

## **Annex C**

### **Text of Proposed Form 43-101F1 *Technical Report***

#### **Table of Contents**

<b><u>ITEM</u></b>	<b><u>TITLE</u></b>
--------------------	---------------------

#### **CONTENTS OF THE TECHNICAL REPORT**

Title Page

Date and Signature Page

Table of Contents

Illustrations

Requirements for all Technical Reports

Item 1:	Summary
Item 2:	Introduction
Item 3:	Reliance on Other Experts
Item 4:	Mineral Project Description and Location
Item 5:	Accessibility, Local Resources, Infrastructure and Physiography
Item 6:	History
Item 7:	Geological Setting and Mineralization
Item 8:	Deposit Types
Item 9:	Exploration
Item 10:	Drilling
Item 11:	Sample Preparation, Analyses and Security
Item 12:	Data Verification
Item 13:	Metallurgical Testing
Item 14:	Mineral Resource Estimates
Item 15:	Mineral Reserve Estimates
Item 16:	Mining Methods
Item 17:	Processing Methods
Item 18:	Mineral Project Infrastructure
Item 19:	Market Studies and Contracts
Item 20:	Environmental Studies, Permitting and Regional or Local Impact
Item 21:	Capital and Operating Costs
Item 22:	Economic Analysis
Item 23:	Current Personal Inspection
Item 24:	Other Relevant Data and Information
Item 25:	Interpretation and Conclusions
Item 26:	Recommendations
Item 27:	References

**Proposed Form 43-101F1**  
***Technical Report***

*Under the Instrument, the technical report is a summary document of all relevant scientific and technical information concerning mineral exploration, development, and production activities on a mineral project that is material to an issuer. This Form sets out the requirements for the preparation and content of a technical report. Instructions for the preparation of the Form have been italicized for reference purposes.*

**INSTRUCTIONS:**

- (1) *Do not incorporate by reference any previous disclosure.*
- (2) *Words and expressions used in the Instrument have the same meaning in this Form.*
- (3) *Be concise and include sufficient context and cautionary language to allow a reasonable person to understand the nature, importance and limitations of the data, interpretations and conclusions summarized in the technical report.*
- (4) *Include all headings and information specified under Items 1 to 12 and 23 to 27 of this Form. For all other headings and Items in this Form, include the headings and information that are relevant to the mineral project. Disclosure included under one Item is not required to be repeated under another Item.*
- (5) *Do not include appendices with excessive information.*
- (6) *Guidance on how to prepare the Form can be found in the Companion Policy 43-101CP.*

**CONTENTS OF THE TECHNICAL REPORT**

**Title Page**

Include on the first or front page the following:

- (a) the technical report title;
- (b) the name of the mineral project;
- (c) the stage of the mineral project;
- (d) the name of each issuer for which the technical report has been prepared;
- (e) the country in which the mineral project is located and its general location within the country;
- (f) the name and professional designation of each qualified person;

- (g) the effective date of the technical report.

### **Date and Signature Page**

Include a signature page, at the beginning or end of the technical report, signed in accordance with section 21 of the Instrument. Include on the signature page the effective date of the technical report and the date that the report is signed.

### **Table of Contents**

Provide a table of contents listing the contents of the technical report and all figures and tables.

### **Illustrations**

Include legible maps, plans and sections, all prepared at scales that distinguish important features. Date each map and include a legend, author or information source, a scale in bar or grid form and an arrow indicating north. Include a location or index map and a compilation map outlining the general geology of the mineral project. Include more detailed maps showing important features described in the technical report, relative to the mineral project boundaries. For greater certainty, include the following important features:

- (a) areas of previous or historical exploration, and the location of known mineralization, geochemical or geophysical anomalies, drilling and mineral deposits;
- (b) the location and surficial outline of mineral resources, mineral reserves and, if applicable, areas for potential access and infrastructure;
- (c) the location of pit limits or underground development, plant sites, tailings storage areas, waste disposal areas and all other significant infrastructure features.

### **Requirements for All Technical Reports**

#### **Item 1: Summary**

Briefly summarize important information in the technical report, including, for greater certainty, mineral project description and ownership, geology and mineralization, status of exploration, development and operations, mineral resource and mineral reserve estimates and the conclusions and recommendations of each qualified person responsible for preparing or supervising the preparation of all or part of the technical report.

#### **Item 2: Introduction**

Include a description of the following:

- (a) the issuer for which the technical report is prepared;

- (b) the terms of reference for and purpose for which the technical report is prepared;
- (c) the sources of information and data in the technical report or used in its preparation, with citations if applicable.

**Item 3: Reliance on Other Experts**

Do not rely on a report, opinion or statement of a person or company that is not a qualified person for any part of the technical report other than legal, political, environmental or tax matters. If a qualified person who prepares or supervises the preparation of all or part of a technical report relies on a report, opinion or statement of an expert, or information provided by the issuer, concerning legal, political, environmental or tax matters, identify the following:

- (a) the source relied on, including, for greater certainty, the date, title and author of the report, opinion, statement or information, as applicable;
- (b) the extent to which the qualified person relies on the report, opinion, statement or information;
- (c) the parts of the technical report to which the reliance applies.

**Item 4: Mineral Project Description and Location**

Describe the following, as applicable:

- (a) the area of the mineral project in hectares or other applicable units;
- (b) the location of the mineral project, using an easily recognizable geographic and grid location system;
- (c) the type of mineral tenure of the mineral project and the identifying name or number and expiration date of each claim, licence or lease comprising the mineral tenure;
- (d) the nature and extent of the issuer's title to, or interest in, the mineral project including, for greater certainty, surface rights and legal access, and the obligations that must be met to retain the issuer's title to or interest in the project;
- (e) any permit or agreement required under laws or regulations to conduct the work proposed for the mineral project, including, for greater certainty, those with Indigenous Peoples, rightsholders or communities, as applicable, and whether the permits or agreements have been obtained or entered into;
- (f) the terms of any agreement concerning royalties, back-in rights, payments or other similar agreement, and any encumbrances, to which the mineral project is subject;
- (g) to the extent known, any environmental liabilities to which the mineral project is subject;

- (h) any significant factors and risks that are not described in paragraphs (a) to (g) that may affect the ability to perform work on the mineral project.

**Item 5: Accessibility, Local Resources, Infrastructure and Physiography**

Describe the following:

- (a) topography and elevation of the mineral project;
- (b) the means of access to the mineral project;
- (c) the proximity of the mineral project to a population centre and to any protected or sensitive environmental or cultural area;
- (d) if relevant to the mineral project, the length of the operating season and an explanation of any constraints;
- (e) if relevant to the mineral project, the sufficiency of surface rights for mining operations and the availability and sources of power, water, personnel, potential tailings storage areas, potential waste disposal areas, potential heap leach pad areas and potential processing plant sites.

**Item 6: History**

If relevant, summarize the following:

- (a) the prior ownership, and changes in prior ownership, of the mineral project;
- (b) the type, amount, quantity and general results of exploration and development work undertaken by or on behalf of any previous owners or operators of the mineral project;
- (c) historical estimates in accordance with section 7 of the Instrument;
- (d) any production from the mineral project.

**Item 7: Geological Setting and Mineralization**

Include the following:

- (a) a summary of the regional setting and mineral project geology;
- (b) a summary of the significant mineralized zones encountered on the mineral project, including, for greater certainty, a summary of the surrounding rock types, relevant geological controls and the length, width, depth and continuity of the mineralization, and a description of the type, character and distribution of the mineralization;

- (c) if the technical report includes a discussion of mineralization on a neighbouring or analogue project, a statement with the same prominence as and proximate to the discussion that the discussion is not necessarily indicative of the mineralization on the mineral project that is subject of the technical report.

#### **Item 8: Deposit Type**

Describe the mineral deposit types being investigated or being explored for and the geological model or concepts being applied and on the basis of which the exploration program is planned.

#### **Item 9: Exploration**

Describe the nature and extent of all relevant exploration work by the issuer, other than drilling, including the following:

- (a) the procedures and parameters relating to the surveys and investigations;
- (b) the sampling methods and sample quality, including whether the samples are representative, and any factors that may have resulted in sample biases;
- (c) the location, number, type, nature and spacing or density of samples collected and the size of the area covered;
- (d) the significant results and interpretation of the exploration information.

#### **Item 10: Drilling**

Describe the following, as applicable:

- (a) the type and extent of drilling, including the procedures followed and a summary and interpretation of all relevant results and, if applicable, drilling conducted from previous operations;
- (b) any drilling, sampling or recovery factors that could materially impact the accuracy and reliability of the results including, for greater certainty, any underground sampling or test work;
- (c) for a mineral project without mineral resources, the following:
  - (i) the location, azimuth and dip of any drill hole, and the depth of the relevant sample intervals;
  - (ii) the relationship between the sample length and the true thickness of the mineralization, if known, and if the orientation of the mineralization is unknown, state this;
  - (iii) the results of any significantly higher-grade intervals within a lower grade intersection.

### **Item 11: Sample Preparation, Analyses and Security**

Include the following:

- (a) a description of sample preparation methods and quality control measures used before dispatch of samples to an analytical or testing laboratory, the method or process of sample splitting and reduction and the security measures taken to ensure the validity and integrity of samples taken;
- (b) a description of relevant information regarding sample preparation, assaying and analytical procedures used, the name and location of each analytical or testing laboratory, the relationship of the laboratory to the issuer and whether the laboratory is certified by any standards association and, if so, the particulars of any certification;
- (c) a summary of the nature, extent and results of quality control procedures used, and quality assurance actions taken or recommended, to provide adequate confidence in data collected and processed under this Item;
- (d) a qualified person's opinion on the adequacy of sample preparation, security and analytical procedures.

### **Item 12: Data Verification**

Describe the data verification steps taken by each qualified person for each Item of the technical report and include the following:

- (a) the information required under section 10 of the Instrument;
- (b) an opinion on the adequacy of the data for the purposes used in the technical report.

### **Item 13: Metallurgical Testing**

If metallurgical testing analyses have been carried out, discuss the following:

- (a) the nature and extent of the testing and analytical procedures and, in summary form, the relevant results;
- (b) the basis for any assumptions or predictions regarding recovery estimates;
- (c) the degree to which test samples are representative of the various types and styles of mineralization and the mineral deposit as a whole;
- (d) any factors or deleterious elements that could have a significant effect on potential economic extraction.

#### **Item 14: Mineral Resource Estimates**

If the technical report includes disclosure of mineral resources, include the following, as applicable:

- (a) the key assumptions, parameters and methods used to estimate the mineral resource and how it was generated;
- (b) the inputs for each cut-off grade or economic limit and how they meet the test of “reasonable prospects for eventual economic extraction”, as defined by CIM;
- (c) if the grade for a multiple commodity mineral resource is reported as a metal or mineral equivalent, the individual grade of each metal or mineral and the metal prices, recoveries and other relevant conversion factors used to estimate the metal or mineral equivalent grade;
- (d) a general discussion of the classification of the mineral resource, the average drill or sample spacing, the continuity of the important zones in the mineralization model, the impact on mineral resource classification and, if applicable, a relevant visual representation;
- (e) the statistical representation of the distribution of block distances from the nearest data support for each category of the mineral resource;
- (f) the mineral resources reported on a 100% basis, and if the issuer only holds a percentage of the mineral resources, the percentage of the mineral resource attributable to the issuer;
- (g) if known, any environmental, permitting, legal, title, taxation, rightsholders, socio-economic, marketing, political and other relevant factors that could materially affect the mineral resource estimate;
- (h) if multiple cut-off grade scenarios are presented, identification of the base case or preferred scenario.

#### **Item 15: Mineral Reserve Estimates**

If the technical report includes disclosure of mineral reserves, include a discussion of the following, as applicable:

- (a) the key assumptions, parameters and methods and the application of the modifying factors explaining how a qualified person converted the mineral resources to mineral reserves;
- (b) if the grade for a multiple commodity mineral reserve is reported as a metal or mineral equivalent, the individual grade of each metal or mineral and the metal prices, recoveries and any other relevant conversion factors used to estimate the metal or mineral equivalent grade;



- (c) if known, any mining, metallurgical, infrastructure, environmental, permitting, rightsholder and other relevant factors that could materially affect the mineral reserve estimate.

#### **Item 16: Mining Methods**

Discuss the current or proposed mining methods and provide a summary of the relevant information used to establish the amenability or potential amenability of the mineral resources or mineral reserves to the proposed mining methods. If relevant, include the following, as applicable:

- (a) geotechnical, hydrological and other parameters relevant to mine or pit designs and plans;
- (b) production rates, expected mine life, mining unit dimensions, strip ratio, mining dilution and mining loss factors used;
- (c) requirements for stripping, underground development and backfilling;
- (d) the necessary type of mining fleet and machinery used or to be used.

#### **Item 17: Processing Methods**

Discuss reasonably available information on test or operating results relating to the recoverability of the valuable component or commodity and amenability of the mineralization to the proposed processing methods. If relevant, include the following, as applicable:

- (a) a description or flow sheet of any current or proposed process plant;
- (b) plant design, equipment characteristics and specifications;
- (c) current or projected requirements for energy, water and process materials.

#### **Item 18: Mineral Project Infrastructure**

Summarize applicable infrastructure and logistics necessary for the mineral project. If relevant, include the following, as applicable:

- (a) roads, rail, port facilities, power and pipelines;
- (b) leach pads, waste dumps and stockpiles;
- (c) tailings storage facilities;
- (d) site monitoring and water management requirements during operations and after closure.

### **Item 19: Market Studies and Contracts**

Discuss market studies and contracts reasonably available. If relevant, include the following, as applicable:

- (a) a summary of available information concerning markets for the issuer's production, including the nature and material terms of any agency relationships;
- (b) the nature of any studies or analyses completed by the issuer on commodity price projections, product valuations, market entry strategies or product specifications and confirmation that a qualified person has reviewed the studies or analyses and that the results of the studies or analyses support the assumptions in the technical report;
- (c) a list of contracts required to develop the mineral project including, for greater certainty, mining, concentrating, smelting, refining, transportation, sales and hedging, handling, and forward sales contracts or arrangements, a list of those entered into, and a discussion of whether the terms, rates or charges are within industry norms.

### **Item 20: Environmental Studies, Permitting and Regional or Local Impact**

Discuss available information on environmental, permitting and other regional or local factors concerning the mineral project, including, in each case the source of the information. If relevant, include a list of the following, as applicable:

- (a) the date of any environmental study and a discussion of any known environmental issues that could impact the issuer's ability to extract the mineral resources or mineral reserves;
- (b) regional, local or other permitting requirements or obligations and plans for the mineral project including, but not limited to, the status and date of any permit application and any known requirements or obligations to post performance or reclamation bonds;
- (c) the status and dates of any negotiations or agreements entered into with Indigenous Peoples, rightsholders or communities.

### **Item 21: Capital and Operating Costs**

Provide the following concerning the mineral project, as applicable:

- (a) in tabular form, the capital and operating cost estimates and an explanation of the accuracy of the estimates;
- (b) the key assumptions, parameters and an explanation of the basis for the cost estimates, including the related contingency;

- (c) an explanation of any cost estimate classification used and the level and accuracy of each important element;
- (d) the costs related to closure, remediation and reclamation;
- (e) the extent to which any known environmental, permitting, legal, title, taxation, rightsholders, socio-economic, marketing, political or other relevant factors could materially affect the capital and operating costs estimates.

**Item 22: Economic Analysis**

Other than for a mineral project of a producing issuer for which the issuer is not materially expanding current production, provide an economic analysis for the mineral project that includes the following:

- (a) a clear statement of and justification for the principal assumptions;
- (b) discounted cash flow forecasts on an annual basis using mineral reserves or mineral resources, an annual production schedule for the life of the mineral project and a discussion of how the risk-adjusted discount rate applied in the forecasts was selected;
- (c) a presentation of both pre-tax and post-tax net present value, internal rate of return and payback period of capital and a discussion of how each of these was determined;
- (d) a summary of applicable taxes, royalties and government levies concerning the mineral project, including, for greater certainty, those applicable to production and to revenue or income from the mineral project;
- (e) sensitivity or other analysis using variants in commodity price, grade, capital and operating costs, discount rate or other significant parameters, as applicable, including a discussion of the impact of the results.

**Item 23: Current Personal Inspection**

Disclose the following details of the personal inspection of the mineral project, required under section 19 of the Instrument, by each qualified person, as applicable:

- (a) the date and duration of the inspection;
- (b) the observations made concerning the Items of the Form for which the qualified person is responsible;
- (c) the conditions of the mineral project;
- (d) any confirmation sampling or testing conducted under this Item, including results.

**Item 24: Other Relevant Data and Information**

Include any additional information or explanation necessary to make the technical report not misleading.

**Item 25: Interpretation and Conclusions**

Summarize the results and interpretations of the information and analysis in the technical report. Discuss any risks and uncertainties that could be expected to affect the reliability of or confidence in the exploration information, mineral resource or mineral reserve estimates or economic analysis. Discuss any foreseeable impacts of these risks and uncertainties on the mineral project's potential economic viability or continued viability.

**Item 26: Recommendations**

Provide details of each recommended work program and a breakdown of costs for each phase. If phases of a program are recommended to be undertaken in succession, include any condition to be satisfied before a decision to proceed from one phase to the next is made. Do not apply the recommendations to more than 2 phases of work and state whether advancing to the subsequent phase is contingent on positive results in the previous phase.

**Item 27: References**

Include a list of all references cited in the technical report.