CERTIFICATION CODE FOR EXPLORATION PROSPECTS, MINERAL RESOURCES AND ORE RESERVES

Instituto de Ingenieros de Minas de Chile
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The **Mineral Resources Committee of the Instititution of Mining Engineers of Chile (IIMCh)** is pleased to introduce the

Code for the Certification of
Exploration Prospects, Mineral Resources and Reserves

which is the result of a Collaboration Agreement between the IIMCh and the Ministry of Mining established in December, 2002.

This code synthetizes the present practice of the mining industry in regard to standards and procedures applied to exploration prospects, mineral resources, and reserves with the purpose of reporting publicly on financial instruments based on these mine assets in the capital markets. These standards follow general criteria already adopted and applied by capital markets in those countries characterized by a very dynamic and well developed mining sector such as Australia, Canada, Southafrica, United Kingdom, and others. The work done by the **Mineral Resources Committee of the IIMCh** has had the recognition of the Combined Reserves International Reporting Standards Committee (CRIRSCO) that leads the establishement of an international code in these matters. CRIRISCO is an entity formed by representatives of the countries previously mentioned, a representative of the Society of Mining Engineers of the UStates and a representative of the IIMCh. The Institution thanks the Ministry of Mining, the representatives of these Ministry in the **Mineral Resources Committee**, and specially the Minister of Mining, **Sr. Alfonso Dulanto Rencoret** due to the genuine support given to the IIMCh in the preparation of this Code.

The Institution also thanks the Superintendencia de Valores y Seguros (SVS) because of the help given continuously to the Committee as well as by the interchange of opinions and suggestions received during the preparation of this document.

For the preparation of the Code, the IIMCh, through the ***Mineral Resources Committee****, invited to different enterprises, mining entities, and professionals with interest in the issue of exploration prospects, mineral resources and reserves. The IIMCh and the Committee´s President thank to all their contributions in the preparation of this Code.*

AngloAmerican	*(Jorge Betzhold)*
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Antofagasta Minerals	*(Alvio Zuccone)*
BhpBilliton	*(John Montimer)*
Carey Abogados	*(Francisco Ugarte)*
Cochilco	*(Robinson Saldías)*
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INSTITUTION OF MINING ENGINEERS OF CHILE (IIMCH)

CERTIFICATION CODE FOR EXPLORATION PROSPECTS, MINERAL RESOURCES AND RESERVES

INTRODUCTION

I1. Within the context of a Collaboration Agreement signed in year 2002 with the Chilean Mining Ministry, the Institute of Mining Engineers of Chile (IIMCh) laid down this document known as the Code for the Certification of Exploration Prospects, Mineral Resources and Ore Reserves. The Certification is required to prepare and issue public information on mineral assets according to the guidelines that regulate the technical, economic, and environmental aspects that satisfy the conditions set up by the Chilean capital and financial markets. As a result of international treaties and globalization of the mining industry, the Code is consistent with other prevailing international codes which have already been adopted by capital and financial markets of worldwide relevance.

I2. The attached document has been written and revised by the Mineral Resources Committee of the Institute of Mining Engineers of Chile which includes representatives of the IIMCh, the Chilean Mining Ministry, and representatives of various foreign and Chilean mining entreprises and entities under the invitation of the IIMCh. Invitations were addressed to the Mining Council, the Mining National Society, the National Association of Geologists, the Engineering National Association - Mining Section, the Chilean Geological Society, Cochilco, Sernageomin, Anglo-American, Bhp-Billiton, Codelco, Aur Resources Inc, Antofagasta Minerals, ENAMI, Empresas El Melon, CMP, SQM, Golder Associates, Carey Lawyers, other mine enterprises and national consultants.

I3. In 1942 the Institute of Mining Engineers of Chile proposed a definition for the technical terms used in the Estimation of Mineral Reserves (*"Annals of the of the First Pan-American Mining Engineering and Geology Congress", Santiago, January, 1942, page 132*). Another milestone was reached in the 1986 Convention of the Institute of Mining Engineers of Chile held in Copiapo in the month of November, with the presentation of a Classification System of Mineral Resources and Ore Reserves which resulted from an analysis of the different systems of classifications existing on these mine assets, and whose goal was to normalize the study and the evaluation of Mining Projects (Raul Riveros: *"The ABC of Mineral Reserves,"* Mining Bulletin, National Mining Society, May 1989).

These efforts of the IIMCh were inserted into a series of other pionnering international efforts that resulted in relevant documentation that pointed to making explicit definitions on mine assets:

1970 Canada established the classification of reserves required by the Canadian Securities Administrators (CSA).

1980 The U.S. Bureau of Mines and the US Geological Survey published the Geological Circular 831 "Principles of a Classification of Mineral Resources and Ore Reserves."

1989 The Australian Code is presented to Inform on Mineral Resources and Ore Reserves in accordance with the JORC (Joint Ore Reserves Committee). The code is structured in a similar way to the American Circular and includes important modifications in terms of the competence of the people responsible for the estimations of Mineral Resources and Ore Reserves.

Later, the efforts for a better definition of the Mineral Resource and Ore Reserves have been put forward in the following documents

1994 Through its Society of Mining Economists, the CIM of Canada created a Committee dedicated to improve Mineral Reserve definitions. The report of the Special Committee was presented by the CIM Council in May and published in October 1994. The same year, the Society of Mining Engineers of the United States (SME) published "A Guide for Reporting Exploration Information, Resources and Reserves."

1996 The CIM Council accepted the ad hoc Committee's Report on "Mineral Resource-Reserve Classification: Categories, Definitions, and Guidelines" in September 1996. This report is used extensively as a reference and as a system of classification and information on Resources and Reserves. The Report was published in September in the CIM Bulletin.

1997 The Ontario Securities Commission (OSC) and the Toronto Stock Exchange formed the Mining Standards Task Force (MSTF) during the month of June. The MSTF issued a report draft in June 1998 and a final report in January 1999 called "Setting New Standards." One of the first recommendations in the MSTF report was "to adopt, for the Administrators of Canadian Values regulated by the National Instrument 43-101, the CIM guides for the estimation, classification and information about the Mineral Resources and Ore Reserves with the appropriate improvements for the future."

From the issue of this publication several meetings have been had by the Council of Mining and Metallurgical Institutes (CMMI) of which CIM is one of the members, dedicated to develop a common system for the classification, definition, and information of resources and reserves in Australia, Canada, the United Kingdom and the United States.

From the international mining industry´s point of view,

1994 The CMMI (International Council of Mining and Metallurgy) sponsored an initiative to obtain consensus on the Mineral Resource and Ore Reserve definitions used in Australia, Canada, Great Britain, South Africa and the UStates.

The Mining Resource Committee of the CMMI becomes the Combined Reserves International Reporting Standards Committee (CRIRSCO).

1997 The CMMI met in Denver, UStates. In this meeting representatives agreed on the definitions of the most important Mineral Resources and Ore Reserves categories. The CMMI definitions were published in the CIM Bulletin, February 1998.

1998 The Society of Mining Engineers (SME) published its definitions in accordance with CMMI. These definitions have not been accepted by the Securities and Exchange Commission (SEC) yet. The SEC has its own Guide 7, that only recognizes Ore Reserves estimated on the basis of known and specific data to the day when that estimation is made. Mineral Resources, in any of their categories, are considered only as mineralized material.

1999 The Australasian Institute of Mining and Metallurgy (AusIMM), the JORC Committee of the AusIMM, the Australian Institute of Geoscientists and the Mineral Council of Australia published a revised draft of the JORC Code in July 1998. This document proposed the use of the CMMI definitions along with some minor changes. The JORC code was published in January 1999 in order to apply it in September 1999.

2002 In May, the CMMI organized a meeting in Cairns, where the idea of formalizing an International Code for Mineral Resources and Ore Reserves was renewed as a result of the improvements made in the definitions of these mineral assets as a response to the globalization and internationalization of the mining industry, and as support for the credibility that must sustain public information related to these assets. There is a progress on the consolidation of the CRIRSCO Committee

I4. In Chile, the IIMCh and the Ministry of Mining initiated in 2002 an exchange of ideas concerning the establishment of a code that would rule and regulate public information disseminated in the country about Mineral Prospects, Resources and Reserves. The purpose of this was to prepare a technical, legal, financial, accounting, and entrepreneurial platform that would serve as a basis for the reforms propitiated by the Government oriented to push a vigorous capital market in the country. These initiatives should incorporate the global character of the mining operations and include the new factors that impact the mining sector such as the technical, economic, environmental and financial sustainability. Additionally, these initiatives should emphasize the professional ethics of those Qualified Competent Persons that must have the necessary specialization in order to certify public reports to be presented to the financial and stock-exchange institutions. At the same time, this effort should contribute to the efforts carried out by other countries, such as Australia, Canada, United Kingdom, South Africa, countries of the European Union and the UStates in the establishement of an International Code for Mine Assets.

I5. The denominated Public Reports include, but are not limited to the Annual Balances, Trimester Reports, Memo Reports by Specialists, Technical Articles and other information that is provided to Stock Exchanges, as well as those required by the law or issued by the companies themselves.

I6. The IIMCh, as the entity comprising a wide spectrum of mine professionals, and the Ministry of Mining, as the entity in charge of the Government´s intervention of the Chilean mining sector, formed the Mineral Resources Committee. This activity was formalized with Decree 340 of December, the 30th, 2002, which endorsed a Collaboration Agreement between the MinMin and the IIMCh to work together towards the Chilean Code and set up both the scope and the work program for the Certification of Mineral Prospects, Resources, and Reserves.

I7. The IIMCh and representatives of the Ministry of Mining, ever since the signing of that agreement, extended their invitations to other institutions such as the ones already mentioned [I2]. Meetings with the financial sector, especially the Chilean Stock Exchanges & Values (SVS) were carried out and a work program that extended through out the year 2003 was established.

I8. The work program aimed to establishing minimum requirements for the certification of mineral assets in Chile on the basis of technical standards and criteria applied and certified by qualified competent professionals – ruled by a Code of Ethics to protect public interests assuring technical, economic, and financial sustainability of these assets.

I9. Norms should be established and applied with transparency, materiality, and competence. **Transparency** in order to be explicit, concise and without ambiguity. **Materiality** in order to be applied to relevant, fundamental and essential aspects associated with the definition and certification of Mineral Prospects, Resources and Reserves. **Competence** in the sense that they deserve to be certified by qualified and competent professional who are subjected and ruled by Ethical and Professional Codes of Conduct.

I10. This document emphasizes with normal letters, norms that establish the minimum requirements to be demanded regarding the Exploration prospects, Mineral resources and Ore reserves with the purposes of reporting to the public and capital markets; guidelines in this document are indicated in italics.

Public information is not limited to reporting Mineral Prospects for the use of potential investors and advisers but also for the fulfillment of Regulatory Authority´s requirements, reports to government institutions, Annual Companies´Results, Stock Exchange Reports, Environmental Updates, and others.

FOUNDATIONS

F1. When we refer to codes, norms and guidelines related to the Certification of Exploration Prospects, Mineral Resources and Ore Reserves, we have to consider that this activity has been led by those countries with a solid experience in emerging capital markets. In Canada, for example, the Canadian Securities Administrators established requirements for Ore Reserves Certification in the 1970's. In 1980, the Circular 831 of the US Bureau of Mines and the US Geological Survey was established and it made the distinction between Mineral Resources and Ore Reserves. In 1989, the JORC, which appeared in Australia, advanced the concept of the Competent Person with the goal of making someone responsible for the Certification of Mineral Resources and Ore Reserves. In 1998, the South African SAMREC was introduced and the JORC was taken as its foundation. In 1999, a working group in Mineral Resources and Ore Reserves, along with the Institution of Mining and Metallurgy (IMM) of England, was formed as a response to the similar efforts in other countries.

F2. Progress in coding the Certification of Exploration Prospects, Mineral Resources and Ore Reserves was noticeable between the period 1991-1996, particularly in Canada and the UStates. In 1993 professional organizations in Canada, the UStates, Australia, Great Britain, and South Africa, met to create the International Council of Mining and Metallurgy (CMMI) and establish a common code that would represent all of those separate efforts. This objective was formalized in the year 1997. Since that year until now these efforts have continued. Through these years, there has been a common goal towards the establishment of an International template that includes the essence of the various international codes. These are the 43-101 Instrument of Canada; the JORC updates of 1999 and 2003; the Reporting Code prepared by the

Federation of European Geologists, the Geology Society of London and the Institute of Geologists of Ireland issued in 1999 and updated in the year 2001; and the Guide to inform about the results of the Exploration and the Mineral Resources and Ore Reserves of the SME in the UStates. All these activities and the texts issued have served as a basis to facilitate the establishment of a code in Chile.

APPLICATIONS AND LIMITATIONS

A1. The proposed Chilean standards apply essentially to basic, strategic, and precious metals, as well as the non-metallic minerals, in general. This code does not apply to hydrocarbons as well as maritime resources.

The Mineral Resources Committee of the IIMCh recognizes that once in a while it will be necessary to revise, improve, and update the proposed Code.

PUBLIC REPORTS, SUSTAINABILITY, AND TECHNICAL COMPETENCE

P1. The Public Report about Exploration Prospects, Mineral Resources and Ore Reserves is a report issued under the responsibility of the entity that owns those assets, and which acts through the Board of Directors revealing information that is relevant to such activities. This information can influence their economic value in a significant way. This report must be based and reflect all the support materials about the Exploration Prospects, Mineral Resources and Ore Reserves that have been prepared by a competent person.

In relation to the relevant information that should guide the definition of the Exploration Prospects, Mineral Resources and Ore Reserves, Appendix 1 provides a matrix of minimum requirements that should be applied to the techniques, criteria and procedures that support these definitions. This matrix is a guide and its application should be evaluated in each case.

The report should be issued with the written and explicit consent of the Competent Qualified Person(s) in relation to its shape and context.

In any event, whether the relevant information is found in the report itself or appendix, these documents must clearly state that "the information and data in this report that is relevant to the Exploration Prospects, Mineral Resources and Ore Reserves have been compiled by the (insert the name of the Competent Qualified Person)."

In every report there should be a paragraph explaining that:

"(insert the name of the Competent Qualified Person) has enough experience which is relevant to the style of mineralisation, to the type of deposit that is being considered and the type of activity being carried out, which certifies him/her as a Competent Qualified Person" as it is defined in this Code.

P2. A **Qualified Competent Person** – whose task is to inform publicly about the Exploration Prospects, Mineral Resources and Ore Reserves – is a person registered as such by a state organization, that by law and with the support of a technical advising committee, will be assigned to this job. A has obtained a university degree in one of the specialties associated with the mining business and have a minimum of 5 years of experience relevant to the area of analysis of geoscientific data, modeling, estimation and processing of Mineral Resources and Ore Reserves. The **Qualified Competent Person** has a perfect knowledge of the mine business sustainability, the type and style of the mineralisation being studied and the entire mining business chain of value.

P3. Because of the different styles of mineralisation in nature, such as gold vein layers, massive or controlled copper sediments, nitrate and iodine layers, lime deposits, artificial deposits of tailings, dumps, and others, the Qualified Competent Person must assess his/her own merits and strengths to become responsible for the issuing of a Public Report related to a particular deposit.

If the Qualified Competent Person is directing the work of any Exploration Prospects, the relevant experience of this professional should have to do with the security and the quality control of the exploration tasks, with the conceptualization of geological models, and definition of geo-metallurgic units. If the Qualified Competent Person is estimating or supervising Mineral

Resource estimations, the relevant experience should be on modeling, estimating and evaluating those Mineral Resources. If the Qualified Competent Person is estimating or supervising the estimation of Ore Reserves, the relevant experience should be on estimating, planning and the techno-economic evaluation for ore reserve definition. The key qualifying expression for a Qualified Competent Person is "relevant experience". The determining factor of what constitutes relevant experience can be a difficult area to define and that is why common sense must be exercised. For example, when estimating Mineral Resources for vein gold mineralisation, the experience with a high-nugget effect will probably be relevant, while the experience for a case of massive base metal deposits will not be necessary. For a professional to become a Qualified Competent Person in the estimation of Mineral Resources for alluvial gold deposits, he/she has to have a considerable experience (probably more than the minimum of five years) in the economic evaluation and extraction of this kind of mineralisation. This based on the characteristics of the alluvial gold systems, the size of the host sediment particles, and the low grades involved. The experience with placer deposits containing minerals other than gold, would not necessarily result in a appropriate relevant experience.

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

It is possible, for instance, that a person with twenty years of experience in the Estimation of Mineral Resources, in a variety of metalliferous hard-rock deposit types, will not be required to have five years of specific experience in porphyry copper deposits to act as a Qualified Competent Person. In this case, relevant experiences in other deposit types can be considered as the experience required in relation to porphyry copper deposits.

On the other hand, a Qualified Competent Person who is preparing a Mineral Resource estimation should have, aside from experience in the types and styles of mineralisations, enough experience in sampling and assaying techniques,

related to the deposit type under consideration. This to be conscious of the problems that could affect the reliability, overall security, and the quality control of the data. The applicable extraction and processing techniques to this type of deposit could also be important.

As a general guide, the persons who are called to act as Qualified Competent Persons should feel completely confident that they can face their peers to demonstrate competence in the product, type of deposit, and the situation under consideration. If there is a doubt, the person should either seek opinions from other colleagues or should decline to act as a Qualified Competent Person.

Depending on the complexities of the mineralisation under study, the Qualified Competent Person responsible for the certification and the issuing of the Public Report, will be able to detect the need of other Qualified Competent Persons who specialize in relatively complex areas such as, geological modeling, geotechnical considerations, sampling, mineral resources or others, so that while this person exercises leadership over the Certification, he/she can call on those other Qualified Competent Persons to ask for their contribution. In such cases, even if a Qualified Competent Person specializes in a complex area, he/she is responsible for his/her own work but the ***leading*** *Qualified Competent person is also responsible for the entire certification. The Public Report should be signed and accredited in every case by the leading Qualified Competent Person who is individually responsible for the entire Report. This procedure should not be taken, in any case, as a "rubber-stamping exercise."*

Frequently, the Mineral Resource estimation is a team effort. Within this team, geologists usually play the pivotal role. The estimation of Ore Reserves usually requires a team effort that involves a number of technical disciplines, and in that team, the mining engineers play the central role. The documentation for a Mineral Resource and Ore Reserve estimation can be compiled by, or under the supervision of, one or several Qualified Competent Persons, whether a geologist, a mining engineer or a member of another discipline. Nevertheless, it is recommended that in cases where there isn't a clear division of responsibilities inside a team, each Qualified Competent Person accept

responsibility of their particular contribution. For example, a Qualified Competent Person could accept responsibility for gathering Mineral Resource data, another one for the Mineral Resource estimation process, another one for the consumption of the Ore Reserves according to a production program, and the project leader should accept responsibility for the entire document. It is important that the leading Qualified Competent Person, who accepts global responsibilities for a Mineral Resource or Ore Reserve estimation, as well as for the supporting documentation that has been prepared entirely or partially by others, is completely sure that the work of the other collaborators is acceptable.

The ***Certification of Exploration Prospects, Mineral Resources and Ore Reserves*** *should constitute a compiled report, presented and defended by the Qualified Competent Person in charge of such certification. When there are doubts or questions in regard to the certification carried out under the responsibility of a Qualified Competent Person, he or she will respond professionally to the organization that accredited its quality as well as legally to regulatory institutions or other entities associated with the Chilean capital markets.*

When a company, listed in Chile, wishes to inform about an overseas Exploration Prospect or about the results of an overseas Resource estimation which have been certified by a foreign Competent Person, it will be necessary for that company to name one or several Qualified Competent Person(s) – registered in Chile – for becoming responsible for the review and certification of this overseas information. The Qualified Competent Person(s) who take charge of this activity should be conscious that they are accepting full responsibility for the estimation and supporting documentation, and should not treat the procedure simply or as a "signature rubber stamp." This condition does not apply to cases in which foreign countries have entities that hold accreditation power for Qualified Competent Persons and with a reciprocity agreement with Chile.

For all that has been said in the prior paragraphs, the Exploration Prospects, Mineral Resources and Ore Reserves Certification can come out of a multi-disciplinary effort that by nature of the mining business could require the

participation of experts, specialists, and Qualified Competent Persons who specialize in geological, mining, metallurgic, environmental and legal areas. Although their participation is not only useful, but also needed, the complete and entire responsibility falls directly on the Qualified Competent Person who is in charge of the certification.

Given this, the leading Qualified Competent Person should demonstrate knowledge, experience, and judgment when considering the matters related to technical, economic and environmental sustainability of the mining business.

***Knowledge**, through specialty studies in the area of economic and technical sustainability of Exploration Prospects, Mineral Resources and Ore Reserves; **experience**, through relevant jobs in which he/she has participated whether in the academic guidance or as an expert in specific areas; **judgment**, via a solid and well-established career.*

In addition to the Qualified Competent Person's capacity to identify the potential and vulnerabilities, a Qualified Competent Person must take responsibilities for other tasks such as compiling relevant information; preparing associated documentation; describing opportunities and risks; coordinating project´s technical, economic, and financial data as well as supervising total process. The responsibility of Qualified Competent Person in charge of a certification should be complete. If the Qualified Competent Person in charge of such certification recognizes personal flaws within any particular area, his/her responsibility is to include another Qualified Competent Person in the team who specializes in that particular area to make up for the insufficiencies found.

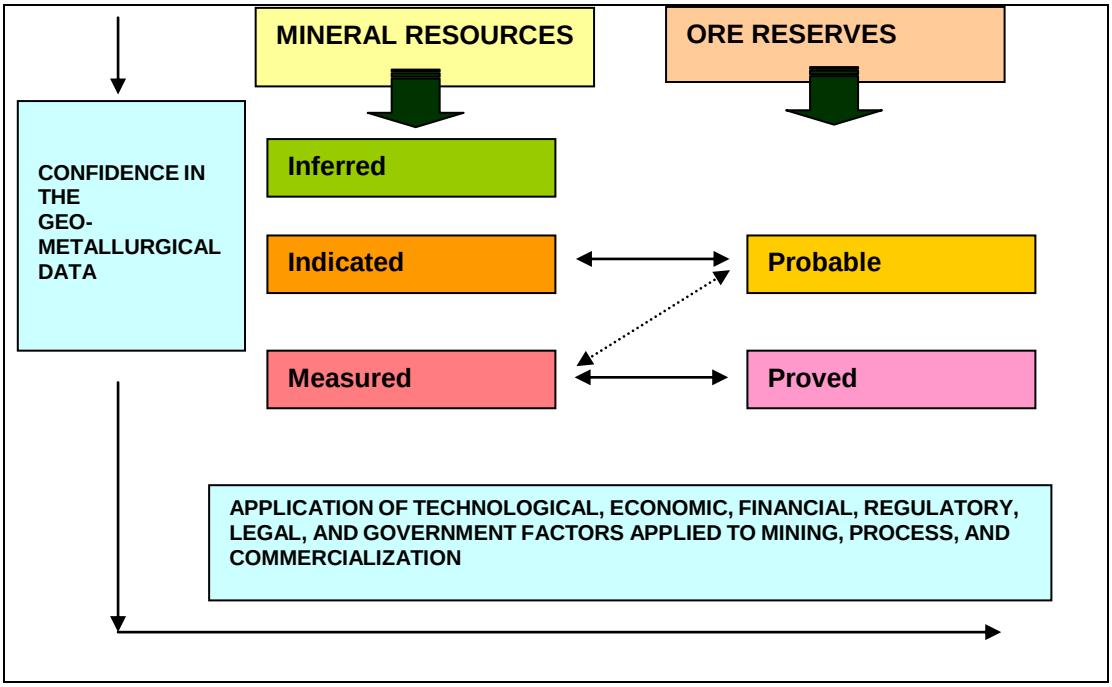
In addition to the competence and technical qualification requirements, there are rules and guides of professional conduct that every Qualified Competent Person should comply to. Appendix 2.

P4. Geometallurgical sustainability includes the interpretation, analysis, evaluation and validation of all technical aspects that support the results of each of the activities associated with the mining business chain of value, according to the progress of capturing the technical and economic data to convert mineral resources into ore reserves. That is, the Exploration phase as well as the phases of Profile, Conceptual, and Basic engineering. Geometallurgical sustainability constitutes the capacity of the technical-economic data to respond to potential vulnerabilities and risks associated with the Exploration Prospects, Mineral Resources and Ore Reserves.

P5. The Mining Chain of Value refers to the sequence of activities that covers from mineralized rock to final production. It includes activities associated with the verification of land ownership, mineral delineation, drilling, sampling, chemical analysis, geological studies, geometallurgical testing, geotechnical modeling, mineral resource estimation, environmental impact and permissions, infrastructure, techno-economic parameters for mine design and planning, ore reserve statement, mine production programs, economic and financial evaluation and marketing.

TECHNICAL TERMINOLOGY

T1. The conversion process from mineral resource to ore reserve includes the Exploration activities which gives origin to the Idea, the Diagnostic Study which gives origin to the Profile Engineering, and the PreFeasibility study which gives origin to Conceptual Engineering.



T2. <u>The Exploration Prospect</u> derives its information from initial geological studies and geoscientific analyses to delineate the presence of mineralisation that may lead to the definition of a mineral deposit. In most cases, this definition does not provide data about tonnages and grades, given that a "delineated mineral resource" category does not exist. When informing about these prospects' potential, the Qualified Competent Person must indicate clearly that the information given, rather than estimation, it is a conceptualization.

This is the case in which small ditches, outcrops, and other tasks could be of use to certain investors without allowing them to make any reasonable estimation of tonnages and grades. In cases like this, a clear proof of the nature and limitations of the information must be provided.

In these circumstances, and in every case, it would be interesting to provide geological and historical production information related to the mines located in the prospect area. The nature of neighboring mine properties along with their characteristics should be described as well as any other information that could

be of interest to an investor such as their economics. It is also useful to provide information about the potential of mineral processing centers to which – many of those small deposits – can bring in production. However, the Qualified Competent Person could hardly commit to providing information about tonnages, grades and production programs.

T3. **The Diagnostic Study** derives its information from preliminary studies about the technical and economic viability of a mining deposit. This studies involve sequential activities to identify the geologic continuity, the structural controls, the type of alteration, mineralisation, lithology, and the mineral resource estimation and categorization and are based on drilling, sampling, standardized chemical analysis, metallurgic testing, and technical and production parameters associated with the potential mine business. The quality of the data has been made subject to security and control procedures, and mine extraction configurations and environmental commitments have been identified. In this way, the Qualified Competent Person can certify the existence of a mineral asset in which the identified mineral resources may be categorized as Measured, Indicated or Inferred resources depending on the quality and reliability of the data. This data is the basis for a Profile Engineering Report.

T4. **The Conceptual Study** derives its information from preliminary studies about the technical and economic viability of a mining deposit, in which the geologic continuity, the structural controls, the type of alteration, mineralisation, lithology, and the estimation and categorization of mineral resources have been adequately validated. Drilling, sampling, chemical analysis, and metallurgic testing have been confirmed and technical and production parameters associated with the potential mine business have been frozen. Quality of the data has been made subject to strict security and control procedures, production configurations have been selected, environmental commitments have been identified, and economic and financial information has been clearly stated. In this way, the Qualified Competent Person can certify what portion of these Mineral Resources can be converted and counted as an Ore Reserve. Depending on the degree of confidence assigned to the information about this mine assets, resources may categorized as Measured,

Indicated, and Inferred, and reserves may become Proved or Probable. This data is the basis for a PreFeasibility Engineering Report.

T5. Mineral Resource is a natural concentration or occurrence, solid, inorganic, or fossilized organic substance in such quantity and at such quality that there exist reasonable prospects about its technical and economic potential. Localization, tonnages, contents, geologic characteristics and degree of mineralisation continuity are interpreted, known, or estimated from specific geological, metallurgical, and/or geoscientific evidences.

The term Mineral Resource is based on mineralisations and natural materials of intrinsic economic interest, identified and estimated through exploration, drilling, and sampling whereby Ore Reserves can be subsequently defined based on well-supported technical and economic parameters, as well as on legal, environmental, socio-economic and government aspects. These estimated or assumed parameters based on known foundations should be presented in an explicit manner in both public and technical reports.

T6. Inferred Mineral Resource is that part of the mineral resource for which tonnage and grade estimation is affected by accuracy and precision due to fragmentary and limited sampling, assumed perceptions regarding its geologic continuity and subjective extrapolations regarding ore grade distribution. Data is sufficient to delineate mineralizations but not to categorize the deposit as an Indicated Mineral Resource

Given the uncertainties associated with the inferred Mineral Resource there is no certainty that the entire mineral or a portion of it will change this category to an Indicated or Measured Mineral Resource as a result of any additional exploration.

The reliability of the Inferred Resources is not enough to guarantee - in a substantial way - a significant characterization of their technical parameters or to facilitate an evaluation regarding its economic viability. For this same reason, in an economic analysis one should be especially careful when - eventually - Inferred Mineral Resource is included in a limited and fully

identified manner. This will depend on the type and characteristics of mineralisation, the timing for their extraction to surface, and the program and span of time stipulated to convert these Inferred Mineral Resources into ***Indicated or Measured*** *Mineral Resources as well as any other relevant aspects of the deposit under analysis.*

T7. **Indicated Mineral Resource** is that part of a Mineral Resource for which tonnages, densities, grades, geological, geometallurgical and geotechnical data have been captured with a reasonable level of confidence. Estimations and characterizations are based on exploration drilling, sampling and cheminal analysis carried out in representative locations of the mineralisation, source of these resources. These locations conform to a grid of nodes in such a way that the geological continuity and characterization, as well as the metal content associated with each node of the grid can be estimated with an acceptable degree of confidence. In addition, mineral resources can be codified and categorized as Indicated Mineral Resource when the nature, quality, quantity and distribution of data are such that they allow an adequate interpretation of the geological setting so that the continuity and characterization of the mineralisation can be assumed in acceptable way.

The Qualified Competent Person should have the capacity, knowledge and judgment to recognize the importance of the Indicated Mineral Resource category for the preparation and advancement of the prefeasibility study. The Indicated Mineral Resource estimation should be of sufficient quality to support preliminary alternate production scenarios that can serve as the basis for meaningful decision-making regarding the most promissory scenario from the technical and economic point of view.

T8. **Measured Mineral Resource** is that part of a Mineral Resource for which tonnages, densities, grades, and geologic, geometallurgical and geotechnical data have been estimated and characterized by a significant level of confidence. Estimations and characterizations are based on detailed, reliable, and verifiable exploration data, representative sampling, and reliable chemical analysis in accordance with a grid of nodes to facilitate validation of grade continuity and geoscientific data.

The Qualified Competent Person can codify the Mineral Resource as "Measured" when nature, quality, amount, and distribution of the data is such that the geological setting can be well interpreted. Based on this, mineralization continuity can be confirmed; tonnage and grade estimation can be established within narrow limits of reliability; and potential variations of these estimates do not affect the economic viability of these resources in a significant way. This category requires a high level of confidence in the geological interpretation, in the mineralisation controls, in the type of lithology, alteration and mineralisation and in the definition of the metallurgic units. The confidence in this type of Mineral Resource is such that it allows the application of technical and economic concepts for the evaluation of the economic viability of these Mineral Resources.

T9. Mineral Resource Categorization: For the mineral resource categorization process, it is important to consider the degree of knowledge regarding its continuity characteristics. The term Inferred Mineral Resource does not mean unknown Mineral Resource, nor hypothetical Mineral Resource. "Inferred" implies certain information in situ; fragmentary and reduced information, yet real so that an inference can be established. The Inferred Mineral Resource is an informed bet. The uncertainty can be high and meaningful but is measurable, modeled and verified. Mineral Resources, which are assumed to be without information, correspond to bets based on ignorance. These bets cannot be characterized nor accounted for, so they cannot imply Inferred Resources but only as Hypothetical and Potential mineralized material. The Potential mineralized material can be referred to, but there is no place for it in the technical terminology of Mineral Resources and Ore Reserves.

In relation to the relevant information that should guide the definition of Exploration Prospects, Mineral Resources and Ore Reserves, Appendix 1 provides a matrix of minimum requirements that should be applied to techniques, criteria and procedures that sustain this definition. This matrix is a guide and its application should be evaluated case by case.

T10. The Mineral Resource Estimation: These estimations do not constitute determinations, nor precise calculations, given that the information captured and used is limited. These estimations constitute expected values.

Given this, there is not much sense in quantifying tonnages – globally – at a level of millions to focus its accuracy – later – to the level of units. Nor is there much sense in quantifying the grades of one or two digits focusing their accuracy – later – to the level of the third decimal.

T11. Ore Reserve: is the part of a Measured or Indicated Mineral Resource that is economically mineable in accordance with a production, environmental, economic and financial scenario supporting a mining plan. The Ore Reserve includes losses and dilutions with adjacent material that is part of the Mineral Resource and which contaminates it due to mine extraction. The assessment that is carried out can arise from prefeasibility and feasibility study in which realistic conditions, at the time of evaluation, include geological, metallurgical, geotechnical, environmental, social and governmental factors. These assessments should justify the technical and economic viability of mine extraction when they are reported.

The Ore Reserves are sub-divided into Proved and Probable Ore Reserves. The first ones possess a higher level of confidence that the second ones.

Ore Reserve is made up of those portions that after applying mining parameters and factors, result in metal tonnage and contents, which for the Qualified Competent Person can be the basis of a viable project after considering the relevant technical, economic, environmental, legal and governmental factors.

Ore Reserve should include the diluting material that, given the extraction conditions, should be mined along with it and delivered to the treatment plan in conjunction with the Ore Reserve.

The factors considered in this case imply that the feasibility of an extractive operation based on Ore Reserves has been established and analytically

demonstrated and justified under technological, operational, environmental and investment estimations. This does not mean that the installations are already operating or that all the government approvals have been obtained. What it mean is that there are reasonable expectations about such approvals.

T12. Probable Ore Reserve: is that economically viable part of an Indicated Mineral Resource, and eventually a part of a Measured Mineral Resource.

Ore Reserve includes diluting materials and tonnage losses, which can occur as a result of mining. The Probable Ore Reserve is based on assessments that include engineering studies incorporating mine parameters and metallurgical, technological, economic, commercial, legal, environmental, as well as other regulatory governmental factors. These assessments demonstrate that mine extraction at the time of reporting can be reasonably justified.

The Probable Ore Reserve has a lower level of confidence than the Proved Ore Reserve.

T13. Proved Ore Reserve: is the economically mineable part of a Measured Mineral Resource. Ore Reserve includes diluting material and tonnage losses that can result from mine extraction. Proved Ore Reserve is based on assessment including engineering studies incorporating mine parameters and metallurgical, technological, economic, commercial, legal, environmental and other regulatory government factors. These assessments demonstrate that mine extraction at the time of reporting can be reasonably justified.

Categorization of Ore Reserves is determined primarily by the categorization of the corresponding Mineral Resource and must be made by a Qualified Competent Person.

The Code provides a direct relationship between the Measured Mineral Resource and both the Proved Ore Reserve or the Probable Ore Reserve. The level of geoscientific confidence for Probable Ore Reserves is the same as the one required for the determination of the in-situ Measured Mineral Resource.

In direct relation, the Indicated Mineral Resource must become a Probable Ore Reserve. It is only when this Indicated Mineral Resource is converted into a Measured Mineral Resource that it can be turned into a Proved Ore Reserve. The direct step form a Indicated Mineral Resource to a Proved Ore Reserve is not allowed.

T14. Ore Reserve Categorization: In the categorization imposed on the Ore Reserve it is important to consider the level of knowledge regarding economic, technological, environmental, legal and other governmental factors that affect the type of Reserve under analysis. Both terms, Proved and Probable, imply a widely accepted uncertainty regarding the geoscientific knowledge about them as well as about the previously mentioned factors.

In relation to the relevant information that should guide the definition of Mineral Resources and Ore Reserves, Appendix 1 provides a matrix of minimum requirements that should be applied to the techniques, criteria and procedures that support this definition. This matrix acts as a guide and its application should be evaluated in each case.

T15. Ore Reserve and Mineral Resource Inventory: Ore Reserve and Mineral Resource estimates are not precise; therefore, in Public Reports the tonnage and grade should be expressed so that the associated accuracy of these estimates appears rounded off to significant figures.

The estimates cannot include combined categories, and they should specifically refer to the category to which both Mineral Resource and Ore Reserves belong. In the same manner, the estimates should clearly state the tonnage and grade, and should not omit their metal or mineral content.

When reporting Ore Reserves it should also be reported the metallurgical recoveries considered and their variations through time, with the type of mineralisations, and with any other parameters.

When reporting Mineral Resource Categories, it must be noted explicitly whether or not these categories are included, or whether they are additional to

some of the Ore Reserves Categories. This is in order to avoid a double quantification.

If there is a substantial difference between the Mineral Resource and Ore Reserve statements in a Public Report, an explanation of the reasons for that difference should be included in the report. This allows the reader of the report to be able to make a judgment about the possibility of eventually converting the remaining Mineral Resources into Ore Reserves.

Ore Reserves must incorporate the dilution criteria, that is, the criteria to include in it, material - which is not part of the original Mineral Resource. It is essential that this fundamental difference between Mineral Resources and Ore Reserves is considered and special care should be exercised when attempting to draw conclusions about these two terms.

For the same reason, Ore Reserves should not be presented as disassociated from the Mineral Resources. The end result can be very confusing in economic terms and the figures can be misunderstood, or in more serious cases, misused in order to give a false impression about a company's prospects.

A public Report of tonnage and grade estimates that uses a different terminology to that used for Mineral Resources and Ore Reserves in this document is not permitted by the Code.

T16. Reconciliations: When preparing the Ore Reserve statement, the Mineral Resource statement should be developed first. This can be reconciled with the Mineral Resource statement established for the previous period, and the identified differences given production aspects, new exploration work, changes in categories, or others. Cut-off grades and other criteria can then be applied to the Mineral Resources statement to generate the Ore Reserve Statement that can be reconciled with comparable previous statements.

Companies are encouraged to reconcile their estimates in their Reports whenever possible. A detailed account of the differences between estimates is not essential, but an adequate comment should be made so that the reader can become familiar with the significant variances and deviations.

Appendix 1, Table 1 provides a summary of the main criteria, which should be considered when preparing reports about an Exploration Prospect, Mineral Resources, and Ore Reserves. These criteria do not need to be discussed in the Public Reports unless they materially affect Ore Reserve estimations or classifications. Changes in economics, government issues and other factors can become, by themselves, the basis for significant changes in Ore Reserves and should be reported accordingly.

T17. Non-metallic Deposits: In the case of non-metallic deposits, the main focus is the quality of the mineable, processed, and commercialized material according to market requirements, supply contracts and the imposed restrictions on contaminating materials. The Ore mix analysis, granulometries, and geological structure control which influences the quality of the product, constitute the essential aspects to inform about this type of deposit.

T18. Artificial Deposits: When artificial deposits (pej, heaps, broken material, "piles," and others) are informed about tonnage, grade, metallurgical attributes, and categorization, the information associated with such deposits should be provided in detail. Information should include grades, recoveries, humidity contents, densities, granulometry, percolation index, and other significant data for engineering purposes.

APPENDIX 1

INFORMATION ON

THE SAMPLING TECHNIQUES AND DATA
THE EXPLORATION PROSPECTS
THE ESTIMATION OF MINERAL RESOURCES
THE ESTIMATION OF RESERVES

INFORMATION ON SAMPLING TECHNIQUES AND DATA

SAMPLING TECHNIQUES	*Data on* *type, location, and configuration of sampling (channels, rock chips, and others) and the quality control established to make sure the confidence in sampling representativity.*
DRILLING TECHNIQUES	*Data on* *drilling techniques (e.g. core, reverse circulation, etc.) and details (e.g. core diameter), sampling attributes, drill survey, others*
SAMPLE RECOVERY	*Data on* *drill sample recovery. Measures taken to maximise sample recovery and ensure representative nature of the samples.* *whether sample recovery has been properly recorded and results assessed.* *indications of sample bias (e.g. preferential loss/gain of fine/coarse material).*
LOGGING	*Data on* *whether samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *whether logging is qualitative or quantitative in nature. Core (or trench, channel etc.) photography*
TECHNIQUES OF SAMPLE PREPARATION	*Data on* *whether sampled-core is cut or sawn or whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split etc.* *whether split wet or dry the nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* *nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* *nature, quality, and appropriateness of sample preparation and quality control technique for all samples.* *whether the material is really in-situ material. Whether sample size/ granulometry ratio is adequate for representative sampling.*

ASSAY QUALITY AND LABORATORY TESTS	*Data on* *nature, protocols, and quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.* *measures taken to ensure that sampling is representative of the in situ material collected. (standards, duplicates, check labs) and acceptable is terms of accuracy levels (unbiased estimates).* *labs with rigorous controls (using - for instance - reference materials, validation testing, etc) should be accreditated through certification of performance.*
VERIFICATION OF SAMPLING AND ASSAYS	*Data on* *the verification of selected intersections by either independent or alternative personnel.* *use of twinned holes, deflections or duplicate samples*
LOCATION OF SAMPLED VALUES	*Data on* *sample locations, accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys).* *using twin holes to verify significant mineralized intersections.*
SAMPLE DENSITY AND DISTRIBUTION	*Data on* *sample density for reporting Exploration Results.* *whether data density and distribution are sufficient to establish the degree of geological and grade continuity appropriate for mineral resource and mineral reserve estimation and categorization.* *whether sample compositing has been applied.*
AUDITS AND REVIEWS	*Data on* *results obtained from any technical auditing and reviews.*

INFORMATION ON EXPLORATION PROSPECTS

MINERAL RIGHTS AND LAND OWNERSHIP	*Data on* *type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, historical sites, wilderness or national park and environmental settings.* *the security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. Location plans of mineral rights and titles.*
EXPLORATION WORK CARRIED OUT BY OTHERS	*Data on* *reconnaissance and appraisal of exploration by other parties.*
GEOLOGY	*Data on* *The nature, detail, and reliability of geological information (rock types, structure, alteration, mineralisation, and relation to known mineralised zones, etc.).*
METHODS OF DATA COMPOSITING	*Data on* *numerical models applied to Exploration Results, weighted averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated.* *where composite intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such compositing should be stated and some typical examples of such composites should be shown in detail.* *assumptions used for any reporting of metal equivalent values should be clearly stated.*
RELATIONSHIP BETWEEN MINERALISATION WIDTHS AND INTERCEPT LENGTHS	*Data on* *these relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported*
DIAGRAMS	*Data on* *maps, plans and sections (with scales) and tabulations of intercepts should be included for illustrtion purposes.*

BALANCE REPORTING	*Data on* *both low and high grades and/or widths should be described in detail to avoid misleading reporting of Exploration Results.*
OTHER RELEVANT EXPLORATION DATA	*Data on* *other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*
ADDITIONAL WORKS	*Data on* *any additional or planned exploration work.*

INFORMATION ON RESOURCE ESTIMATION

DATABASE INTEGRITY	*Data on* *measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data verification and/or validation procedures used.* *validation criteria..*
GEOLOGICAL INTERPRETATION	*Data on* *uncertainty and reliability levels in the geological interpretation of the mine deposit.* *nature of geological data used in assumptions.* *discussion of alternative interpretations and their potential impact on the estimation.* *description of geological model and inferences made from this model.* *discussion of sufficiency of data density to assure continuity of mineralisation and provide an adequate database for the estimation procedure used.*

DIMENSIONS	*Data on* *extension and variabiklity of the mineral resource given in lenght, width, and thickness.*
ESTIMATION AND MODELLING	*Data on* *the nature and appropriateness of the estimation techniques applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, maximum distance of projection from data points.* *availability of check estimates, previous estimates and/or mine production records and whether the mineral resource estimate takes appropriate account of such data.* *assumptions made regarding recovery of by-products.* *estimation of contaminants or other qualitative variables of economic significance.* *in the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* *any assumptions behind modelling of selective mining units (e.g. non-linear kriging).* *the process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. w*
CUT-OFF PARAMETERS	*Data on* *the basis of the cut-off grades or quality parameters applied, including the basis, if appropriate, of equivalent metal formulae.*
MINE PARAMETERS	*Data on* *mining method proposed and its suitability for the style of mineralisation, including minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make detailed assumptions regarding mining factors when estimating Mineral Resources. In order to demonstrate realistic prospects for eventual economic extraction, basic assumptions are necessary.*

METALLURGICAL PARAMETERS	*Data on* *the metallurgical process proposed and the appropriateness of that process to the style of mineralisation. It may not always be possible to make detailed assumptions regarding metallurgical treatment processes when reporting Mineral Resources. In order to demonstrate realistic prospects for eventual economic extraction, basic assumptions are necessary.*
TONNAGE FACTORS (IN-SITU DENSITIES)	*Data on* *whether factors are assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, the frequency of the measurements, the nature, size and representativeness of the samples.*
CATEGORIZATION	*Data on* *the basis for the classification of the Mineral Resources into varying confidence categories.* *whether appropriate account has been taken of all relevant factors i.e. relative confidence in tonnage/grade computations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data. And whether the result appropriately reflects the Competent Person' s view of the deposit.*
AUDITS AND REVIEWS	*Data on* *results of any audits or reviews of Mineral Resource estimates.*
DISCUSSION ON THE ACCURACY/ RELATIVE CONFIDENCE LEVEL	*Data on* *the accuracy/ relative confidence level in the mineral resource estimation by using an approximation or adequate procedure. For instance, the application of statistical or geostatistical procedures to quantify the relative accuracy of the mineral resource within established confidence limits (ie, in the case of copper, <7% with a 90% probability: quarterly for the measured resource; annually for the indicated resource; in the case of gold, 12-18% with a 90% probability: quarterly for the measured resource; annually for the indicated resource), or a qualitative discussion on risks if this procedure is not considered.* *statement should specify whether this accuracy is at a gobal or local level. If it is local, relevant tonnages and grades should be established for economic evaluation. Documentation should include assumptions made and procedures used. Risk statements should reconcile with available real data.*

INFORMATION ON RESERVE ESTIMATION

THE CONVERSION OF RESOURCES INTO RESERVES	*Data on* *the attributes of the mineral resource estimates used as a basis for the conversion to ore reserve.* *clear statement as to whether the mineral resources are reported additional to, or inclusive of the mineral reserves.*
MINE PLAN STATUS	*Data on* *the choice of the nature and the appropriateness of the selected mining methods and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit optimisation (if appropriate). The mining dilution factors, mining recovery factors.*
CUT-OFF PARAMETERS	*Data on* *the basis of the cut-off grade(s) or quality parameters applied, including the basis, if appropriate, of equivalent metal formulae. The cut-off parameter may be economic value per block rather than grade.hence the project value.*
MINE PLAN FACTORS	*Data on* *the method and assumptions used to convert the Mineral Resource to a Mineral Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice of, the nature and the appropriateness of the selected mining methods and other mining parameters including associated design issues such as pre-strip, access, etc.* *the assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit optimisation (if appropriate). The mining dilution factors, mining recovery factors, and minimum mining widths used and the infrastructure requirements of the selected mining methods. Where available, the historic reliability of the performance parameters.*

METALLURGICAL FACTORS	*Data on* *the metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is a well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken and the metallurgical recovery factors used. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are representative of the orebody as a whole. The tonnages and grades reported for Mineral Reserves should state clearly whether these are in respect of material to the plant or after recovery.* *comment on existing plant and equipment, including an indication of replacement and salvage value.*
COSTS & INCOME	*Data on* *.* *derivation of or assumptions made, regarding projected capital and operating costs.* *assumptions made regarding revenue including head grade, metal or commodity prices, exchange rates, transportation and treatment charges, penalties,etc.* *allowances made for royalties payable, both Government and private.*
COMERCIALIZACION	*Data on* *demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* *analysis to identify possible market expansions.* *price and volume forecasts and the basis for these forecasts.* *for non-metalic minerales, specifications of quality, testing, ,acceptance requirements in anticipation to supply contracts.*

OTHERS	*Data on* *the effect, if any, of natural risk, infrastructure, environmental, legal, marketing, social or governmental factors on the likely viability of a project and/or on the estimation and classification of the Mineral Reserves.* *status of titles and approvals critical to the viability of the project, such as mining leases, discharge permits, government and statutory approvals. Environmental descriptions of anticipated liabilities. Location plans of mineral rights and titles.*
CATEGORIZATION	*Data on* *the basis for the classification of the Mineral Reserves into varying confidence categories.* *whether the result appropriately reflects the Competent Person's view of the deposit.* *proportion of Probable Mineral Reserves which have been derived from Measured Mineral Resources (if any).*
AUDITS & REVIEWS	*Data on* *results of any audits or reviews of Mineral Reserve estimates.*

APPENDIX 2

NORMS AND GUIDELINES OF CONDUCT

OF THE

QUALIFIED COMPETENT PERSON

NORMS AND RULES OF CONDUCT

The following rules of conduct apply to Qualified Competent Persons engaged in the practice of preparing or contributing to public reports that include statements of Mineral Exploration Results, Mineral Resources or Mineral Reserves. These rules are in addition to the Professional Codes of Ethics that may apply due to the Competent Person's membership of a recognised professional body. The Rules of Conduct are listed under various areas of responsibility.

THE PUBLIC AND SOCIETY

Qualified Competent Persons must discharge their duties with fidelity to the public, and at all times in their professional or employed capacities carry out their work with integrity and professional responsibility. In particular:

In particular,

Recognise at all times, that the responsibility of Competent Persons towards the Public overrides all other specific responsibilities including responsibility to professional, sectional, or private interests or to other Competent Persons.

Ensure that public comments on geological, engineering and metallurgical and related matters are made with care and accuracy, without unsubstantiated, exaggerated, or premature statements; they should be made clearly and concisely.

Base Public Reports on Mineral Resources and Mineral Reserves on sound and relevant estimation techniques, adequately validated data and unbiased judgement.

Note that when required to do so, Competent Persons should give evidence, express opinions or make statements in an objective and truthful manner on the basis of adequate knowledge and understanding.

Recognise that where required to do so, Competent Persons should be prepared to disclose details of qualifications, professional affiliations and relevant experience in all public reports.

THE PROFESSION, EMPLOYERS AND CLIENTS

Competent Persons must uphold the honour, integrity, reputation and dignity of their profession and maintain the highest level of conduct in all professional matters.

In particular they should,

Act with due skill, care and diligence at all times in conducting their activities.

Perform work only in their area of competence.

Never knowingly mislead or deceive others, falsify or fabricate data.

Respect and safeguard confidential information.

Acknowledge and avoid wherever possible both real and perceived conflicts of interest.

Distinguish between fact and opinion so that it is clearly evident what is interpretation of fact and what is professional judgement.
Competent/Qualified Persons may give a considered professional opinion based on facts, experience, interpretation, extrapolation or a combination of these.

Ensure the scientific and technological contributions are thorough, accurate and unbiased in design, implementation and presentation.

Ensure that sound and relevant estimation techniques, adequately validated data and unbiased judgement are applied to the documentation upon which public reports on Mineral Resources and Reserves are based.

Comply with all laws and regulations relating to the mineral industries and rules, regulations and practices as established and promulgated by the relevant regulatory authorities.

Use their best endeavours to ensure that their employer or client complies with the rules and regulations and practices of the relevant regulatory authorities.

PROFESSIONAL BODIES, COLLEAGUES AND ASSOCIATES

Competent persons must at all times conform to the rules of the professional bodies to which they belong and respect and acknowledge the contributions of colleagues and other experts in enabling them to conduct their work.

In particular,

Accept responsibility for their own errors.

Demonstrate a willingness to be judged by their professional peers.

Agree to be bound by the disciplinary code of the professional body to which they are affiliated.

THE ENVIRONMENT, HEALTH AND SAFETY

In performing their work, Competent Persons should strive to protect the natural environment and ensure that the consequences of their work do not adversely affect the safety, health and welfare of themselves, colleagues and members of the Public.

Ensure that consideration of the modifying factors used to determine Mineral Reserves fully recognises the need to provide a safe working environment.

Ensure that Mineral Reserve estimates acknowledge the likely environmental impact of development and ensure that appropriate allowances are made for mitigation and remediation.