

LEGAL ALERT

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MAJOR CHANGES TO SEC DISCLOSURE RULES FOR MINING COMPANIES WILL BECOME MANDATORY IN 2021

In October 2018, the Securities and Exchange SEC (“**SEC**”) adopted major changes (the “**New Mining Disclosure Rules**”) to the SEC’s disclosure regulations for public mining companies. Registrants have been permitted to comply with the New Mining Disclosure Rules on a voluntary basis since 2019, but they will become mandatory for fiscal years beginning on or after January 21, 2021. For mining company registrants that have not already begun to comply with the New Mining Disclosure Rules on a voluntary basis, it is not too early to become familiar with the new Rules.

The New Mining Disclosure Rules are intended to more closely align the SEC’s disclosure requirements and policies for mining operations with current industry and global regulatory practices, including those followed by some of the leading centers of the mining industry such as Australia and Canada.

Under the New Mining Disclosure Rules, a registrant with material mining operations must disclose specified information in its Securities Act and Exchange Act filings concerning such operations, including information about exploration results, mineral resources and mineral reserves.

For the first time, a registrant’s disclosure of exploration results, mineral resources, or mineral reserves in SEC filings must be based on and accurately reflect information and supporting documentation prepared by a mining expert—a “qualified person,” who meets certain required qualifications.

A registrant is required to obtain a dated and signed technical report summary from the qualified person or persons, which identifies and summarizes the information reviewed and

We are able to provide counsel and guidance concerning SEC registration and reporting requirements, including with respect to the New Mining Disclosure Rules. For additional information, please contact the attorneys named below or the attorney with whom you have a primary relationship.

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conclusions reached by each qualified person about the registrant's mineral resources or mineral reserves determined to be on each material property. A registrant must file the technical report summary as an exhibit to the relevant SEC filing when disclosing mineral reserves or mineral resources for the first time or when there is a material change in the mineral reserves or mineral resources from the last technical report summary filed for the property.

Consolidation of the Mining Disclosure Requirements

In order to implement the New Mining Disclosure Rules, the SEC adopted amendments to the disclosure requirements for mining registrants, and related guidance, currently set forth in Item 102 of Regulation S-K under the Securities Act of 1933, as amended (the "**Securities Act**") and the Securities Exchange Act of 1934, as amended (the "**Exchange Act**") and in Industry Guide 7. The New Mining Disclosure Rules rescind Guide 7 and codify the SEC's mining property disclosure requirements in new subpart 1300 of Regulation S-K.

Under the New Mining Disclosure Rules, a registrant must provide the disclosure specified in subpart 1300 of Regulation S-K if its mining operations are "material" to its business or financial condition. For purposes of subpart 1300, the term "**material**" has the same meaning as under Securities Act Rule 405 or Exchange Act Rule 12b-2. ["The term material, when used to qualify a requirement for the furnishing of information as to any subject, limits the information required to those matters to which there is a substantial likelihood that a reasonable investor would attach importance in determining whether to purchase the security registered"].

Definitions of Exploration, Development and Production Stage

Under the New Mining Disclosure Rules, mining companies are classified into the following categories, which depend on the nature of their mining properties:

- An "**exploration stage issuer**" is one that has no material property with mineral reserves;
- A "**development stage issuer**" is one that is engaged in the preparation of mineral reserves for extraction on at least one material property; and
- A "**production stage issuer**" is one that is engaged in material extraction of mineral reserves on at least one material property.

A registrant that does not have 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.

Specific Disclosure Requirements

Requirements for Summary Disclosure

The New Mining Disclosure Rules require that registrants with material mining operations, which own or otherwise have economic interests in two or more mining properties, provide summary disclosure of their mining operations in either narrative or tabular format.

The summary disclosure must include annual production on an aggregated basis for the registrant's mining properties during each of the three most recently completed fiscal years. In addition, the disclosure should include the following information for the registrant's mining properties considered in the aggregate, and only as relevant:

- The location of the properties;
- The type and amount of ownership interests;
- The identity of the operator or operators;
- Titles, mineral rights, leases or options and acreage involved;

- The stages of the properties (exploration, development, or production);
- Key permit conditions;
- Mine types and mineralization styles; and
- Processing plants and other available facilities.

The New Mining Disclosure Rules require a registrant to provide a summary of its mineral resources (defined below) and mineral reserves (defined below) at the end of its most recently completed fiscal year, by commodity and geographic area, and for each property containing 10 percent or more of the registrant's mineral reserves or 10 percent or more of the registrant's combined measured and indicated mineral resources. The registrant is required to provide this summary, including the amount and grade or quality, for each 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.

In order to standardize the disclosure, facilitate a registrant's compliance with the disclosure requirements, and enhance investor understanding of this information, the New Mining Disclosure Rules require that a registrant provide the summary of all mineral resources and reserves at the end of the most recently completed fiscal year in tabular format. Registrants are required to use separate tables when reporting mineral resources and reserves, as required by Item 1303(b)(3) of Regulation S-K. The disclosure should follow the format of the tables designated as Tables 1 and 2 to paragraph (b) of Item 1303.

Mineral resources, reported in the summary disclosure provided in Table 1 to paragraph (b) of Item 1303, must be exclusive of mineral reserves.

All disclosure of mineral resources and reserves must be only for the portion of the resources or reserves attributable to the registrant's interest in the property.

Requirements for Individual Property Disclosure

The New Mining Disclosure Rules require that a registrant with material mining operations must disclose certain information about each property that is material to its business or financial condition. When determining the materiality of a property relative to its business or financial condition, a registrant must apply the same standards and other considerations to each individual property as required when determining whether its mining operations as a whole are material.

The registrant is required to provide a brief description of each material property, including: the property's location; existing infrastructure, including roads, railroads, airports, towns, ports, sources of water, electricity, and personnel; and 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.

In addition, the registrant is required to provide, as relevant to each material property: a brief description of the present condition of the property, the work completed by the registrant on the property, the registrant's proposed program of exploration or development, the current stage of the property as exploration, development or production, the current state of exploration or development of the property, and the current production activities; the age, details as to modernization and physical condition of the equipment, facilities, infrastructure, and

underground development; the total cost for or book value of the property and its associated plant and equipment; a brief history of previous operations, including the names of previous operators, insofar as known; and a brief description of any significant encumbrances to the property, including current and future permitting requirements and associated timelines, permit conditions, and violations and fines.

The New Mining Disclosure Rules require a registrant to disclose, if mineral resources or reserves have been determined, a summary of all mineral resources or reserves as of the end of the most recently completed fiscal year. For each property, the registrant is required to disclose in tabular format, as provided in Table 1 to paragraph (d) of Item 1304, for each class of mineral resources (measured, indicated, and inferred), together with total measured and indicated mineral resources, the estimated tonnages and grades (or quality, where appropriate), and in Table 2 to paragraph (d) of Item 1304, for each class of mineral reserves (proven and probable), together with total mineral reserves, the estimated tonnages, grades (or quality, where appropriate), cut-off grades and metallurgical recovery. The disclosures in these Tables 1 and 2 will be based on a specific point of reference selected by a qualified person (defined below). The registrant must disclose the selected point of reference for each of Tables 1 and 2 to paragraph (d) of Item 1304.

A registrant is permitted to modify the tabular formats in Tables 1 and 2 for ease of presentation, to add information, or to combine two or more required tables. This is intended to provide registrants with the flexibility to organize the required data to fit their own particular circumstances. The instructions makes it clear, however, that when combining tables, the registrant should not report mineral resources and reserves in the same table, and all disclosure of mineral resources must be exclusive of mineral reserves.

The New Mining Disclosure Rules require a registrant to compare each material property's mineral resources and reserves as of the end of the last fiscal year with the mineral resources and reserves as of the end of the preceding fiscal year, with the comparison including the following information:

- The mineral resources or reserves at the end of the last two fiscal years;
- The net difference between the mineral resources or reserves at the end of the last completed fiscal year and the preceding fiscal year, as a percentage of the resources or reserves at the end of the fiscal year preceding the last completed one;
- An explanation of the causes of any discrepancy in mineral resources including depletion or production, changes in commodity prices, additional resources discovered through exploration, and changes due to the methods employed; and
- An explanation of the causes of any discrepancy in mineral reserves including depletion or production, changes in the resource model, changes in commodity prices and operating costs, changes due to the methods employed, and changes due to acquisition or disposal of properties.

If the registrant has not previously disclosed mineral reserve or resource estimates in a SEC filing or is disclosing material changes to its previously disclosed mineral reserve or resource estimates, the New Mining Disclosure Rules require it to provide a brief discussion of the material assumptions and criteria underlying the estimates. The material assumptions and criteria will depend on the specific facts and circumstances surrounding the particular property and the mineral resource and reserve estimates. However, the disclosure of these assumptions and criteria must include all of the material information necessary for investors reasonably to

understand the disclosed mineral resources or reserves. In addition, the registrant must cite to corresponding sections of the technical report summary (defined below) if one is filed as an exhibit pursuant to Item 1302(b).

The New Mining Disclosure Rules provide that if a registrant is disclosing exploration activity and exploration results for any material property for its most recently completed fiscal year, it must provide summaries that include certain specified information, either in narrative or tabular format. For exploration activity, the summary must describe, for each material property as relevant, the sampling methods used, and, for each sampling method used, the number of samples, the total size or length of the samples, and the total number of assays. For exploration results, the summary must identify, for each relevant material property, the hole, trench or other sample that generated the exploration results, describe the length, lithology, and key geologic properties of the exploration results, and include a brief discussion of the exploration results' context and relevance. If the summary of exploration results only includes results from selected samples and intersections, it should be accompanied with a discussion of the context and justification for excluding other results.

If the registrant has not previously disclosed exploration results in a filing with the SEC, or is disclosing material changes to its previously disclosed exploration results, the New Mining Disclosure Rules require it to provide sufficient information to allow for an accurate understanding of the significance of the exploration results. This must include information such as exploration context, type and method of sampling, sampling intervals and methods, relevant sample locations, distribution, dimensions, and relative location of all relevant assay and physical data, data aggregation methods, land tenure status, and any additional material information that may be necessary to make the disclosure concerning the registrant's exploration results not misleading. The registrant must cite to corresponding sections of the summary technical report if one is filed.

The SEC staff believes that if material assumptions in the filed technical report summary are no longer valid, under current facts and circumstances, then using such a technical report summary to support disclosure of mineral resources or reserves can be misleading to investors. Consequently, the New Mining Disclosure Rules requires a filed technical report summary to be current with respect to all material assumptions and information, including assumptions relating to all modifying factors and scientific and technical information (e.g., sampling data, estimation assumptions and methods), as of the end of the registrant's most recently completed fiscal year.

The New Mining Disclosure Rules do not require a registrant to format any of its disclosure about its individually material properties or summary disclosure in XBRL.

The “Qualified Person” Requirement

Under the New Mining Disclosure Rules, a registrant's disclosure of exploration results, mineral resources, or mineral reserves in SEC filings must be based on and accurately reflect information and supporting documentation prepared by a “**qualified person**”, as defined in subpart 1300 of Regulation S-K.

The New Mining Disclosure Rules define a “**qualified person**” as a person who is 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. In addition, the proposed definition requires a qualified person to be an

eligible member or licensee in good standing of a “**recognized professional organization**” (as defined) at the time the technical report is prepared.

The registrant is responsible for determining that the qualified person meets the specified qualifications, and that the disclosure in the registrant's filing accurately reflects information provided by the qualified person.

A registrant must obtain a dated and signed 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 mineral resources or mineral reserves determined to be on each material property.

A registrant must file the technical report summary as an exhibit to the relevant SEC filing when disclosing mineral reserves or mineral resources for the first time or when there is a material change in the mineral reserves or mineral resources from the last technical report summary filed for the property.

While exploration results, if disclosed, must be based on the findings and conclusions of a qualified person, the New Mining Disclosure Rules do not require that a registrant obtain a dated and signed technical report summary from a qualified person to support the disclosure of exploration results. A registrant may elect to obtain a technical report summary in connection with the disclosure of exploration results on a material property and file it as an exhibit to the relevant SEC filing, but it is not required to do so.

The New Mining Disclosure Rules provide that, for Securities Act filings, the registrant must file a written consent from the qualified person as an exhibit to the registration statement. For Exchange Act reports, the registrant is not required to file the written consent obtained from the qualified person, but should retain the written consent for as long as it is relying on the qualified person's information and supporting documentation for its current estimates regarding mineral resources, mineral reserves, or exploration results.

A qualified person will be subject to expert liability under Section 11 of the Securities Act, subject to certain exceptions for information provided by third parties on which the qualified person relies such as economic information regarding macroeconomic trends, data, and assumptions, and interest rates, all of which are material to the economic analysis required to support the qualified person's reserve estimate.

In addition, the New Mining Disclosure Rules provide that any description in the technical report summary or other part of the registration statement of the procedures, findings, and conclusions reached about matters identified by the qualified person as having been based on information provided by the registrant shall not be considered a part of the registration statement prepared or certified by the qualified person within the meaning of Sections 7 and 11 of the Securities Act.

Treatment of Exploration Results

The New Mining Disclosure Rules provide that if the registrant is disclosing exploration activity or exploration results for its most recently completed fiscal year, it must then provide certain specified disclosures. The disclosure of exploration activity and exploration results is voluntary until such activity and the concomitant results become material for investors.

Once the exploration activity and related results become material, the New Mining Disclosure Rules require that such results must be disclosed. The registrant is required to make a good faith determination regarding the materiality of its exploration activity and exploration results at the end of each completed fiscal year based upon guidance that the SEC has included in the New Mining Disclosure Rules.

If a registrant discloses exploration results, the New Mining Disclosure Rules do not require the registrant to file a technical report summary to support such disclosure, even though the disclosure itself must still be based on information and supporting documentation by a qualified person.

The New Mining Disclosure Rules do not require the disclosure of exploration results by a registrant that has material mining operations in the aggregate but no individual properties that are material circumstances.

The Mineral Resource Disclosure Requirement

The New Mining Disclosure Rules require a registrant with material mining operations to disclose specified information in its Securities Act and Exchange Act filings concerning any “mineral resources”, as defined, that have been determined based on information and supporting documentation from a qualified person. A registrant with material mining operations that has multiple properties would have to provide both summary disclosure about its mineral resources for all properties and more detailed disclosure concerning its mineral resources for each material property.

Under the New Mining Disclosure Rules, while a registrant could not disclose that it has determined that a mineral deposit constitutes a mineral resource or mineral reserve unless that determination is based upon information and supporting documentation prepared by a qualified person, there is no requirement that a registrant make such an affirmative determination.

However, once a registrant with material mining operations does determine that it has mineral resources, based on information and supporting documentation of a qualified person, then, because of their importance to the potential valuation of the company and to investors, such information must be disclosed in an SEC filing.

Definition of Mineral Resource

The New Mining Disclosure Rules define “**mineral resource**” as a concentration or occurrence of 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 its economic extraction.

The term “**material of economic interest**,” as used in the definition of mineral resource, includes mineralization, including dumps and tailings, mineral brines, and other resources extracted on or within the earth’s crust. The term “material of economic interest” does not include oil and gas resources resulting from oil and gas producing activities, as defined in Regulation S-X, gases (e.g., helium and carbon dioxide), or water.

In order to classify a deposit as a resource, a qualified person must establish that there are reasonable prospects of economic extraction by estimating or interpreting key geological characteristics from specific geological evidence. A qualified person should have a higher level

of confidence to determine that a deposit is properly classified as a mineral resource (which is an estimate of tonnage and grade that has reasonable prospects of economic extraction) than to report exploration results (which may not indicate the existence of any tonnage with reasonable prospects of economic extraction) because of the relatively greater weight that investors are likely to place on estimates of mineral resources.

Classification of Mineral Resources

The New Mining Disclosure Rules require a registrant with material mining operations to classify its mineral resources into “**inferred**”, “**indicated**”, and “**measured**” mineral resources, in order of increasing confidence based on the level of underlying geological evidence. The SEC believes this classification requirement will improve the accuracy of a registrant’s mining disclosure in SEC filings, and thereby benefit investors, because it is based upon an assessment of “**geologic uncertainty**,” which is the risk related to the quality, quantity and location of the mineral in the ground. Geologic uncertainty directly affects two very significant estimates, production quantities per period and related cash flows, which are crucial to a registrant’s determination, and an investor’s understanding, of mineral resource disclosure.

The resource categories are defined as follows:

Inferred Mineral Resources

“**Inferred mineral resources**” are that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. “**Limited geological evidence**” means evidence that is only sufficient to establish that geological and grade or quality continuity is more likely than not. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence prospects of economic extraction in a manner useful for evaluation of economic viability.

Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, it may not be considered when assessing the economic viability of a mining project and may not be converted to a mineral reserve.

The qualified person must have a reasonable expectation that the majority of inferred mineral resources could be upgraded to indicated or measured mineral resources with continued exploration. In addition, the qualified person should be able to defend the basis of this expectation before his or her peers.

Indicated and Measured Mineral Resources

“**Indicated mineral resource**” is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. “**Adequate geological evidence**” means evidence that is sufficient to establish geological and grade or quality continuity with reasonable certainty. This means that the level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

An indicated mineral resource has a lower level of confidence than that applicable to a measured mineral resource and may only be converted to a probable mineral reserve.

“Measured mineral resource” is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling.

“Conclusive geological evidence” means evidence that is sufficient to test and confirm geological and grade or quality continuity. This means that the level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit.

Because a measured mineral resource has a higher level of confidence than that applying to either an indicated mineral resource or an inferred mineral resource, it may be converted to a proven mineral reserve or to a probable mineral reserve.

The Initial Assessment Requirement

The New Mining Disclosure Rules require that a registrant's disclosure of mineral resources must be based upon a qualified person's **“initial assessment”** supporting the determination of mineral resources. **“Initial assessment”** is defined as a preliminary technical and economic study of the economic potential of all or parts of mineralization to support the disclosure of mineral resources. The initial assessment must include the qualified person's qualitative evaluation of relevant technical and economic factors likely to influence the prospect of economic extraction to establish the economic potential of the mining property or project.

The initial assessment must include appropriate assessments of reasonably assumed technical and economic 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. An initial assessment is required for disclosure of mineral resources but cannot be used as the basis for disclosure of mineral reserves.

At a minimum, the qualified person's initial assessment must include a qualitative evaluation of modifying factors to establish the economic potential of the mining property or project (*i.e.*, that there are reasonable prospects for economic extraction of the mineral resource).

An initial assessment must include cut-off grade estimation, based on assumed unit costs for surface or underground operations and estimated mineral prices. **Cut-off grade** refers to the grade at which the destination of the material changes during mining. For purposes of the initial assessment, cut-off grade distinguishes between material that is going to the waste dump and material that is going to the processing plant (in surface mining) or between material that is not mined and material mined to be processed (in underground mining).

As part of the initial assessment, the qualified person must make assumptions about the two key determinants of cut-off grade estimation—**operating costs and commodity prices**. Any cut-off grade estimation that is not based upon, or does not disclose, these two assumptions may not fully meet the standard required to demonstrate reasonable prospects of economic extraction.

Qualitative Assessment of Factors and Permitted Assumptions

A qualified person must provide a qualitative assessment of all other 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.

The New Mining Disclosure Rules provide the minimum requirements for various factors that the qualified person must evaluate when preparing an initial assessment, pre-feasibility study, or feasibility study in a single table to facilitate a comparison of the modifying factors evaluation requirement across the three key technical studies to be used for mineral resource and reserve disclosure. The modifying factors evaluative process becomes more exacting as mining property assessment progresses from mineral resource estimation to mineral reserve estimation.

Table 1 to paragraph (d) of Item 1302 sets forth the assumptions permitted to be made when preparing the initial assessment as well as other technical studies. These include assumptions concerning infrastructure location and the required plant area, type of power supply, site access roads and camp or town site, production rates, processing method and plant throughput, post-mining land uses, and plans for tailings disposal, reclamation, and mitigation.

The assumption phase is temporary as the qualified person must substitute most assumptions with empirical evidence and facts as part of the pre-feasibility or feasibility study that is required for determining mineral reserves.

Treatment of Mineral Reserves

The Framework for Determining Mineral Reserves

The New Mining Disclosure Rules include a framework of applying modifying factors to indicated or measured mineral resources in order to convert them to mineral reserves. As part of this framework, the New Mining Disclosure Rules includes definitions of “**mineral reserves**,” “**probable mineral reserves**,” “**proven mineral reserves**,” and “**modifying factors**.”

“**Mineral reserve**” is an estimate of tonnage and grade or quality of indicated or measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, a mineral reserve is the economically mineable part of a measured or indicated mineral resource, including diluting materials and allowances for losses that may occur when the material is mined or extracted.

The determination that part of a measured or indicated mineral resource is economically mineable has to be based on a preliminary feasibility (pre-feasibility) or feasibility study conducted by a qualified person applying the modifying factors to indicated or measured mineral resources. Such study has to demonstrate that, at the time of reporting, extraction of the mineral reserve is economically viable under reasonable investment and market assumptions. Moreover, the study has to establish a life of mine plan that is technically achievable and economically viable, which is the basis of determining the mineral reserve.

The term “**mineral reserves**” does not necessarily require that extraction facilities are in place or operational, that the company has obtained all necessary permits or that the company has entered into sales contracts for the sale of mined products. It does require, however, that the qualified person has, after reasonable investigation, not identified any obstacles to obtaining permits and entering into the necessary sales contracts, and reasonably believes that the chances of obtaining such approvals and contracts in a timely manner are highly likely.

The New Mining Disclosure Rules provide that when used in reference to a mineral reserve, the term “**economically viable**” means that the qualified person has determined, using a discounted cash flow analysis, or has otherwise analytically determined, that extraction of the mineral

reserve is economically viable under reasonable investment and market assumptions. As used in this definition, "**investment and market assumptions**" includes all assumptions made about the prices, exchange rates, sales volumes and costs that are necessary and are used to determine the economic viability of the reserves.

The qualified person must use a price for each commodity that provides a reasonable basis for establishing that the project is economically viable. The qualified person will be required to explain, with particularity, his or her reasons for selecting the price and the underlying material assumptions regarding the selection.

In certain circumstances, the determination of mineral reserves may require the completion of at least a preliminary market study, in the context of a pre-feasibility study, or a final market study, in the context of a feasibility study, to support the qualified person's conclusions about the chances of obtaining revenues from sales. For example, a preliminary or final market study would be required where the mine's product cannot be traded on an exchange, there is no other established market for the product, and no sales contract exists.

The New Mining Disclosure Rules subdivide mineral reserves, in order of increasing confidence in the results obtained from the application of the modifying factors to the indicated and measured mineral resources, into **probable mineral reserves** and **proven mineral reserves**.

"**Probable mineral reserves**" is defined as the economically mineable part of an indicated and, in some cases, a measured mineral resource. For a probable mineral reserve, the qualified person's confidence in the results obtained from the application of the modifying factors and in the estimates of tonnage and grade or quality is lower than what is sufficient for a classification as a proven mineral reserve, but is still sufficient to demonstrate that, at the time of reporting, extraction of the mineral reserve is economically viable under reasonable investment and market assumptions. This lower level of confidence can be due either to higher geologic uncertainty when the qualified person converts an indicated mineral resource to a probable mineral reserve or higher risk in the results of the application of modifying factors at the time when the qualified person converts a measured mineral resource to a probable mineral reserve. A qualified person must classify a measured mineral resource as a probable mineral reserve when his or her confidence in the results obtained from the application of the modifying factors to the measured mineral resource is lower than what is sufficient for a proven mineral reserve.

"**Proven mineral reserves**" is defined as the economically mineable part of a measured mineral resource. For a proven mineral reserve, the qualified person must have a high degree of confidence in the results obtained from the application of the modifying factors and in the estimates of tonnage and grade or quality. In addition, a proven mineral reserve can only result from conversion of a measured mineral resource.

The New Mining Disclosure Rules include a number of guidelines for the conversion of mineral resources into mineral reserves. For example, if the uncertainties in the results obtained from the application of the modifying factors, which prevented a measured mineral resource from being converted to a proven mineral reserve, no longer exist, then the qualified person may convert the measured mineral resource to a proven mineral reserve.

A qualified person cannot convert an indicated mineral resource to a proven mineral reserve unless there is new evidence that justifies conversion of the indicated mineral resource to a measured mineral resource.

Also, a qualified person cannot convert an inferred mineral resource to a mineral reserve without first obtaining new evidence that justifies converting it to an indicated or measured mineral resource.

“Modifying factors” are defined as the factors that a qualified person must apply to indicated and measured resources and then evaluate in order to establish the economic viability of mineral reserves. A qualified person must apply and evaluate modifying factors to convert measured and indicated mineral resources to proven and probable mineral reserves. The definition provides examples of the modifying factors, which include, but are not restricted to: mining; processing; metallurgical; infrastructure; economic; marketing; legal; environmental compliance; plans, negotiations, or agreements with local individuals or groups; and governmental factors.

The determination that part of a measured or indicated mineral resource is economically mineable must be based on a preliminary feasibility (pre-feasibility) or feasibility study that discusses the qualified person’s application of the modifying factors to indicated or measured mineral resources, and demonstrates that, at the time of reporting, extraction of the mineral reserve is economically viable under reasonable investment and market assumptions.

The New Mining Disclosure Rules provide that the study must establish a life of mine plan that is technically achievable and economically viable, and which will be the basis of determining the mineral reserve.

The Type of Study Required to Support a Reserve Determination

The New Mining Disclosure Rules permit either a preliminary feasibility study or a feasibility study to support the determination and disclosure of mineral reserves.

A **“preliminary feasibility study”** (or **“pre-feasibility study”**) is defined as a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a qualified person has determined (in the case of underground mining) a preferred mining method, or (in the case of surface mining) a pit configuration, and in all cases has determined an effective method of mineral processing and an effective plan to sell the product.

A pre-feasibility study must include a financial analysis based on reasonable assumptions, based on appropriate testing, about the modifying factors and the evaluation of any other relevant factors that are sufficient for a qualified person to determine if all or part of the indicated and measured mineral resources may be converted to mineral reserves at the time of reporting. The study’s financial analysis must have the level of detail necessary to demonstrate, at the time of reporting, that extraction is economically viable. In addition, while a pre-feasibility study is less comprehensive and results in a lower confidence level than a feasibility study, a pre-feasibility study is more comprehensive and results in a higher confidence level than an initial assessment.

Factors to be considered in a pre-feasibility study are typically the same as those required for a feasibility study, but considered at a lower level of detail or at an earlier stage of development.

The list of factors is not exclusive. For example, a pre-feasibility study must define, analyze, or otherwise address in detail, to the extent material:

- 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;
- The preferred underground mining method or surface mine pit configuration, with detailed mine layouts drawn for each alternative;
- The bench lab tests that have been conducted, the process flow sheet, equipment sizes, and general arrangement that have been completed, and the plant throughput;
- The environmental compliance and permitting requirements, the baseline studies, and the plans for tailings disposal, reclamation and mitigation, together with an analysis establishing that permitting is possible; and
- Any other reasonable assumptions, based on appropriate testing, regarding the modifying factors sufficient to demonstrate that extraction is economically viable.

The New Mining Disclosure Rules define a “**feasibility study**” as a comprehensive technical and economic study of the selected development option for a mineral project, which includes detailed assessments of all applicable modifying factors together with any other relevant operational factors, and detailed financial analysis that are necessary to demonstrate, at the time of reporting, that extraction is economically viable. The results of the study may serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. Thus, a feasibility study is more comprehensive, with a higher degree of accuracy, and yielding results with a higher level of confidence, than a pre-feasibility study. A feasibility study must contain mining, infrastructure, and process designs completed with sufficient rigor to serve as the basis for an investment decision or to support project financing.

A feasibility study must contain the application and description of all relevant modifying factors in a more detailed form and with more certainty than a pre-feasibility study.

Both a pre-feasibility and a feasibility study must include the qualified person's detailed evaluation of all applicable modifying factors to demonstrate the economic viability of the mining property or project. Moreover, the technical report summary submitted by the qualified person to support a determination of mineral reserves must describe the procedures, findings, and conclusions reached for the pre-feasibility or feasibility study.

A pre-feasibility study must include a financial analysis at a level of detail sufficient to demonstrate the economic viability of extraction and must include an economic analysis that supports the property's economic viability as assessed by a detailed discounted cash flow analysis. This economic analysis must describe in detail applicable taxes and provide an estimate of revenues, which in certain situations (e.g., where the products are not traded on an exchange or no established market or sales contract exists) must be based on at least a preliminary market study.

Requirements for Technical Report Summaries

The New Mining Disclosure Rules require a registrant disclosing information concerning its mineral resources or mineral reserves determined to be on a material property to file a technical report summary by one or more qualified persons to support such disclosure of mineral resources or reserves. The qualified person(s) must identify and summarize the scientific and technical information and conclusions reached concerning initial assessments used to support disclosure of

mineral resources, or concerning preliminary or final feasibility studies used to support disclosure of mineral reserves, in the technical report summary.

The technical report summary must consist of some or all of 26 sections, depending upon the specific scope of the summary. A technical report summary that reports the results of a preliminary or final feasibility study would have to include all 26 sections. A technical report summary that reports the results of an initial assessment or that reports material exploration results could omit information required by certain of the proposed technical report summary sections.

The New Mining Disclosure Rules provide that the information specified under the various sections of the technical report summary is to be provided only to the extent that it is material. This clarification recognizes that, due to the diversity of operations in the mining industry, some sections may require little to no disclosure for certain registrants because those sections are not material to an investor's understanding of their particular mining operations.

In addition, the New Mining Disclosure Rules:

- permit the qualified person to disclose mineral resource estimates that include mineral reserves;
- permit the qualified person to use any reasonable and justifiable price when determining both mineral resource and reserve estimates;
- permit the qualified person to estimate both mineral resources and mineral reserves at a single point of reference selected by the qualified person;
- permit the qualified person to include inferred resources in the technical report summary's economic analysis when determining and disclosing mineral resource estimates; and
- require the qualified person to provide information describing the underlying property in which a royalty company registrant holds an interest only to the extent known or reasonably available.

The New Mining Disclosure Rules permit, but do not require, a registrant to file a technical report summary to support the disclosure of material exploration results.

The New Mining Disclosure Rules restrict the technical report summary from including large amounts of technical or other project data, either in the report or as appendices to the report. In addition, the qualified person must draft the summary to conform, to the extent practicable, with the plain English principles set forth under the Securities Act and Exchange Act.

Requirements for Internal Controls Disclosure

The New Mining Disclosure Rules require a registrant to describe the internal controls that it uses in its exploration and mineral resource and reserve estimation efforts, including the registrant's quality control and quality assurance programs, verification of analytical procedures, and comprehensive risk inherent in the estimation. A registrant must provide the required internal controls disclosure whether it is providing summary disclosure under Item 1303, individual property disclosure under Item 1304, or under both items.

Item 1305 requires disclosure of internal controls that the registrant has put in place to ensure that its exploration results and mineral resource and reserve estimates on its mining properties are reliable, and not for any other purpose.

Conforming Changes to Certain Forms Not Subject to Regulation S-K

Form 20-F

Under the New Mining Disclosure Rules, foreign private issuers that use Form 20-F to file their Exchange Act annual reports and registration statements, or that refer to Form 20-F for their Securities Act registration statements on Forms F-1, F-3, and F-4, will have to comply with the mining disclosure requirements of new subpart 1300 of Regulation S-K and the technical report summary requirements in Item 601(b)(96), as applicable.

The New Mining Disclosure Rules do not permit Canadian registrants that are not MJDS-eligible to continue to provide disclosure that meets the requirements of Canada's NI 43-101, nor do they permit non-Canadian registrants to file disclosure documents that meet the requirements of another mining disclosure code to satisfy their U.S. reporting obligations.

Form 1-A

The New Mining Disclosure Rules include revisions to Form 1-A that require Regulation A issuers with material mining operations to comply with all of the disclosure requirements in subpart 1300 of Regulation S-K as well as the technical report summary requirements in Item 601(b)(96), as applicable.

Transition Period and Compliance Date

The New Mining Disclosure Rules include a two-year transition period so that a registrant will not be required to comply with the new rules until the first fiscal year beginning on or after January 1, 2021. Thus, for a calendar year-end company, a registrant will be required to comply with the New Mining Disclosure Rules when filing Securities Act and Exchange Act registration statements on or after this date and when filing its Form 10-K or Form 20-F annual report for the fiscal year ended December 31, 2021.

A registrant may comply with the new mining property disclosure rules prior to the compliance date as long as they abide by all of subpart 1300's requirements. Until then, registrants should continue looking to Guide 7 for their mining property disclosures. Guide 7 will remain effective until all registrants are required to comply with the New Mining Disclosure Rules, at which time Guide 7 will be rescinded.