

Resources and Reserves Reporting (metallic minerals) to the PERC code

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Caution

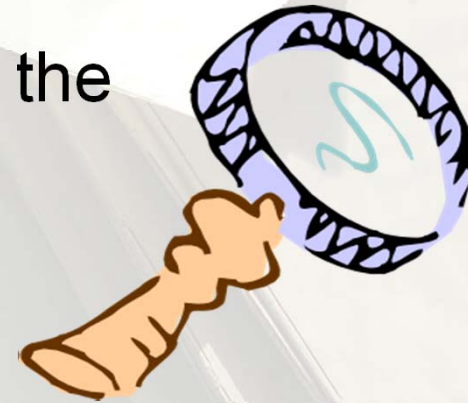
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- Information has been summarized and paraphrased for presentation purposes. **Please refer to the original documents for clarification.**

Why are You Here?

We build trust and all we have left at the end is our reputation



*Do unto others what
you would have them
do unto you?*



Do you really
Care?

PERC Standard - The Standard

Verification, Validation and Independent Review

Pan European Reserves and Resources Reporting Committee

What is it?

Why?



When?

Scope &
Principles

Scope and Intent

What would you expect?

Minimum
Standard

All
reasonable
information

Balanced
Judgement



Presentation Road Map



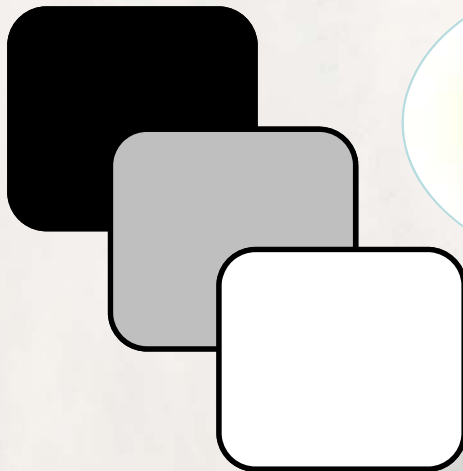
Why Do We Need All These Rules and Guidelines?



Risk
Capital



Cowboys
and a hole in
the ground!



Grey
areas

Guidance



Mining Scandals – Fact or fiction?



BRE-X (1997) - salting

Naxos (May 1996) – visual estimates

Cartaway (May 1996) – visual estimates

Timbuktu (June 1996) - salting

Delgratia (March 1997) – salting/proprietary assaying

Golden Rule/Hixon Gold (May 1997) - salting

Southwestern (July 2007) – assay data tampering



Regulator's Dilemma

Get Tough
but don't ruin
the Party



Rules alone
not enough

Booming
Markets +
Unscrupulous
Participants



Vigilance and
DD Critical



Desired Outcomes

Informed
investment
decision

Balanced
disclosure

Results-
understand
significance
& context

Data -
understand
risks and
limitations

Confidence
in the CP



Flow Chart for typical Core Drill Program

DRILLING



LOGGING



SAMPLE
PREPARATION



ASSAYING



Public Reports

Inform
Exploration
Results, Mineral
Resources

internal non-
compliant
documentation

Annual, Quarterly,
press releases,
technical papers,
website postings,
public presentations

Intent



Competence and Responsibility

CP/QP

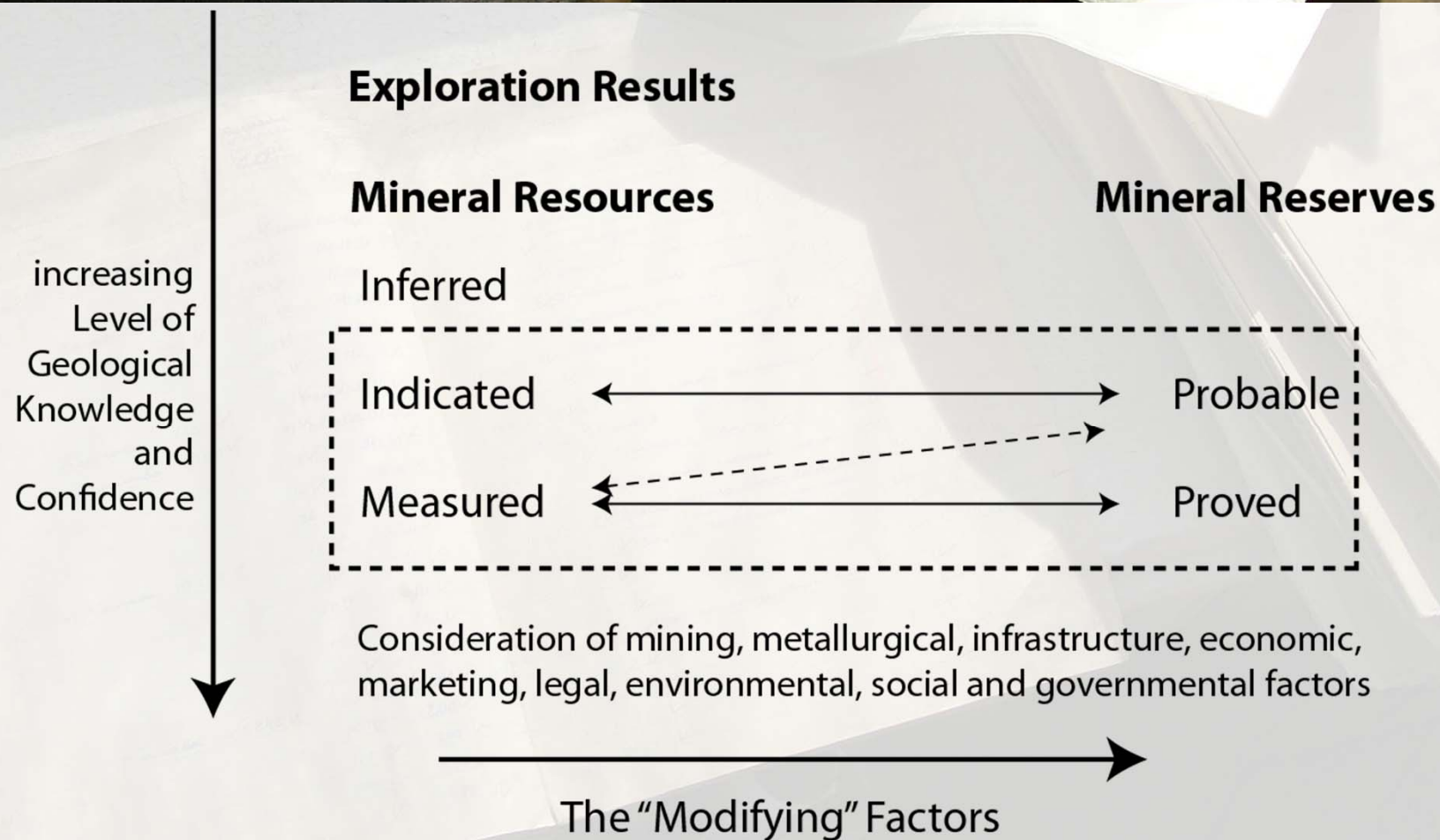
CP

Disclosure
and
consent



Resource Reserve Terminology

Modifying Factors



Can only use these terms!

Resource Definition

which takes precedence over category definitions

- Concentration of metal with **reasonable** prospect of **eventual** economic extraction based on grade/quality & quantity.
- Modifying factors - location, quantity, grade/quality, continuity and other geological characteristics are known, estimated or interpreted from specific geological evidence and knowledge, including sampling

Evidence &
Knowledge

Reasonable
is a
judgement
call by CP

Realistic
inventory with
cut off

Inferred Resources

Limited
geology and
sampling

Imply but not
verify

Expectation
to increase
confidence

Imply geological and grade/quality continuity



reserve

Indicated Resources

Sufficient
confidence to
support mine
planning &
economic viability

Adequate
detailed and
reliable
sampling

Lower
confidence
than
measured



**Probable
reserve**

Assume geological and grade/quality continuity

Measured Resources

Sufficient
confidence to
support mine
planning &
economic viability

Adequate
detailed and
reliable
sampling

No
reasonable
doubt

**Proven or
probable
reserve**

Confirm geological and grade/quality continuity



Reporting of Mineral Resources

Table 1 Checklist & guidelines of reporting & assessment criteria

(15 criteria)

High-level
reference
checklist

Normal
systematic
approach

Non
prescriptive

Relevance
& Materiality



**database – geology – method– cut off –
bulk density – assumptions – conversion - \$-
market –classification – audits - discussion**

Historical Resource estimates

Five criteria

- 1) Source & Date
- 2) Relevance & Reliability
- 3) Categories
- 4) Cautionary statement
- 5) Most recent estimates



Materiality



What is Material?

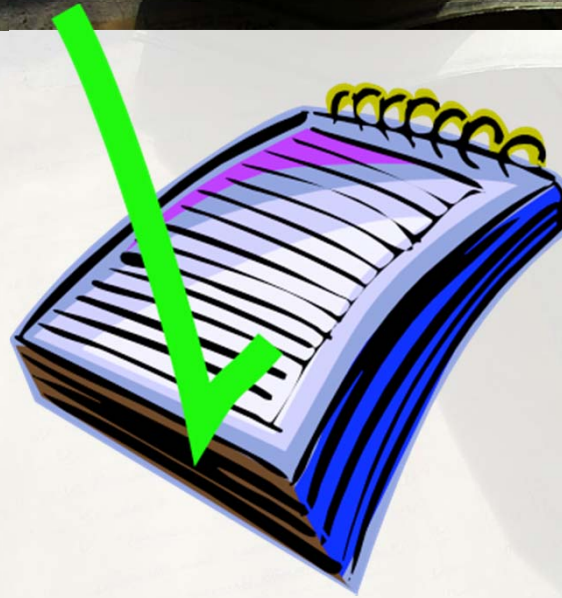
= impacts value
and share price

Securities Regulators View of Materiality

The View



Requirements for All Disclosure



- * Use only PERC categories of resources and reserves
- * Report each category separately
- * Don't add inferred to other categories
- * If contained metal is disclosed state grade and tonnes for each category

Disclosure Red Flags



Analyst Reports & Third Party Newsletters



Misconceptions



- **BFS or FS – the same!**
- **Mineable resource???**
- **Disclaimers**
- **All authors of technical reports must be independent**

Conclusions

- The Standard
- Why?
- Guiding core message
- Reporting Best Practice
- References:



References

- **Pan-European Code for Reporting of Exploration Results, Mineral Resources and Reserves**
(“The PERC Reporting Code”)

<http://www.perc.co/>