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**Mineral Reserve and Resource Reporting and
Classification within the USA**

2009 CRIRSCO-MoLAR Workshop
Beijing, China

October 29, 2009 Ian H. Douglas



U.S. Reporting Outline

1. Background
2. 2007 SME Guidelines
3. Notable Differences
 - Prices
 - Modified Resource Definitions
 - Mineral Reserves Declaration Report
 - Permitting and legal requirements



U.S. Reporting - Background

- Within the United States, disclosure of Mineral Reserves falls under the jurisdiction of the Security and Exchange Commission (SEC).
- The SEC does not provide detailed guidelines such as found in the SME Guidelines, JORC Code, and other international guidelines



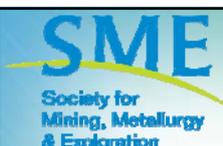
U.S. Reporting - Background

- The SEC does have a short publication, Industry Guide 7, that addresses only Reserves, and comments on three important criteria.
 - “at the time of reserve determination”
 - Guidance from the SEC is that this infers metal prices based on 3 year averages or spot prices
 - “economically extracted”
 - This infers that the basis of reserve estimates is a full Feasibility Study for new projects, and detailed mine plans for operating mines.
 - “legally extracted”
 - The SEC has inferred that permits must be in hand or that they will be obtained within a reasonable time frame.



U.S. Reporting - Background

- The SEC does not officially recognize Resources.
- Disclosures other than Proven and Probable Reserves shall not be disclosed.
- The use of the term “resource” is frowned upon and the term “Mineralized Material” is accepted.
- Inferred material is not mentioned in IG-7, only Measured and Indicated.
- The Qualified or Competent Person has not been recognized.



2007 SME Guide

- The 2007 SME Guide was updated such that the SEC might adopt the guide to replace IG7 by addressing their concerns with new language. While the SEC has not yet adopted the SME guide, discussions continue with the SEC.
- The SME Guide reflected changes that addressed concerns expressed by the SEC and made the Guide vary from other international codes in 4 main areas.



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2007 SME Guide

- The 4 areas of difference include:
 1. Commodity Pricing Guidelines: Recommended companies disclose price assumptions, tie those prices to companies' long term planning view and disclose a sensitivity of reported reserves to a 3 year average.
 2. Publication of Mineral Resources: Changed language to strengthen the potential economic test for resources and clarify definitions for Measured Indicated and Inferred.
 3. Technical and Economic Study Requirements: Propose a standard for a "Mineral Reserves Declaration Report"
 4. Permitting and Legal Requirements: Underscore the reasonable expectation of extraction of reserves



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2007 SME Guide

- The 2007 SME Guide is nearly identical to other reporting codes in the many areas:
 1. Competent/Qualified Persons
 2. Relationship of Measured, Indicated, Inferred Resources
 3. Relationship of Proven and Probable Reserves
 4. The modifying factors that allow some Resources to become Reserves



2007 SME Guide Notable Differences

- Metal Price Guidance
 - Prices should be based on Companies long-term views and consistent with company long term plans
 - Disclosure of price assumptions is recommended but not mandatory
 - Disclosure of sensitivity or test against 3 year trailing average prices required.



2007 SME Guide Notable Differences

- Definition of Resource
 - More strict interpretation of “potentially economic”, such that resources should be constrained within pit shells or conceptual stoping zones.
 - Recognition of concept that economics can be applied to all resource categories



2007 SME Guide Notable Differences

- Volume concept included in Resource Class definitions
 - Measured incorporates “local at high” confidence that implies shorter term planning horizons such as 3 to 6 months.
 - Indicated incorporates “local at reasonable” and “overall at high” confidence that imply longer term planning horizons of 1 year or more.
 - Inferred incorporates “overall at reasonable” confidence that implies there is sufficient confidence to be able to apply economic analyses to this class.



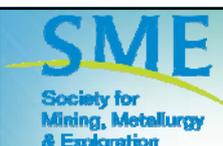
2007 SME Guide Notable Differences

- Reserves Declaration Report
 - Required for new projects
 - Detailed and fully scoped and defined study that has defined mining and processing method and permitting is feasible.
 - Study justifies all capital investment, both pre-production and sustaining



2007 SME Guide Notable Differences

- Legal and Permitting Guidance
 - Legally enforceable mineral title exists at time of Reserves, either owned or leased
 - No known material obstacles to mining that would prevent operations.
 - Reasonable expectation that all permits, ancillary rights and authorizations can be obtained in timely fashion.



Thank you!

Preparing this talk and attending this seminar was supported by :

