



Importance of a QP on Investment Selection in the Mining Sector

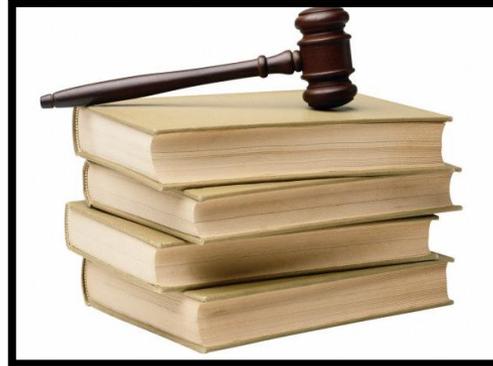
Deborah McCombe, CIM Representative
CRIRSCO Workshop
Brasilia, Brazil, December 1

- **Definition of a Qualified Person**
- **QP Self Assessment**
- **Accepted Foreign Associations**
- **Independence/Companion Policy**
- **Choosing an Appropriate QP**
- **QP for Investment Selection**

What are the core principles of NI 43-101?



Qualified
Person



Standards
&
Best Practices



Technical
Report

Objective is to ensure that disclosure is based on reliable information, reflecting professional opinions, based on industry best practices and using standardized terms.

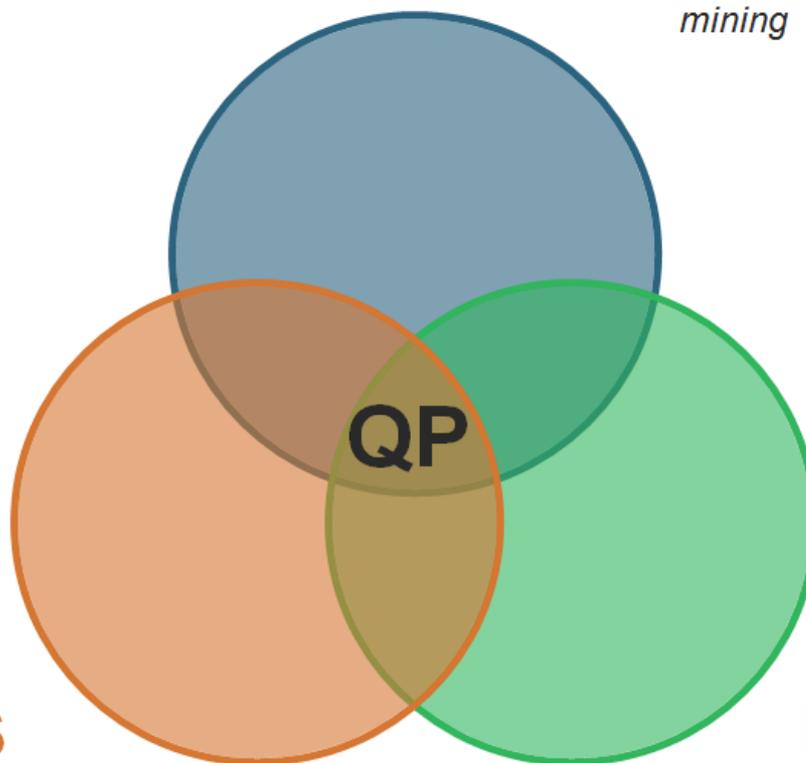
Reason for QP Involvement

- Reason for QP involvement
 - Transparency
 - Competence
 - Materiality
 - Provides confidence in the markets so investors can make informed investment decisions
 - Provides a level playing field as there is an ability to compare projects on an international basis

Definition of a Qualified Person

Education

Geoscientist or engineer with a university degree in geoscience or engineering related to exploration or mining



Professional association recognized by law in Canada or a foreign association and membership designation listed in NI 43-101

Ethics

At least five years of experience in exploration, mining, or project assessment and experience relevant to subject matter being reporting on

Experience



“QP should be clearly satisfied that they could face their peers and demonstrate competence and relevant experience in the commodity, type of deposit and situation under consideration”

QP Self Assessment Questions

- Would the vast majority of my peers agree with my logic in defining, classifying, and reporting the mineral estimates?
- Are my assumptions for eventual economic extraction reasonable and realistic?
- Would informed investors understand the assumptions, factors, and procedures used?
- Does the project's stage of development reflect the level of confidence in the data?
- Have I considered and used all representative data, and if not, have I considered the advantages and risks in not doing so?
- Have I adequately presented the significant areas of risk and uncertainty and potential ways that these could be addressed in future work and studies?

Modified from M.A. Noppé - Xstract Mining Consultants – March 2014

- Qualified Persons must apply their professional and ethical standards to their work
- Subject to discipline by their professional association
- Stock exchanges require their involvement in design and conduct of exploration programs and sign off on disclosure
- Responsible for preparation of mineral resources/reserves
- Canadian securities regulators require Qualified Persons to be named in disclosure documents and require consents in some situations

Accepted Foreign Associations

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 (CSi 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)
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

QP and foreign “professional associations”

(August 16, 2012)



Canadian Securities
Administrators

Autorités canadiennes
en valeurs mobilières

CSA Staff Notice 43-308
Professional Associations
under NI 43-101 Standards of Disclosure for Mineral Projects

Addition to the List of Foreign Associations and Membership Designations

After considering submissions received, in staff's view the organization identified below meets the definition of a "professional association" in NI 43-101, and the membership designation below meets the criteria in paragraph (e) of the definition of "qualified person" in NI 43-101.

Foreign Association	Membership Designation	Date of Determination
The Institution of Engineers Australia (Engineers Australia)	Chartered Professional Engineer (CPEng)	May 29, 2012

This association and membership designation should be considered an addition to the list of accepted foreign associations and membership designations in Appendix A of the Companion Policy.

Section 1.5 Independence

In this Instrument, a qualified person is independent of an issuer if there is no circumstance that, in the opinion of a reasonable person aware of all relevant facts, **could interfere with the qualified person's judgment** regarding the preparation of the technical report.

Principle based definition (in bold).

Independence is only relevant to the Qualified Persons preparing a technical report, and only in limited circumstances.

1.5 Independence

1. Guidance on Independence

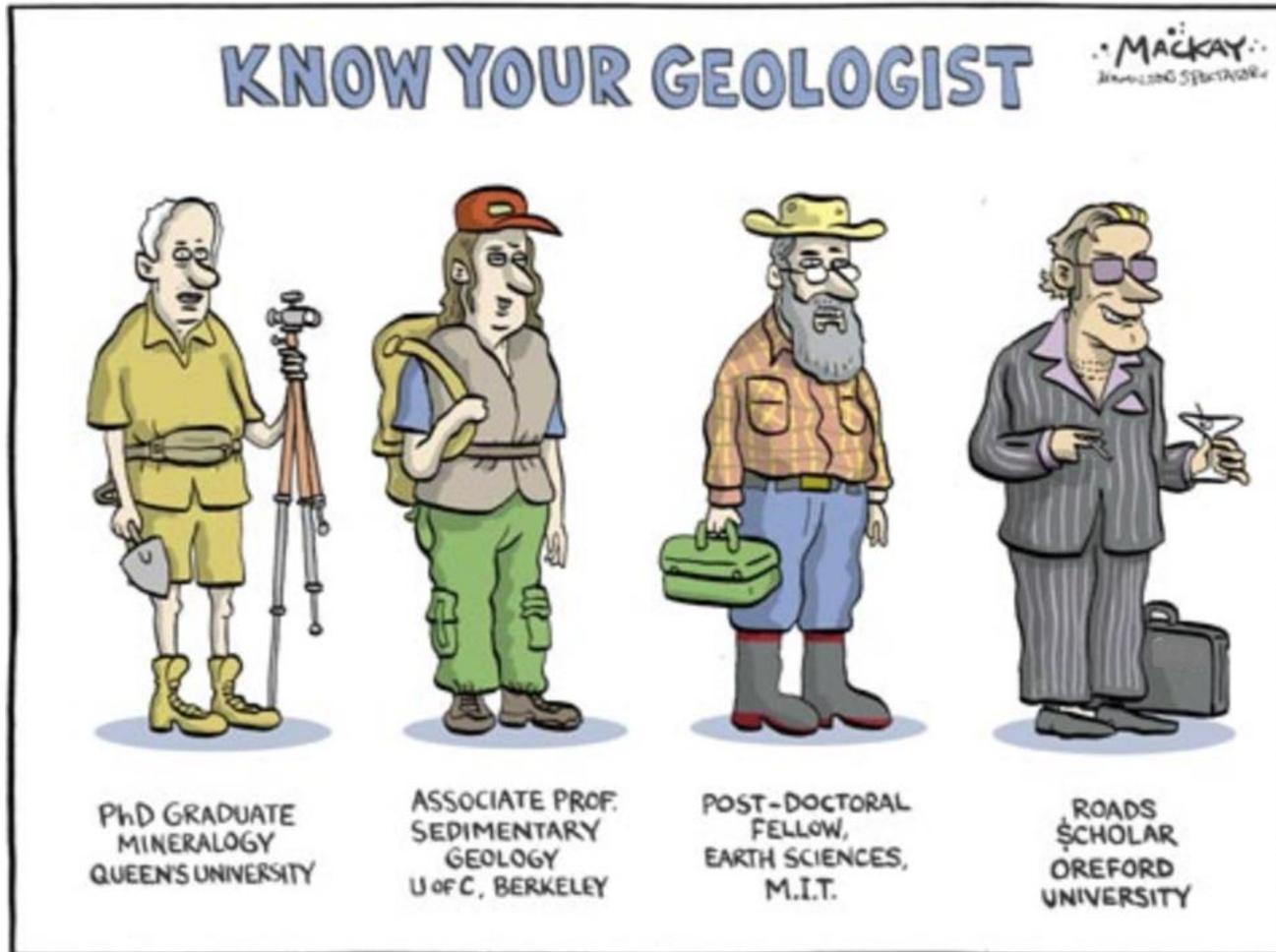
- Employee, insider, director, or partner of:
 - the company
 - a related party of the company
- Hold shares directly or indirectly in:
 - the company
 - another company that has an interest in the property that is the subject of the technical report or an adjacent property
- Has or expects to have a royalty interest
- Received majority of income from company over past three years

- **Comply with your professional association's code of ethics**
 - Perform work only in your area of competency and be honest, fair and objective
- **CIM definition standards and best practices**
 - Follow CIM Standards and Best Practice Guidelines
- **Conduct data verification**
 - Perform a reasonable level of due diligence and validation of technical data
- **Communicate the project risks**
 - Clearly report on the material risks in a manner understandable to investors
- **Check the company's disclosure**
 - Helps reduce the risk of being misquoted

Company's responsibilities

- **Company** is responsible for its disclosure
 - Company's directors and officers are responsible for their disclosure
- **Compliance** with rules and policies
 - Must comply with securities laws and stock exchange policies
- **Choose** an appropriate QP
 - Company is responsible for choosing an appropriate QP for the task
- **Current** site visit
 - Company must arrange its affairs so a QP can carry out a current site visit

Choosing an appropriate QP



The Qualified Person for geological content

Relevant Experience:

- Exploration tools: mapping, geophysics, geochemistry
- Commodity specific: coal, diamonds, iron ore, base metals, precious metals, potash, specialty metals
- Resource estimation: geological modeling, geostatistics

The Qualified Person for mining engineering content

Relevant Experience:

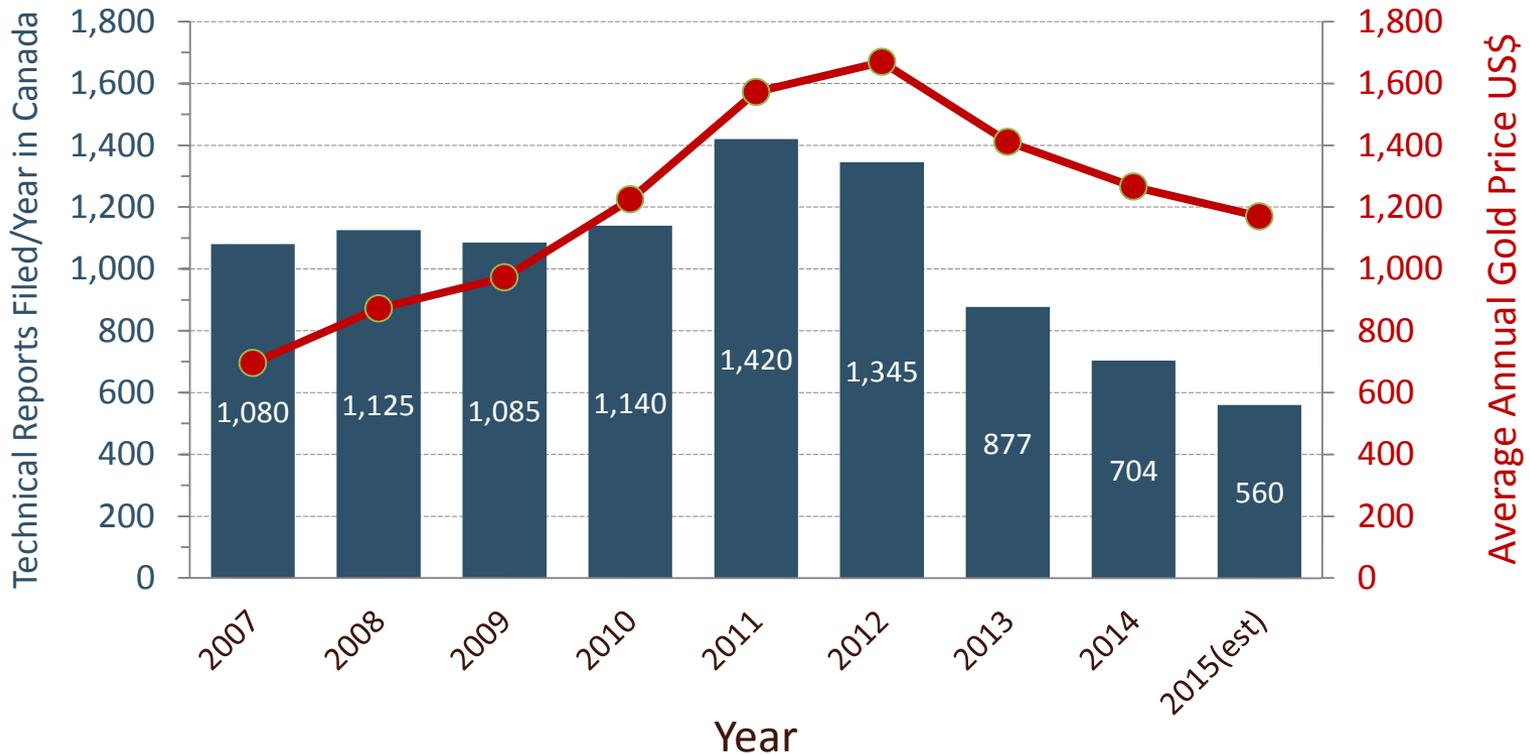
- Underground versus open-pit
- Stage of development: Preliminary Economic Assessment versus Feasibility Study
- Specialized mining methods: block cave, solution mining
- Reserve estimation/financial analysis

Qualified Person in Resource Estimate

- *Guidance in: CIM Definition Standards for Mineral Resources and Mineral Reserves – definition of a Qualified Person*
- *Estimation of Mineral Resources is often a team effort, for example, involving one person or team collecting the data and another person or team preparing the Mineral Resource estimate. Within this team, geologists usually occupy the pivotal role.”*

Technical Reports Filed Per Year (2007 – 2015 est)

2011 to 2015 \rightarrow 60% fewer technical reports



- Staff Notice 43-309
 - 25% of the presentations (130) have major non-compliance issues related to disclosure of exploration targets, mineral resources, mineral reserves, or PEAs
 - Overall compliance improved when the presentation was reviewed by a QP
 - Canadian regulators have seen an improvement in investor presentation disclosure since publication of the review and the accompanying guidance

Variation in “judgement by the QP”

- Observation by the regulator about how QPs interpret “**reasonable prospects for eventual economic extraction**” related to estimation of mineral resources

— Basic to detailed —
↓



Analogous deposit



Assumed metal price and mining method



Constrained by a conceptual open pit shell or underground stope blocks



Based on an internal scoping study (including initial capex)

- Selection of the QP important for credibility
 - QP's report will be closely read by investors
 - QP's reputation and opinion will control the decision to invest
- Principles: Competence, Materiality, Transparency
- Allows investor to get clear message on risks and potential upsides

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