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# THE REPORTING OF MINERAL RESOURCES AND RESERVES AND THE COMPETENT PERSONS CONCEPT IN CHILE

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**INSTITUTO DE INGENIEROS DE MINAS**



- **Set up a standard for public reporting of mineral resources and reserves.**
- **Implement the concept of the Competent Person in mineral resources and reserves in Chile and the requirements for their qualification.**
- **Create a Mining Commission in Chile to regulate and manage the Registry of Competent Persons.**



**Chile, as the premier world copper producer, is not immune to the**

- Insufficient engineering data and lack of reliable information to support project finance for new and complex projects;**
- Increasing evidence of poor cost estimation in feasibility studies due to uncertainties and risks;**
- Increasing delays and difficulties in implementing development plans.**



- These issues, among others, are relevant for the **disconnect** between the mining sector and the capital markets in Chile
  - While the mining sector contributes + 23% to the GNP
  - Mining companies show less than 3% of equity capital.
- To turn around this situation and assure the confidence of the financial markets in the Chilean minerals sector, it is essential that mine reports and studies for prospect and project financing are completed to the highest professional standards.



- **Chile's rich mineral endowment contains promising small and medium mines which under proper financing and management may become world class deposits. Several large mines in Chile today were known years ago as "another small mine".**
- **Because of this situation, in 2002, the Ministry of Mines requested the Institute of Mining Engineers to develop, jointly with other institutions, a technical standard to be used to facilitate the financing of mine development.**



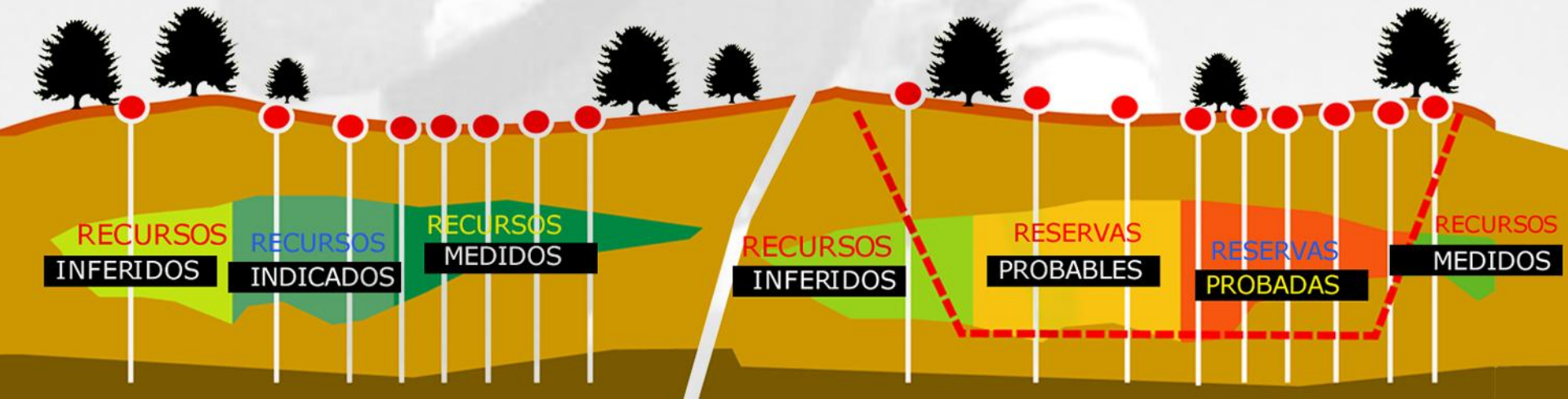
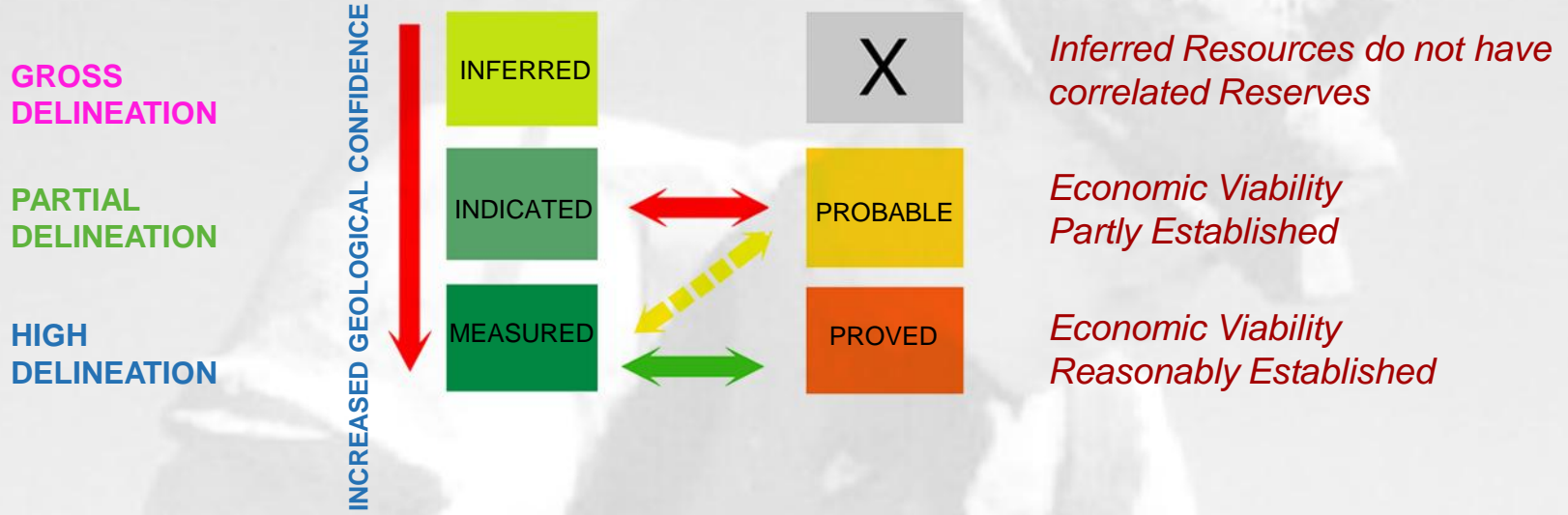
### **The Ministry specified that the Standard:**

- **Gives confidence in the reporting of resource and reserve data**
- **Reflects the global character of the mining industry and adhere to international best practice standards**
- **Establishes a Competent Person system in the area of the mineral resources and reserves.**
- **Provides information based on a technical and transparent geologically evaluation, certified by a Competent Person.**



## GEOSCIENTIFIC DELINEACIÓN

## CONFIRMED ECONOMIC VIABILITY





- However, due to clauses in the Chilean Constitution, such an initiative required not just a Resource - Reserve Reporting Code, but also a Law approved by the National Congress.
- So the effort was focused on
  - Preparation of a Reporting Code, and
  - Presentation of a Government proposal to Congress to approve a Law to create the concept of Competent Persons in Mineral Resource and Reserve Reporting in Chile.





- The Institute of Mining Engineers, with the sponsorship of the Ministry of Mines, established a 22 member Working Group of private and public Chilean, and foreign resource companies, academics and consulting groups to draft the Code.
- Preparation took one year with the permanent support of the Ministry of Mines, the Chilean SEC, and the Committee for Mineral Reserves International Reporting Standards (CRIRSCO).



- Preparation of the draft Law for consideration by the National Congress along with Congress discussions, and approval took four years. The law was promulgated on December 31th, 2007.
- The key feature of the standard developed was to establish a self-regulating body responsible for drafting and implementation of a Reporting Code.



- The law authorizes to five institutions to jointly establish a Mining Commission to regulate the Competent Person process in the Reporting of Mineral Resources and Reserves.
- These institutions are:
  - the Institute of Mining Engineers;
  - the College of Geologists;
  - the College of Engineers,
  - the Mining Council, and
  - the National Mining Society (SONAMI).



## The Law also authorizes the Commission to

- Request the revision of any technical report prepared by a Competent Person so that it adheres to the Code.
- Establish a Board from the five institutions, to manage the process. The term of office of the members is three years.
- Establish a Recognized Overseas Professional Organisation (“ROPO”) reciprocity protocol.



- **The Mining Commission is under the authority of the Chilean SEC (Superintendencia de Valores y Seguros).**
- **Any Public Offering of Shares in the Chilean Capital Markets will only be permitted if a registered Competent Person has authorised a technical report in support of the Offering.**
- **All Press Releases – associated with the Chilean Capital markets – must be signed off by a Competent Person.**



- **Competent Persons in Mineral Resources and Reserves who sign off and issue a false or fraudulent technical/public report as well as.....**
- **any other person who signs, issues, and divulges public reports without having those reports signed off and authorised by a Competent Person will be liable to a jail term, plus a fine to a maximum of US \$200,000.**
- **The Mining Commission, by law, will provide technical assistance to Chilean regulators, including the Ministry of Justice.**



- **The Commission's funding will be provided by the member institutions, by donations, and fees.**
- **The Commission will charge a Registration Fee to Competent Persons.**
- **Expenses will be financed by the institutions.**



- **The Competent Persons will be accountable in law for negligence in the commission of their responsibilities.**
- **In the event that a technical or public report has been signed and issued by more than one Competent Person, they will be jointly accountable for the prejudice caused by fraudulent activities.**
- **Those responsible for issuing, presenting, and divulging news, reports, and any data on any public offering will be jointly accountable.**





- **In order to be registered a Competent Persons in Chile must:**
  - **Have a recognised university degree in a relevant area of the minerals industries;**
  - **Have five years of relevant professional experience;**
  - **Maintain their qualifications through a process of Continuous Professional Development**



- In recognition of its adherence to international standards the Chilean Mining Commission has been ratified as a member of the Committee for Mineral Reserves International Reporting Standards (**CRIRSCO**), the international umbrella body of the National Reporting Organisations.

NRO	STANDARD	KNOWN AS
<b>AUSTRALIA</b>	<i>Australasian Code for Mineral Resources and Ore Reserves Reporting of Exploration Results.</i>	JORC
<b>CANADA</b>	<i>CIM DEFINITION STANDARDS : On Mineral Resources and Mineral Reserves Prepared by the CIM Standing Committee on Reserve Definitions.</i>	Instrument 43-101
<b>CHILE</b>	<i>DEFINICIONES Y GUIAS: Código para la Certificación de Prospectos de Exploración, Recursos y Reservas Mineras.</i>	El Código
<b>PERC</b>	<i>Code for Reporting of Mineral Exploration Results, Mineral Resources and Mineral Reserves.</i>	The Reporting Code
<b>SO. AFRICA</b>	<i>South african code for Reporting of mineral Resources And mineral reserves.</i>	SAMREC
<b>USA</b>	<i>A Guide for Reporting Exploration Information, Mineral Resources, and Mineral Reserves'</i>	The SME Standard



**CRIRSCO:** Committee for Mineral Reserves International Reporting Standards)  
(website [www.crirSCO.com](http://www.crirSCO.com))

- **Established in 1994. It is now a Technical Committee of the International Council of Mining and Metals (ICMM).**
- **It represents National Organizations that are responsible for developing mineral reporting codes and guidelines in Australia, Chile, Canada, South Africa, the USA, and UK-W. Europe.**
- **The combined value of mining companies reporting to these Codes accounts for more than 80% of the listed capital of the mining industry.**



## CRIRSCO

Sets minimum **standards** for public reporting of Exploration Results, Mineral Resources and Reserves.

Provides a mandatory system for classification of tonnage/grade estimates according to geological **confidence** and technical/economic considerations.

Provides definitions for mineral resource and ore reserve classes that are compatible with **international agreements**.

Requires public reporting to be based on work by a Competent Person; describes the qualifications and type of experience required to be a **Competent Person**.

Provides extensive **guidelines** on the criteria to be considered when preparing reports on Exploration Results, Mineral Resources and Reserves.



	Australia	Canada	UK/Europe	S.Africa	Chile	USASME	USASEC	UNFC
<b>CRIRSCO standard</b>	√	√	√	√	√	√	X	X
<b>Recognized by National Regulator</b>	√	√	√	√	√	√	X	X
<b>Competent Person requirement</b>	√	√	√	√	√	√	X	X
<b>Reporting of Mineral Resources allowed</b>	√	√	√	√	√	√	X	√
<b>Inferred Resources allowed in economic studies</b>	√	X	√	√	√	√	X	√
<b>Level of studies required for ore reserves</b>	1	2	1	2	2	1	3	3*
<b>Commodity price process specified by regulator</b>	X	X	X	X	X	X	√	X
<b>Reciprocal recognition of professional organizations</b>	√	√	√	√	√	X	X	X

1=appropriate assessments and studies as determined by Competent Person.

2=Pre-feasibility study expected (UK/Europe) or required (Canada, Chile)

3=Feasibility study for new projects; 3\* =Feasibility for Proved Reserves; Pre-Feasibility for Probable Reserve



**Muchas Gracias**