KAZAKHSTAN ASSOCIATION

OF PUBLIC REPORTING FOR EXPLORATION RESULTS,

MINERAL RESOURCES AND MINERAL RESERVES

KAZAKHSTAN PUBLIC REPORTING CODE

FOR

EXPLORATION RESULTS,

MINERAL RESOURCES AND MINERAL RESERVES

(KAZRC)

July 2021

FOREWORD

1. The Kazakhstan Public Reporting Code for Exploration Results, Mineral Resources and Mineral Reserves (hereinafter - the KAZRC Code) was developed by the Kazakhstan Association of Public Reporting for Exploration Results, Mineral Resources and Mineral Reserves (hereinafter - the KAZRC Association) with the support of the Committee of Geology and Subsoil Use of the Ministry of Investments and Development of the Republic of Kazakhstan and the members of the KAZRC Association.

The founders of the KAZRC Association are: the Association of Industrial Geological Organizations of the Republic of Kazakhstan, the Republican Association of Mining and Metallurgical Enterprises, the National Exploration Company "Kazgeologia" joint stock company. The KAZRC Association is open to new members who accept the principles and conditions of its Charter.

The KAZRC Code establishes the minimum requirements for the Public Report of mining and exploration companies in the Republic of Kazakhstan.

The KAZRC Code is developed in accordance with the general criteria adopted by the global mining community using the International Reporting Template (2019 version) of the CRIRSCO (Committee for Mineral Reserves International Reporting Standards, http: //www.crirsco.com).

It was first developed and published in June 2016. In 2017, amendments were made to Appendix 2 of the KAZRC Code on the recognition of foreign professional organizations that are part of CRIRSCO member organizations (NROs).

Any changes and additions to the KAZRC Code are made by KAZRC Association and come into force after agreement with members of CRIRSCO.

Standard definitions:

A number of terms used in the KAZRC Code are used in their CRIRSCO interpretation and do not relate to similar historical concepts.

Contents

INTRODUCTION

2. In this KAZRC Code, the important terms and definitions are provided as numbered clauses **in bold typeface** and clearly identified as definitions. The guidelines and mandatory clauses are placed after the respective Code items *in italic* typeface. They provide assistance and guidance to readers for interpreting the meaning and application of the definitions and clauses in the KAZRC Code.
This is the same typeface used in Table 1 (*Checklist of Assessment and Reporting Criteria*) and Appendix 1 (*Code Terms and Equivalents*) to make it clear that they are part of the guideline for applying the KAZRC Code.
Table 1 provides, in a summary form, a list of the criteria which must be considered by a Competent Person when preparing reports on Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves. For each item, a meaningful comment should be provided, or the Competent Person must explain why it has been omitted.

Appendix 1 contains a table of key terms and equivalents that should be used to avoid unnecessary duplication or ambiguity in the text.

Appendix 9 contains information on which professional organizations are recognized by the KAZRC code.

For the purposes of the Code.

A Mineral is any substance, extracted for value, occurring naturally in or on the Earth, in or under water or in tailings, residues or stockpiles, having been formed by or subjected to a geological process but excludes, water, oil and gas.

The definition of Mineral is broad, and therefore the KAZRC Code is applicable to a diverse range of commodities for which public reporting on Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves is required by a relevant Regulatory Authority, including but not limited to:

- Metalliferous minerals;
- Coal;
- Diamonds and other gemstones;
- Industrial Minerals;
- Cement feed materials and construction raw materials;
- Mineralized fill, dumps and tailings,
- Remnant materials, etc.

In addition, the principles of the KAZRC Code are applicable to:

- Oil shales, oil sands and other energy minerals extracted by mining;
- Metallic and non-metallic minerals recovered by solution mining methods,
- Minerals extracted from liquid brines.

PRINCIPLES AND SCOPE

3. The main principles governing the operation and application of the KAZRC Code are the Transparency of the information provided, its Materiality for the consumer and the Competence of the report authors.
The principle of ***Transparency*** implies the Users of Public Reports (investors, their professional advisers, etc.) are provided with sufficient information, the presentation of which is clear and unambiguous, so as to understand the report and not to be misled.

Materiality requires that a Public Report contain all the relevant information which the Users would reasonably require, and reasonably expect to find in a Public Report, for the purpose of making a reasoned and balanced judgement regarding the Exploration Targets, Exploration Results, Mineral Resources and/or Mineral Reserves being reported.
Competence requires that the Public Report be based on work that is the responsibility of a suitably qualified and experienced person who is subject to a professional code of ethics and disciplinary process.

4. Public Reports are reports prepared for the purpose of informing investors or potential investors and their advisers on Exploration Targets, Exploration Results, Mineral Resources or Mineral Reserves. They include but are not limited to annual and quarterly company reports, media releases, information memoranda, technical papers, website postings and public presentations.
The KAZRC Code defines the minimum required standard for Public Reporting, and is recommended as the minimum standard for other reporting. The Company is encouraged to provide the most complete information in its Public Reports.
If the Public Report is presented in a summary form, for example, in the form of a media release on the results of ongoing exploration work, then reference should be made to the source materials prepared by the Competent Person.
The KAZRC Code also applies to any reports that have been prepared for the purposes described in Section 4, such as environmental reports, information notes, expert reports, and technical documents related to Exploration Results, Mineral Resources and Mineral Reserves. These reports can also be prepared for the purpose of satisfying regulatory requirements in Kazakhstan.
For companies issuing annual reports, or other periodic summary reports, all material information relating to Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves should be included. In cases where summary information is presented, the Public Report must clearly state that the information is a summary, and a reference must be provided giving the source and location of the KAZRC Code-compliant Public Reports or public reporting on which the summary is based.
It is recognized that companies can be required to issue reports into more than one regulatory jurisdiction, with compliance standards that may differ from the KAZRC Code. It is recommended that such reports include a statement alerting the reader to this situation.
Reference in the KAZRC Code to 'documentation' is to internal company documents prepared as a basis for a Public Report.
It is recognized that documentation prepared by Competent Persons (refer to Section 11) for internal company or similar non-public purposes may not necessarily comply with the definitions, requirements and guidance contained in the KAZRC Code. In such situations, it is recommended that the document include a prominent statement to this effect. Such a statement will warn against the use of such documentation in the preparation of the Public Report, since the KAZRC Code requires that the Public Report accurately reflects the Exploration Targets, Exploration Results, Mineral Resources estimates

and / or Reserves, as well as accompanying documentation prepared by the Competent Person. Estimation of Mineral Resources and Mineral Reserves is inherently subject to some level of uncertainty and inaccuracy. The uncertainty and the possible discrepancies affecting the estimates for Mineral Resources and Mineral Reserves categorization should be discussed in documentation or in the Public Reports.
The effective date of a Mineral Resource and Mineral Reserve statement must be shown (year, month, day).
Where a Mineral Resource and Mineral Reserve statement is issued, a company's economic interest in a Project must be disclosed. Where Mineral Resources and Mineral Reserves are estimated for multiple properties, they may be aggregated for reporting purposes, particularly if the properties (deposits, sites) are located in close proximity or their products (ore, preconcentrates) are sent to common treatment plants or markets. Where multiple ownership (multiple shareholders) is involved, it must be made clear in the Report what proportion of the reported Mineral Resources and Reserves in which the Company has an interest.

5. The KAZRC Code applies to all solid minerals for which the submission of the Public Report of Exploration Results and Mineral Resources and/or Mineral Reserves estimate is determined by the requirements of the Regulatory Authorities, including the Kazakhstan Stock Exchange *(KASE).*

6. It is recognized that the KAZRC Code will be updated or revised from time to time.

7. The standard definitions of the KAZRC Code and the relationships between them are illustrated in Figure 1. In the following text, definitions are marked in bold typeface. Defined terms (when referred to in other definitions) are underlined.

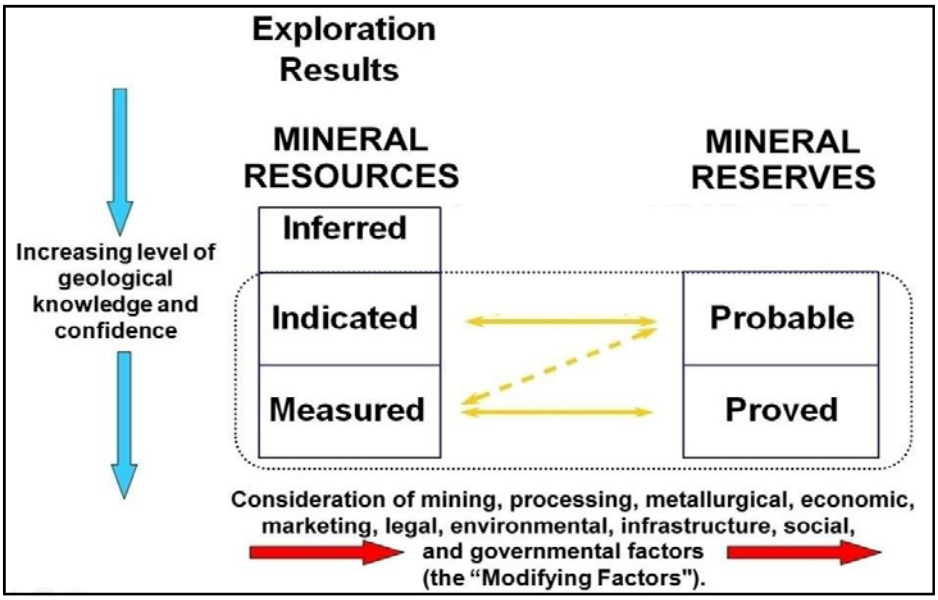

Figure 1. Relationship between Exploration Results, Mineral Resources, and Mineral Reserves.

8. A Public Report concerning a company's Exploration Targets, Exploration Results, Mineral Resources and/or Mineral Reserves is the responsibility of the company acting through its Board of Directors. Any such report must fairly reflect the information and supporting documentation prepared by a Competent Person.

9. Public Report on Exploration Targets, Exploration Results, Mineral Resources, and Mineral Reserves must be based on the documentation prepared by, or under the direction of, a Competent Person or Persons.

10. A company issuing a Public Report shall make publicly available the name(s) of the Competent Person(s), their qualifications, professional and corporate affiliation and relevant experience. The report must be released only with the written consent of the Competent Person or Persons as to its form, content and date of issue.

11. A Competent Person is a minerals industry professional, who is a member of a recognized Professional Organization with enforceable disciplinary processes including the powers to suspend or expel a member.

A Competent Person must have a minimum of five years relevant experience in the style of mineralization or type of deposit under consideration and in the activity which that person is undertaking.

If the Competent Person is preparing a report on Exploration Targets or Exploration Results, the relevant experience must be in exploration. If the Competent Person is estimating, or supervising the estimation of Mineral Resources, the relevant experience must be in the estimation, assessment and evaluation of Mineral Resources. If the Competent Person is estimating, or supervising the estimation of Mineral Reserves, the relevant experience must be in the estimation, assessment, evaluation and economic extraction of Mineral Reserves.

Recognized Professional Organizations are listed in Appendix 9.

The key qualifier in the definition of a Competent Person is the word 'relevant'. Determination of what constitutes relevant experience can be a difficult area, and common sense has to be exercised. For example, in estimating Mineral Resources for vein gold mineralization, experience in a high-nugget, vein-type mineralization such as tin, uranium etc. will probably be relevant, whereas experience in massive base metal deposits may not be.

As a second example, to qualify as a Competent Person in the estimation of Mineral Reserves for alluvial gold deposits, considerable experience (at least five years) in the evaluation and economic extraction of this type of mineralization would be needed. This is due to the characteristics of gold in alluvial systems, the particle sizing of the host sediment, and the low grades involved. Experience with placer deposits containing minerals other than gold may not necessarily provide appropriate relevant experience.

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

For example, a person with (say) 20 years' experience in estimating Mineral Resources for a variety of metalliferous hard-rock deposit types may not require five years specific experience in (say) porphyry copper deposits to act as a Competent Person. Relevant experience in the other deposit types could count towards the required experience in relation to porphyry copper deposits.

In addition to experience in the style of mineralization, a Competent Person taking responsibility for the compilation of Exploration Targets, Exploration Results and/or Mineral Reserves and Resources estimates should have sufficient experience in the sampling and analytical techniques relevant to the deposit under consideration to be aware of problems, which could affect the reliability of data. Some appreciation of processing and beneficiation applicable to that deposit type is also important.

As a general guide, persons being called upon to act as Competent Persons should be clearly satisfied in their own minds that they could face their peers and demonstrate competence in the commodity, type of deposit and situation under consideration. If doubt exists, the person either should seek opinions from appropriately experienced expert advisers in relevant areas or should decline to act as a Competent Person.

Estimation of Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves is very commonly a team effort involving experts from several technical disciplines (for example, involving one person or team collecting the data and another person or team preparing the estimate). Where there is a clear division of responsibility within a team, each Competent Person and their contribution should be identified, and responsibility accepted for that contribution. If only one Competent Person signs the Mineral Resource or Mineral Reserve documentation, that person is responsible and accountable for the whole of the documentation on estimates. An important point in this situation is that the Competent Person accepting overall responsibility for a Mineral Resource or Mineral Reserve estimate and supporting documentation prepared in whole or in part by others, should be satisfied that the work of the other contributors is acceptable.

Complaints made in respect of the professional work of a Competent Person will be dealt with under the disciplinary procedures of the Professional Organization (PO) to which the Competent Person belongs, such as a Code of Professional Ethics or Code of Conduct and Applicable Guidelines. Failure to comply with relevant Codes of Professional Ethics or Code of Conduct and Applicable Guidelines will result in disciplinary

actions which, under certain circumstances, include suspension of membership or expulsion from professional organizations.

The Competent Person and the Company publishing information on the Exploration Targets, Exploration Results, Mineral Resources or Mineral Reserves of the Company must know and comply with the requirements of the KAZRC Code and the KASE Kazakhstan Stock Exchange and be responsible for the completeness, materiality, and quality of information presented in the reports.

GENERAL REPORTING REQUIREMENTS

12. Company Public Reports of Exploration Results, Mineral Resources and/or Mineral Reserves must include a description of the type and nature of mineralization.

13. The Company is required to disclose any relevant information regarding the deposit under consideration that could materially affect the economics of the deposit. The company must promptly report any material changes in Mineral Resources or Mineral Reserves.

14. Companies may revise and publish Reports of their Exploration Results, Mineral Resources and/or Mineral Reserves as necessary, indicating the actual date of the Mineral Resources and Mineral Reserves estimate. Companies are encouraged to provide as complete and comprehensive information as possible in their Public Reports. The economic interest of the Company in the project must be indicated.

15. Throughout the KAZRC Code, certain words are used in a general sense when a more specific meaning might be attached to them by particular commodity groups within the industry. In order to avoid unnecessary duplication, the key terms are listed in Appendix 1 together with other terms that may be regarded as synonymous for the purposes of this document.

The use of one or another special term in this document does not mean that this definition of the term is preferred or perfect under all and any possible circumstances. A typical example of this is when mining refers to quarry mining, which is about dimension stone and construction mixes. It is up to the Competent Person to select and use the most appropriate terminology for specific commodities or works undertaken.
The list of terms used should be given in the Report.

16. Modifying Factors are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

Figure 1 sets out the framework for classifying tonnage and grade estimates to reflect different levels of geological confidence and different degrees of technical and economic evaluation.
***Mineral Resources** can be estimated mainly based on geological information with some input from other disciplines.*
***Mineral Reserves**, which are a modified sub-set of the Indicated and Measured Mineral Resources (shown within the dotted outline in Figure 1), require consideration* of the Modifying Factors *affecting extraction, and should in most instances be estimated with input from a range of disciplines.*

***Measured Mineral Resources** may convert to either Proved Mineral Reserves or Probable Mineral Reserves. The Competent Person may convert Measured Mineral Resources to Probable Mineral Reserves because of uncertainties associated with some or all of the Modifying Factors, which are taken into account in the conversion from Mineral Resources to Mineral Reserves. This relationship is shown by the broken arrow in Figure 1. Although the trend of the broken arrow includes a vertical component, it does not, in this instance, imply a reduction in the level of geological knowledge or confidence. In such a situation these Modifying Factors should be fully explained. The guidance in Section 31 should also be consulted.*

EXPLORATION TARGET

17. An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade or quality, relates to mineralization for which there has been insufficient exploration to estimate Mineral Resources.

It is recognized that it is common practice to comment on and discuss exploration strategy in terms of target size and type. Any such information relating to Exploration Target size must not be expressed in a way that could be confused as an estimate of Mineral Resources or Mineral Reserves.

Any statement referring to potential quantity and grade of the target must be expressed as a range of tonnage and grade or quality, and extent of the commodity. There must also be a proximate statement that the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource.

The detailed explanation of the basis for the Statement of an Exploration Target must specifically discuss the geological setting and exploration strategy, exploration activity already completed and the presence of or lack of the following attributes:

- *mineralized outcrops and assays;*
- *surface geochemical and physical sampling results;*
- *surface and subsurface geophysical survey results; and*
- *drill holes, test pits, and underground workings. Proposed exploration activities designed to test the validity of an Exploration Target should be detailed and include the timeframe within which they are expected to be completed.*

REPORTING OF EXPLORATION RESULTS

18. The purpose of Exploration is to determine or estimate the potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade or quality, relates to mineralization for which there has been insufficient exploration to estimate Mineral Resources.

It is recognized that it is common practice for Companies to comment on and discuss its exploration strategy in terms of target size and type. Any such information relating to Exploration Target size must not be expressed in a way that could be confused as an estimate of Mineral Resources or Mineral Reserves. Any statement referring to potential quantity and grade of the target must be expressed as a range and must include a detailed explanation of the basis for the assumptions made and procedures used to estimate the range of tonnage and grade or quality, and

continuity. There must also be a proximate statement that the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource, and that it is uncertain if further exploration will result in the determination of a Mineral Resource. The detailed explanation of the basis for the statement of a target must specifically discuss the geological setting and exploration strategy,

exploration activity already completed and the presence of or lack of the following attributes:
• mineralized outcrops and assays;
• surface geochemical and physical sampling results;
• surface and subsurface geophysical survey results; and
• drill holes, test pits, and underground workings. Proposed exploration activities designed to test the validity of an Exploration Target should be detailed and include the timeframe within which they are expected to be completed.

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

This is common in the early stages of exploration when the quantity of data available is generally not sufficient to allow any reasonable estimates of tonnage and grade to be made Examples include discovery outcrops, single drill hole intercepts or the result or geophysical surveys.

It should be made clear in Public Reports that contain Exploration Results that it is inappropriate to use such information to derive estimates of tonnage and grade or quality. It is recommended that such reports carry a continuing statement along the following lines:
"The information provided in this report/statement/release establishes the Exploration Results as defined in Section 19 of the KAZRC Code. It is inappropriate for the reader to use the information presented for deriving estimates of tonnage and grade or quality".

20. *If the Company provides Exploration Results for a mineralization not classified as a Mineral Resource or Mineral Reserves, then no estimates of quantity or average grade shall be provided. Descriptions of Exploration Targets or Exploration Results presented in Public Reports should be phrased so that the reader does not mistake them for Mineral Resource or Mineral Reserves estimates.*

21. Public Reports of Exploration Results for mineralization not classified as a Mineral Resource or Mineral Reserves must include sufficient information pertaining to the property to make an informed and balanced judgment of the significance of those results. Public Reports of Exploration Results must not be presented so as to unreasonably imply that potentially economic mineralization has been discovered

Where assay and analytical results are reported, they must be reported using one of the following methods, selected as the most appropriate by the Competent Person, either:

- by listing all results, along with sample intervals (or size, in the case of bulk samples); or

- by reporting weighted average grades of mineralized zones, indicating clearly how the grades were calculated.

Clear diagrams and maps designed to represent the geological context must be included in the report. These must include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.

- By recalculating geophysical data into mineralized intervals. By providing the recalculation methodology (applicable to layer-infiltrated deposits of uranium, phosphorites, coal).

Reporting of isolated assays, isolated drill holes, assays of panned concentrates or supergene enriched soils or surface samples, without placing them in perspective is unacceptable.

While it is not necessary to report all assays or drill holes, it is a requirement that sufficient information about the omitted data is provided so that a considered and balanced judgement can be made by the reader of the Report. Where reports of Exploration Results do not include all drill holes or all intersections of drill holes, the Competent Person must provide an explanation of why this information is not considered relevant or why it has not been provided.

The Competent Person must not 'remain silent' on any issue for which the presence or absence of comment could impact the public perception or value of the mineral occurrence. For significant projects the reporting of all criteria in Table 1 on an 'if not, why not' basis is required, preferably as an appendix to the Public Report.

Additional disclosure is particularly important where inadequate or uncertain data affect the reliability of, or confidence in, a statement of Exploration Results; for example, poor sample recovery, poor repeatability of assay or laboratory results, etc.

REPORTING OF MINERAL RESOURCES

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

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

Mineral Resources are subdivided, in order of increasing geological confidence into Inferred, Indicated and Measured categories.

All reports of Mineral Resources must satisfy the requirement that there are reasonable prospects for eventual economic extraction.

Parts of solid mineral deposits for which there are no reasonable prospects for eventual economic extraction (non-economic mineralization) do not qualify as Mineral Resources.

The term 'Mineral Resource' covers mineralization, including dumps and tailings, which has been identified and estimated through exploration and sampling and within which Mineral Reserves may be defined by the consideration and application of Modifying Factors.

The term 'reasonable prospects for eventual economic extraction' implies a judgement (albeit preliminary) by the Competent Person in respect of all technical, economical and other factors that, in all probability, could affect the prospects of economic extraction of the commodity, including the approximate mining parameters. In other words, a Mineral Resource is not an inventory of all mineralization drilled or sampled, regardless of cut-off grade, likely mining dimensions, location or continuity. It is a realistic inventory of mineralization, which, under assumed and justifiable technical and economic conditions, may, in whole or in part, become economically extractable.

Any material assumptions made in determining the 'reasonable prospects for eventual economic extraction' should be clearly stated in the Public Report.

Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For coal, iron ores, bauxite and other large-tonnage commodities, it reasonable to assume the "eventual economic extraction" for a period of over 50 years. At the same time, for most gold deposits, the application of this concept is usually limited to 10-15 years, and often much shorter periods of time.

Any adjustment made to the data for making the Mineral Resource estimate, for example by cutting or factoring anomaly high grades, should be clearly stated and described in the Public Report.

Certain reports (e.g., inventory reports, exploration reports to government and other similar reports not intended primarily for providing information for investment purposes) may require full disclosure of all mineralization, including some material that does not have reasonable prospects for eventual economic extraction. Such estimates of mineralization would not qualify as Mineral Resources or Mineral Reserves under the definitions of the KAZRC Code.

23. An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality (useful component proportion) are estimated on the basis of limited geological evidence and sampling.

Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

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

In circumstances where the estimation of the Inferred Mineral Resource is presented on the basis of extrapolation beyond the nominal sampling spacing and taking into account the style of mineralization, the report must contain sufficient information to inform the reader of:

- the maximum distance that the resource is extrapolated beyond the sample points;
- the proportion of the resource that is based on extrapolated data;
- the basis on which the resource is extrapolated to these limits; and
- a diagrammatic representation of the Inferred Mineral Resource showing clearly the extrapolated part of the estimated resource.

The Inferred category is intended to cover situations where a mineral concentration or occurrence has been identified, and limited measurements and sampling have been completed, but where the data are insufficient to allow the geological and/or grade continuity to be interpreted with confidence. However, due to the uncertainty of Inferred Mineral Resources, it should not be assumed that such upgrading would always occur.

Confidence in the estimate is usually not sufficient to allow the results of the application of technical and economic parameters to be used for planning.
Caution should be exercised if this category is considered in technical and economic studies.

24. An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource. Indicated Mineral Resources may only be converted to Probable Mineral Reserve.
Mineralization may be classified as an Indicated Mineral Resource when the nature, quality, amount and distribution of data are such as to allow confident interpretation of the geological framework and to assume continuity of mineralization.
Confidence in the estimate is sufficient to allow the application of technical and economic parameters, and to enable an evaluation of economic viability (mining project).

25. A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.
Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.
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 Proved Mineral Reserve or to a Probable Mineral Reserve.
Mineralization may be classified as a Measured Mineral Resource when the nature, quality, amount and distribution of data are such as to leave no reasonable doubt, in the opinion of the Competent Person determining the Mineral Resource, that the tonnage and grade of the mineralization can be estimated to within close limits, and that any variation from the estimate would be unlikely to significantly affect potential economic viability.
This category requires a high level of confidence in, and understanding of, the geology and the controls of the mineral deposit.
Confidence in the estimate is sufficient to allow the application of technical and economic parameters and to enable an evaluation of economic viability with a high level of confidence.

26. The choice of the appropriate category of Mineral Resource depends upon the quantity, distribution and quality of data available and the level of confidence that attaches to those data. The appropriate Mineral Resource category must be determined by a Competent Person.
Mineral Resource classification is a matter for skilled judgement, and Competent Persons should take into account those items in Table 1, which relate to confidence in Mineral Resource estimation.
In deciding between Measured Mineral Resources and Indicated Mineral Resources, Competent Persons may find it useful to consider, in addition to the phrases in the two definitions relating to geological and grade continuity in Sections 24 and 25 the phrase in the guideline to the definition for Measured Mineral Resources: "…any variation from the estimate would be unlikely to significantly affect potential economic viability".
In deciding between Indicated Mineral Resources and Inferred Mineral Resources, Competent Persons may wish to take into account, in addition to the phrases in the two definitions in Sections 23 and 24 relating to geological and grade continuity, the guideline to the definition for Indicated Mineral Resources: "Confidence in *the Indicated Mineral Resources estimate is sufficient to allow the application of technical*

and economic parameters and to enable an evaluation of economic viability", which contrasts with the guideline to the definition for Inferred Mineral Resources: "Confidence in the estimate of these is usually not sufficient to allow the results of the application of technical and economic parameters to be used for planning. Caution should be exercised if this category is considered in technical and economic studies".

The Competent Person should take into consideration issues of the style of mineralization, scale and cut-off grade particular to the style of mineralization when assessing geological and grade continuity.

27. The resulting Mineral Resource estimates are not precise calculations. They are dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. Reporting of tonnage and grade figures should reflect the relative uncertainty of the estimate by rounding off to appropriately significant figures and, in the case of Inferred Mineral Resources, by qualification with terms such as 'approximately'.

In most situations, rounding to the second significant figure should be sufficient. For example, 10,863,000 tonnes at 8.23 per cent should be stated as 11 million tonnes at 8.2 per *cent. There will be occasions, however, where rounding to the first significant figure may be necessary in order to convey properly the uncertainties in estimation. This would usually be the case with Inferred Mineral Resources*.

To emphasise the imprecise nature of a Mineral Resource estimate, the result should always be referred to as an estimate not a calculation. Competent Persons are encouraged, where appropriate, to discuss the relative accuracy and/or confidence of the Mineral Resource estimates. The Report should specify whether it relates to global (whole of resource) or local estimates (a subset of the resource for which the accuracy and/or confidence might differ from the whole of the resource). If a local estimate is referred to, the relevant tonnage or volume must be stated. Where a statement of the relative accuracy and/or confidence is not possible, a qualitative discussion of the uncertainties should be provided (refer to Table 1).

28. Public Reports of Mineral Resources must specify one or more of the categories of 'Inferred', 'Indicated' and 'Measured'. Categories must not be reported in a combined form unless details for the individual categories of Mineral Resources are also provided. Mineral Resources must not be reported in terms of contained metal or mineral content unless corresponding tonnages and grades are also presented. Mineral Resources must not be aggregated with Mineral Reserves.

Public reporting of tonnage and grade outside the categories covered by the KAZRC Code is not permitted.

29. Table 1 provides, in a summary form, a list of the criteria which should be considered when preparing reports on Exploration Results, Mineral Resources and Mineral Reserves. These

criteria are not discussed in the Public Report unless they materially affect the assessment of resources or their qualifications.
In the Public Reports comments give to each item of Table. 1 are not obligatory, however, it is important to report any matters that might materially affect a reader's understanding or interpretation of the results or estimates being reported. This is particularly important where inadequate or uncertain data affect the reliability of, or confidence in, a Company's Report of Exploration Results or an estimate of Mineral Resources or Mineral Reserves. For instance, it is of particular importance to include information on poor sample recovery, poor repeatability of assay or laboratory results, and insufficient data on bulk density.
If there is doubt about what should be reported, it is better to err on the side of providing too much information than too little.
Uncertainties in any of the reporting quality criteria listed in the checklist in Table 1 that could lead to underestimation or overestimation of the quantity and quality of Mineral Resources should be disclosed.

30. The words 'ore' and 'reserves' must not be used in sections of Public Report stating Mineral Resource estimates (except in the context of common usage such as 'iron ore', etc.) as the terms imply technical feasibility and economic viability and are only appropriate when all relevant modifying factors have been considered. Reports and statements should continue to refer to the appropriate category or categories of Mineral Resources until technical feasibility and economic viability have been established. If re-evaluation indicates that any part of the Mineral Reserves is no longer viable, such Mineral Reserves must be re-classified as Mineral Resources and be removed from the Company's Mineral Reserve/Resource statements.
It is not intended that re-classification from Mineral Reserves to Mineral Resources or vice versa should be applied as a result of changes expected to be of a short term or temporary nature, or where company management has made a deliberate decision to operate on a non-economic basis. Examples of such situations might be commodity price fluctuations expected to be of short duration, emergencies of a short-term nature, transport strikes, etc.

REPORTING OF MINERAL RESERVES

31. A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource.
It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted. The amount of Reserves is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors.
Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.
The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated in the Report. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.
Mineral Reserves are those portions of Indicated and Measured Mineral Resources which, after the application of all relevant Modifying Factors, result in an estimated tonnage and grade which, in the opinion of the Competent Person making the estimates, can be the basis of a viable project.
Studies to Pre-Feasibility or Feasibility level and of all relevant Modifying Factors, as appropriate, will have been carried out prior to determination of the Mineral Reserves to achieve the necessary level of Mineral Reserves confidence. The study will have determined a mine plan that is technically achievable and economically viable and from which the Mineral Reserves can be derived.
In reporting Mineral Reserves, an estimate of recovery ratio is considered material and must be included in Public Reports at all times.

The term 'economically mineable' implies that extraction of the Mineral Reserve has been demonstrated to be viable under reasonable financial assumptions. What constitutes 'reasonable financial assumptions' will vary with the type of deposit, the level of study that has been carried out and the financial criteria of the individual Company. For this reason, there can be no fixed definition for the term 'economically mineable'. However, it is expected that companies will attempt to achieve an acceptable return on capital invested, and that returns to investors in the project will be competitive with alternative investments of comparable risk.

At the same time, the Competent Person should, if possible, inform the Users of the Public Report of the prices for commodity products used in assessing the value of mineral assets, and disclose the methodology for determining them. In cases where commodity products are sold in accordance with

existing contracts, the value of mineral assets should be determined using contract prices.
The term 'Mineral Reserves' need not necessarily signify that extraction facilities are in place or operative or that all necessary approvals or sales contracts have been received. It does signify that there are reasonable expectations of such approvals or contracts. In this case, the Competent Person should report any material or unresolved matter that is dependent on a third party on which mining is contingent (extraction of Mineral Reserves).
Any adjustment made to the data for the purpose of making the Mineral Reserve estimate, for example by cutting or factoring grades, should be clearly stated and described in the Public Report.

It should be noted that the KAZRC Code does not imply that an economically viable project should have Proved Mineral Reserves. Situations may arise where Probable Mineral Reserves alone may be sufficient to justify economically viable extraction. For example, it may be the mining of some alluvial tin, gold or diamond deposits. Competent Person role in this situation is to show uncertainty clearly.

32. A Probable Mineral Reserve is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource.
The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve.

33. A Proved Mineral Reserve is the economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the Modifying Factors.
In some deposits, the style of mineralization or other factors could mean that Proved Mineral Reserves are not achievable in some deposits. Competent Persons should be aware of the consequences of declaring material of the highest confidence category before satisfying themselves that all of the relevant resource parameters and Modifying Factors have been established at a similarly high level of confidence.

34. The choice of the appropriate category of Mineral Reserve is determined primarily by the relevant level of confidence in the Mineral Resource and after considering any uncertainties in the Modifying Factors. Allocation of the appropriate category must be made by the Competent Person.

The KAZRC Code provides for a direct relationship between Indicated Mineral Resources and Probable Mineral Reserves and between Measured Mineral Resources and Proved Mineral Reserves. In other words, the level of geological confidence for Probable Mineral Reserves is similar to that required for the determination of Indicated Mineral Resources. The level of geological

confidence for Proved Mineral Reserves is similar to that required for the determination of Measured Mineral Resources. Inferred Mineral Resources are always additional to Mineral Reserves.
The KAZRC Code also provides for a two-way relationship between Measured Mineral Resources and Probable Mineral Reserves This is to cover a situation where uncertainties associated with any of the Modifying Factors considered when converting Mineral Resources to Mineral Reserves may result in there being a lower degree of confidence in the Mineral Reserves than in the corresponding Mineral Resources.
Such a conversion would not imply a reduction in the level of geological knowledge or confidence. A Probable Mineral Reserve derived from a Measured Mineral Resource may be converted to a Proved Mineral Reserve if the uncertainties in the Modifying Factors are removed. No amount of confidence in the Modifying Factors for conversion of a Mineral Resource to a Mineral Reserve can override the upper level of confidence that exists in the Mineral Resource. Under no circumstances can an Indicated Mineral Resource be converted directly to a Proved Mineral Reserve (see Figure 1).
Application of the category of Proved Mineral Reserves implies the highest degree of confidence in the estimate, with consequent expectations in the minds of the readers of the report. These expectations should be borne in mind when categorizing a Mineral Resource as Measured.

If re-evaluation indicates that any part of the Mineral Reserves is no longer economic or not viable due to mining conditions, such Mineral Reserves must be removed from the Mineral Reserve statements.
It is not intended that re-classification from Mineral Reserves or vice versa from Mineral Resources into Mineral Reserves should be applied as a result of changes expected to be of a short term or temporary nature, or where company has made a deliberate decision to operate on a non-economic basis. Examples of such situations might be sharp commodity price fluctuations expected to be of short duration, mine emergency of a non-permanent nature, transport strike, etc.

35. Mineral Reserve estimates are not precise calculations. Reporting of tonnage and grade figures should reflect the relative uncertainty of the estimate by rounding off to appropriately significant figures. Refer also to Section 27.

To emphasize the imprecise nature of a Mineral Reserve, the result should always be referred to as an estimate not a calculation.

Competent Persons should, where appropriate, discuss the relative accuracy and/or confidence of the Mineral Reserve estimates. The Report should specify whether it relates to global (whole of reserve) or local estimates (part of reserve). If a local estimate is referred to, the relevant tonnage or volume must be stated. Where a statement of the relative accuracy and/or

confidence is not possible, a qualitative discussion of the uncertainties should be provided (refer to Table 1 and Clause 27).

36. Public Reports of Mineral Reserves must specify one or both of the categories of 'Proved' and 'Probable'. Categories must not be reported in a combined Proved and Probable Mineral Reserve unless the relevant figures for each of the categories are also provided. The Public Report must not present metal or mineral content figures unless corresponding tonnage and grade figures are also given. Mineral Reserves must not be aggregated with Mineral Resources. Public reporting of Reserves in the categories not covered by the KAZRC Code classification is not permitted.
Mineral Reserves may incorporate material (dilution) which is not part of the original Mineral Resource. It is essential that this fundamental difference between Mineral Resources and Mineral Reserves is borne in mind in comparison of the two.
When revised Mineral Reserve and Mineral Resource statements are publicly reported they should be accompanied by reconciliation with previous statements. A detailed account of differences between the figures is not essential, but sufficient comment should be made to enable significant changes to be understood by the reader.

37. It is accepted that mine design and planning of Life of Mine Plan may include a proportion of Inferred Mineral Resources. If this category of Mineral Resource is considered in mine design, mine planning or economic studies, the results of which are publicly reported, full disclosure must be made and the effect on the results of the studies must be stated.
Inferred Mineral Resources may be included in mine design, mine planning and economic studies only if a Life of Mine Plan (Project) and a statement of Mineral Reserves that declares that Inferred Mineral Resources have been included exists. In general, a Life of Mine Plan must be economically viable without Inferred Mineral Resources to support the declaration of Mineral Reserves. Where a deposit mineralization includes Inferred Mineral Resources, a comparison of the results with and without these Inferred Mineral Resources must be shown. Also, the rationale (including a risk assessment) behind their inclusion must be explained and the proportion of Inferred Resources included in the Life of Mine Plan reported.

Modifying Factors and assumptions applied to the Inferred Mineral Resources must reflect a risk analysis taking into account their lower geological knowledge and confidence.

38. In a Public Report of a Mineral Reserve, when reporting for the first time, or when the estimates have materially changed from when they were last reported, a brief summary of the information in relevant sections of Table 1 must be provided.

39. In Reports where figures for both Mineral Resources and Mineral Reserves are reported, a statement must be included in the report which clearly indicates whether the Mineral Resources are inclusive of, or additional to the Mineral Reserves.
Mineral Reserve estimates must not be added to Mineral Resource estimates to be used as a single combined figure in a Public Report.

In some situations, there are reasons for reporting Mineral Resources inclusive of Mineral Reserves, and in other situations for reporting Mineral Resources exclusive of Mineral Reserves. It must be made clear which form of reporting has been adopted.

Appropriate forms of clarifying statements may be:
– The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources

modified to produce the Mineral Reserves;
– The Measured and Indicated Mineral Resources are additional to the Mineral Reserves.

In the former case, if any Measured and Indicated Mineral Resources have not been modified to produce Mineral Reserves for economic or other reasons, the relevant details of the unmodified Mineral Resources should be included in the report. This is to assist the reader of the Public Report in making a judgement of the likelihood of the unmodified Measured and Indicated Mineral Resources eventually being converted to Mineral Reserves.

Inferred Resources are by definition always additional to Mineral Reserves.

For reasons stated in the guidelines to Section 34 and in this guideline, the reported Mineral Reserve figures must not be added to the Mineral Resource figures in the Public Report, as the resulting total is misleading and is capable of being misunderstood or of being misused to give a false impression of a company's prospects.

TECHNICAL STUDIES

40. A Scoping Study is an order of magnitude technical and economic study of the potential viability of Mineral Resources that includes appropriate assessments of realistically assumed Modifying Factors together with any other relevant operational factors that are necessary to demonstrate at the time of reporting that progress to a Pre-Feasibility Study can be reasonably justified.

A Scoping Study must not be used as the basis for estimation of Mineral Reserves; if the outcome of a Scoping Study is partially supported by Inferred Mineral Resources, the Public Report must state the proportion and relative sequencing of the Inferred Mineral Resources within the Scoping Study.

For all Scoping Studies, the company must include a cautionary statement in the same paragraph as or immediately following the disclosure of the Scoping Study.

An example cautionary statement:

"The Scoping Study referred to in this report is based on low-level technical and economic assessments and is insufficient to support estimation of Mineral Reserves or to provide assurance of an economic development case at this stage of the Project, or to provide certainty that the conclusions of the Scoping Study will be realised."

In discussing 'reasonable prospects for eventual economic extraction' at Section 22, an assessment (albeit preliminary) is required of all matters likely to influence the prospect of economic extraction including the approximate modifying factors by the Competent Person. While a Scoping Study may provide the basis for that assessment, the KAZRC Code does not require a Scoping Study to have been completed to report a Mineral Resource.

Scoping Studies are commonly the first economic evaluation of a project undertaken and may be based on a combination of directly gathered project geological data together with assumptions borrowed from similar deposits. Scoping Studies are also commonly used by companies for comparative and project planning purposes.

Reporting the general results of a Scoping Study should be undertaken with care to ensure there is no implication that Mineral Reserves have been established or that an economic evaluation of the Project has been reliably completed. In this regard it is appropriate to indicate the Mineral Resource inputs to the Scoping Study and the processes applied, but it is not appropriate to report the diluted tonnes and grade as if they were Mineral Reserves.

While initial studies, mining and processing cases may have been developed during a Scoping

Study, they must not be used to allow a Mineral Reserve to be declared.

41. A Pre-Feasibility Study is 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 preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on the Modifying Factors and the evaluation of any other relevant factors which are sufficient for a Competent Person, acting reasonably, to determine if all or part of the Mineral Resource may be converted to a Mineral Reserve at the time of reporting. A Pre-Feasibility Study is at a lower confidence level than a Feasibility Study .

According to Clause 31, an assessment of all Modifying Factors is required in order to determine how much available Measured and Indicated Mineral Resources can be converted to Mineral Reserves.

A Pre-Feasibility Study will consider all Modifying Factors (as outlined in Table 1, section 4) to demonstrate economic viability of a Project and to support a Mineral Reserve in a Public Report. The Pre-Feasibility Study will identify the preferred mining, processing, and infrastructure requirements and capacities, but will not yet have finalised these matters. Detailed assessments of environmental and socio-economic impacts and requirements will also be well advanced. The Pre-Feasibility Study will highlight areas that require further refinement within the final study stage.

42. A Feasibility Study is a comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of 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 reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the Feasibility Study will be higher than that of a Pre-Feasibility Study.

The KAZRC Code does not require that a full Feasibility Study has been undertaken to convert Mineral Resources to Mineral Reserves; it is however, necessary that at least a Pre-Feasibility Study has been carried out that will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.

Terms such as 'Bankable Feasibility Study' and 'Definitive Feasibility Study' *are noted as being equivalent to a Feasibility Study as defined in this Clause.*

A Feasibility Study is of a higher level of confidence than a Pre-Feasibility Study and would normally contain a Mine Design, infrastructure and process designs completed with sufficient rigor to serve as the basis for an investment decision or to support project financing. Social, environmental and governmental approvals, permits, and agreements will be in place or will be approaching finalisation within the expected development timeframe. The Feasibility Study will contain the application and description of all Modifying Factors (as outlined in Table 1, section 5) in a more detailed form than in the Pre- Feasibility Study and may address implementation issues such as detailed mining schedules, construction ramp up, and project execution plans.

Guidance on the requirements for the Scoping Study, the Pre-Feasibility Study and the Feasibility Study is included in Table 2 at the end of this document.

COMMODITY PRICING AND MARKETING

43. Commodity prices and sales volume expectations used for the determination of Mineral Resources and Mineral Reserves must be based on forward-looking estimates reflecting the company's reasonable and supportable short- and long-term expectations as supported by available evidence, which may include consensus forecasts, three-year trailing averages, sales contracts, or other price analyses (see Clause 44 below for cases where public disclosure is not appropriate).

The basis for the selected prices and sales volumes should be supported by appropriate documentation.

The Competent Person should ascertain that these prices and volumes are consistent with sales agreements and marketing determinations or forecasts.

Under certain circumstances, it may be appropriate to use different prices for estimating Mineral Resources and Mineral Reserves.

For current mining operations, the price and volume profile used for Mineral Resources and Mineral Reserves estimation may reflect current market conditions for short-term forecasts, while trending with time upward or downward toward the long-term price and volume estimates based on the Company's expectations. For Mineral Reserves that are expected to be produced beyond the validity of short-term forecasts, the Company should use long-term price and volume expectations.

For commodities sold under existing contracts, Mineral Reserves should be determined based on contract terms. For Mineral Reserves for which production would extend beyond the quantities specified in existing contracts, reasonable and supportable assumptions should be made to determine the likelihood of contract renewal and prices applicable for the estimation and reporting of these Mineral Resources and Mineral Reserves.

44. To demonstrate the economic feasibility of a Project, the estimated prices, combined with Modifying Factors, must be applied to only **Measured** and **Indicated** Mineral Resources.

Mineral Reserves are the economically mineable part of a Measured or Indicated Mineral Resource; hence, appropriate assessments should demonstrate at the time of Statement that extraction is reasonably justified. This requires that assumptions are made concerning the price of the commodity or product that will be sold when the mine is in production.

Mineral Reserves are estimated and published to supply information concerning the value of the deposit and the risk which may be associated with its development. Mineral Reserves are used by a Company, in conjunction with Mineral Resources, for short-term, long-term, and strategic planning. They play a critical role in accounting, including impairment testing, fair value accounting, calculation of depreciation, depletion, and accumulated retirement obligation provision rates. To supply information consistent with the Company's plans and financial reporting, commodity prices used for the determination of Mineral Reserves should be based on forward-looking estimates

reflecting the Company's reasonable expectations as supported by all available evidence.
Most commodities, whether sold using publicly quoted prices (e.g. base metals and precious metals) or under long term contract (e.g., coal and iron ore), experience long-term price cycles. Price expectations should reflect current prices as well as long-term trends. Overly optimistic or pessimistic price and volumes expectations could result in significant over or underestimation of Mineral Reserves. It is the responsibility of the Company and the Competent Person to determine whether the prices used for Mineral Reserve estimation are reasonable and supportable, given all available information.
During periods of low prices, a mining company may choose to temporarily curtail operations and conserve the mineral asset until prices recover. When such actions are taken, Public Reports should be updated to reflect the new information. In such circumstances, previously published Mineral Reserves may not have to be reclassified, provided that, in the opinion of the Company and the Competent Person, higher future prices can be reasonably and supportably assumed, and it can reasonably be expected that operations will resume.
The documentation supporting the company's expectations should include: comparison of prices with historical and current prices and forward curves, contracts and market considerations, currency exchange rates where applicable, third party sources, and supplemental information.

45. Disclosure in Public Reports of the commodity prices and sometimes also the costs (including other Modifying Factors) used for Mineral Reserve estimation is generally required by the Code. In the absence of applicable securities or other laws to disclose prices, there may be cases, such as when a product is sold under long-term contract, the terms of which are confidential, where there are valid commercial reasons for non-disclosure of prices.
Similarly, where disclosure of the long-term price and/or cost assumptions used in the estimation would be detrimental to the Company's business, such as when bidding for sales contracts or property acquisitions or negotiating agreements with third parties, non-disclosure may be justifiable.
Whenever prices and/or costs are not disclosed, the reasons should be documented, and the commodity price and/or cost information should nevertheless be available for review by auditors or regulators if required. Even when commodity prices and/or costs are excluded from a Public Report, a description of the methodology used to determine the prices and/or costs should be disclosed. Such disclosure should be in a form which helps the audience of the Public Report to form an opinion that prices and/or costs used represent reasonable views of future prices and/or costs. The exceptions to disclosure of commodity prices and/or costs, suggested in **Clause 44, are subject to,** and overruled by, any obligations imposed by applicable securities or other laws.

46. For the declaration of Mineral Reserves, there must be no known material obstacles to mining, arising from the failure to obtain relevant permits.

There must be a reasonable expectation by the Competent Person, often through reliance on legal and permitting experts, that all permits, ancillary rights (including water or other property rights) and authorizations required for mining, and to the extent applicable, processing and marketing, can be obtained in a timely fashion, and maintained for ongoing operations.

The Company must complete a review of all legal and permitting requirements and document the findings. Local environmental laws and processes must be taken into account.

To demonstrate reasonable expectation that all permits, ancillary rights and authorizations can be obtained, the Company must show understanding of the procedures to be followed to obtain such permits, ancillary rights and authorizations. Demonstrating earlier success in obtaining the necessary permits can be used to document the likelihood of future success.

If permits are required, but there is no defined procedure to obtain such permits, reasonable expectation of success may be difficult to support. Information that materially increases or decreases the risk that the necessary legal rights or permits will be obtained must be disclosed.

It is recognized that the legal and permitting environment may change over time and that such changes could have an impact on Mineral Reserve estimation. If it is determined that obstacles arise or are eliminated, the Mineral Reserve estimates must be adjusted accordingly.

It is recognized that some permits cannot be obtained until after a Mineral Reserve has been declared. Sound business reasons why obtaining some permits will be postponed must be disclosed in the Report.

It is also recognized that waiting for all permits to be on hand could result in critical information not being released to the investors in a timely fashion, and therefore it is recommended that disclosure of material information occur prior to obtaining permits as appropriate.

Documentation should include a brief description of the title, claim, lease or option under which the company has the right to hold or operate the property, indicating any conditions that the company must meet to obtain or retain the property.

If held by leases or options, the expiry dates of such leases or options should be stated. If extension of leases or options will be needed to mine the Mineral Reserves, there should be reasonable expectation that such extension will be granted.

Royalty terms and claw back rights of former license holders must be disclosed.

Information relating to the review of legal and permitting issues must be documented either in full or by reference to an appropriate resource. Information may remain confidential to the company. However, when required, it may be released to regulators or auditors on a confidential basis.

SUSTAINABILITY CONSIDERATIONS

47. Public Reports should discuss environmental, social, and health and safety impacts that are expected during development, operation and after closure. These impacts will affect employees, contractors, neighboring communities, and customers.

Historical activity by the company should be used to engage all stakeholders and to plan for continued successful projects for all parties concerned.

In the minerals industry, health and safety has traditionally received the most attention, with accident statistics reflecting these improvements.

Sustainability can refer to three principal themes: the ability of the environment to maintain itself with minimal impacts to the local flora and fauna; the ability of the surrounding community to continue its traditional economic and cultural activities; and the ability of newly created economic inputs to continue beyond the mine life.

The Competent Person should ensure the report discusses reasonably available information on environmental, permitting, and social or community factors related to the project.

The discussions should include, where relevant:

- *a summary of the results of any environmental studies and a discussion of any known environmental issues that could materially impact the issuer's ability to extract the Mineral Resources or Mineral Reserves;*
- *requirements and plans for waste and tailings disposal, site monitoring, and water management both during operations and post mine closure;*
- *project permitting requirements, the status of any permit applications, and any known requirements to post performance or reclamation bonds;*
- *a discussion of any potential social or community related requirements and plans for the project and the status of any negotiations or agreements with local communities;*
- *a discussion of mine closure (remediation and reclamation) requirements and costs;*
- *special capital or operating requirements for handling hazardous minerals or reagents, as well as other health and industrial hygiene risks;*
- *any savings in energy usage or other reduction of consumption reflecting directly in the economic outcome of the project; and*
- *Mineral Reserve estimates should acknowledge the likely environmental and social impact of development and ensure that appropriate allowances are made for mitigation and remediation.*

TABLE 1

EVALUATION AND REPORTING CRITERIA CHECKLIST

Table 1 is a checklist of questions and guidelines for preparing KAZRC Reports on Exploration Results, Mineral Resources and Mineral Reserves. The requirements of the KAZRC Code determine the need for comments on each item of Table 1 on an “if not, why not” basis. Table 1 attached to the KAZRC Code is an example of best practice. Requirements for completing the Table may vary depending on the place where the Report is submitted, but Transparency, Competence and Materiality are overriding principles that determine how the information should be presented for Public Reporting. The Competent Person must provide sufficient comment on all matters that may affect the perception of information about the results of the assessment performed.

Publicly reported information should be sufficient to enable the informed reader to make a reasonable and balanced assessment of the significance of this information. It is, however, important to report any matters that may materially affect a reader's understanding or interpretation of the results or estimates being reported. This is particularly important where inadequate or uncertain data affects the reliability of, or confidence in, a statement of Exploration Results or an estimate of Mineral Resources or Mineral Reserves.

In some cases, it will be appropriate for a Public Report to exclude some commercially sensitive information. A decision to exclude commercially sensitive information would be a decision of the company issuing the Public Report, and such a decision must be made in accordance with any relevant provisions in that jurisdiction. In cases where commercially sensitive information is excluded from a Public Report, the report should provide summary information (for example the methodology used to determine economic assumptions where the numerical value of those assumptions is commercially sensitive) and context for informing investors or potential investors and their advisors.

The order and grouping of criteria in Table 1 reflect the normal systematic approach to exploration and estimation of resources and reserves. The table should be approached from left to right. In other words, criteria in the first column, Exploration Results, should be considered to apply also when reporting Mineral Resources and Mineral Reserves. Similarly, the additional criteria in the Mineral Resources column also apply to Mineral Reserves reporting.

When compiling a Public Report dealing with coal, diamonds, industrial and construction minerals, and dimension stone, there are specific matters that must be considered. Appendices 3 to 6 of the template address these issues. Sections 10-13 of Table 1 include also items that may relate to these products and therefore have been included in Appendices 3-6.

Table 1.

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
GENERAL					
Introduction	General	(i)	Scope of work		
		(ii)	Role of the Competent Person in the preparation of the Report		
		(iii)	A statement for whom the report was prepared; whether it was intended as a full or partial evaluation or other purpose, work conducted, effective date of report, and remaining work.		
		(iv)	Sources of information and data contained in the report or used in its preparation, with citations if applicable, and a list of references.		
		(v)	A title page and a table of contents that includes figures and tables.		
		(vi)	An Executive Summary, which briefly summarises important information in the Public Report, including property description and ownership, geology and mineralization, the status of exploration, development and operations, Mineral Resource and Mineral Reserve estimates, and the Competent Person's conclusions and recommendations. If Inferred Mineral Resources are used, a summary valuation with and if practical without inclusion of such Inferred Mineral Resources. The Executive Summary should have sufficient detail to allow the reader to understand the essentials of the project.		
		(vii)	A declaration from the Competent Person, stating whether "the declaration has been made in terms of the guidelines of the (state the NRO) Code". If a reporting code other than the code of the NRO having jurisdiction has been used, an explanation of the differences.		
		(viii)	Diagrams, maps, plans, sections and illustrations, which are dated, legible and prepared at an appropriate scale to distinguish important features. Maps including a legend, author or information source, coordinate system and datum, a scale in bar or grid form, and an arrow indicating north. Reference to a location or index map and more detailed maps showing all important features described in the text, including all relevant cadastral and other infrastructure features.		
		(ix)	The units of measure, currency and relevant exchange rates.		
	Critical Data	(x)	The details of the personal inspection on the property by each Competent Person or, if applicable, the reason why a personal inspection has not been completed		
		(xi)	If the Competent Person is relying on a report, opinion, or statement of another expert who is not a Competent Person, then a disclosure of the date, title, and author of the report, opinion, or statement, the qualifications of the other expert, the reason for the Competent Person to rely on the other expert, any significant risks and any steps the Competent Person took to verify the information provided.		
SECTION 1: PROJECT OUTLINE					
1.1	Location	(i)	Description of location and map (country, province, and closest town/city, coordinate systems and ranges, etc.)		
		(ii)	Country Profile, with a description of information relating to the project host country that is pertinent to the project, including relevant applicable legislation, environmental and social context etc. An assessment, at a high level, of relevant technical, environmental, social, economic, political and other key risks.		
		(iii)	A general topo-cadastral map.	Topo-cadastral map in sufficient detail to support the assessment of	Detailed topo-cadastral map, with appropriate aerial surveys verified checked with ground controls and

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
				eventual economics and showing existing climatic risks.	and surveys, particularly in areas of rugged terrain, dense vegetation or high altitude.
1.2	Property Description	(i)	Brief description of the scope of project (i.e., whether in preliminary sampling, advanced exploration, Scoping, Pre-Feasibility, or Feasibility Study, Life of Mine plan for an ongoing mining operation or closure).		
		(ii)	Description of topography, elevation, drainage and vegetation, the means and ease of access to the property, the proximity of the property to a population centre, and the nature of transport, the climate, known associated climatic and seismic risks and the length of the operating season and to the extent relevant to the mineral project, the sufficiency of surface rights for mining operations including the availability and sources of power, water, mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, and potential processing plant sites (noting any conditions that may affect possible prospecting/mining activities).		
1.3	Adjacent properties	(i)	Details of relevant adjacent properties. The inclusion on the maps of the location and common mineralized structures in adjacent or nearby properties having an important bearing on the Report. Reference to all information used from other sources.		
1.4	History	(i)	Historical background to the project and adjacent areas concerned, including known results of previous exploration and mining activities (type, amount, quantity and development work), previous ownership and changes thereto.		
		(ii)		Previous successes or failures referred to transparently with reasons why the project should now be considered potentially economic.	
		(iii)		Known or existing historical Mineral Resource estimates and performance statistics from actual production for past and current operations.	
		(iv)			Known or existing historical Mineral Reserve estimates and performance statistics to actual production for past and current operations.
1.5	Legal Aspects and Permitting	A statement from the Competent Person on the confirmation of the legal tenure, including a description of:			
		(i)	The nature of the Issuer's rights (e.g., prospecting and/or mining) and the right to use the surface of the properties to which these rights relate. The date of expiry and other relevant details.		
		(ii)	The principal terms and conditions of all existing agreements, and details of those still to be obtained, (such as, but not limited to, concessions, partnerships, joint ventures, access rights, leases, historical and cultural sites, wilderness or national park and environmental settings, royalties, consents, permission, permits or authorisations).		
		(iii)	The security of the tenure held at the time of reporting or that is reasonably expected to be granted in the future along with any known impediments to obtaining the right to operate in the area. Details of applications that have been made. See Clause 31 for declaration of a Mineral Reserve.		
		(iv)	A statement of any legal proceedings, for example: land claims that may have an influence on the rights to prospect or mine for minerals, or an appropriate negative statement.		
		(v)	A statement relating to governmental/statutory requirements and permits as may be required, have been applied for, approved or can be reasonably be expected to be obtained.		

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
			A review of risks that permits will not be received as expected and impact of delays to the project.		
1.6	Royalties	(i)	The royalties or streaming agreements that are payable in respect of each property		
1.7	Liabilities	(i)	Any liabilities, including rehabilitation guarantees that are pertinent to the project. A description of the rehabilitation liability, including, but not limited to, legislative requirements, assumptions and limitations.		
SECTION 2: GEOLOGICAL SETTING, DEPOSIT, MINERALIZATION					
2.1	Geological Setting, Deposit, Mineralization	(i)	The regional geology		
		(ii)	The project geology including deposit type, geological setting and style of mineralization.		
		(iii)	The geological model or concepts being applied in the investigation and on the basis of which the exploration program is planned, along with a description of the inferences and assumptions made from this model.		
		(iv)	Data density, distribution and reliability and whether the quality and quantity of information are sufficient to support statements, made or inferred, concerning the deposit.		
		(v)	Significant minerals present in the deposit, their frequency, size and other characteristics, including a discussion of minor and gangue minerals where these will have an effect on the processing steps and the variability of each important mineral within the deposit.		
		(vi)	Significant mineralized zones encountered on the property, including a summary of the surrounding rock types, relevant geological controls, and the length, width, depth, and continuity of the mineralization, together with a description of the type, character, and distribution of the mineralization.		
		(vii)	The existence of reliable geological models and/or maps and cross sections that support interpretations.		
SECTION 3: EXPLORATION AND DRILLING, SAMPLING TECHNIQUES AND DATA					
3.1	Exploration	(i)	Data acquisition or exploration techniques and the nature, level of detail, and confidence in the geological data used (i.e., geological observations, remote sensing results, stratigraphy, lithology, structure, alteration, mineralization, hydrology, geophysical, geochemical, petrography, mineralogy, geochronology, bulk density, potential deleterious or contaminating substances, geotechnical and rock characteristics, moisture content, bulk samples etc.). Data sets with all relevant metadata, such as unique sample number, sample mass, collection date, spatial location (sampling coordinates) etc.		
		(ii)	The primary data elements (observation and measurements) used for the Project and a description of the management and verification of these data or the database. Description of the following relevant processes: data acquisition (capture or transfer), validation, integration, control, storage, retrieval and backup processes. If data are not stored digitally, presentation of hand-printed tables with well-organised data and information.		
		(iii)	Acknowledgement and appraisal of data from other parties, and reference to all data and information used from other sources.		
		(iv)	Distinction between data / information from the property under discussion and that derived from surrounding properties.		
		(v)	The methods for collar and down-hole survey, techniques and expected accuracies of data as well as the projection and the grid system used.		

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
		(vi)	Discussion on the sufficiency of the data spacing (geological data) and distribution to establish the degree of geological and grade continuity (assay) appropriate for the Mineral Resources / Mineral Reserves estimation procedure(s) and classifications applied.		
		(vii)	Presentation of representative models and / or maps and cross sections or other two or three-dimensional illustrations of results showing location of samples, accurate drill hole collar positions, down-hole surveys, exploration pits, underground workings, relevant geological data, etc.		
		(viii)	Spatial distribution (geometry) of the mineralization with respect to the drill hole angle because of the importance of the relationships between mineralization widths and intercept lengths (down-hole lengths). Justification if only down-hole lengths are reported.		
3.2	Drilling	(i)	Type of drilling undertaken (e.g., core, reverse circulation, auger, etc.) and details (e.g., core diameter, triple or standard tube, whether core is oriented and if so, by what method, etc.).		
		(ii)	The geological and geotechnical logging of core and chip samples relative to the level of detail required to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.		
		(iii)	The nature of logging (qualitative or quantitative) and the use of core photography (or channel, etc.)		
		(iv)	The total length and percentage of the relevant mineralization intersections logged.		
		(v)	Directional Survey		
3.3	Sample method, collection, capture and storage	(i)	A description of the nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down-hole gamma sondes, or handheld or fixed-position		
		(ii)	A description of the sampling processes, including sub-sampling stages to maximise representivity of samples, whether sample sizes are appropriate to the grain size of the material being sampled and any sample compositing (group samples).		
		(iii)	A description of each data set (e.g., geology, grade, density, quality, geo-metallurgical characteristics etc.), sample type, sample-size selection and collection methods.		
		(iv)	The nature of the geometry of the mineralization with respect to the drill hole angle (if known). The orientation of sampling to achieve unbiased sampling of possible structures, considering the deposit type. The intersection angle. The down-hole lengths if the intersection angle is not known.		
		(v)	A description of retention policy and storage of physical samples (e.g., core, sample reject, etc.).		
		(vi)	A description of the method of recording and assessing core and chip sample recoveries and the results assessed, measures taken to maximise sample recovery and ensure representative nature of the samples, whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss of fine material.		
		(vii)	The cutting of a drill-core sample, e.g., whether it was split or sawn and whether quarter, half or full core was submitted for analysis. Non-core sampling, e.g., whether the sample was riffled, tube sampled, rotary split etc.; whether it was sampled wet or dry; the impact of water table or flow rates on recovery and introduction of sampling biases or contamination from above. The impact of variable hole diameters, e.g., by the use of a calliper tool.		
3.4	Sample Preparation and Analyzes	(i)	The identity of the laboratory(s) and its accreditation status and Registration Number. The steps taken by the Competent Person to ensure the results from a non-accredited laboratory are of an acceptable quality.		
		(ii)			

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
			The analytical method, its nature, the quality and appropriateness of the assaying and laboratory processes and procedures used and whether the technique is considered partial or total by Competent Person.		
		(iii)	A description of the process and method used for sample preparation, sub-sampling and size reduction, and the likelihood of inadequate or non-representative samples (i.e., improper size reduction, contamination, screen sizes, granulometry, mass balance, etc.)		
3.5	Sampling Governance	(i)	The governance of the sampling campaign and process, to ensure quality and representivity of samples and data, such as sample recovery, high grading, selective losses or contamination, core/hole diameter, internal and external QA/QC, and any other factors that may have resulted in or identified sample bias.		
		(ii)	The measures taken to ensure sample security and the Chain of Custody.		
		(iii)	The validation procedures used to ensure the integrity of the data, e.g., transcription, input or other errors, between its initial collection and its future use for modelling (e.g., geology, grade, density, etc.)		
		(iv)	The audit process and frequency (including dates of these audits) and disclose any material risks identified.		
3.6	Quality control	(i)	The verification techniques (QA/QC) for field sampling process, e.g., the level of duplicates, blanks, reference material standards (CRM), process audits, analysis, etc. Indirect methods of measurement (e.g., geophysical methods), with attention given to the confidence of interpretation. Reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. QA/QC procedures used to check databases augmented with 'new' data have not disturbed previous versions containing 'old' data.		
3.7	Bulk Density	(i)	The method of bulk density determination with reference to the frequency of measurements, the size, nature and representativeness of the		
		(ii)	Preliminary estimates or basis of assumptions made for bulk density.		
		(iii)	The representivity of bulk density samples.		
		(iv)	The measurement of bulk density for bulk material using methods that adequately account for void spaces (vugs, porosity etc.), moisture and differences between rock and alteration zones within the deposit.		
3.8	Borehole Survey	(i)	Borehole Survey techniques		
		(ii)	identification of geophysical anomalies in boreholes		
		(iii)	lithological dissection of boreholes		
		(iv)	determination of the ore intervals depths, boundaries, length and the grade for calculating reserves (where possible)		
		V	determination of hydrogeological parameters of layers and horizons.		
		VI	other types of control and surveys.		
3.9	Bulk Sampling or trial mining	(i)	The location of individual samples (including map).		
		(ii)	The size of samples, spacing/density of samples recovered and whether sample sizes and distribution are appropriate to the grain size of the material being sampled.		
		(iii)	The method of mining and treatment.		
		(iv)	The degree to which the samples are representative of the various types and styles of mineralization and the mineral deposit as a whole.		
SECTION 4: ESTIMATIONS AND REPORTING OF EXPLORATION RESULTS AND MINERAL RESOURCES.					

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
4.1	Geological model and interpretation	(i)	The nature, detail and reliability of geological information with which lithological, structural, mineralogical, alteration or other geological, geotechnical and geo-metallurgical characteristics were recorded		
		(ii)	The geological model, construction technique and assumptions that forms the basis for the Exploration Results or Mineral Resource estimate. The sufficiency of data density to assure continuity of mineralization and geology and provision of an adequate basis for the estimation and classification procedures applied.		
		(iii)	Any geological, mining, metallurgical, processing, environmental, social, infrastructural, legal and economic factors that could have a significant effect on the prospects of any possible Exploration Target or deposit.		
		(iv)		Geological data that could materially influence the estimated quantity and quality of the Mineral Resource.	
		(v)		Consideration given to alternative interpretations or models and their possible effect (or potential risk) if any, on the Mineral Resource estimate.	
		(vi)		Geological discounts (e.g., magnitude, domain, etc.), applied in the model, whether applied to mineralized and / or un-mineralized material (e.g., potholes, faults, dykes, etc.).	
4.2	Estimation and modelling techniques	(i)	A detailed description of the estimation techniques and assumptions used to determine the grade and tonnage ranges (intervals) for Exploration Targets.		
		(ii)		The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values (cutting or capping), compositing (including by length and/or density), domaining, sample spacing, estimation unit size (block size), selective mining units, interpolation parameters and maximum distance of extrapolation from data points.	
		(iii)		Assumptions and justification of correlations made between variables.	
		(iv)		Relevant software used (with the version number) together with the parameters used.	
		(v)		The processes of checking and validation, the comparison of model information to sample data and use of reconciliation data, and whether the Mineral Resource estimate takes account of such information.	
4.3	Reasonable prospects for eventual	(i)		The geological parameters, including (but not be limited to) volume / tonnage, grade and value / quality estimates, cut-off grades, strip ratios, upper- and lower- screen sizes.	

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
	economic extraction	(ii)		The engineering parameters, including mining method, processing, geotechnical, hydrogeological and metallurgical) parameters, including assumptions made to mitigate the effect of deleterious elements. Dilution and mining recovery factors that might be applicable to convert in-situ Mineral Resources to Mineral Reserves.	
		(iii)		The infrastructure including, but not limited to, power, water, site-access.	
		(iv)		The legal, governmental, permitting parameters.	
		(v)		The environmental and social (or community) parameters.	
		(vi)		The marketing parameters.	
		(vii)		The economic assumptions and parameters, including, but not limited to, commodity prices, sales volumes and potential capital and operating costs.	
		(viii)		Material risks	
		(ix)		The parameters used to support the concept of 'eventual' in the case of Mineral Resources.	
4.4	Classification criteria	(i)		The criteria and methods used as the basis for the classification of the Mineral Resources into varying confidence categories.	
4.5	Reporting	(i)	Specific grades / qualities and widths.		
		(ii)	The reporting of low and high-grades and widths, together with their spatial location to avoid misleading reporting of Exploration Results.		
		(iii)	A statement on whether grades are regional averages or if they are selected individual samples taken from the property under discussion.		
		(iv)		The detail of open pit, underground, residue stockpile, remnants, tailings, and existing pillars or other sources in a Mineral Resource statement.	
		(v)		A comparison with the previous Mineral Resource estimates, with an explanation of the reason for material changes. A comment on any historical trends (e.g. global bias).	
		(vi)		The basis for the estimate and if not 100%, the attributable percentage relevant to the entity commissioning the report.	

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
		(vi)	The basis of equivalent metal formulae.		
SECTION 5: TECHNICAL STUDIES.					
5.1	Introduction	(i)	Not applicable to Exploration Results or Exploration Targets.	The level of study – Scoping, Pre-Feasibility, Feasibility or ongoing Life of Mine	The level of study –Pre-Feasibility, Feasibility or ongoing Life of Mine
		(ii)			A summary table of the Modifying Factors used to convert the Mineral Resource to Mineral Reserve.
5.2	Mining project (plan)	(i)	Not applicable to Exploration Results or Exploration Targets.	Assumptions regarding mining methods and parameters when estimating Mineral Resources.	
		(ii)			All Modifying Factors and assumptions made regarding mining methods, minimum mining dimensions (or pit shell) and internal and, if applicable, external planned and unplanned mining dilution and mining losses used for the techno-economic study and signed- off, such as mining method, mine design criteria, infrastructure, capacities, production schedule, mining efficiencies, grade control, geotechnical and hydrological considerations, closure plans, and personnel requirements.
		(iii)		Mineral Resource models used in the study.	Mineral Resource models used in the study.
		(iv)		The basis of the cut-off grade(s).	The basis of (the adopted) cut-off grade(s) or quality parameters applied, including metal equivalents if relevant.
		(v)			The mining method(s) to be used.
		(vi)			For open cut mines, a discussion of pit slopes, slope stability, and strip ratio.
		(vii)			For underground mines, a discussion of mining method, geotechnical considerations, mine design

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
					characteristics, and ventilation/cooling requirements.
		(viii)			Discussion of mining rate, equipment selected, grade control methods, geotechnical and hydrogeological considerations, health and safety of the workforce, staffing requirements, dilution, and recovery.
		(ix)			Pit optimisation methods and software used in planning, including a discussion of the constraints.
5.3	Metallurgical and Testwork	(i)	Not applicable to Exploration Results or Exploration Targets.		The source of the samples, the representivity of the potential feed and the techniques used to obtain the samples, laboratory and metallurgical testing techniques.
		(ii)			The basis for assumptions or predictions regarding metallurgical amenability and any preliminary mineralogical test work should already be carried out.
		(iii)		The possible processing methods and any processing factors that could have a material effect on the likelihood of eventual economic extraction. The appropriateness of the processing methods to the style of mineralization.	The processing method(s), equipment, plant capacity, efficiencies, and personnel requirements.
		(iv)			The nature, amount and representativeness of metallurgical test work undertaken and the recovery factors used. A detailed flow sheet / diagram and a mass balance, especially for multi-product operations from which the saleable materials (concentrates) are priced for different chemical and physical characteristics.
		(v)			Assumptions or allowances made for deleterious elements and the existence of any bulk-sample or pilot-scale test work and the degree to which such samples

Criteria		Exploration Results	Mineral Resources	Mineral Reserves
				are representative of the deposit / ore body as a whole.
		(vi)		Disclosure of whether metallurgical process is well-tested technology or novel in nature and if novel, justification of its use in Mineral Reserve estimation.
5.4	Infrastructure	(i) Not applicable to Exploration Results or Exploration Targets. Objectives.	Comment regarding the current state of infrastructure or the ease with which the infrastructure can be provided or accessed and its effect on reasonable prospects for eventual economic extraction.	
		(ii)		Demonstration that the necessary facilities have been allowed for (which may include, but not be limited to, processing plant, tailings dam, leaching facilities, waste dumps, road, pipeline, rail or port facilities, water and power supply, offices, housing, security, resource sterilisation testing etc.). Provision of detailed maps showing locations of facilities.
		(iii)		Statement showing that all necessary logistics have been considered.
5.5	Environmentl and social factors	(i) Not applicable to Exploration Results or Exploration Targets.	Confirmation that the company holding the tenement has addressed the host country environmental legal compliance requirements and any mandatory and/or voluntary standards or guidelines to which the company subscribes.	
		(ii)	Identification of the necessary permits that will be required and their status, and where not yet obtained, and confirmation that there is a reasonable basis to believe that all permits required for the project will be obtained in a timely manner.	
		(iii)	Any sensitive areas that may affect the project as well as any other environmental factors including Interested and Affected Party (I&AP) and/or studies that could have a material effect on the likelihood of eventual economic extraction. Possible means of mitigation of existing problems.	
		(iv)	Legislated social management programmes that may be required and content and status of these.	
		(v)	Material socio-economic and cultural impacts that need to be managed, and where appropriate the associated costs.	

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
5.6	Market Studies and Economic Criteria	(i)	Not applicable to Exploration Results or Exploration Targets.	Technical and economic factors likely to influence the prospect of economic extraction. Refer to Clauses 23-30.	Valuable and potentially valuable product(s) including suitability of products, co-products and by products to market.
		(ii)			Product to be sold, customer specifications, testing, and acceptance requirements. Existence of a ready market for the product and whether contracts for the sale of the product are in place. Price and volume forecasts and the basis for the
		(iii)			Economic criteria used for the study, such as capital and operating costs, exchange rates, revenue / price curves, royalties, and streaming agreements, cut-off grades, reserve pay limits.
		(iv)			Summary description, source and confidence of method used to estimate the commodity price/value profiles used for cut-off grade calculation, economic analysis and project valuation, including applicable taxes, inflation indices, discount rate and exchange rates.
		(v)			Assumptions made concerning production cost including transportation, treatment, penalties, exchange rates, marketing and other costs. Allowances should be made for the content of deleterious elements and the cost of penalties.
		(vi)			Allowances made for royalties and handover agreements payable, both to Government and private entities.
		(vii)			Ownership, type, extent and condition of plant and equipment that is significant to the existing operation(s).
		(viii)			Environmental, social and labour costs.
5.7	Risk Analysis	(i)	Not applicable to Exploration Results or Exploration Targets.	An assessment of technical, environmental, social, economic, political and other key risks to the project.	

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
				Actions that will be taken to mitigate and / or manage the identified risks.	
5.8	Economic analysis	(i)	Not applicable to Exploration Results or Exploration Targets.	The basis on which reasonable prospects for eventual economic extraction has been determined. Any material assumptions made in determining the 'reasonable prospects for eventual economic extraction'.	Mandatory statement on the inclusion of any Inferred Resources in the Pre-Feasibility and Feasibility Studies economic analysis. The sensitivity to the inclusion of any Inferred Resources.
		(ii)			An economic analysis for the project that includes after tax Cash Flow forecast on an annual basis using Mineral Reserves or Mineral Resources OR an annual production schedule for the life of the project, which has been used at the relevant level Pre-Feasibility or Feasibility Study. Accounting for royalties and streaming agreements.
		(iii)			A discussion of net present value (NPV), internal rate of return (IRR) and payback period of capital.
		(iv)			Sensitivity or other analysis using variants in commodity price, grade, capital and operating costs, or other significant parameters, as appropriate and discuss the impact of the results.
SECTION 6: ESTIMATION AND REPORTING OF MINERAL RESERVES.					
6.1	Mineral Reserve Estimation	(i)		A description of the Mineral Resource estimate used as a basis for the conversion to a Mineral Reserve.	
		(ii)			A comparison between the two possibilities, the one with inclusion of Inferred Mineral Resources and the one without inclusion, in such a way so as not to mislead the investors. The quantum of the Inferred Mineral Resources included and the sensitivity of the inclusion to the
		(iii)			A Mineral Reserve Statement in sufficient detail indicating if the mining is open pit or underground plus the source and type of mineralization, domain or ore body,

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
					surface dumps, stockpiles and all other sources.
		(iv)			Reconciliation of historic reliability and reconciliation of the performance parameters, assumptions and modifying factors. A comparison with the previous Reserve quantity and qualities, if available. Where appropriate, any historic trends (e.g., global patterns or bias).
6.2	Classification criteria	(i)			Criteria and methods used as the basis for the classification of the Mineral Reserves into varying confidence categories, which should be based on the Mineral Resource category, and include consideration of the confidence in all the Modifying Factors.
6.3	Reporting	(i)			The proportion of Probable Mineral Reserves, which have been derived from Measured Mineral Resources (if any), including the reason(s) therefore.
		(ii)			The inclusion in a Mineral Reserve statement of the detail of open pit, underground, residue stockpile, remnants, tailings, and existing pillars or other sources.
		(iii)			A comparison with previous Mineral Reserves estimates. Any historic trends (e.g., global patterns).
		(iv)		The inclusion or exclusion of Mineral Resources in Mineral Reserves.	
SECTION 7: AUDITS AND REVIEWS					
7.1	Audits and Reviews	(i)	Type of review/audit (e.g., independent, external), area (e.g., laboratory, drilling, data, environmental compliance etc.), date and name of the reviewer(s) together with their recognised professional qualifications. The level of review/audit (desk-top, on-site comparison with standard procedures, or endorsement where auditor/reviewer has checked the work to the extent they stand behind it as if it were their own work).		
		(ii)	Level and conclusions of relevant audits or reviews. Significant deficiencies and remedial actions are required.		
SECTION 8: OTHER RELEVANT INFORMATION					
8.1		(i)	Other relevant and material information not discussed elsewhere.		

Criteria			Exploration Results	Mineral Resources	Mineral Reserves
SECTION 9: QUALIFICATION OF COMPETENT PERSON AND OTHER KEY TECHNICAL STAFF. DATE AND SIGNATURE					
9.1		(i)	The full name of the Competent Person, their registration number and the name of the professional Organization (PO or RPO), of which the Competent Person(s) is a member. The relevant experience of the Competent Person(s) and other key technical staff who prepared and are responsible for the Public Report.		
		(ii)	The Competent Person's relationship to the issuer of the report, if any.		
		(iii)	The inclusion of the Certificate of the Competent Person (see Appendix 2). Such Certificate should include the date of sign-off and the effective date of the report.		

TABLE 2

Guideline for technical studies

Item	Scoping Study	Pre-Feasibility Study	Feasibility Study
Mineral Resources	Mostly Inferred	Mostly Indicated	Measured and Indicated
Mineral Reserves	None	Probable	Proven and/or Probable
Mining method and geotechnical constraints	Conceptual	Preliminary options	Detailed and Optimised
Mine design	None or conceptual	Preliminary mine plan and schedule	Detailed mine plan and schedule
Scheduling	Annual approximation	3-monthly to annual	Monthly for much of payback period
Mineral Processing	Metallurgical test work	Preliminary Options	Detailed and Optimised studies
Permitting, licensing (mining, prospecting, environmental and infrastructural)	Required permitting listed	Preliminary applications submitted to Authorised Bodies	Applications officially submitted, permitting partially obtained
Social licence to operate	Initial contact with local communities	Formal communication structures and engagement models in place	Contracts/agreements in place with local communities and municipalities (local government)
Risk tolerance	High	moderate	low
CAPITAL COSTS ESTIMATES			
Base, civil/structural, architectural, piping/HVAC, electrical, instrumentation, construction labour, construction labour productivity, material volumes/amounts, material/equipment, pricing, infrastructure	Order-of-magnitude based on historic data or factoring. Engineering < 5% complete.	Estimated from historic factors or percentages and vendor quotes based on material volumes. Engineering 5-25% complete.	Detailed estimate based on calculations, multiple vendor quotations. Engineering 20-50% complete.
Contractors	Included in unit cost or as a percentage of total cost	Percentage of direct cost by area for contractors; historic for subcontractors	Written quotes from contractors
Engineering, procurement, and construction management (EPCM)	Percentage of estimated construction cost	Key parameters assessed. Percentage of detailed construction cost	Detailed estimate

Item	Scoping Study	Pre-Feasibility Study	Feasibility Study
Owner's costs	Historic estimate	Budgeted quotes on key parameters and estimates from experience, factored from similar project	Detailed estimate
Environmental compliance / Closure Cost	Historic estimate	Estimate from experience, factored from similar project	Estimate prepared from detailed budget for actions and specific instructions.
Escalation	Not considered	Based on current budget percentages	Based on cost area with risk
Working Capital	Estimate from experience	Factored from similar project	Detailed analysis of cash flow
Accuracy	+/- 25-50%	+/- 15-25%	+/- 10-15%
Contingency range	+/- 30%	+/- 15-30%	+/- 10-15% (to be determined based on risk analysis)
BASIS OF OPERATING COSTS			
Operating Costs	Order-of-magnitude based on historic data	Rate and Quantitative estimates with some factoring	Detailed estimates, quotations received; minimal factoring
Operating Quantities	General	Quantification from specific estimates with some factoring	Detailed estimates
Unit Costs	Based on historic data for factoring	Estimates for labour, power, and consumables, some factoring	Letter quotes from vendors; minimal factoring
Accuracy	+/- 25-50%	+/- 15-25%	+/- 10-15%
Contingency range	+/- 25%	+/- 15%	+/- 10% (to be determined based on risk analysis)

APPENDIX 1

KAZRC CODE TERMS AND EQUIVALENTS

Throughout the KAZRC Code, most of the terms are used in a general sense. At the same time, a more specific meaning might be attached to them by particular commodity groups specialists' within the industry In order to avoid unnecessary duplication, the generic terms are listed below together with other terms that may be regarded as synonymous for the purposes of this document.

Term	***Synonyms or similar terms***	***Intended meaning***
Mining	*Quarrying*	*AAll activities related to extraction of metals, minerals and gemstones from the earth whether surface or underground, and by any method (e.g., quarries, open cast, open cut, solution mining, dredging etc.), as well as special types of mining operations (underground leaching, smelting, hydraulic mining, etc.).*
Tonnage	*Quantity, volume*	*An expression of the amount of material of interest irrespective of the units of measurement (which should be stated when figures are reported).*
Grade	*Quality, Assay, Analysis (Value)*	*Any physical or chemical measurement of the characteristics of the material of interest in samples or product. Note that the term quality has special meaning for diamonds and other gemstones.*
Beneficiation	*Processing, Preparation, Concentration, Smelting and refining*	*Physical or chemical separation of constituents of interest from a larger mass of material. Methods employed to prepare a final marketable product from material as mined. Examples include screening, flotation, magnetic separation, leaching, washing, roasting etc.*
Recovery	*Yield*	*The percentage of material of initial interest that is extracted during mining and/or processing. A measure of mining or processing efficiency.*
Mineralization	*Type of deposit, orebody, style of mineralization.*	*Any single mineral or combination of minerals occurring in a mass, or deposit, of economic interest. The term is intended to cover all forms in which mineralization might occur, whether by class of deposit, mode of occurrence, genesis or composition.*
Mineral Reserves	*Ore Reserves*	*Term 'Mineral' is preferred under the Code but 'ore' is in common use and is generally acceptable. Other descriptors can be used to clarify the meaning e.g., "coal reserves", "diamond reserves" etc.*
Cut-off grade	*Product specifications*	*The lowest grade, or quality, of mineralized material that qualifies as economically mineable and available in a given deposit. May be defined on the basis of economic evaluation, or on physical or chemical attributes that define an acceptable product.*

Term	*Synonyms or similar terms*	*Intended meaning*
Gemstone		*Diamonds and other gemstones with the same characteristics.*
Raw gemstones	*Ornamental stones*	
Competent Person	*Qualified Person (Canada) Qualified Competent Person (Chile)*	*Refer to Clause 11 of the KAZRC Code and the definition of a Competent Person.*
Scoping Study	*Scoping Study (according to CRIRSCO)*	*A Scoping Study of potential economics of a Mineral Resource, which includes appropriate estimates of the realistically inferred Modifying Factors, together with any other relevant operational factors necessary to demonstrate, at the reporting date, that a Pre-Feasibility study can be reasonably justified.*
Pre-Feasibility Study	*Preliminary Feasibility Study, PFS*	*A Pre-Feasibility Study is a comprehensive study of the viability of a mining project which allows to determine the most suitable mining system (in the case of underground mining) or the configuration of an open pit (in open mining) based on the data obtained and to determine an effective process flow for treatment of the extracted raw materials; it includes a financial analysis based on reasonable assumptions about engineering, legal, operational and economic factors, as well as an assessment of other relevant factors that would be sufficient for a Competent Person acting on reasonable grounds to answer the question whether all or some of the studied Mineral Resources be classified as Reserves.*
Feasibility Study	*Feasibility Study*	*A detailed Feasibility Study is a complete and comprehensive study of a mineral deposit factoring in geological, engineering, technical, legal, operational, social and economic, environmental and other relevant factors in sufficient detail to serve as the basis for the final decision by one or another financial body regarding the financing of industrial development and industrial exploitation of the deposit.*
Recovery Ratio	*Loses and dilution*	*Part of extracted mineral raw material can be lost during excavation due to method of mining.*
Audit	*Expertise*	*Evaluation of the Asset by independent consultants for the purpose to have independent estimate for investor or planning purposes.*
Review		*Review is an independent evaluation of a Report on Exploration Results, Mineral Resources or Mineral Reserves estimates by another Competent Person by request of investor of Stock Exchange to approve results reported.*

APPENDIX 2

CERTIFICATE OF COMPETENT PERSON

This Competent Person Certificate is given only as a guide to the Competent Person. It is designed to incorporate all of the requirements of the KAZRC Code.

Certificate of Competent Person

As the author of the report entitled [report title], I hereby state:
1. My name is [Competent Person's name] and [details – position in company, company name, address].

2. [Profession and details of registration body].

3. [Qualifications].

4. [Relevant experience].

5. I am a "Competent Person" as defined in the KAZRC Code.

6. [Work undertaken or services rendered].

7. [Site inspection details].

8. [Details of aspects of this report for which the CP is responsible].

9. I am not aware of any material fact or material change with respect to the subject matter of the Report that is not reflected in the Report, the omission of which would make the Report misleading.

10. I declare that this Report appropriately reflects the Competent Person's/author's view.

11. I am independent/not independent of [name of issuer].

12. I have read the KAZRC Code and the Report has been prepared in accordance with the guidelines of the KAZRC Code.

13. I do not have, nor do I expect to receive, a direct or indirect interest in the [project/mine details] or [name of issuer] OR I am an [employee/shareholder/director or other interested party] in respect of the issuer [name of issuer] or the project/mine. OR I have no conflicts of interest in respect of the issuer [name of issuer] or the project/mine

14. At the effective date of the Report, to the best of my knowledge, information and belief,

the Report contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Dated at [place] and [date].

[Signed]
[Name of Competent Person] [Name of PO or RPO]

APPENDIX 3

Reporting of metal equivalents

3.1 The reporting of Exploration Results, Mineral Resources and/or Mineral Reserves for polymetallic deposits in terms of metal equivalents (a single equivalent grade of one major metal) must show details of all material factors contributing to the net value derived from each constituent.

The following minimum information must accompany any Public Report that includes reference to metal equivalents, in order to conform to the principles of Transparency, Materiality and Competence, as set out in Section 3:

- Individual grades for all metals included in the metal equivalent calculation;
- Assumed commodity prices for all metals,
- Assumed beneficiation recoveries for all metals and discussion of the basis on which the assumed recoveries are derived (metallurgical test work, detailed mineralogy, similar deposits, etc.);
- A clear statement that it is the Company's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold; and
- The calculation formula used.

In most circumstances, the metal chosen for reporting on an equivalent basis should be the one that contributes most to the metal equivalent calculation. If this is not the case, a clear explanation of the logic of choosing another metal must be included in the report.

Estimates of beneficiation recoveries for each metal must be used to calculate meaningful metal equivalents

Reporting on the basis of metal equivalents is not appropriate if metallurgical recovery information is not available or not able to be estimated with reasonable confidence.

In many projects information on the benefeciation recoveries of metals may not be available, or cannot be estimated with sufficient reliability at the Exploration Results stage. In such cases, reporting on the basis of metal equivalents can be misleading.

APPENDIX 4

Reporting of mineralized fill, pillars, low grade mineralization, stockpiles, dumps and tailings.

4.1. The KAZRC Code is applicable to the assessment and categorization of all mineralized fills. This can include mineralized fill, remnants, pillars, low grade mineralization, stockpiles, dumps and tailings (remnant materials) where there are reasonable prospects for eventual economic extraction in the case of Mineral Resources, and where extraction is reasonably justifiable in the case of Mineral Reserves. Unless otherwise stated, all other Clauses of the Code (incl. Fig. 1) apply to the reporting of these fills.

Any mineralized material as described in this Appendix can be considered to be similar to in situ mineralization for the purposes of reporting Mineral Resources and Mineral Reserves. Judgements about the mineability of such mineralized material should be made by professionals with relevant experience.

If there are no reasonable prospects for the eventual economic extraction of all or part of the mineralized material as described in this Appendix, then this material cannot be classified as either Mineral Resources or Mineral Reserves. If some portion of the mineralized material is currently sub-economic, but there is a reasonable expectation that it will become economic, then this material may be classified as a Mineral Resource. If technical and economic studies have demonstrated that economic extraction could reasonably be justified under realistically assumed conditions, then the material may be classified as a Mineral Reserve.
The above Clauses apply equally to low grade in situ mineralization, sometimes referred to as 'mineralized waste' or 'marginal grade material', and often intended for stockpiling and treatment towards the end of mine life. For clarity of understanding, it is recommended that tonnage and grade estimates of such material be itemized separately in Public Reports, although they may also be aggregated with total Mineral Resource and Mineral Reserve figures.

Stockpiles are defined to include both surface and underground stockpiles, including broken ore in stopes, and can include ore currently in the ore storage system. Mineralized material in the course of being processed (including leaching), if reported, should be reported separately.

APPENDIX 5

Reporting of Coal Exploration Results, Mineral Resources and Reserves.

5.1 The sections in this appendix 5.1-5.4 of the KAZRC Code address matters that relate specifically to the public reporting of Coal Exploration Results, Coal Resources and Coal Reserves. Unless otherwise stated, sections 1 to 42 of the KAZRC Code (including Figure 1) apply. The guidelines presented in Table 1 should be considered persuasive when reporting on Coal Resources and Reserves.
For purposes of public reporting, the requirements for coal are generally similar to those for other commodities with the replacement of terms such as 'mineral' by 'coal' and 'grade' by 'quality'.

5.2 The terms 'Mineral Resource(s)' and 'Mineral Reserve(s)', and the subdivisions of these as defined above, apply also to coal reporting, but if preferred by the reporting company, the terms 'Coal Resource(s)' and 'Coal Reserve(s)' and the appropriate subdivisions may be substituted.

5.3 'Marketable Coal Reserves', representing beneficiated or otherwise enhanced coal product where modifications due to processing have been considered in addition to mining factors such as dilution, may be publicly reported in conjunction with, but not instead of, reports of Coal Reserves. The basis of the predicted yield to achieve Marketable Coal Reserves should be stated.

5.4 Reference to all coal products and properties must not be made until specific properties are demonstrated by analytical results for samples from the deposit.

Table 1 SECTION 10			Exploration Results	Mineral Resources	Mineral Reserves
Section 10 Reporting of Coal Exploration Results, Mineral Resources and Reserves.					
10.1	Specific Reporting for Coal	(i)	Appendix 5 of the *KAZRC* Code provides additional criteria for reporting on coal deposits.		
		(ii)	Methodological guidance is available from KAZRC on Coal Deposits reporting.		
10.2	Geological Setting, Property description, Mineralization	(i)	The project geology including coal deposit type, geological setting and coal seams/ zones present.		
		(ii)	The structural complexity, physical continuity, coal rank, qualitative and quantitative properties of the significant coal seams or zones on the property.		
10.3	Drilling	(i)	Core recoveries and method of calculation. Core recoveries in cored boreholes should be in excess of 95% by length within the coal seam intersection.		
10.4	Relative Density	(ii)	The apparent relative density or true relative density of the coal seam(s) determined on coal samples from borehole cores using recognized standard laboratory methods or commonly used procedures. The moisture basis on which the relative density determination is based and the moisture basis on which the final density value is reported (in situ or air-dried basis), should be stated.		
10.5	Bulk- Sampling or trial-mining	(iii)	The purpose or aim of the bulk sampling programme, the size of samples, spacing/density of samples recovered. The applicability of bulk sampling or large diameter core samples to provide representative samples for tests Comparison of results obtained from bulk sampling versus exploration sampling.		
10.6	Reasonable prospects for eventual economic extraction	(i)	The basis on which reasonable prospects for eventual economic extraction has been determined. Any material assumptions made in determining the 'reasonable prospects for eventual economic extraction'.		
10.7	Mineral Resources or Mineral Reserves Reporting	(i)		The appropriate coal quality for all Coal Resource and Reserve categories. The type of analysis (e.g., raw coal, washed coal at specific cut-point density) and the basis of reporting of the coal quality parameters (e.g., air-dried basis, dry basis, etc.).	
		(ii)		A Mineral Resource only includes the coal seam(s) above the minimum thickness cut-off and the coal quality cut-off(s).	The Reserves maybe reported as ROM tonnages and coal quality, and also as Saleable product's tonnages and coal quality.
		(iii)		The reporting basis with particular reference to moisture and relative density.	

APPENDIX 6

Reporting of Diamond and other Gemstones Exploration Results, Mineral Resources and Mineral Reserves.

6.1 The sections in this Appendix 6.1-6.4 of the KAZRC Code address matters that relate specifically to Public Reporting of Exploration Results, Mineral Resources and Mineral Reserves for Diamonds and Other Gemstones. Unless otherwise specified, sections 1 to 42 of this KAZRC Code (including Figure 1) apply. The guidelines presented in Table 1 should be considered persuasive when reporting on Exploration Results, Resources and Reserves for Diamonds and other Gemstones.

For the purposes of public reporting, the requirements for diamonds and other gemstones are generally similar to those for other commodities with the replacement of terms such as 'mineral' by 'diamond'. The term 'quality' should not be substituted for 'grade,' since in diamond deposits these have distinctly separate meanings

A number of characteristics of diamond deposits are different from those of typical metalliferous and coal deposits and require special consideration. These include the generally low mineral content and variability of primary and placer deposits, the particulate nature of diamonds and the specialised requirement for diamond valuation. In addition, the specific difficulties and uncertainties inherent in estimating the resources and reserves of these raw materials must be considered.

6.2 Reports of diamonds recovered from sampling programs must provide material information relating to the basis on which the sample is taken, the method of recovery and the recovery of the diamonds. The weight of diamonds recovered may only be omitted from the report when the diamonds are considered to be too small to be of commercial significance. This lower cut-off size should be stated.

The stone size distribution and price of diamonds and other gemstones are critical components of the resource and reserve estimates. At an early exploration stage, sampling and delineation drilling will not usually provide this information, which relies on large diameter drilling and, in particular, bulk sampling.

In order to demonstrate that a resource has reasonable prospects for eventual economic extraction, some appreciation of the likely stone size distribution and price is necessary, however preliminary. To determine an Inferred Resource in simple, single-facies or single-phase deposits, such information may be obtainable by representative large-diameter drilling. More often, some form of bulk sampling, such as pitting and trenching, would be employed to provide larger sample parcels.

In order to progress to an Indicated Resource, and from there to a Probable Reserve, it is likely that much more extensive bulk sampling would be needed to fully determine the stone size distribution and value. Commonly such bulk samples would be obtained by underground development

designed to obtain sufficient diamonds to enable a confident estimate of price.
In complex deposits, it may be very difficult to ensure that the bulk samples taken are truly representative of the whole deposit. The lack of direct bulk sampling, and the uncertainty in demonstrating spatial continuity of size and price relationships should be persuasive in determining the appropriate resource category.

6.3 Where Diamond Resource or Diamond Reserve grades (carats per cubic meter) are based on correlations between the frequency of occurrence of micro-diamonds and of commercial size stones, this must be stated, the reliability of the procedure must be explained and the cut-off size sieve for micro-diamonds reported.

6.4 For Public Reports dealing with diamond or other gemstone mineralization, it is a requirement that any Reported valuation of a parcel of diamonds or gemstones be accompanied by a Statement verifying the independence of the valuation, which must be based on a Report from a demonstrably reputable and qualified expert.
If a valuation of a parcel of diamonds is reported, the weight in carats and the lower cut-off size of the contained diamonds must be stated and the value of the diamonds must be given in US dollars per carat. Where the valuation is used in the estimation of Diamond Resources or Diamond Reserves, the valuation must be based on a parcel representative of the size, shape and colour distributions of the diamond population in the deposit.
Diamond valuations should not be reported for samples of diamonds processed using total liberation methods.

The continuation of Table 1 provides a generalized list of the main criteria that must be taken into account when preparing Reports on the Exploration Results, Resources and Reserves of Diamonds and other Gemstones.

Table 1 SECTION 11			Exploration Results	Mineral Resources	Mineral Reserves
SECTION 11: Exploration Results, Mineral Resources and Mineral Reserves Reporting of Diamond and other Gamestones.					
11.1	Specific Reporting for Diamonds and Gemstones	(i)	Criteria applicable to diamond deposits are also applicable to other gemstone deposits.		
		(ii)	Appendix 6 provides additional criteria for reporting on diamonds and other gemstones.		
11. 2	Geological Setting, Property description, Mineralization	(i)	The nature of the source of the diamonds, including the rock type and geological environment.		
11.3	Sampling of Diamond Projects	(i)	The type of sample (outcrop, boulder, drill-core, RC drill cuttings, gravel, stream sediment or soil) and purpose (for example: RC drilling to identify gravel thickness, large-diameter drilling to establish stones per unit of volume, bulk-sample, etc.).		
		(ii)	Sample size, distribution and representativity.		
		(iii)	The type of packaging, sample refinement.		
		(iv)	Sample size reduction, bottom and top screen sizes and any re-crush.		
		(v)	The sample processes (e.g., DMS, grease, X-Ray, hand-sorting, etc.).		
		(vi)	Process efficiency, tailings auditing and granulometry.		
		(vii)	The laboratory used, type of process for micro-diamonds and accreditation. Reports of microdiamond recoveries should specify both the number of stones recovered and the top and bottom screen or crushing sizes used in the recovery process.		
		(viii)	Reports of kimberlitic indicator minerals (KIM's), such as chemically/physically distinctive garnet, ilmenite, chrome spinel and chrome diopside, should be prepared by a suitably qualified laboratory which should be identified.		
		(ix)	Reports of recoveries of diamonds or KIM's from all samples accompanied by details of the sampling parameters used – type of sample (stream sediment, soil, bulk, rock, etc) As well as sample size, sample frequency (screening net), representivity and screen parameters are required.		
		(x)	Existing data on major and trace element chemistry of any kimberlitic indicator minerals recovered. Relevant peer-reviewed published research articles referenced when reporting the interpretation of mineral chemistry data for diamond exploration projects. NOTE: Mineral chemistry does not provide direct grade or diamond value information, and may not be used to infer these parameters for Mineral Resource estimation purposes.		
		(xi)	Where diamonds have been recovered, details of the form, shape, colour and size of the diamonds and, where relevant, the nature of the source of the diamonds.		

Table 1 SECTION 11			Exploration Results	Mineral Resources	Mineral Reserves
11.4	Bulk Sampling or trial-mining	(i)	Relevant tabulated results, including (but not limited to) volume of sample, number of individual diamonds, total number of carats, sample grade, diamond value (it is not possible to evaluate diamond quality from microdiamonds).		
		(ii)	Micro and macro diamond sample results per geological domain.		
		(iii)	Stone-size and stone-number distribution.		
		(iv)	The lower cut-off size should be stated.		
		(v)	A carat (diamond) is defined as one fifth of a gram (0.2 g) – often described as a metric carat. Any deviation from this standard should be explained in detail. Sample grade is used in the context of carats per units of mass, area or volume. The sample grade above the specified lower cut-off sieve size should be reported as carats per dry metric tonne and/or carats per 100 dry metric tonnes. For placer deposits, sample grades quoted in carats per tonne or carats per m^3 are acceptable. In the marine placer environment Diamond Reserve grades are, typically, reconciled on a per m^2 basis.		
11.5	Estimation and Modelling Techniques	(i)	Estimation techniques (including geostatistical estimation, where relevant) used to determine the volume/tonnage, grade and value data applicable to the deposit type.		
		(ii)	Applicable volumes, grades and values expressed in ranges (with appropriate clarifiers to denote lack of reliability of data).		
		(iii)	If grades are reported then it should be stated clearly whether these are regional averages, based on microdiamond assessment, KIM analyses, or if they are selected individual samples taken from the property under discussion.	The basis for grade estimation for Diamond Resources should be from bulk-sampling or large diameter drilling (or extrapolated from microdiamond data) derived from the property itself.	The basis for grade estimation for Diamond Reserves should be from bulk-sampling and/or trial-mining.
		(iv)	If grades are reported then it should be stated clearly whether these are regional averages or if they are selected individual samples taken from the property under discussion.		
		(v)	The occurrence of individual diamonds or microdiamonds in surficial deposits or from inadequate samples (too small to be statistically valid) from a primary or secondary rock source would not typically qualify as an exploration target. This may not be true for marine deposits, in which case further explanation and discussion would be necessary.		

Table 1 SECTION 11			Exploration Results	Mineral Resources	Mineral Reserves
		(vi)	Volume, grade and value estimation (including geostatistical, where relevant) and interpolation techniques applied and their applicability to the deposit type.		
		(vii)	Reports of diamond properties should specify the number and total weight (in carats) of diamonds recovered. The weight of diamonds recovered may only be omitted from the report when the diamonds are less than 0.5 mm in size (i.e. when the diamonds recovered are microdiamonds).		
11.6	Resource/ Reserve Classification Criteria	(i)		A Diamond Resource / Reserve should not be reported in terms of contained diamond content unless corresponding tonnages / volumes, grades and values are also reported. The average diamond grade and value should not be reported without specifying the applicable Bottom Cut-off Screen Size.	
		(ii)		In addition to general requirements to assess volume and density there may be a need to relate stone frequency (stones per cubic metre, per tonne, or per square metre) to stone size (carats per stone) to derive grade (carats per cubic metre, per tonne or per square metre). The elements of uncertainty in these estimates should be considered, and Diamond Resource classification developed accordingly.	
		(iii)		Present aspects of: - Micro and macro diamond sample results per domain, - Global sample grade per geological domain and local block estimates in the case of Indicated Resources, - spatial structure analysis and content distribution, - stone size and numbers distribution, - Effect on sample grade with change in bottom cut off screen size.	
		(iv)		Sample grade - the sample grade above the specified lower cut-off sieve size as carats per dry metric tonne and/or carats per 100 dry metric tonnes. - For alluvial deposits, sample grades quoted in carats per (100) square metre or carats per (100) cubic metre are acceptable be accompanied by a volume to weight basis for calculation, where relevant. - Adjustments made to size distribution for sample plant performance and performance on a commercial scale. - The total number of diamonds and the total weight of diamonds greater than the specified and reported bottom cut-off sieve size. - The weight of diamonds may only be omitted when the diamonds are considered too small to be of commercial significance. - This lower cut-off size should be stated in the text.	
		(v)		Value - Diamond valuation is a highly specialized process and is only possible on parcels containing appropriate numbers of macro-diamonds. - It is not possible to evaluate diamond quality from microdiamonds.	

Table 1 SECTION 11			Exploration Results	Mineral Resources	Mineral Reserves
				- Classification of diamonds as gem, or near gem and industrial, should be made by recognized experts. - Valuations should not be reported for samples of diamonds processed using total liberation method, which is commonly used for processing kimberlite exploration samples. - The number of stones and the total number of carats used in the grade and value estimation should be disclosed and accompanied by a discussion of the validity of this data. - The accreditation of the Valuer should be disclosed. Valuations of partial parcels of diamonds should not be used as a basis for the estimation of average revenue from a diamond deposit. - Details of parcel valued, number of stones, carats and size distribution using a standard progression of sieve sizes for each identified geological domain. - Average valuation per sieve size. - Estimation of value with size. - Assessment of diamond breakage. - Average USD/carat and/or USD/tonne value with change in bottom cut-off. - Minimum parcel size for representative valuation. - Has a strict bottom cut-off been applied, or does the modelled value include incidental diamonds below the bottom cut-off? - The basis for the price (e.g., dealer buying price, dealer selling price, etc.) should also be stated.	
11.7	Security and integrity of sampling	(i)	Whether samples were sealed after excavation and the chain of custody from source to reporting of results.		
		(ii)	Security standards in sampling plant and recovery sections of sampling/mining programmes for macro diamonds.		
		(iii)	Valuer location, escort, delivery, cleaning losses, reconciliation with recorded sample carats and number of stones.		
		(iv)	Core samples washed prior to treatment for micro-diamonds and use of diamond drill-bits.		
		(v)	Audit samples treated at alternative facilities.		
		(vi)	Results of tailings checks.		
		(vii)	Recovery of tracer monitors used in sampling and treatment.		
		(viii)	Geophysical (logged) density and particle density.		
		(ix)	Cross-validation of sample weights, wet and dry, with hole volume and density, moisture factor.		

APPENDIX 7

Reporting of Industrial Minerals, Cement Feed Materials and Construction Raw Materials Exploration Results, Mineral Resources and Reserves.

7.1 Sections 7.1–7.2 of the KAZRC Code address matters related to Public Reporting of industrial minerals**,** cement feed materials and construction raw materials of all forms that are generally sold on the basis of their product specifications and market acceptance.

Unless otherwise stated, sections 1 to 42 of the KAZRC Code (including Figure 1) apply. The guidelines presented in Table 1, should be considered persuasive when reporting Exploration Results, Mineral Resources and Mineral Reserves for industrial minerals, cement feed materials and construction raw materials, except for the guidelines that may not apply when estimates of Mineral Resources and Reserves are presented on a aggregated basis as described in section 7.2.

When reporting information and estimates for industrial minerals, cement feed materials and construction raw materials, all of the key principles and purpose of the KAZRC Code apply. Chemical analyses may not always be relevant, and other quality and performance characteristics may be more applicable and acceptable as the basis of the reporting.

Some industrial mineral, cement feed materials and construction raw material deposits may be capable of yielding products suitable for more than one application and/or specification. If considered material by the Competent Person, such multiple products should be quantified either separately or as a percentage of the bulk of the deposit.

Unless it is a specific aspect of their instructions to reflect the range of product mixes and target markets for the deposit, the Competent Person should normally report the reserves and resources within the framework of an existing mining plan or established set of product and market assumptions and objectives.

If there is potential for ancillary products, or mining or process waste, to be sold off-site for subsidiary uses in addition to the planned sales of primary products (i.e., other uses for non-saleable quarry production, such as secondary aggregate or engineering or other fill), the Competent Person should reflect this in their report and comment on any significant implications (e.g., reductions in the amount of non-saleable material that could otherwise be used as a restoration material).

The factors underpinning the estimation of Mineral Resources and Mineral Reserves for industrial minerals, cement feed materials and construction raw materials are the same as those for other deposit types covered by the KAZRC Code. It may be necessary, prior to the reporting of a Mineral Resource or Mineral Reserve, to take particular account of certain key characteristics or qualities such as likely product specifications, proximity to markets and general product marketability.

For industrial minerals, cement feed materials and construction raw materials, it is common practice to report the saleable product rather than the 'as mined' product as it is recognised that commercial sensitivities may not permit the publication of Mineral Resources and Reserves

in the latter format which is the preferred style of reporting as per the KAZRC Code.
It is important that, in all situations where the saleable or usable product is reported, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.
Other industry guidance on the valuation and reporting of resources and reserves of industrial minerals**,** cement feed materials and construction raw materials may be useful, but shall in no way replace the principles and objectives of KAZRC public reporting.

Reports should make clear the 'permitted' or 'non-permitted' status
of the resources and reserves. In addition, reserves particularly should only be quoted in the Report where the operating company has legal control.

It should be noted that many of the Modifying Factors are more relevant to industrial minerals, cement feed materials and construction raw materials than to metalliferous minerals. Specifically the legal control may be more important, as well as the permitting status, due to the nature of the planning process for non - strategic and non - government owned minerals in the country.

7.2 Mineral Reserves and Mineral Resources of industrial minerals**,** cement feed materials and construction raw materials serving localized or regional markets may be reported on an aggregated basis on an appropriately defined geographical basis to reflect the particular economic constraints of the deposits being reported without divulging commercially sensitive information.
In certain cases, commercial sensitivity may prevent the publication of detailed information and data associated with Mineral Resources and Mineral Reserves of industrial minerals, cement feed materials and construction raw materials, and in such cases, this should be clearly justified in the report (either prepared for an individual site or on an aggregated basis).

Table 1 SECTION 12			Exploration Results	Mineral Resources	Mineral Reserves
Section 12: Reporting of Industrial Minerals, Cement Feed Materials and Construction Raw Materials Exploration Results, Mineral Resources and Reserves.					
12.1	Reporting of Industrial Minerals, Cement Feed Materials and Construction Raw Materials Exploration Results, Mineral Resources and Reserves.	(i)	Appendix 7 provides additional criteria for reporting on Industrial Mineral, Cement Feed Materials and Construction Raw Materials deposits.		
		(ii)	The exploration or geologically specific specialised industry techniques appropriate to the minerals under investigation.		
		(iii)	The nature and quality of sampling or specific specialised industry standard measurement tools appropriate to the minerals under investigation.		
		(iv)	Appropriate saleable product qualities. The basis for reporting (physical or chemical parameters, air-dried basis, dry basis, etc.). Deleterious chemical elements or physical parameters.		
		(v)	Assumptions regarding in particular: extraction methods, infrastructure, processing, environmental and social parameters. Where no mining related assumptions have been made, this should be explained.		
		(vi)	Marketing parameters, customer specifications, testing, and acceptance requirements.		
		(vii)	The nature, amount and representativeness of metallurgical/processing studies completed which form the basis for the various saleable materials which may be priced for different chemical and physical characteristics.		
		(viii)	Where the reference point is a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.		

APPENDIX 8

Reporting Of Exploration Results, Mineral Resources And Mineral Reserves For Dimension Stone, Ornamental And Decorative Stone

8.1

Clauses in this Appendix address matters that relate to the public reporting of dimension stone, ornamental and decorative stone of all forms that are generally sold based on their technical (geological/mining) product specifications, quality and market acceptance.

Unless otherwise noted, paragraphs 1 to 47 of the KAZRC Code (including Figure 1) apply to this section.

Table 1, as part of the Template, should be considered persuasive when reporting Exploration Results, Mineral Resources and Mineral Reserves for dimension stone, ornamental, and decorative stone.

'Dimension stone' is a technical/commercial term that includes all-natural stones that can be quarried in blocks of different dimensions and processed by cutting or splitting, and that possess the technical and aesthetic properties required for their use in the building and construction industries.

In both mining methods and fields of application, dimension stone is distinct from any other material derived from natural rocks (such as: aggregates, cement materials, crushed stone, etc.) Whilst other materials are almost exclusively used for load bearing and filling functions and are largely utilized in public works, dimension stone materials offer special qualitative features which mean they can be used for different purposes, and they can perform both structural and decorative architectural functions.

In general, dimension stones can be quarried in regular and/or unshaped blocks by using different mining methods (drilling & splitting, diamond wire and diamond chainsaw cutting) and processed (cut, polished, and subjected to other surface treatments) to produce semi-finished products (slabs) and finished products (tiles and cut-to-size products).

Chemical analyses may not always be relevant for material evaluation, at least during the exploration-evaluation phases. Where necessary, chemical analysis is used to verify the presence of possible minerals and related alteration that could produce important quality defects on finished products. Chemical/compositional analysis may also identify mineral components and/or assemblages and is used to predict the future technical requirements of the quarrying-processing equipment and related tools.

Qualitative and aesthetic qualities (color, grain, texture, and their regularity in distribution) and/or their structural performance characteristics (compression and flexural strength, abrasion resistance, porosity, ability to be polished, radioactivity content, etc.) may be more important for the market and applicable and acceptable as the basis of the Reporting.

Many dimension stone deposits may be capable of yielding different products (different materials and /or different market grades within the same material), suitable to produce more than one finished or semi-finished product, and for more than

one final application and/or specification. They often are sold in the market with different prices. If considered material by the Competent Person, estimates for such multiple products should be included either separately or as percentages of the bulk of the deposit. Unless it is a specific aspect of their instructions to reflect the range of products mixes and target markets for the deposit, the Competent Person should normally report the Mineral Resources and Mineral Reserves within the framework of an existing mining plan and/or feasibility study or established set of products and market assumptions and objectives.
If there is potential for ancillary products or by-products, or for quarrying or processing waste to be re-utilized or to be sold off-site for subsidiary uses, in addition to the planned sales of the primary products as described above (e.g., aggregate, sand and powder as industrial mineral, building and paving stone, etc.) The Competent Person should reflect this in the report and comment on any significant implications (e.g., reduction in the amount of non-saleable material, minimization of waste and related lower waste management costs and environmental impact).

The factors underpinning the estimation of Mineral Resources and Mineral Reserves for dimension stones are often not the same as those for other deposit types covered by the KAZRC Code.
It may be necessary, prior to the reporting of Mineral Resources and Mineral Reserves, to take account of certain particular key characteristics/features of the target material specific to dimension stone. These may include final product specifications, proximity to markets, type, structure, and demand of the market (very different area by area) and, excluding some very well-established materials, possible changes in market requirements, and general product marketability.
These may also depend mainly on the market quality of the target material (colour, grain, texture and their regularity in distribution).

Table 1 SECTION 13			Exploration Results	Mineral Resources	Mineral Reserves
SECTION 13: Reporting Of Exploration Results, Mineral Resources And Mineral Reserves For Dimension Stone, Ornamental And Decorative Stone.					
13.1	Reporting Of Exploration Results, Mineral Resources And Mineral Reserves For Dimension Stone, Ornamental And Decorative Stone	(i)	Appendix 8 provides additional criteria for reporting on Dimension Stone, Ornamental and Decorative Stone.		
		(ii)	The exploration or geologically specific specialized industry techniques appropriate to the stone under investigation.		
		(iii)	The nature and quality of sampling or specific specialized industry standard measurement tools appropriate to the stone under investigation.		
		(iv)	The appropriate saleable product qualities reported, including colour, grain, texture and their regularity in distribution. The basis for reporting (physical or chemical parameters, compression and flexural strength, abrasion resistance, porosity, polishability etc.) should be reported. Reporting of deleterious chemical elements, radioactivity or physical parameters is required.		
		(v)	State assumptions regarding in particular extraction methods, infrastructure, processing, environmental and social parameters. Where no mining related assumptions have been made, this should be explained.		
		(vi)	Discuss and justify the marketing parameters, customer specifications, testing, and acceptance requirements.		
		(vii)	Discuss the nature, amount and representativeness of processing studies completed which form the basis for the various saleable materials which may be priced for different chemical and physical characteristics.		
		(viii)	Where the reference point is a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.		

APPENDIX 9. RECOGNIZED PROFESSIONAL ORGANIZATIONS IN THE FIELD OF GEOLOGY AND MINING

1. Public Society «Professional Society of independent experts of the subsurface resources PONEN»

2. Overseas professional organizations members of the National Reporting Organizations that are members of CRIRSCO.