

# THE PAN-EUROPEAN REPORTING STANDARD

## “PERC”

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**ATHLONE**

**MARCH 20<sup>TH</sup> 2012**

John A Clifford

# PRESENTATION OUTLINE

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- PART ONE
  - BACKGROUND
  - CRIRSCO
  - PERC REPORTING STANDARD
- PART TWO
  - REPORTING EXPLORATION RESULTS
  - THE COMPETENT PERSON
  - COMMON PROBLEMS

# BACKGROUND

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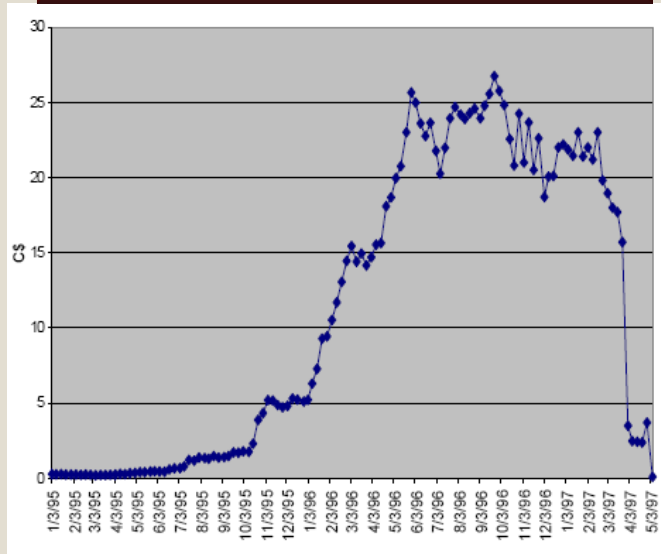
# WHY WE NEED STANDARDS

Resource

+

Feasibility

=



## NOT A NEW PROBLEM

16<sup>th</sup> Century: Agricola

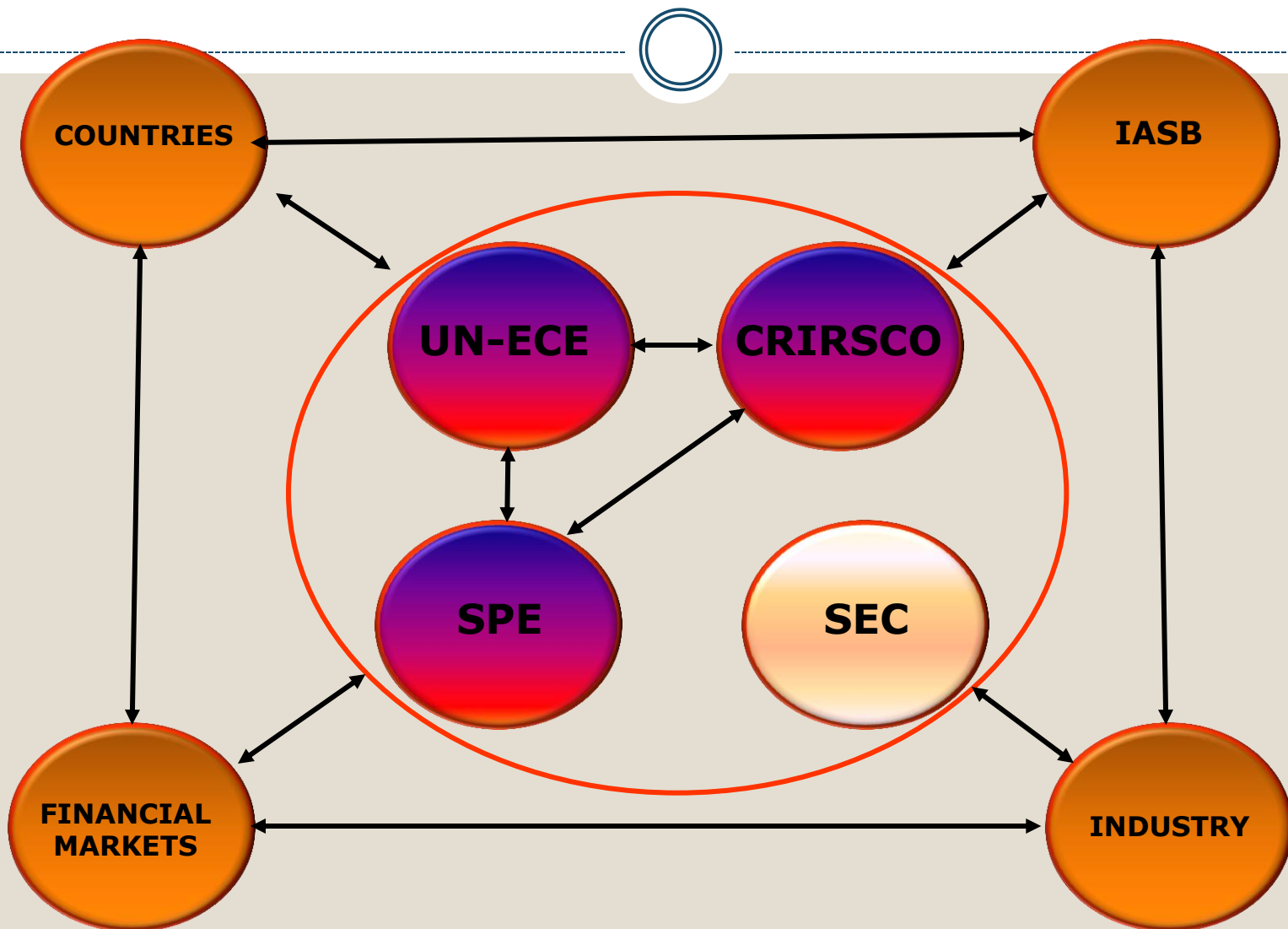
1826: Collapse of London Stock Market due to South American speculation

1996: Naxos – proprietary assay technique

1996: Timbuktu – Salting

21<sup>st</sup> Century: Digital Salting

# PLAYERS



# PREFERRED CAPITAL MARKETS FOR MINING INDUSTRY December 31<sup>st</sup> 2009

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Exchange	Listings	Market Cap C\$ billion
USA	110	1,052
Australia	610	553
UK	171	435
South Africa	55	378
Canada	1434	367
Hong Kong	36	122



# CRIRSCO



Committee for Mineral Reserves International Reporting Standards

# CRIRSCO FAMILY OF CODES

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## FIRST EDITIONS

JORC (1989) – SME Guidelines (1992) – CIM (2000) – SAMREC (2000)  
– PERC (2001) – Chile (2007) – Philippines (2007) – Russia (2011)



## INTERNATIONAL DEVELOPMENTS

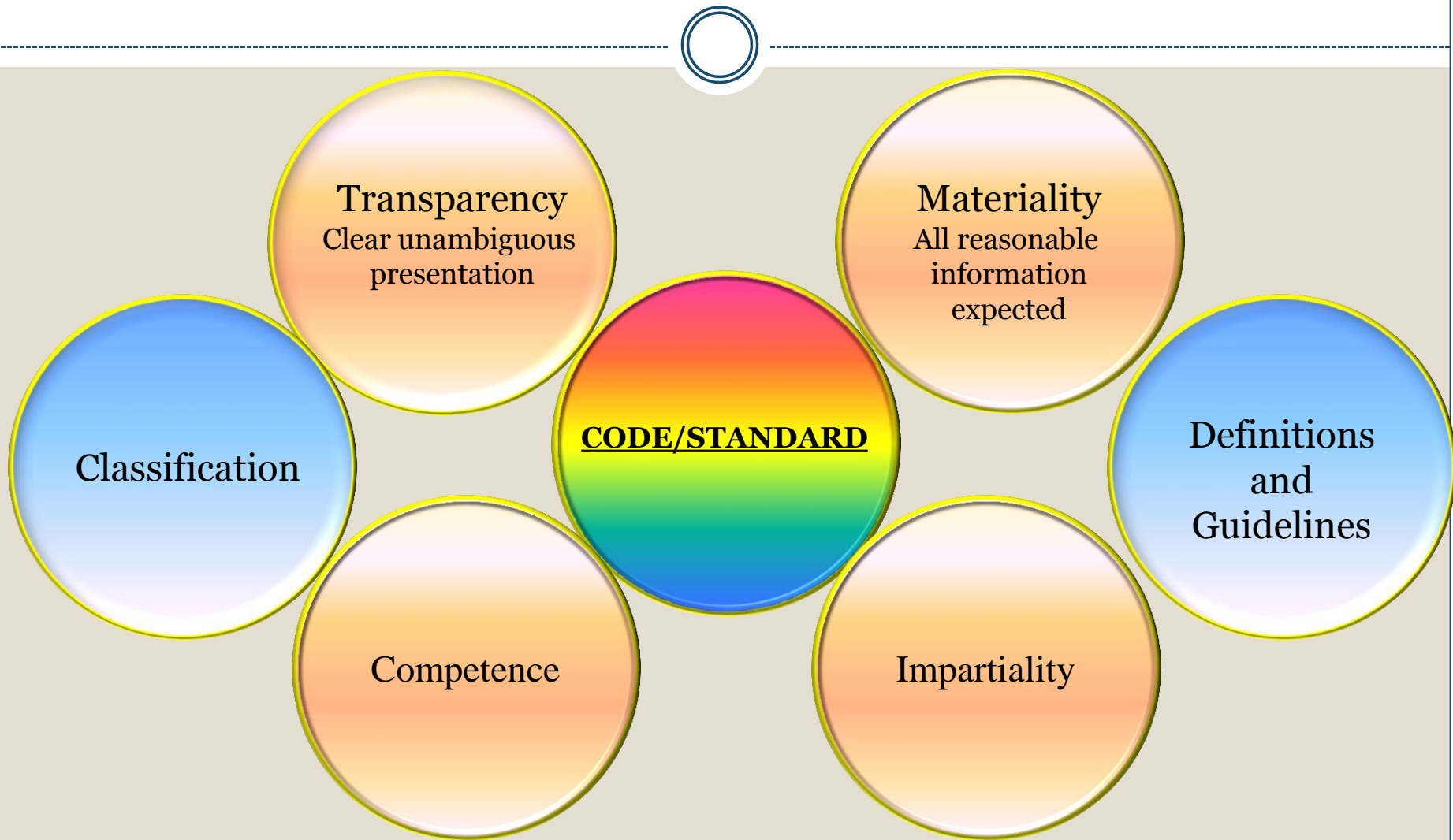
1997: Denver Accord; 1998: Geneva Convention with UN-ECE; 2011: CRIRSCO Definitions



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# CRIRSCO STYLE CODES - STANDARDS



# WHAT CRIRSCO DOES



- Sets **minimum standards for public reporting** of Exploration Results, Mineral Resources and Mineral 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 Reports to be based on work undertaken 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 Mineral Reserves

# WHAT CRIRSCO DOES NOT DO



- **Regulate the procedures** used by Competent Persons to estimate and classify Mineral Resources and Ore Reserves (methodology)
- **Regulate companies' internal classification** or reporting systems
- Deal with **breaches of the Code by companies** (This is a function for the Stock Exchanges)
- Deal with **breaches by individuals**, these are dealt with under code of ethics of the relevant professional association

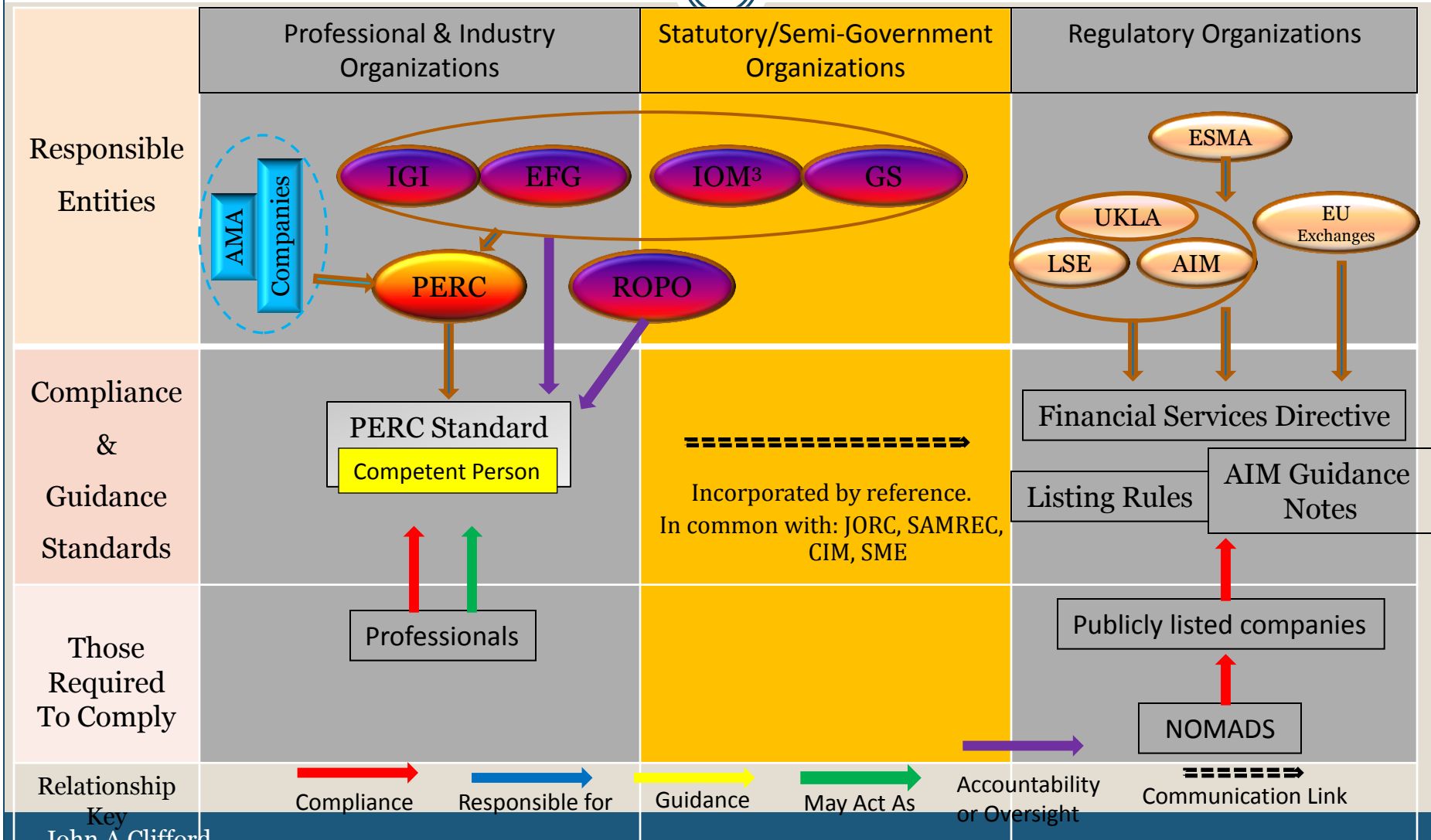
# PERC STANDARD

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# PERC

## PAN EUROPEAN RESERVES-RESOURCES REPORTING STANDARD

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# REPORTING EXPLORATION RESULTS



# REPORTING

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- Study the relevant Standard and the Exchange regulations before you report anything.
- For example:
  - PERC – LSE or AIM
  - CIM – NI 43-101
  - JORC - ASX
- Table 1 of the PERC Standard provides a high-level Checklist and Guidelines.



# THE EXPLORATION PROCESS



Concept



Budget



DATA ACQUISITION, VALIDATION, COMPILATION AND INTERPRETATION



Resource



RESOURCE  
ESTIMATOR

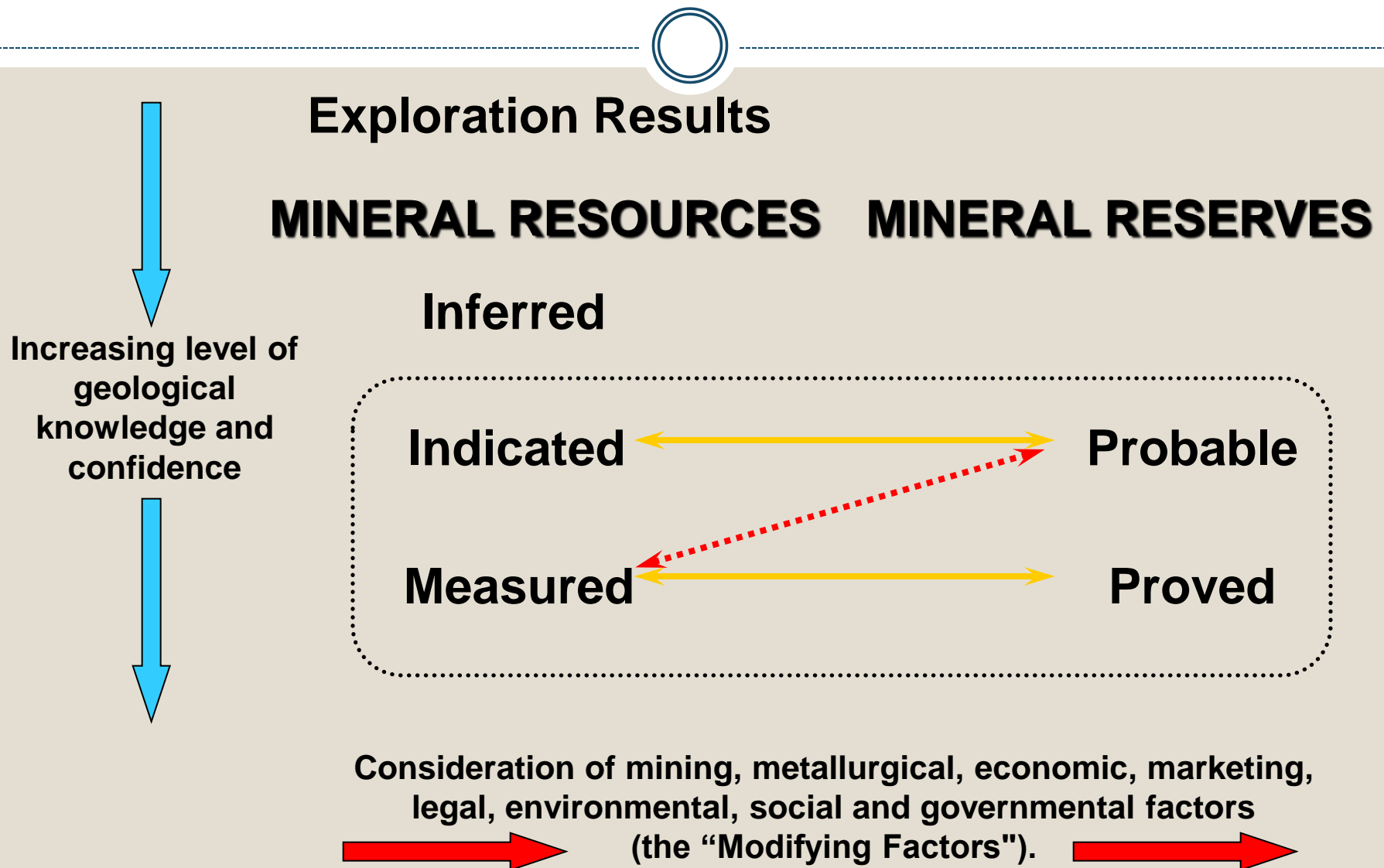
PRELIMINARY  
ECONOMIC  
ASSESSMENT

PRE-FEASIBILITY

FEASIBILITY



# RELATIONSHIP BETWEEN EXPLORATION RESULTS, MINERAL RESOURCES & MINERAL RESERVES



# REPORTING EXPLORATION RESULTS



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

## CAUTIONARY STATEMENT

- *“It is inappropriate for the reader to use such information for deriving estimates of tonnage and grade”.*

# EXPLORATION TARGETS

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- Descriptions of exploration targets or potential should be expressed so as not to misrepresent them as an estimate of Mineral Resources or Mineral Reserves.
  - Potential quantity and grade must be expressed as a range;
  - Proximate statement that the quantity and grade is conceptual in nature, that there has been insufficient exploration to define a mineral resource and that it is uncertain if further exploration will result in the target being delineated as a mineral resources

# EXPLORATION TARGET EXAMPLE

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*This work **has not resulted in the definition of any resource which is compliant** with the JORC Code but has identified an Exploration Target. With further exploration, this **target has potential for between 50Mt to 150Mt of mineralisation** at a grade of 0.8 to 1.5% copper within the drilled and surrounding area. The **potential quantity and grade is conceptual** in nature and there has been insufficient exploration to define a Mineral Resource in accordance to the JORC Code. As such it is **uncertain if further exploration will result in the determination of a Mineral Resource**. Further XYZ Resources cautions that in order to achieve this target, **substantial exploration is required** to further geologically map, detect, trench and drill test the defined conceptual target. On this basis, XYZ Resources considers that **further work is warranted** beyond that previously conducted.*

# EXPLORATION TARGET

## HOW NOT TO DO IT

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### Security Regulators forced a retraction

The Company's website previously contained historical estimates of a potential mineral deposit for the Amazing property, expressed as “*numerous hundreds of thousands of tons of reserves*” and “*thought to be in the million ton range*”. The Company would like to specifically retract this disclosure.

# EXPLORATION RESULTS

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- Must contain sufficient information to allow a considered and balanced judgement of the significance of the results.
- Should include:
  - Land tenure
  - Geology and mineralisation
  - Drilling and sampling density
  - Sampling methodology
  - Sampling techniques and data
  - True widths, or qualification
  - Assays
    - ✦ List all results, including sample intervals or size, or;
    - ✦ Weighted average grades, with description of procedure used
  - A map/section is equal to a thousand words

# PERC APPENDIX ONE

## GENERAL

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- Project Outline
- History
- Key Plans, Maps and Sections
- Project Location and Description
- Topography and Climate
- Legal Aspects and Tenure



# PERC APPENDIX ONE

## SAMPLING TECHNIQUES and DATA

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- Types of Sampling
- Drilling Techniques
- Drill Sample Recovery
- Logging
- Other Sampling Techniques
- Sub-Sampling Techniques and Preparation
- Assay Data and Laboratory Investigation
- Verification of Results
- Data Location
- Data Density and Distribution
- Reporting Archives
- Audits and Reviews

# PERC APPENDIX ONE

## EXPLORATION RESULTS

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- Mineral Rights and Land Ownership
- Exploration by Other Parties
- Geology
- Mineralogy
- Data Compositing
- Relationship between Mineralisation Width and Intercept Width
- Diagrams
- Balanced Reporting
- Other Substantive Exploration Data
- Further Work

# DATA VERIFICATION

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- The process of confirming that the data is suitable to be used
  - State that the CP has verified that data;
  - How it was verified, and any limitations;
  - Explain any failure to verify the data;
  - QA/QC

# THE COMPETENT PERSON

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# PERC REPORTING STANDARD

## THE COMPETENT PERSON

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### Rules of Conduct and Guidelines

- Duty To:
  - The Public and Society;
  - The Profession, Employers and Clients;
  - Professional Bodies, Colleagues and Associates;
  - The Environment, Health and Safety

# THE COMPETENT PERSON

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- CRIRSCO-style standards require publicly reported reserve and resource information to be based on work undertaken by a Competent Person
- The Competent Person is **named** in the public report
- It is the Competent Person's **responsibility** to ensure that the estimates have been performed properly
- The Competent Person may be either an employee or a consultant

**STRONG DETERRENT**

# WHO IS A COMPETENT PERSON

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- A Competent Person must have at least five years **relevant** experience
- A Competent Person must be a **member** of a **professional society** that:
  - requires compliance with professional and ethical standards
  - has disciplinary powers, including the power to discipline or expel a member
- Because the Competent Person's experience is in relation to the deposit style and situation under consideration, most countries do not attempt to maintain registers of Competent Persons

# REPORTING - A TEAM EFFORT

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- Exploration Results – Geologist
- Mineral Resources – More than one CP
- Mineral Reserves – Three of more CP's



# COMPETENT PERSON STATEMENT

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Appendix 4 of the PERC Standard provides an example  
Consent Statement

# COMMON PROBLEMS EXAMPLES FROM THE ASX

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# ASX COMPLIANCE

## October 2008 – March 2009

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- 5,200 announcements checked.
- 333 instances of non-compliance (246 companies):
  - 176: Deficient or Missing Competent Person Statement;
  - 80: Combined or unspecified categories of Resources;
  - 41: Exploration target statement reported incorrectly;
  - 12: Insufficient information on Results;
  - 11: Combined or unspecified categories of Reserves;
  - 5: Use of in-ground values or sufficient information to explain equivalent calculations;
  - 5: Reporting of Historic/Foreign estimates;
  - 3: Miscellaneous

# BCSC Technical Report Study

## April – December 2008

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• Consents – missing or incomplete	51%
• Certificates – missing or incomplete	22%
• Problem disclaimers	11%
• Recommendations/Costs	11%
• Not signed	5%
• Title Page	5%

# FOR FURTHER INFORMATION

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## PERC

[www.percreserves.com](http://www.percreserves.com)