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Corporate Finance British Columbia Securities Commission
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Dear Sirs/Mesdames:

RE: CSA Consultation Paper Comments

The writer has recently retired from the partnership of a national law firm after nearly 40 years of professional practice in the mining and securities law area. The views expressed herein are mine alone and include my views both as a lawyer and as an investor in resource issuers.

Executive Summary

I believe the empirical evidence is that NI 43-101 is functioning reasonably well. I think this is evident from the fact that the regulator of the world's largest capital market, the SEC, has with its recent "Modernization Rules" adopted many, if not most, of the concepts in NI 43-101, albeit with some nuanced differences. These differences may lie at the heart of some of the CSA questions posed in the Consultation Paper.

I believe that the instrument could be improved by making it expressly more connected to the concept of *material to the issuer* in a number of areas, and less (seemingly) arbitrarily prescriptive. Moreover, I think the implied thrust of the CSA questions to expand the instrument to incorporate additional non-technical matters such as indigenous people's rights is moving in the wrong direction.

Amending the Instrument to provide a more express connection to the concept of *materiality to the issuer* would allow more flexibility in several of its current requirements including: the 45 day technical report filing deadline, the requirement to retain an independent QP, the requirement for current personal inspection, and inclusion of non-CIM classified by-products in preliminary economic assessments (PEAs) and the continued use of PEAs after reserves have been declared.

In regards to mandating further disclosure about indigenous people's rights, I note the instrument already contemplates a general consideration of title and mining regime issues both directly and via its several general catchall provisions. A discussion of indigenous people's issues is usually legally complex, and involves highly sensitive and confidential information which is not appropriate for a report which is ostensibly technically and scientifically focussed. Requiring the QP to both incorporate and associate with (and rely upon) third-party legal experts in a complex

area of law can result in the QP becoming the arbiter of the capabilities of legal/political experts which is a role I believe the QP is not trained to handle. Worse, requiring the QP to decide on which professionals to rely upon could lead to the QP being involved with “opinion shopping” about indigenous peoples’ rights.

A. Improvement and Modernization

Q1-2 Pre-resource issuers and alternative presentation formats

The current Form is broadly worded and when complied with in good faith informs the reader as reasonably as is practicable. I note the SEC’s recently adopted “Modernization Rules” (see Q 25 below) contemplate a discussion about the “exploration target” which may be a more understandable layman’s term than is used in Form Item 8 “Deposit Types” (although the substantive requirements are similar). It seems to me it would enhance comprehensibility to change the heading of Item 8 to “Deposit Types and Exploration Targets” and require some discussion of the actual targets, and the consequences of missing the targets, all of which ties into Item 26 Recommendations.

The NI 43-101 Technical Report should remain the base disclosure document for the “scientific and technical” information about a mineral project. I do not see how investors would be better served by having technical and scientific information presented in a mix of other disclosure documents. Non-technical aspects of the project such as legal and socio-political should be best discussed in other disclosure documents such as MD&As and AIFs. A new NI 43-101 Technical Report is triggered when material new scientific or technical information is developed by the issuer, however legal and political factors are outside of its control. Material changes in the local law respecting indigenous peoples’ rights would for example, and using the same logic as new technical information, trigger a new report although they are matters outside an issuer’s control and would necessitate all aspects of the project be updated.

Q#3 Alignment with other Jurisdictions

Efforts by CSA towards alignment with the SEC which oversees a deeper capital market is appropriate and will increase the likelihood that compliance with Canadian standards will be fully acceptable to the SEC. The Modernization Rules contain thoughtful approaches to the disclosure required around the determination of resources which should be considered, if not followed, by CSA. The SEC’s use of a certified summary of the technical report and the emphasis on “plain English” seems a step forward (as I note further at the end of this letter).

Q4 45-day Technical Report Filing Deadline

I think rather than shortening the 45-day period, CSA should consider a more flexible approach to the deadline requirement for filing new technical reports based on a less “binary” approach to materiality. My suggestion is that CSA should adopt an approach that allow issuers some discretion as to the appropriate filing date based on their own assessment of the materiality of the new information. Practical administration of securities regulation is no doubt simplified by treating “materiality” as a binary concept, however capital markets recognize materiality as a spectrum. Establishing a uniform 45-day filing deadline is an example of imposing a binary treatment. A more flexible approach would require the issuer which is disclosing new technical or scientific

information in a news release to be able to specify a planned target date for filing of the related technical report. If the information were assessed by CSA to be particularly material and unexpected, 45 days may well be too long a period. On the other hand, much technical or scientific information may be only "arguably" material and so specifying a uniform filing deadline often means unnecessary pressures on the issuer and QPs and an incentive to take the position the information is "not material".

CSA staff should be guided both by the nature of the news release (i.e. are the announced results surprising or dubious) and by the market's reaction to the news release. CSA should have the discretion to require the issuer to accelerate an issuer's proposed target filing date if it disagrees with the proposed filing date or if another event intervenes, such as a financing. Absent these events, the issuer should be afforded reasonable discretion to determine and disclose its report filing target dates.

Q5- Current Personal Inspection Requirements

It is difficult to see the point of sending QPs on-site in many circumstances where either technological solutions or reliable local professionals who may not be QPs can be used. While there will be circumstances where a current personal inspection by one or more of the responsible QPs is essential, I submit that it should be a matter for the geological and engineering professionals to determine, and for CSA to monitor rather than prescribe. This is another case where the "materiality" of the personal inspection to the Technical Report should be considered by the issuer and the QP and some reasonable discretion afforded them. The issuer should disclose its decision in regards to the need for a personal inspection by the QP and CSA staff should have the right to require an inspection. But the current regime seems to a degree, to fetishize the personal inspection as a requirement for every project every time, perhaps a lingering holdover from Bre-X.

B. Data Verification Disclosure Requirements

Q 6-8 No comment other than to note paucity of any litigation surrounding the issue of data verification so one might well question if it is a concern requiring any material amendment.

C. Historical Estimate Disclosure Requirements

Q 9-10 I believe historical estimates are substantially discounted by investors because they appreciate that old information is inherently less reliable and because if the mineral project were robust, the project would likely have advanced since the historical estimates were made. It seems that the restrictions and cautionary requirements of the instrument adequately put investors on reasonable notice about the limitations of historical estimates. CSA's comments concerns seem to relate more to a concern with non-compliance with the requirements than a need to change them.

D. Preliminary Economic Assessments

Q 11 Enhancing the precision of PEAs

CSA questions whether the form requirements for PEAs should include additional prescriptive fine-tuning about costs or other input parameters. As with historical estimates, my experience is

that investors substantially discount the conclusions of PEAs and the announcement of PEAs rarely have a lasting material effect on the issuer's share price.

Appendix A to this letter includes a high-level survey of 51 PEAs announced by public issuers over the last approximately 12 months. Appendix A, Part 1 shows a comparison of the PEA's estimated after-tax net present value (NPV) of the mineral projects and compares the NPV to the issuer's implied market capitalization by share price. While one would expect that an issuer's market capitalization would reflect some discount to the NPV, the disconnect is often astonishing with the market capitalization more than a 90% discount to the NPV. Part 2 of Appendix A looks at the share price immediately before and after the PEA announcement date as well as 30 days later. Of the 51 PEAs announced, the share prices of 35 of the issuers was down immediately following the PEA. The majority of issuers (28) experienced moves of under 8% either positive or negative and only 12 experienced moves of over 12%.

While Appendix A was not subjected rigorous regression analysis, nor was it adjusted for multi-property issuers or other factors that could influence share price, I believe it can be fairly said that the announcement of a PEA is an event which generally has little effect on the issuer's share price and that the issuer's share price often bears little resemblance to the economic conclusions of the PEA as to the "value" of the mineral project.

Given the early-stage nature of PEA, the fact that the most critical input (future metal prices) is a complete guess, that inferred resources may be included and very conceptual mine planning is involved, all suggest that prescribing additional fine-tuning of the cost inputs will not move the needle as regards the reliability. I certainly do not subscribe to any view that the market reaction to PEA's would be less muted if the analysis were somehow made more rigorous. To borrow from Mark Twain, the market understands that predictions about mineral projects are hard, especially about their future.

Q 12 Cautionary Notice in PEAs

The required cautionary notice focusses on the inclusion of inferred resources which actually distracts from the danger of reliance on a PEA in that it may suggest the inclusion of inferred resources may be the primary risk associated with it. I believe that merely advising readers that the PEA may not be "realized" is unclear to most readers. A more generic and comprehensive disclaimer should perhaps be required that states prominently that PEAs are *highly conjectural and uncertain in nature and that empirically the vast majority of positive PEAs involve mineral projects which never achieve commercial production.*"

Q 13 QP Independence requirement for PEA Changes

In its paper, CSA uses the term "significant" in relation to changes to the PEA when the Form references changes in the PEA that are "*material to the issuer*". In my view and based on my review of market reactions to PEAS, it follows that changes to a PEA too are rarely "*material to an issuer*" and hence mandating involvement of an independent QP is generally unnecessary. This is another case where I believe CSA should allow issuers to self-assess whether the nature of the changes to the PEA are truly *material to the issuer* and disclose in the news release which announces the PEA changes if (and when) they intend to retain an independent QP to support the

disclosure. CSA staff should merely monitor this self-assessment in the context of the nature of the PEA changes and the market's reaction to them.

Q 14 Preclusion of New PEAs for Deposits on which Reserves were Previously Declared

CSA questions whether an issuer that has declared mineral reserves on a project should in effect be precluded from disclosing a further PEA. Given the substantial discounting that applies to PEAs it would seem that some narrative in the PEA clarifying how and why its conclusions are inconsistent with the previous reserve estimations would be a better approach than some blanket interdiction. A PEA which posits a significantly different mine model should state that if the new model is pursued it means that unless and until a pre-feasibility study otherwise confirms, any previously announced proven or probable reserves for that project should be considered to be withdrawn or in doubt.

Q 15 Uncategorized By-Product Credits

Materiality-based reasoning also applies to the CSA questioning the appropriateness of including metal by-product credits in a PEA or other economic model where the mineralized material has not been estimated within CIM-classified resource categories. If the inclusion of these credits would be *material to the issuer* then they should require that the necessary work be completed to ensure the appropriate CIM classification. I again distinguish that something can be arguably significant to a PEA yet still not be "*material to the issuer*".

E. Qualified Person Definition

Q16 Clarity of QP definition

I do not find the definition of QP unclear, I find it inappropriately arbitrary. The justification for a five-years-experience requirement for all certifying QPs does not take into account the nature of the particular assignment. It is difficult to comprehend how a university graduate geologist with 59 months of experience is unable to recommend a modest first stage exploration program of say surface geophysical and geochemical work, but a person with 61 months experience can certify a feasibility report. My suggestion would be that CSA eliminates the five-year rule relating to professional society membership and/or experience and require only current membership and sufficient relevant experience given the *materiality to the issuer* of the report which is being certified. The Instrument should be amended to provide it is the number of years of experience that counts, not the number of years membership in a professional organization (as long as the QP is a member in good standing at the time of the certification). Finally, I note this kind of arbitrary determination of years-required-for-competence is inexplicably unique to QPs and not applicable to other industry professionals such as lawyers and auditors

Q 17 Expansion of QP designation to other Disciplines

Provided the focus of the instrument remains scientific and technical information, I believe the definition of QP being limited to geoscience professionals is appropriate. While the definition of QP need not be expanded in my view, I believe that non-QPs should be permitted to perform certain functions such as personal current inspections, provided a QP assumes responsibility for that work.

Q 18 QP Independence Definition

In my view, the “reasonable person” test is flexible and I would also suggest that “independence” is often not a simple binary concept but one again related to *materiality to the issuer*. Corporate boards (and CSA) should take into consideration the *materiality to the issuer* of a report or recommendations when evaluating whether an insider can properly act as the QP for that report. If the report (say) simply recommends some early stage prospecting and surface work, I as an investor would not be concerned that the QP holds a stock option in the issuer. On the other hand, if the technical report is one that involves conclusions about a project that can be considered a *material change* to the issuer, then the report should be certified by an independent QP. I respectfully submit the vast majority of technical reports do not rise to the level of material changes and CSA can monitor this issue quite easily. Again, the absence of litigation on this issue suggests that QP non-independence has not been a cause of abuse, but if CSA has other information, sharing it would help in evaluating whether this is an actual or theoretical concern.

As regards the definition of independence, the reasonable person test is long-established in law and would seem to suffice, especially given the extensive companion policy guidelines.

Q19 Directors and Named Officers as QPs

Directors and named executive officers of an issuer should not be automatically precluded from acting as QPs, any more than lawyers and accountants who serve as directors and officers are precluded from opining on legal matters or certifying quarterly reports. Directors and officers have a duty to act honestly under corporate law and QPs have a duty to act honestly under the rules of their professional societies. It can also be added that the fiduciary duties of directors and officers are more extensive than merely the duty to act honestly. Hence, in regard to honesty, there is no inherent conflict of interest in a director or officer acting as QP per se. Conflicts of interest arise more in the context of the security holdings of the QP, not the legal office he or she may hold in an issuer. If the technical report contains conclusions material to the issuer and if the director or officer holds securities of the issuer which are material to his or her overall finances, then involvement of an independent should be required. Disclosure of the nature and extent of the security holding needs to be part of the report certification and CSA should monitor and consider, not simply prescribe generally.

F. Current Personal Inspections

Q20 Defining Current Personal Inspection

The Form (or Companion Policy) should be clarified to state that compliance with the current personal inspection requirement is a function of the importance of both the nature of the inspection and the materiality to the issuer of the analysis and recommendations of the report. The guidance should make clear that the report should discuss why the inspection was considered necessary (or not) for the accuracy of the report including what aspects of the project were inspected and why. The QP conducting the inspection must have, and should disclose, suitable experience and credentials necessary to conduct a meaningful inspection. It seems to me there could be many instances at the early stage of exploration where a current personal inspection is simply an

unnecessary burden on the issuer here alternative evidence such as photographic, satellite or drone information would suffice.

Reliance on reliable local professionals should also be in the reasonable discretion of the QPs and considered in the context of the *materiality to the issuer* of the personal inspection and conclusions of the report. There may well be times when all the QPs involved in an advanced project would properly need to have made a personal inspection. If CSA accepts this principle-based approach applying *materiality to the issuer*, then the inclement weather exemption in 6.2(2) of NI 43-101 would be unnecessary and could be deleted.

Q 21 Current Personal Inspection by QP Responsible for Resource Estimates

CSA should not arbitrarily prescribe which QPs need to do what personal inspections in which circumstances. The issue of the need for inspections should be in the hands of the responsible QPs and the issuers and determined by them in the context of the importance of the inspection and the materiality to the issuer of the conclusions of the report. A technical report should disclose why certain QPs were required, or not required, to conduct a personal inspection.

Q 22 Current Personal Inspections of Advanced Projects by all QP

See Item 21.

Q23 Bad Weather Exemption for Current Personal Inspections

As noted in my response to Q20, if a current personal inspection is a critical part of a report material to the issuer, there should be no exemption for weather or anything else, and if it is not critically important to a report which is also *material to the issuer*, an exemption is not needed.

G. Exploration Information

Q 24 I defer to QPs in regards to this question.

H. Mineral Resource / Mineral Reserve Estimation

Q 25 Economic and Technical Assumptions Underlying Resource Estimation

One can contrast the relatively brief requirements of Form Item 14: “provide sufficient discussion of the key assumptions, parameters and methods used to estimate the mineral resources for a reasonably informed reader to understand the basis for the estimate and how it was generated” with the much more detailed requirements of the Modernization Rules. Using the Modernization Rules would bring a greater degree to comparability to resource estimation so I include them for contrast appreciating there is overlap with NI 43-101:

- The qualified person must estimate cut-off grades based on assumed costs for surface or underground operations and commodity prices that provide a reasonable basis for establishing prospects of economic extraction for resources. The qualified person must disclose the price used for each commodity, and explain, with particularity, his or her reasons for using the selected price, including the material assumptions underlying the selection. This explanation must include disclosure of the time frame used to estimate the commodity price and unit costs for cut-off grade estimation and the reasons justifying the selection of that time frame. The qualified

person may use a price set by contractual arrangement, provided that such price is reasonable, and the qualified person discloses that he or she is using a contractual price.

- When the qualified person reports the grade or quality for a multiple commodity mineral resource as metal or mineral equivalent, he or she also must 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;
- Discuss the uncertainty in the estimates of inferred, indicated, and measured mineral resources and explain the sources of uncertainty and how they were considered in the uncertainty estimates. 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 underlying the resource; and
- The qualified person must provide a qualitative assessment of all relevant technical and economic factors likely to influence the prospect of economic extraction to establish economic potential and justify why he or she believes that all issues can be resolved with further exploration and analysis. These factors include, but are not limited to, to the extent material:
 - 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 assessing prospects of economic extraction 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 technical and economic factors, including plans, negotiations, or agreements with local individuals or groups, which are necessary to demonstrate reasonable prospects for economic extraction.
- In complying with the above requirements, the qualified person must take into account the following instructions:

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.

- Mineral resources must generally be reported exclusive of mineral reserves; however, in the 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.
- Unless otherwise stated, cut-off grades also refer to net smelter returns, pay limits and other similar terms.

I would recommend adoption of similar requirements as the Modernization Rules for inclusion in Item 14 or the Companion Policy.

Q 26 a) & b) Resource QP Responsibility for Current and Legacy Data Verification

The QP responsible for resource estimation should not be entitled to simply assume the correctness of, and disclaim responsibility for, the data on which the resource estimate is based. The QP should describe what procedures he or she conducted on the data or else explain why no review or test checks of the data was deemed necessary. The QP must assume responsibility for any decision not to test-check if that proves to be a negligent act in law. If the QP is satisfied with the integrity of the process by which the data was developed and understands that he or she cannot disclaim responsibility for its use, then that should suffice in lieu of more prescriptive Form requirements.

Q 27 Risk Disclosure Enhancement

While material risk factors are already captured by the Form requirements, if the disclosure requirements of the Modernization Rules are adopted as per Q 25, these would be further detailed.

I. Environmental, Social and Community Relations Disclosure

Q 28-30. The Form already requires discussion of “any other significant factors or risks” so the question is whether CSA needs to alter or augment the Form to prescribe additional requirements about these factors (presumably) on the assumption the QP will not otherwise think of them. I personally don’t think this is necessary, but would suggest that the QP be required to confirm he or she has at least conducted a local media search about the project as this often yields information about opposition to it, or information about particular environmental or political sensitivities in the area, which the QP may not otherwise be aware of.

J. Rights of Indigenous Peoples

Q 31-33 Form item 4(d) requires a discussion the nature and extent of the issuer's title to, or interest in, the property including surface rights, legal access, and item 4(h) requires disclosure of any significant factors that affect access, title, or the right or ability to perform work on the property. The “nature” of the issuer’s title already encompasses the notion of the interests of the state and other stakeholders such as indigenous peoples. Given that the “technical” report is be scientific and technical in nature, I am of the view that it should not purport to go beyond a broad description of these issues for several reasons.

Firstly, indigenous peoples’ rights are often asserted but unproven so it is not appropriate to provide investors with technical report disclosure which purports to ensure that they “fully understand and appreciate” legal rights when the nature and extent of such rights are not yet fully established. Indeed in British Columbia the very concept of the “Crown’s duty to consult” is premised on a recognition that for asserted but unproven claims the duty to consult will placed on a continuum based in part on the strength of claim. This is judicial recognition that, while such assertions must be reckoned with even in the pre-proof context, knowing exactly what impact such assertion have in any particular case is a complex legal question admitting of no simple answer.

Even imposing an obligation to simply disclose known claims would be problematic because there is no central registry of claims, they can in any change over time as First Nations sometimes make assertions over areas they previously did not, and there can be disputes as to who validly speaks for a First Nation in terms of making such assertions. Many of these problems are not unique to BC.

In addition to the extreme complexity of articulating indigenous peoples’ rights, is the concern is that the QP will be left to rely on experts in circumstances where the QP does not have the skill set to responsibly evaluate the expertise of the legal or other expert being relied upon. There will be a risk of opinion shopping with the result that either the QP is at risk for association with a faulty opinion or if the QP is permitted to disclaim responsibility for it, the public will be at risk for the backdoor introduction of faulty opinions.

Articulating indigenous peoples’ rights often involves highly confidential negotiations or advice about the nature of these rights. There are often competing claims by indigenous peoples amongst themselves. The issuer may secure historical ethnographical and strength of claim assessments

which are highly confidential because they directly impact the negotiations between issuers and persons claiming to hold these rights with regards to impact and benefit agreements. Requiring this level of analysis is like asking an issuer involved in civil litigation to outline all its legal arguments and evidence and put that in the public domain so that investors “fully understand and appreciate” the lawsuit.

Finally, indigenous peoples’ rights are often a central concern of investors and need to be addressed in the issuer’s continuous disclosure filings. Such disclosures may need regular updating and hence do not belong in technical reports whose the triggering events are related to material new technical or scientific information.

Suggesting that a QP or any other expert can provide disclosure that allows “investors to fully understand and appreciate all significant risks and uncertainties” in respect of indigenous people’s rights is not a realistic goal.

K. Capital and Operating Costs, Economic Analysis

Q34-37 Capital and Operating Costs, Economic Analysis

An old mining saw says one can never really know if a mine was profitable until after it has been depleted and reclaimed. Given the unknowability of the future revenue side of a mining operation, it is hard to see to how additional parsing of the cost side will significantly change the overall risk level associated with the project. The cost side too is subject to wide fluctuations driven by inflation and supply chain issues, central bank discount rates and currency fluctuations all of which are unknowable notwithstanding there is always a degree of “consensus” about forecasting them at any point.

My personal experience and the limited empirical evidence which I developed in Appendix A suggests to me that investors understand these uncertainties which perhaps explains why issuers typically trade at a fraction of the NPVs of announced PEAs (and never higher as the market does not think that fine tuning anything will “improve” the economics). Investors also understand that the uncertainty around the timing of the governmental approval process makes both revenue and cost predictions out-of-date the day after they are published often making it quite pointless to try to achieve greater precision other than immediately before a formal production decision.

I respectfully submit that CSA should try to develop empirical evidence that suggests a more “prescriptive” Form will provide benefits in excess of the increased burden. Evidence might include, for example, showing how economic or feasibility reports with more precise costing resulted in more predictable outcomes for the project. CSA should consider reviewing historical PEAs and feasibility studies in the context of actual subsequent operating experience of the mines that were later developed on those projects in order to empirically assess this issue.

L Other

In keeping with the reminders in the Modernization Rules, I believe that as a person who has read a great number of technical reports that there should be greater emphasis placed on “plain English” usage in technical reports. Technical report authors should be required to provide understandable explanations for more complex geological terminology and include a glossary so that geological

jargon can be made reasonably comprehensible to lay investors. The current practice of unrestrained use of geo-jargon is an example of perfectly accurate technical disclosure being the enemy of good disclosure.

In my view an issuer cost analysis of certain technical reports such as PEAs and feasibility studies should be required disclosure. While the amount of money spent on technical reports is not directly determinative of their value or reliability, it seems to me the costs are important to disclose, monitor and aggregate for comparative reasons. This disclosure would include a discussion of the costs of all of the previous work on which the report is premised. Investors should not have to parse financial statement notes to understand the aggregate monies involved in the past work supporting the report's conclusions. For comparison, CSA requires three-year disclosure issuers of annual auditor fees but fees paid to independent QPs for reports, which are arguably much more important drivers of junior explorer share prices than financial statements, remain undisclosed.

I hope the foregoing perspectives are of some use to you and would be pleased to discuss this letter with you at your convenience.

Yours very truly,

Bernhard Zinkhofer Law Corp.

Per

Bernhard Zinkhofer, Dir.

A handwritten signature in black ink, appearing to read 'B Zinkhofer', written over the typed name.

Appendix A

Part 1. PEA After-Tax Net Present Value (NPV) compared with Issuer Market Cap. (not adjusted for multi-property issuers or other factors)

Date of PEA Announcement	Name of Issuer	Share price approx. 30 days later	After- Tax NPV (millions)	Issuer's Implied market cap approx. 30 days after (CAD millions)
August 11, 2022	Erin Ventures Inc.	0.050	CAD\$524.9	\$8
(Erin and Temas Temas share ownership)	Temas Resources Corp.	0.0655	CAD\$524.9	\$5
August 8, 2022	Seabridge Gold	17.48	USD\$7,900	\$1,000
August 2, 2022	Altus Strategies Plc.	0.750	USD\$150	\$88
July 28, 2022	Imperial Mining Group Ltd.	0.070	CAD\$1.72 billion	\$12
June 27, 2022	Galane Gold Ltd.	0.1000	Pre-tax NPV USD\$66.4	\$36
June 27, 2022	Manganese x Energy Corp.	0.3100	CAD\$486	\$39
June 23, 2022	Sonoro Gold Corp.	0.1060	USD\$53.5	\$13
June 17, 2022	Kuya Silver Corp.	0.5700	CAD\$46.2	\$26
June 8, 2022	Hudbay Minerals Inc.	4.43	CAD\$1.296	\$1,000
June 7, 2022	Search Minerals	0.1100	CAD\$1.31	\$46
June 13, 2022	Bonterra Resources Inc.	0.6900	CAD\$48.3	\$87
May 24, 2022	Osisko Development	6.250	CAD\$764	\$473

Date of PEA Announcement	Name of Issuer	Share price approx. 30 days later	After- Tax NPV (millions)	Issuer's Implied market cap approx. 30 days after (CAD millions)
May 6, 2022	Golden Minerals Company	0.4800	USD\$22.5	\$79
April 21, 2022	Fox River Resource Corp.	0.3900	CAD\$2,500	\$20
April 11, 2022	Spruce Ridge Resources Ltd.	0.0700	CAD\$9.3	\$13
March 30, 2022	Excelsior Mining Corp.	0.2350	CAD\$1,348	\$65
March 15, 2022	Candente Copper Corp.	0.1800	USD\$1,010	\$49
March 14, 2022	Anacortes Mining Corp.	1.3600	USD\$165.9	\$58
February 23, 2022	Galleon Gold Corp.	0.5600	CAD\$240	\$26
February 22, 2022	Rockcliff Metals Corp.	0.0600	CAD\$128.6	\$19
February 8, 2022	Golden Independence	0.0690	USD\$35	\$4
January 26, 2022	McEwen Mining	11.5000	CAD\$137	\$545
January 21, 2022	Tarachi Gold Corp.	0.1700	CAD\$14.3	\$15
January 20, 2022	Sierra Metals Inc.	2.2000	US\$407.7	\$361
January 18, 2022	Sabre Gold Mines Corp.	0.0700	CAD\$112	\$44
January 13, 2022	AbraSilver Resources Corp.	0.3950	CAD\$473.2	\$191
January 13, 2022	Discovery Silver Corp.	1.8700	CAD\$1,500	\$623

Date of PEA Announcement	Name of Issuer	Share price approx. 30 days later	After- Tax NPV (millions)	Issuer's Implied market cap approx. 30 days after (CAD millions)
January 13, 2022	Clean Air Metals Inc.	0.2450	C\$293	\$41
January 13, 2022	GCM Mining	5.5500	USD\$794	\$544
December 22, 2021	Aura Minerals Inc.	11.91	USD\$86	\$865
December 15, 2021	Loncor Gold Inc.	0.6000	USD\$624	\$84
December 8, 2021	Noram Lithium Corp.	0.8000	CAD\$1,299	\$60
November 26, 2021	Standard Lithium Ltd.	10.000	USD\$1,970	\$2,000
November 10, 2021	Norzinc Ltd.	0.0400	CAD\$299	\$30
November 9, 2021	i-80 Gold Corp.	2.8400	USD\$244.9	\$678
November 5, 2021	Copper Fox Metals Inc.	0.2300	USD\$842.1	\$121
October 27, 2021	Nevada Lithium Resources Inc.	0.4800	CAD\$1,500	\$30
October 20, 2021	Probe Metals Inc.	1.8800	CAD\$598	\$273
October 14, 2021	Tinka Resources Ltd.	0.2000	USD\$433	\$68
October 14, 2021	Silver Elephant Mining Corp.	2.8000	CAD\$260.8	\$68
October 13, 2021	Iconic Minerals Ltd.	0.1900	CAD\$1,500	\$25
October 7, 2021	Cerrado Gold Inc.	1.7800	USD\$617	\$136
September 9, 2021	Northern Dynasty Minerals	0.5200	CAD\$2,300	\$275

Date of PEA Announcement	Name of Issuer	Share price approx. 30 days later	After- Tax NPV (millions)	Issuer's Implied market cap approx. 30 days after (CAD millions)
September 1, 2021	Minera IRL Ltd.	0.0771	USD\$189	\$18
August 30, 2021	Chesapeake Gold Corp.	3.5700	CAD\$852 million	\$240
August 19, 2021	Leading Edge Materials	0.2200	CAD\$762 million	\$33
August 4, 2021	Mexican Gold Mining Corp.	0.0800	CAD\$35 million	\$10
June 24, 2021	Pasofino Gold	1.0800	USD\$627	\$34
June 4, 2021	Bunker Hill Mining Corp.	0.1980	CAD\$143	\$33
January 26, 2021	Medgold	0.0550	USD\$86	\$7
April 6, 2020	Kore Mining	0.7400	CAD\$457	\$66

Part 2. Market Reaction to Preliminary Economic Assessment ("PEA")
(not adjusted for multi-property issuers or other factors)

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
August 11, 2022	Erin Ventures Inc.	0.0700	0.066	0.050	-14.28	.05	CAD\$524.9	\$8
Erin and Temnas share project ownership	Temnas Resources Corp.	0.0650	0.0700	0.0655	0.000	.010	CAD\$524.9	\$5
August 8, 2022	Seabridge Gold	18.020	18.166	17.48	-5.400	16.0	USD\$7.9	\$1,000
August 2, 2022	Altus Strategies Plc.	0.7100	0.7366	0.750	-5.63	0.75	USD\$150	\$88
July 28, 2022	Imperial Mining Group Ltd.	0.0750	0.0733	0.07	7.692	0.065	CAD\$1,720	\$12

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
June 27, 2022	Galane Gold Ltd.	0.1000	0.096	0.1000	-10.000	0.000	Pre-tax NPV USD\$66.4	\$36
June 27, 2022	Manganese x Energy Corp.	0.2600	0.2700	0.3100	-3.571	10.714	CAD\$486	\$39
June 23, 2022	Sonoro Gold Corp.	0.1085	0.109	0.1060	2.135	-1.578	USD\$53.5	\$13
June 17, 2022	Kuya Silver Corp.	0.6100	0.616	0.5700	-4.761	-9.523	CAD\$46.2	\$26
June 8, 2022	Hudbay Minerals Inc.	7.630	6.883	4.43	-15.693	-42.541	CAD\$1,296	\$1,000
June 7, 2022	Search Minerals	0.1800	0.1583	0.1100	-11.111	-38.888	CAD\$1,310	\$46
June 13, 2022	Bonterra Resources Inc.	1.0900	1.013	0.6900	-4.761	-34.285	CAD\$48.3	\$87

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
May 24, 2022	Osisko Development	10.010	9.500	6.250	-9.542	-37.872	CAD\$764	\$473
May 6, 2022	Golden Minerals Company	0.5500	0.4866	0.4800	-12.727	-12.727	USD\$22.5	\$79
April 21, 2022	Fox River Resource Corp.	0.7200	0.593	0.3900	-15.151	-40.909	CAD\$2,500	\$20
April 11, 2022	Spruce Ridge Resources Ltd.	0.1100	0.100	0.0700	-18.181	-36.363	CAD\$9.3	\$13
March 30, 2022	Excelstior Mining Corp.	0.3900	0.371	0.2350	-10.000	-41.250	CAD\$1,348	\$65
March 15, 2022	Candente Copper Corp.	0.2300	0.236	0.1800	0.000	-25.000	USD\$1,010	\$49
March 14, 2022	Anacortes Mining Corp.	1.4500	1.500	1.3600	15.384	4.615	USD\$165.9	\$58

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
February 23, 2022	Galleon Gold Corp.	0.6000	0.5400	0.5600	-6.666	-6.666	CAD\$240	\$26
February 22, 2022	Rockcliff Metals Corp.	0.0600	0.0583	0.0600	-8.333	0.000	CAD\$128.6	\$19
February 8, 2022	Golden Independence	0.0780	0.079	0.0690	-1.265	-12.658	USD\$35	\$4
January 26, 2022	McEwen Mining	12.0000	10.6666	11.5000	-6.140	0.877	CAD\$137	\$545
January 21, 2022	Tarachi Gold Corp.	0.1600	0.155	0.1700	-6.250	6.25	CAD\$14.3	\$15
January 20, 2022	Sierra Metals Inc.	1.6300	1.503	2.2000	-7.594	39.240	USD\$407.7	\$361
January 18, 2022	Sabre Gold Mines Corp.	0.0700	0.0600	0.0700	-14.285	0.000	CAD\$112	\$44
January 13, 2022	Abrasive Silver Resources Corp.	0.3750	0.3420	0.3950	-2.816	27.419	CAD\$473.2	\$191

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
January 13, 2022	Discovery Silver Corp.	2.0000	1.896	1.8700	0.000	-4.102	CAD\$1,500	\$623
January 13, 2022	Clean Air Metals Inc.	0.2150	0.218	0.2450	-4.545	11.363	C\$293	\$41
January 13, 2022	GCM Mining	5.2300	5.086	5.5500	-1.367	8.398	USD\$794	\$544
December 22, 2021	Aura Minerals Inc.	10.260	10.060	11.91	-1.485	17.920	USD\$86 million	\$865
December 15, 2021	Loncor Gold Inc.	0.7500	0.703	0.6000	-9.333	-20.000	USD\$624	\$84
December 8, 2021	Noram Lithium Corp.	0.9100	0.926	0.8000	-8.000	-20.000	CAD\$1,299	\$60
November 26, 2021	Standard Lithium Ltd.	13.20	13.570	10.000	6.984	-20.63	USD\$1.97	\$2,000
November 10, 2021	Norzinc Ltd.	0.0600	0.0600	0.0400	0.000	-33.333	CAD\$299	\$30

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
November 9, 2021	i-80 Gold Corp.	3.1000	3.2700	2.8400	3.726	-11.801	USD\$244.9	\$678
November 5, 2021	Copper Fox Metals Inc.	0.2900	0.276	0.2300	-3.448	-20.689	USD\$842.1	\$121
October 27, 2021	Nevada Lithium Resources Inc.	0.6100	0.530	0.4800	13.207	-9.433	CAD\$1,500	\$30
October 20, 2021	Probe Metals Inc.	1.8700	1.8800	1.8800	0.534	0.534	CAD\$598	\$273
October 14, 2021	Tinka Resources Ltd.	0.2000	0.2300	0.2000	9.523	-4.761	USD\$433	\$68
October 14, 2021	Silver Elephant Mining Corp.	2.6000	2.666	2.8000	-3.571	0.000	CAD\$260.8	\$68
October 13, 2021	Iconic Minerals Ltd.	0.2100	0.2100	0.1900	-16.666	-20.833	CAD\$1,500	\$25

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
October 7, 2021	Cerrado Gold Inc.	1.4500	1.506	1.7800	7.692	24.475	USD\$617	\$136
September 9, 2021	Northern Dynasty Minerals	0.5900	0.5733	0.5200	-10.000	-13.333	CAD\$2,300	\$275
September 1, 2021	Minera IRL Ltd.	0.0584	0.0596	0.0771	6.335	32.020	USD\$189	\$18
August 30, 2021	Chesapeake Gold Corp.	4.2000	4.1333	3.5700	-5.128	-16.783	CAD\$852	\$240
August 19, 2021	Leading Edge Materials	0.2650	0.221	0.2200	-4.347	-4.347	CAD\$762	\$33
August 4, 2021	Mexican Gold Mining Corp.	0.1400	0.1133	0.0800	-21.428	-42.857	CAD\$35	\$10
June 24, 2021	Pasofino Gold	1.1900	1.376	1.0800	-5.263	-18.796	USD\$627	\$34

Date of PEA Announcement	Name of Issuer	Share price day before announcement	Share price average close next 3 days	Share price 30 days later	Approximate appreciation (%) 3 days following	Approximate appreciation (%) one month following	After-Tax NPV (except where noted) M	Issuer's Implied market cap after 30 days from PEA
June 4, 2021	Bunker Hill Mining Corp.	0.2390	0.2540	0.1980	0.000	-22.047	CAD\$1.737	\$33
January 26, 2021	Medgold	0.0550	0.0550	0.0550	27.272	0.000	USD\$86	\$7
April 6, 2020	Kore Mining	0.2400	0.3300	0.7400	25.000	164.285	CAD\$457	\$66