



# **RESPEC**

*Learning, Growing, Improving...Always*



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# Reserve Assessment in Canada and the Rest of the World

Presented at the 29<sup>th</sup> Annual Kentucky Professional  
Engineers in Mining Seminar

Friday, August 26, 2016

Marriott Griffin Gate Resort—Lexington, Kentucky

The logo for RESPEC, featuring the word in a bold, blue, italicized sans-serif font.

Presented by **Edmundo J. Laporte, PE, PEng**



### 1969

*Five South Dakota School of Mines & Technology professors founded RESPEC in Rapid City, South Dakota. RESPEC maintained a single-client focus for the Department of Energy's Nuclear Waste Disposal from 1972 to 1987 and has also been the Waste Isolation Pilot Plant's technical consultant since 1982.*



### 2012

*RESPEC became a 100 percent ESOP company. For over 40 years, our employee-owned firm has integrated engineering and science with applied technology to solve complex challenges. Throughout our history of providing cutting-edge technical services, we have strengthened our ability to respond to a dynamic marketplace.*







# RESPEC

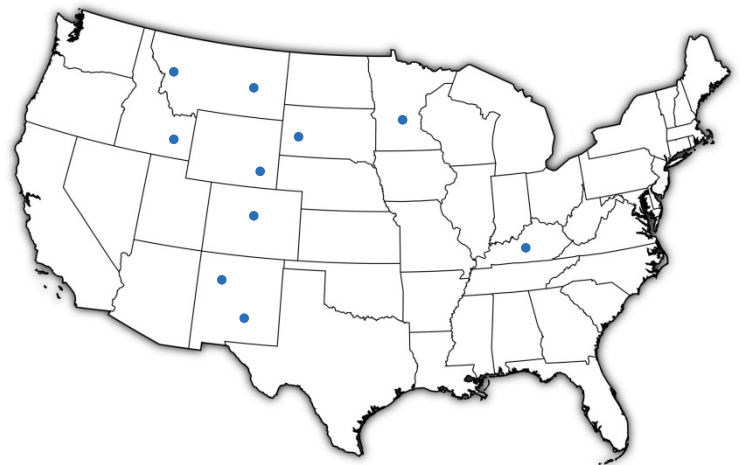
*Today*

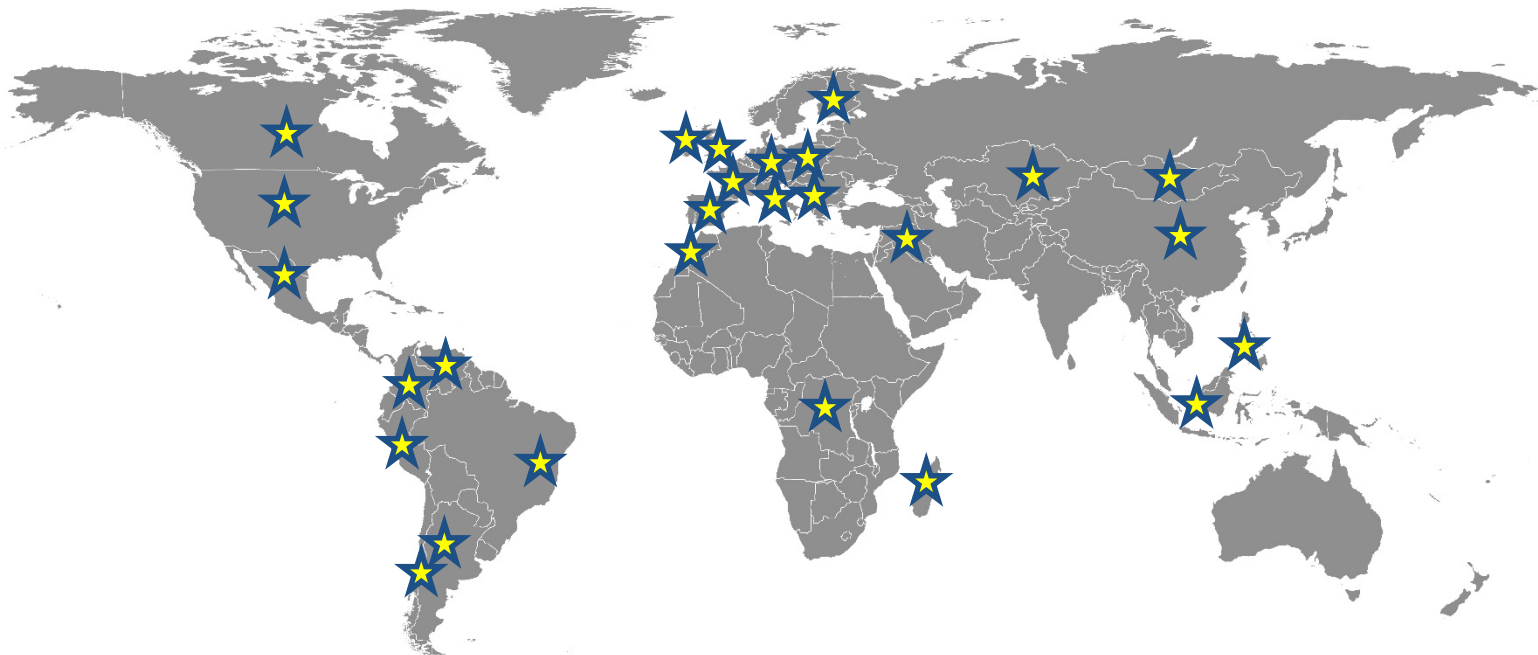
Over 220 Employees

10 Office Locations

100% Employee Owned

Over \$35 Million in Revenue





# INTERNATIONAL EXPERIENCE



RESPEC's Mining & Energy Experts have participated in mining and oil & gas projects in 5 continents, in a number of commodities which include:

*Coal*  
*Silver*  
*Gold*

*Limestone*  
*Sandstone*  
*Industrial Minerals*

*Coalbed Methane*  
*Conventional Gas*  
*Shale Gas*



# International Reporting Codes



# Principles of the International Codes

The main principles governing the operation and application of the international reporting codes are:

- Transparency
- Materiality
- Competence



# Transparency

- The reader of a Public Report is provided with sufficient information, the presentation of which is clear and unambiguous, to understand the report and is not misled.





# Materiality

- A Public Report contains all the relevant information which investors and their professional advisers would reasonably require, and reasonably expect to find in the report, for the purpose of making a reasoned and balanced judgement regarding the Exploration Results, Mineral Resources or Ore Reserves being reported



# Competence

- The Public Report is based on work that is the responsibility of suitably qualified and experienced persons who are subject to an enforceable professional code of ethics

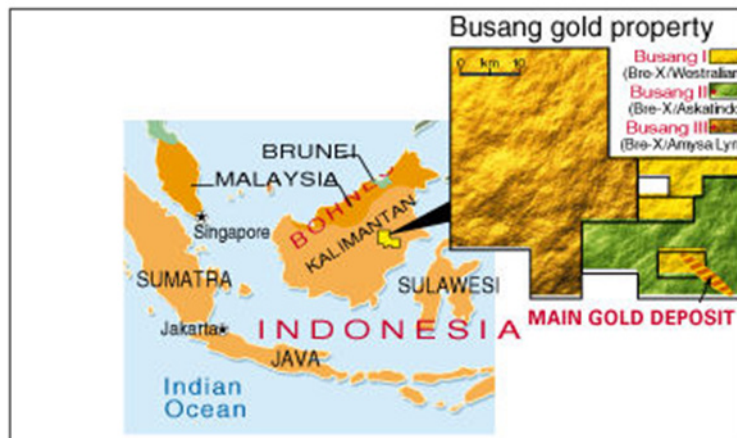


# Competent Person / Qualified Person

- A Member of a Recognized Professional Organization
- Must have a minimum of five years experience, which is relevant to the style of mineralization and type of deposit under consideration and to the activity which that person is undertaking



# The Bre-X Scandal



DAVID WALSH, MICHAEL DE GUZMAN, JOHN FELDERHOF

# Committee for Mineral Reserves International Reporting Standards



## CRIRSCO Members:

JORC (Australasia)  
CBRR (Brazil)  
CIM (Canada)  
Comisión Minera (Chile)  
PERC (Europe)  
MPIGM (Mongolia)  
NAEN (Russia)  
SAMCODES (South Africa)  
SME (United States of America)





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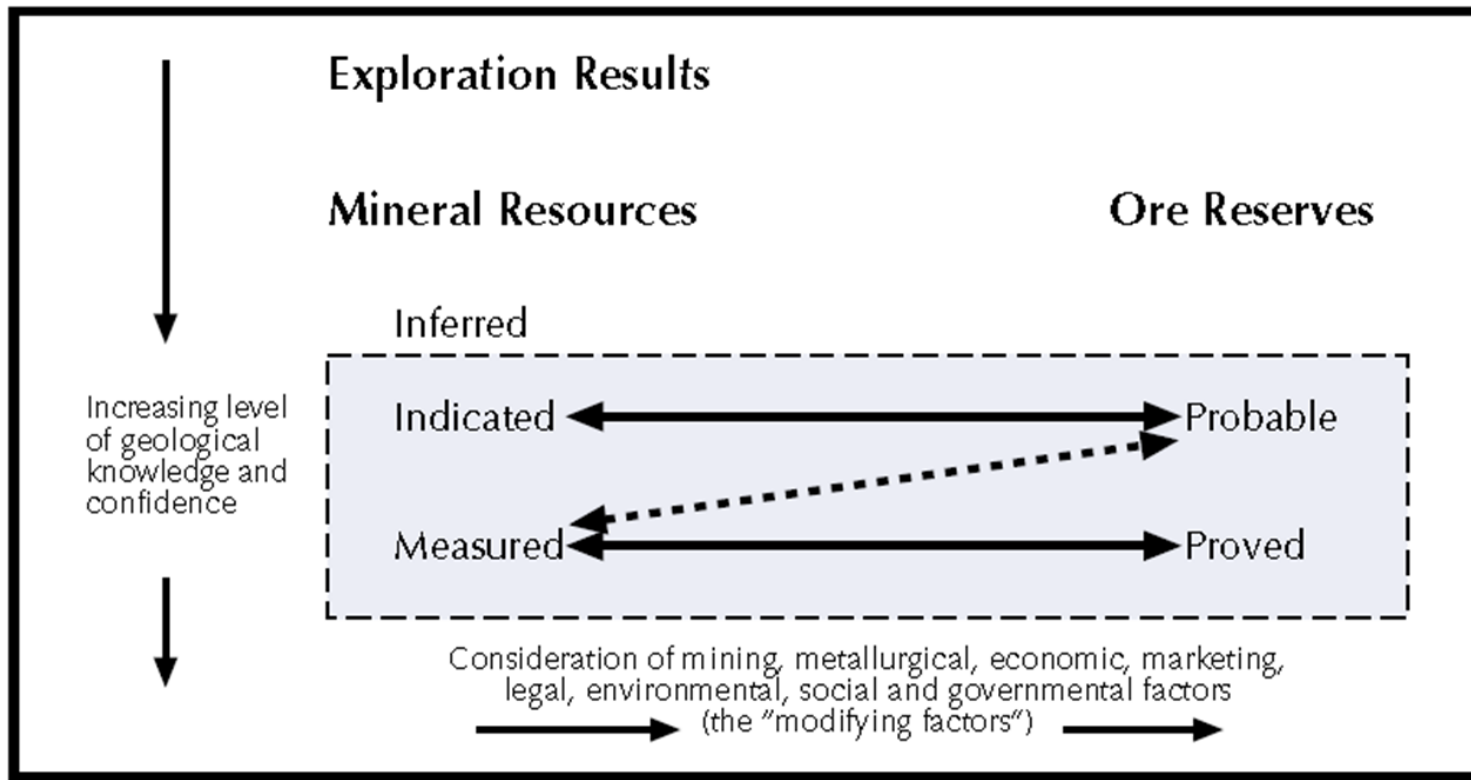
**Ian Douglas**

SME, USA

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# General relationship between Exploration Results, Mineral Resources and Ore Reserves



# National Instrument 43-101



# Role of CIM

- CIM established definitions and best practices used in NI43-101
  - Securities regulators should not be determining mining industry best practices
  - CIM are the standard setters for the mining industry in Canada
  - Formal procedures for review and approval of industry best practices and guidance documents



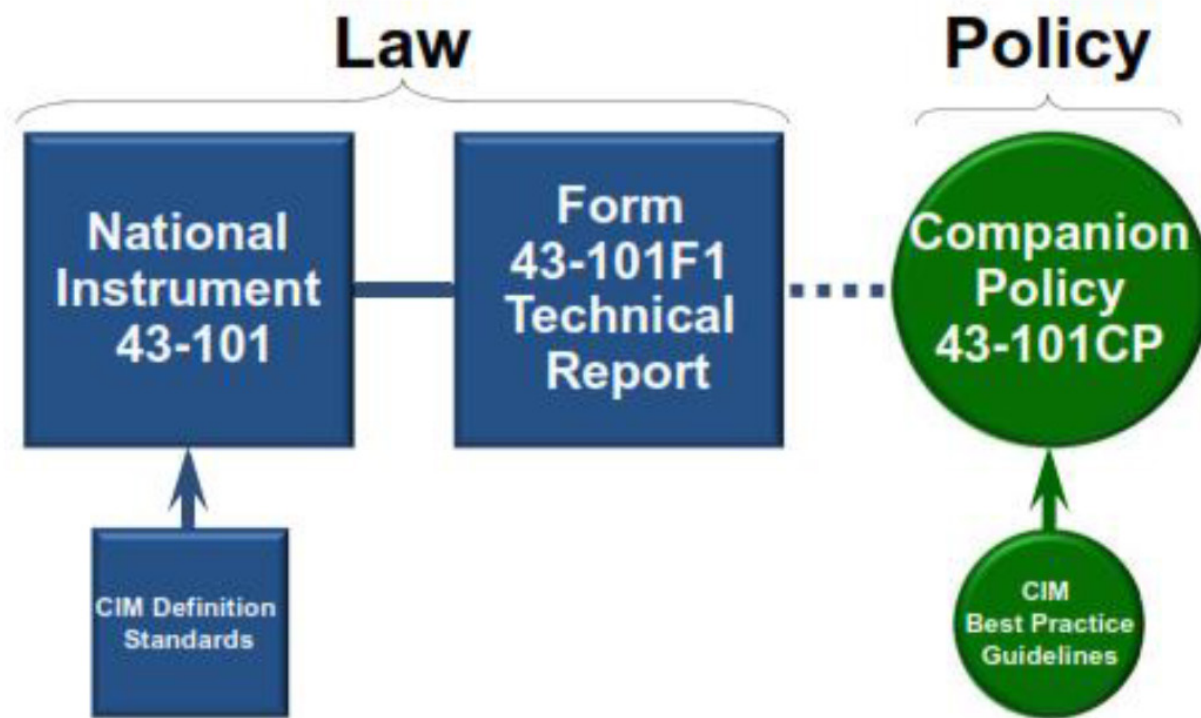
# CIM Definition Standards and Best Practice Guidelines

- CIM Exploration Best Practice Guidelines (2000)
- Guidelines for the Reporting of Diamond Exploration Results (2003)
- CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2003)
- Guidelines Specific to Particular Commodities: Rock Hosted Diamonds (2008)
- CIM Best Practice Guidelines for Mineral Processing (2011)
- CIM Definition Standards for Mineral Resources and Mineral Reserves (2014)





# NI 43-101 and the CIM(Canadian Institute of Mining, Metallurgy, and Petroleum)



# Acceptable Foreign Associations Under NI 43-101\*

**Appendix A**  
**Acceptable Foreign Associations and Membership Designations**



Foreign Association	Membership Designation
American Institute of Professional Geologists (AIPG)	Certified Professional Geologist (CPG)
The Society for Mining, Metallurgy and Exploration, Inc. (SME)	Registered Member
Mining and Metallurgical Society of America (MMSA)	Qualified Professional (QP)
Any state in the United States of America	Licensed or certified as a professional engineer
European Federation of Geologists (EFG)	European Geologist (EurGeol)
Institute of Geologists of Ireland (IGI)	Professional Member (PGeo)
Institute of Materials, Minerals and Mining (IMMM)	Professional Member (MIMMM), Fellow (FIMMM), Chartered Scientist (CSci MIMMM), or Chartered Engineer (CEng MIMMM)
Geological Society of London (GSL)	Chartered Geologist (CGeol)
Australasian Institute of Mining and Metallurgy (AusIMM)	Fellow (FAusIMM) or Chartered Professional Member or Fellow [MAusIMM (CP), FAusIMM (CP)]
Australian Institute of Geoscientists (AIG)	Member (MAIG), Fellow (FAIG) or Registered Professional Geoscientist Member or Fellow (MAIG RPGeo, FAIG RPGeo)
<u>The Institution of Engineers Australia<sup>1</sup> (Engineers Australia)</u>	<u>Chartered Professional Engineer (CPEng)</u>
<u>The Institution of Professional Engineers New Zealand<sup>2</sup> (Engineers New Zealand, IPENZ)</u>	<u>Chartered Professional Engineer (CPEng)</u>
Southern African Institute of Mining and Metallurgy (SAIMM)	Fellow (FSAIMM)
South African Council for Natural Scientific Professions (SACNASP)	Professional Natural Scientist (Pr.Sci.Nat.)
Engineering Council of South Africa (ECSA)	Professional Engineer (Pr.Eng.) or Professional Certificated Engineer (Pr.Cert.Eng.)
Comisión Calificadora de Competencias en Recursos y Reservas Mineras (Chilean Mining Commission)	Registered Member
<u>Russian Society of Subsoil Use Experts<sup>3</sup> (OERN)</u>	<u>Expert</u>

\* Effective February 25, 2016




# System for Electronic Document Analysis and Retrieval (SEDAR)

SEDAR was developed by the Canadian Securities Administrators (CSA) to facilitate the following:

1. Electronic filing of securities information (prospectuses, continuous disclosure documents, etc.) and the payment electronically of filing fees as required by the CSA;
2. Public dissemination of securities information collected in the securities filing process; and
3. Electronic communication between electronic filers, filing agents and the CSA.



# System for Electronic Document Analysis and Retrieval (SEDAR)



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# JORC CODE





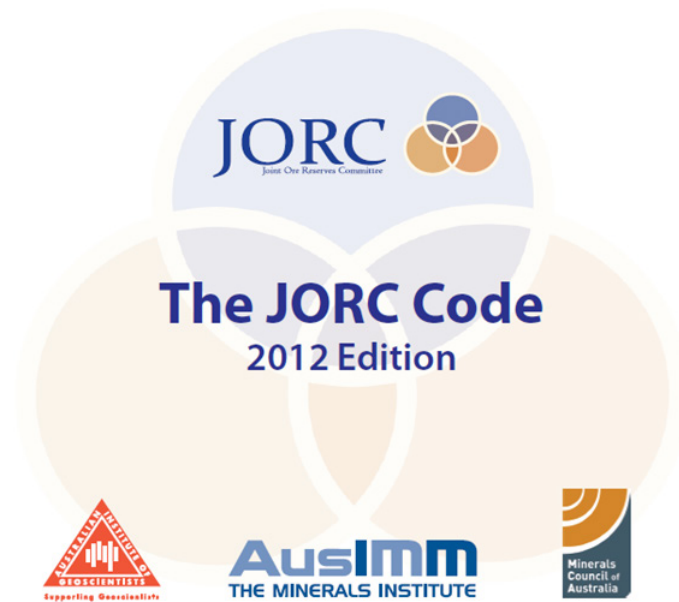
# The Joint Ore Reserves Committee Code (JORC Code 2012)

- Sets minimum standards for Public Reporting of minerals Exploration Results, Mineral Resources and Ore Reserves
- A member of CRIRSCO
- Reports prepared for the purpose of informing investors or potential investors and their advisors
- Comprises representatives of:
  - The Minerals Council of Australia (MCA)
  - The Australasian Institute of Mining and Metallurgy (The AusIMM)
  - The Australian Institute of Geoscientists (AIG)
  - Representatives of the Australian Securities Exchange (ASX), the Financial Services Institute of Australasia (FinSIA) and the accounting profession.



# The Joint Ore Reserves Committee Code (JORC Code 2012)

Australasian Code for Reporting of  
Exploration Results, Mineral Resources  
and Ore Reserves



Effective 20 December 2012 and  
mandatory from 1 December 2013

Prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC)

# Additional Reporting on Mining and Oil and Gas Production and Exploration Activities

- Chapter 5 of the ASX Listing Rules

## Table of Contents

<b>The main headings in this chapter</b>	<b>Rules</b>
Quarterly reporting	5.1 – 5.5
Reporting on mining activities	5.6 – 5.24
Reporting on oil and gas activities	5.25 – 5.44
Terms of a <sup>+</sup> mining tenement and a <sup>+</sup> petroleum tenement joint venture	5.45
Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code)	Appendix 5A
<sup>+</sup> Mining exploration entity and <sup>+</sup> oil and gas exploration entity quarterly report	Appendix 5B



# Additional Reporting on Mining and Oil and Gas Production and Exploration Activities



## ASX LISTING RULES Guidance Note 31

### REPORTING ON MINING ACTIVITIES

<b>The purpose of this Guidance Note</b>	<ul style="list-style-type: none"><li>• To assist listed entities to understand and comply with the reporting requirements for mining activities in Chapter 5 of the Listing Rules</li></ul>
<b>The main points it covers</b>	<ul style="list-style-type: none"><li>• The quarterly reporting obligations that apply to mining entities</li><li>• The general requirements that apply to all public reports of ore reserves or mineral resources</li><li>• The requirements that apply to public reports with information about a geophysical survey</li><li>• The reporting requirements that apply to public reports of exploration results for material mining projects</li><li>• The requirements that apply to public reports with an estimate of mineral resources or ore reserves for material mining projects</li><li>• The requirements that apply to public reports of historical and foreign estimates of mineralisation for material mining projects</li><li>• The requirements that apply to public reports of certain production targets and forecast financial information derived from those production targets</li><li>• The interaction between Chapter 5 and other reporting obligations, including the obligation to give market sensitive information to ASX immediately</li><li>• The requirement for mining exploration entities to include a list of mining tenements in their annual report</li><li>• The requirement for mining entities to include a mineral resources and ore reserves statement in their annual report</li><li>• Competent person requirements</li></ul>
<b>Related materials you should read</b>	<ul style="list-style-type: none"><li>• Appendix 5A of the Listing Rules (the JORC Code)</li><li>• Guidance Note 8: <i>Continuous Disclosure: Listing Rules 3.1 – 3.1B</i></li></ul>

# Comparison of NI 43-101 with the JORC Code

- The National Instrument 43-101 requires substantially more technical disclosure to the market than JORC
- The technical information required in a Reserve declaration under the NI 43-101 exceeds that within the JORC Code
- JORC Compliant technical reports are not commonly published in full upon the Australian Stock Exchange as this is not required by Australian regulatory authorities





# Pan-European Reserves & Resources Reporting Committee (PERC)



# Pan-European Reserves & Resources Reporting Committee (PERC)

- Responsible for setting standards for public reporting of exploration results, mineral resources, and mineral reserves by companies listed on markets in Europe.
- A member of CRIRSCO
- A not-for-profit organization registered in Brussels
- Founded by:
  - The Institute of Materials, Minerals, and Mining (IOM3)
  - The European Federation of Geologists
  - The Geological Society of London
  - The Institute of Geologists of Ireland



# Pan-European Reserves & Resources Reporting Committee (PERC)



RC asbl no. 0.521-825-257 registered Bruxelles 7 March 2013

PERC  
EFG Office  
c/o Service Géologique de Belgique  
13, Rue Jenner B-1000 Bruxelles  
Belgium

## **PERC REPORTING STANDARD 2013**

### **PAN-EUROPEAN STANDARD FOR REPORTING OF EXPLORATION RESULTS, MINERAL RESOURCES AND RESERVES ("THE PERC REPORTING STANDARD")**

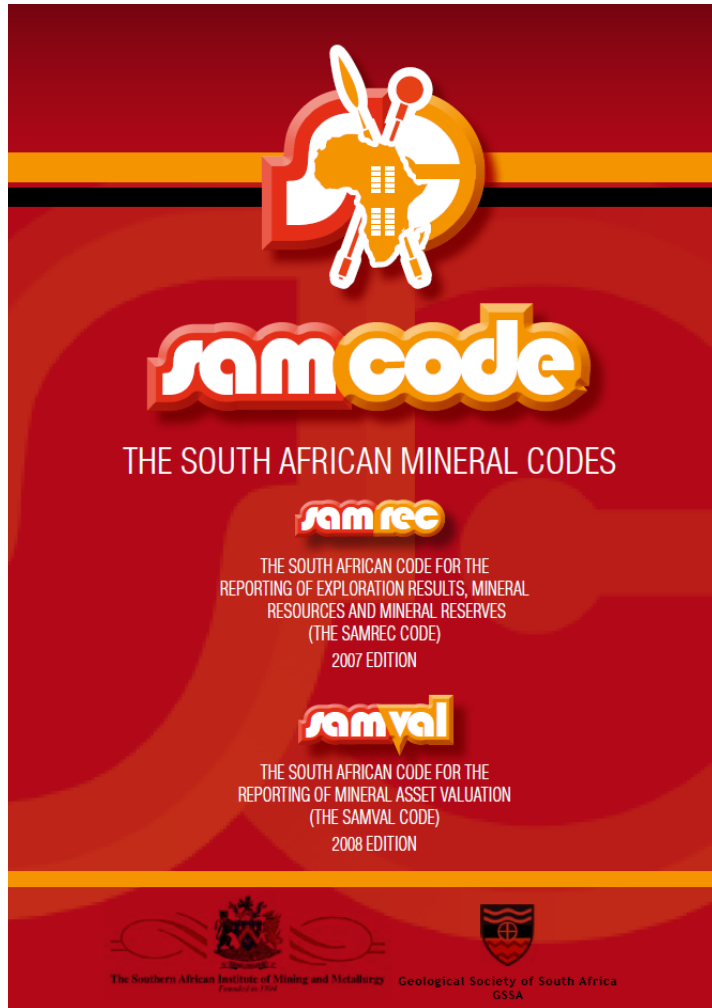
The Pan-European Reserves and Resources Reporting Committee (PERC asbl)  
approved and published 15 March 2013 (revision 2: 29 November 2013)



# Other Reporting Codes



# Other Reporting Codes



# Industry Guide 7



# Industry Guide 7 (IG-7)

- Industry Guide 7 (IG-7) “*Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations*” was introduced by the SEC in 1982.
- IG-7 addresses only Reserves
- Informal recognition of Mineralized Material
- Little formal guidance or definition for either
- Most reports combine USGS Guidelines & IG-7





# Industry Guide 7 Update

- 2011: SME met with SEC representatives to update IG-7
  - SEC does not see updating IG-7 as a priority
  - SEC was overwhelmed with Dodd-Frank changes to regulations
- 2012: SME files Petition for Rulemaking
- 2013: Chair Mary Jo White's speech confirms need to update IG7
- 2014: SME partnering with NMA for political support
- 2014: House Financial Services Committee engaged
  - SME submits questions for April 29 SEC oversight hearing
  - Circulating letter of Congressional support w/Committee
  - Requested draft of revised IG7
  - SME releases the "*2014 Guide for Reporting Exploration Results, Mineral Resources and Mineral Reserves*"



# Industry Guide 7 Update

- 2014: SEC began the process of updating IG7: called for applications for an academic Fellow to work with the Commission and aid senior staff in reviewing the public company disclosure requirements
- 2015: SEC appoints Dr. Kwame Awuah-Offei, associate professor of mining engineering at Missouri University of Science & Technology in Rolla, MO, as academic fellow in the Division of Corporation Finance.
- 2016: SEC publishes a Proposed Rule (File No. S7-12-16) *"Modernization of Property Disclosures for Mining Registrants"*
  - Comments Initially Due: August 26, 2016
  - Extension of Comment Period: September 26, 2016



# SEC PROPOSED RULE



# SEC Proposed Rule

**SECURITIES AND EXCHANGE COMMISSION**

**17 CFR Parts 229, 239 and 249**

**[Release Nos. 33-10098; 34-78086; File No. S7-10-16]**

**RIN 3235-AL81**

**Modernization of Property Disclosures for Mining Registrants**



# SEC Proposed Rule

- Standard requiring registrants to disclose mining operations that are material to the company's business
- Disclose mineral resources and material exploration results in addition to its mineral reserves
- Disclosure of mineral reserves to be based on a preliminary feasibility study or a final feasibility study
- Definitions of mineral reserves and mineral resources



# SEC Proposed Rule

- Requires summary disclosure for mining operations as a whole (tabular format)
- Requires a detailed disclosure for individual material properties
- Introduces the figure of the “qualified person”
- Requires disclosure of resources, reserves and exploration results be based on, and accurately reflect information and supporting documentation prepared by, a “qualified person”
- Requires a technical report summary from the qualified person, which identifies and summarizes for each material property the information reviewed and conclusions reached by the qualified person about the registrant’s exploration results, mineral resources or mineral reserves



# Extension of Comment Period for Modernization of Property Disclosures for Mining Registrants

- File No.: S7-10-16
- See also: Proposed Rule Release No. 33-10098
- Comments Due: September 26, 2016

Comments received from SME, SAMCODES, NRP, Amec Foster Wheeler, AIPG, Anglo Gold Ashanti, NSPE, SRK, Freeport-McMoran, BHP, National Stone, Sand and Gravel Association and others





# SME's Comments on the Rule

- The prices used to estimate both mineral resources and mineral reserves are limited to less than or equal to the average spot price or contract price in effect over a 24-month period preceding the date of the estimate, instead of a "consensus price"
- Does not allow economic value to be attributed to inferred mineral resources in an Initial Assessment, which is contrary to CRIRSCO standards
- Does not permit a qualified person to include a disclaimer of responsibility if he or she relies on a report, opinion, or statement of another expert in preparing the technical report summary.
- The rule elevates the liability of the qualified person to that of company's (registrant's) officers and/or directors.



# SME's Comments on the Rule

- Inconsistency of USGS circulars 831 and 891
- Mineral Brines and Geothermal Require Special Treatment from Solid Minerals
- Coal and Industrial Minerals
- Consideration of Climate, Environmental, Social Issues, Safety and Health



# SME's Position Regarding Royalty Companies

- Holders of royalty interests are not mine operators and have very limited access to the technical data and other information underlying the operator's technical report.
- The additional property, exploration and other detail required by the Proposed Rules is not the key material information to a royalty company's stockholders.
- The qualified person of a royalty company should not be required to be named and subject to securities law liability.



# QUESTIONS



**[Edmundo.Laporte@Respec.com](mailto:Edmundo.Laporte@Respec.com)**

