

10TH ANNIVERSARY

Coaltrans
SOUTH AFRICA

Unlocking the potential within
South Africa's coal industry

21-22 June 2011 | Hilton Sandton Hotel, Johannesburg

REPORTING OF COAL RESOURCES AND RESERVES – HOW SHOULD IT BE DONE?

Roger Dixon,

Chairperson CRIRSCO

Johannesburg , June 22, 2011

ICMM
International Council
on Mining & Metals




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Conferences
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Presentation Agenda

- CRIRSCO - Principle objective
- Members
- Recent activities
- Potential Members
- International Reporting Template
- Coal Specific Terminology
- Compliance Issues

Introduction

CRIRSCO

Committee for Mineral Reserve
International Reporting Standards

ICMM

International Council on Mining and Metals

Principle Objective

To promote best practice in the international public reporting of Mineral Exploration Results, Mineral Resources and Mineral Reserves.

CRIRSCO is an international advisory body without legal authority, relying on its constituent members to ensure regulatory and disciplinary oversight at a national level.

It recognises the truly global nature of the minerals industry and the agreed need for international consensus on reporting standards.

CRIRSCO Members

Australia:	JORC Code
Canada:	CIM Standards
Chile:	The Code for the certification of Exploration Prospects, Mineral Resources and Ore Reserves
Europe and UK:	PERC Code, The Reporting Code
South Africa:	SAMREC Code
United States:	SME Guide for Reporting Exploration Information Mineral Resources and Mineral Reserves

Recent Activities

- Ministry Land and Resources (MLR) joint meeting Beijing 2009
- UNFC 2009
 - Expert Group on Resource Classification (EGRC)
 - Specifications Task Force (STF)
- Extractive Activities Discussion Paper April 2010
 - International Accounting Standards Board (IASB)
- Development of “Guidelines on alignment of Russian reporting standards and CRIRSCO Template”

Potential Members

Argentina

China

Indonesia

Mongolia

Peru

Philippines

Russia

The Template

INTERNATIONAL REPORTING TEMPLATE

for the public reporting of

EXPLORATION RESULTS, MINERAL
RESOURCES AND MINERAL RESERVES

JULY 2006

Purpose

- Advisory only
- National Standards/Codes take precedence
- Model for development of new codes

Public Report

- Reports prepared for investors or potential investors
- Annual Reports
- Quarterly Reports
- Information Memoranda
- Websites
- Public Presentations
- Stock Exchange Information Systems

Principles

- Materiality
- Transparency
- Competency

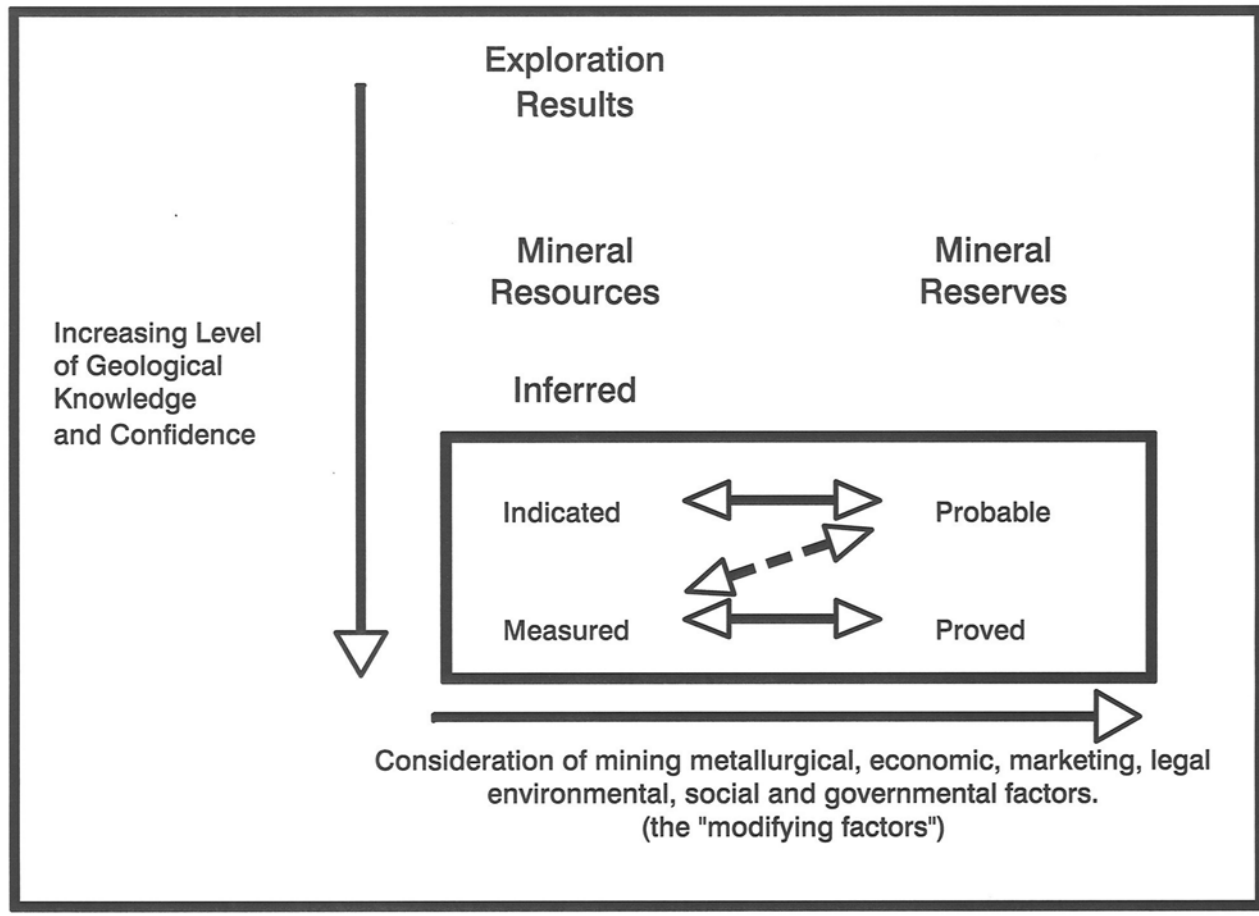
Competency

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

Disciplinary Procedure

- Responsibility of National Reporting Organization (NRO)
- International agreements through Recognized Overseas Professional Organizations (ROPO)

Fundamental Definitions



Modifying Factors

- Mining
- Metallurgical
- Economic
- Marketing
- Legal
- Environmental
- Social
- Governmental

Mineral Resource

Concentration or occurrence of material of ***economic*** interest in or on the earth's crust in such form, quality and quantity that there are ***reasonable*** prospects for ***eventual economic*** extraction

Not an inventory of all mineralization!

Coal Terminology

- The terms ‘Mineral Resource(s)’ and ‘Mineral Reserve(s)’, and the subdivisions

EQUIVALENT,

- ‘Coal Resource(s)’ and ‘Coal Reserve(s)’ and the appropriate subdivisions may be substituted

Coal Terminology

- ‘Marketable Coal Reserves’, **beneficiated or otherwise enhanced coal product** where modifications due to processing have been considered in addition to mining factors.
- May be publicly reported in conjunction with, but not instead of, reports of Coal Reserves.
- The basis of the predicted yield to achieve Marketable Coal Reserves should be stated.

Compliance Issues

All Coal Resources must be classified into Inferred, Indicated and Measured Resources categories.

- Classification based solely on borehole spacing, and in particular the translation of a best practice borehole spacing from one coalfield to another coalfield

The use of “JORC classification” (as per Aus. Guidelines), in Southern African coal deposits is misleading.

The continuity and confidence in typical Australian Coalfields like the Bowen Basin, is an “order of magnitude” better than the coalfields in Southern Africa.

Compliance Issues

- Gross Tonnes In Situ is the only tonnage reported
- Mineability is not discussed, in terms of expected mining method and selectivity;
- The cut-offs are not applied and are not presented;
- Raw Coal Quality is not reported
- Theoretical Yield and Target Quality are not reported;
- Target Products and Markets are not discussed.
- Reasonable and realistic prospects of eventual economic extraction are not adequately motivated;

Ensure that the Coal Deposit is in fact a Coal Resource!

Compliance Issues

- Appropriate **Modifying Factors** have not been applied;
- Appropriate **Coal Processing Modifying Factor discounts** have not been applied to the Saleable Product;
- **Infrastructure Constraints** are not addressed;
- Coal Reserves are not based on a scheduled **Life of Mine Plan**;
- **Economic Model** has not been applied to the Life of Mine Plan;
- Coal Reserves must contain both **ROM and Saleable tonnage estimates** as well as the expected **Product Qualities**;

Coal Resource is in fact not a Coal Reserve

CRIRSCO TEMPLATE

ALL SLIDES

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Acknowledgement



Exploration Results

Exploration Results include data and information generated by exploration programmes that may be of use to investors but is not part of a formal declaration of Mineral Resources or Reserves

Tonnage and grade not to be reported!

Mineral Reserve

- The ***economically mineable*** part of Measured and/or Indicated Mineral Resource
- Includes dilution and losses
- Appropriate assessments have been carried out and modifying factors have been considered
- Demonstrated at time of reporting extraction is reasonably justified
- Proven and Probable

Competent Person

- Member or Fellow of professional body with enforceable code of ethics
- Five (5) years experience *relevant* to type of mineralization and deposit and the activity being undertaken

Competent Person

Team approach allowed but leader signs off.

NB. Satisfied in own mind able to face peers and demonstrate competence in the commodity, type of deposit and situation.

ROPOs

Australasian Institute of Mining and Metallurgy	AusIMM
Australian Institute of Geoscientists	AIG
Canadian Council of Professional Geoscientists	CCPG
European Federation of Geologists	EFG
The Geological Society	GS
Institute of Geologists of Ireland	IGI
Institute of Materials Minerals and Mining	IMMM
Mining and Metallurgical Society of America	MMSA
Society for Mining Metallurgy and Exploration	SME