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# Valuation vs Evaluation

# What is Mineral Evaluation?

- A process to decide the future of a mineral project
- “A broad physical, technical, legal, economic and other assessment generally sought for an investment decision” (IMVAL Draft Template, April 2016, Clause 4.7)
- “For clarity, Evaluation is distinct from Valuation” (IMVAL Draft Template, April 2016, Clause 4.7)

# What is Valuation?

- “Valuation is the process of determining the monetary Value of a Mineral Asset at a set Valuation Date.” (VALMIN Code, 2015 Edition, Clause 14)
- “Value means the estimated amount of money ... for which the Mineral Asset should exchange on the date of Valuation between a willing buyer and a willing seller in an arm’s length transaction after appropriate marketing wherein the parties each acted knowledgeably, prudently and without compulsion.” (VALMIN Code, 2015 Edition, Clause 14)

# Why Do We Use Valuations?

- To determine the sale or purchase price of a mineral asset
- To compare alternative investment opportunities
- To advise shareholders and stakeholders in the event of a proposed corporate transaction, such as a takeover or merger
- To determine the base for value-related impost or taxes
- To quantify asset levels in company balance sheets
- To determine entry or participation levels in joint ventures
- To assess the potential for adding value by exploration or development

# Why Are Valuations and Evaluations Often Confused?

- In the Mongolian language, the word for each is identical.
- In the English language, the word for each is nearly identical.
- In the English language, each word is often incorrectly applied to the alternative meaning.
- Evaluation is the starting point for Valuation

# Evaluation Tools

- Exploration results
- Mineral resources and ore reserves statements
- Scoping studies
- Preliminary economic assessments (Canadian terminology)
- Pre-feasibility studies
- Feasibility studies
- Detailed engineering
- Operational budgets
- Historical operational data

# Evaluation Reports (1)

- Project location: position, topography, climate, vegetation, seismic activity, access, water issues, existing infrastructure
- Project ownership: tenure, royalties, rent, legal issues
- Project history: exploration, past production, past rehabilitation
- Geology: regional, site, mineralisation
- Mineral resources and ore reserves
- Mining: method selection, geotechnical issues, hydrological issues, physical schedules

# Evaluation Reports (2)

- Processing: metallurgical test work, process design, plant and equipment requirements, tailings disposal, physical schedules
- Infrastructure: off-site and on-site roads, site drainage, railways, electrical power supply, water supply, water disposal, site accommodation, workshops, warehouses, explosives magazines, fuel storage
- Environmental: air quality, water quality, noise, flora and fauna impact, mine waste, tailings, erosion control, mine closure and subsequent monitoring
- Capital and operating costs, including sustaining capital, contingency, mine closure and post-closure costs.
- Product marketing: market conditions, sales terms, revenue schedules



# Evaluation Reports (3)

- Political/regulatory: tax regime, duties and imposts, stability
- Cash flow schedules: project, owner (with or without debt funding), taxation, undiscounted and discounted, derived IRR
- Sensitivity analyses
- Risks and opportunities: material contracts, liabilities, commitments

# Evaluation Report Levels

- The complexity of an evaluation report and the amount of provided information will usually relate to the development phase of the project.
- Projects can be classified for evaluation and valuation purposes as:
  - Exploration
  - Pre-development
  - Development
  - Production
- Projects at any of these stages may be active or dormant.

# Importance of a Standardised System of Valuation

- A standardised valuation report improves confidence in the reliability of the findings
- A standardised valuation report can be more readily transferred across jurisdictions.
- In turn, these permit better access for national companies to international markets.
- In turn, this encourages further foreign investment in the national market.

# Some Valuation Terms

- Mineral Deposit means an accumulation of rocks or minerals that are of use to man and that can be worked at a profit (=ore).
- Mineral Asset means a right, or a combination of rights and obligations, to the value of a mineral deposit. It includes ownership, rights to mine, royalties, off-take agreements and product streaming
- Mineral Property means one or more mineral deposits and associated real estate rights, as determined by contiguous tenure.
- In Valuation, the terms are often (but not always) used interchangeably, where the definitions are not contravened.

# Key Valuation Concepts

- An open and effective market
- Highest and best use of the asset
- The effective date of valuation
- Technical Value derived from Evaluation
- Technical Value assumptions
- Premium or discount for market considerations
- Restrictions to reasonable asset marketing times: current (vs best) use, orderly liquidation, forced sales
- Market restrictions: entity-specific factors, synergy, and transaction costs. These are not classified as market considerations in determining value as defined.

# Market Considerations

- Location: adjustments are made for geo-political risk, social licence, regional infrastructure
- Commodity: Value is influenced by long-term price and commodity market
- Percentage ownership: Majority ownership delivers higher-than-proportional value compared to minority ownership.
- Management control: delivers higher-than-proportional value compared to a non-controlling or passive interest.
- Perceived risk: The market may take a different view of risk elements than the evaluator does.
- Market volatility: Market instability and gyrations may result in reduced value for included assets.

# Government Use of Valuations

- A better understanding of the value-adding process employed by mining companies, and the stages where value is added
- A mechanism for equitable distribution of value between the mining company and the State
- A mechanism for determining assessable value for statutory imposts other than company income tax
- NOTE: As evaluation is the starting point for valuation, the evaluation components must not be neglected. They are critical in determining the impact of taxes, royalties and duties on project viability and funding competitiveness.

# Common Valuation Approaches

## Market-based

Exploration projects

Pre-development projects

Development projects

Production projects

## Income-based

Pre-development projects (in some cases)

Development projects

Production projects

## Cost-based

Exploration projects

Pre-development projects (in some cases)



# Valuation Report Components

- Purpose of the report, intended use and users, and restrictions thereto
- Mineral property identification
- Effective date and sign-off date of the report
- Sources of information
- Project evaluation, or technical assessment
- Valuation approaches and methods
- Valuation assumptions, risks, limitations, and forward-looking statements
- Value opinion, including reconciliation of derived value estimates
- Valuer's declaration: identity, qualifications, experience, competence, independence, site visits, conformance with professional code

# Reporting Value

- The regulatory framework
  - National law, in reporting jurisdiction
  - Stock exchange rules, in reporting jurisdiction
  - Professional codes, in home jurisdiction and – if specified by reporting jurisdiction law and stock exchange - reporting jurisdiction
- The regulatory framework is a “cascade”, with the each of the above components taking precedence over the one below in the event of conflicting rules or advice.
- National Law is always the over-arching authority

# The Professional Codes

- They apply to the valuation and evaluation of mineral properties
- They do not apply to the valuation of mineral securities (ie company shares) other than to those components involving evaluation of mineral properties.
- They are not law, but may be referenced by law or regulation.
- They are 'best practice', and are enforceable by the professional institutes.
- A code includes a statement of purpose, definitions, rules and guidelines. In some cases, a valuer may be required to explain why a guideline has not been adopted in a valuation report.
- Commonly used national codes include VALMIN (Australia, first issued in 1995, last revised in 2015), CIMVAL (Canada), SAMVAL (South Africa), SME Valuation Standards (USA)

# Global Harmonisation

- With mining codes, global harmonisation was first initiated under CRIRSCO to make compatible (as far as practicable) the different national mineral resource and ore reserve reporting codes.
- The International Valuation Standards Council (IVSC) aims to introduce common standards to valuation, but its output is generic as it covers valuation in all industries. The IVSC Framework is currently under revision. New key documents are IVS General Standards 104 (Bases of Value) and 105 (Valuation Approaches and Methods).
- The International Mining Valuation Committee (IMVAL) aims to introduce common standards to mineral asset valuation, within the constraints imposed by national laws in different jurisdictions. The IMVAL Template discussion draft was issued in April 2016.

# Code Structure

- 1<sup>st</sup> priority: to provide a workable and enforceable guide to valuers
- 2<sup>nd</sup> priority: to conform with national law and regulations
- 3<sup>rd</sup> priority: to conform with stock exchange rules
- 4<sup>th</sup> priority: to conform with mineral resource and ore reserve reporting code
- 5<sup>th</sup> priority: to conform with IVSC framework and definitions
- 6<sup>th</sup> priority: to conform with IMVAL Template
- Codes change with time. As material changes occur with any or all of the above, then code revisions will be required.

# Reporting Principles

- Competence
- Materiality
- Transparency
- Objectivity (and, where applicable, Independence)
- Reasonableness

# Competence

- Competence, or being competent, requires that the report is based on work that is the responsibility of a suitably qualified and experienced person who is subject to an enforceable Code of Ethics.
- The valuer must be satisfied that he or she is able to demonstrate to professional peers competence in the valuation undertaken pertaining to the particular mineral property, the specific market, and the purpose of the valuation.
- A valuer who is not personally competent to undertake a particular aspect of a valuation must seek assistance from an expert who is competent in that aspect.

# Materiality

- Materiality is the principle that determines whether or not items of information and data are relevant to the valuation.
- Material items must be included or adequately referenced in the valuation report.
- The valuer must provide all material technical, economic, social and risk assumptions adopted in the valuation report.
- The valuer must state if and where material data is found to be to be unreliable, and to prominently describe assumptions made in that case.



# Transparency

- Transparency requires that the reader of a valuation report is provided with sufficient information to understand the report and not be misled by the information or by the omission of material information.
- The provided information must be clear and unambiguous.
- The valuer must clearly set out the methodology or methodologies used.
- The reader must be able to follow the application and logic of the assumptions made and steps followed in formulating the valuation.

# Objectivity

- “The process of Valuation requires the Valuer to make impartial judgements as to the reliance to be given to different factual data or assumptions in arriving at a (Valuation) conclusion. For a Valuation to be credible, it is important that those judgements can be seen to have been made in an environment that promotes Transparency and minimises the influence of subjective factors on the process.” (IVS Framework 2)

# Independence

- Independence of the valuer is not regulated by the professional codes.
- Independence of the valuer may be specified (and defined) by national legal or regulatory requirements, or by stock exchange rules.
- Independence means not being associated with the commissioning entity, not having an interest in the securities being valued, not having an interest in the mineral property being valued, not having an interest in the outcome of the valuation, and not being perceived to be subject to influence from any party.

# Reasonableness

- Reasonableness implies that an assessment is impartial, rational, realistic and logical in its treatment of inputs to the extent another valuer, acting impartially and rationally with the same information, would reach similar conclusions.
- The reasonableness concept is peer related.
- The reasonableness concept is being inscribed into law and regulations in some jurisdictions.

# Issues for Mongolian Consultants

- When a Mongolian consultant is reporting on a Mongolian project to a foreign stock exchange, the consultant must conform with the requirements of the foreign national law and foreign stock exchange rules. For example, the consultant must comply with the requirements of NI 43-101 if the report is to be published under CEDAR for, say, the TSX.
- The Mongolian consultant may in this situation still be required to comply with Mongolian laws and codes.
- Foreign consultants reporting on a project to the Mongolian stock exchange (if permitted to do so by the stock exchange rules) must conform with Mongolian national law and Mongolian stock exchange rules.

# Key Challenges When Valuing for Government

- Identifying the purpose of the valuation
- Familiarisation with statutory rules relating to the valuation
- Potential conflict with government-accepted practices for valuing non-mining projects
- Identifying effects of synergy
- Identifying the effects of circumstances specific to the project
- Dealing with government sensitivities relating to sovereign risk profiles