirement? If reporting in Canada or Australia, what are the costs associated with producing and filing the technical report summaries?

Response

We are an engineering firm and as such it is not appropriate for us to comment on compliance costs that may arise for registrants.

We note that the costs of producing technical report summaries are highly variable, as they are project specific, and will depend on the project location, the stage of project development, and project complexity.

COMMENT 126

SEC Request for Comment

We invite comment on the structure of compliance costs. In particular, to what extent are the compliance costs fixed versus variable? Are there scale advantages or disadvantages in the compliance costs, both in terms of project size or company size?

Response

We are an engineering firm and as such it is not appropriate for us to comment on compliance costs that may arise for registrants.

COMMENT 127

SEC Request for Comment

Are our estimates of the difference in costs of a pre-feasibility study relative to a feasibility study reasonable? If not, what would be more reasonable estimates of the difference in costs?

Response

The costs of producing either a pre-feasibility study or a feasibility study are highly variable, as they are project specific, and will depend on the project location, the stage of project development, and project complexity.

COMMENT 128

SEC Request for Comment

We also seek comment on the alternatives to the proposed rules discussed in this section, and to the costs and benefits of each alternative. Are there any other alternatives that we should consider in lieu of the proposed rules? If so, what are those alternatives and what are their expected costs and benefits?

Response

We are an engineering firm and as such it is not appropriate for us to comment on alternatives, or any costs or benefits that may arise for registrants under alternative scenarios.

COMMENT 129

SEC Request for Comment

We are interested in comments and data related to any potential competitive effects from the proposed rules. In particular, we are interested in evidence and views on the current global competitive situation of U.S. mining registrants as well as the attractiveness of U.S. securities markets for foreign mining companies. To what extent does the current mining disclosure regime affect this competitive situation, if at all? Would the proposed rules improve the global competitiveness of U.S. mining registrants and securities markets? If so, how?

Response

We are an engineering firm and as such it is not appropriate for us to comment on this.