Valuation of a Coal Property
– Applying Standards to Determine
Market Value versus Investment Value

Trevor R. Ellis, CPG, CMA, CGA, FAusIMM
Mineral Property Appraiser
Ellis International Services, Inc.
Denver, Colorado
www.minevaluation.com

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What is Investment Value?

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What is Market Value?
What is Investment Value?

• Commonly termed *Worth*.
• “The value of property to a particular investor, or class of investors, for identified investment objectives.” (International Valuation Standards 2005).
• For us – NPV of project cash flows at the hurdle **DCF ROR** required for investment approval.
What is Market Value?

• “The estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion.”

• “….reflects the collective perceptions and actions of a market …..”

• “…objective valuation of identified ownership rights …”  (IVS 2005).
The Common Appraisal Practice of Mining Industry Practitioners

1. Calculate an NPV for the coal or mineral property
2. Call the NPV *Market Value*
3. Wrap a property description around it
4. Label the report an *Appraisal*
5. Kick it out the door
The Issues

• The value estimate is not derived from market measurement
• It is an Investment Value or a Use Value
• Ignores the US national appraisal standards
  – Uniform Standards of Professional Appraisal Practice (USPAP)
• Result – real property and business appraisers get the mining property appraisal work
INTERAGENCY LAND ACQUISITION CONFERENCE

Uniform Appraisal Standards for Federal Land Acquisitions

WASHINGTON, D.C. 2000

Published by the Appraisal Institute
in cooperation with
the U.S. Department of Justice
International Financial Reporting Standards (IFRSs™)

including International Accounting Standards (IASs™)

and Interpretations as at 31 March 2004

Get Ready for 2005 with IFRSs & IAS
International Valuation Standards – 2003 Structure

- Fundamentals
- Code of Conduct
- Property Types
- Value Types
- Standards
- Applications
- Guidance Notes
- Commentary
- Addenda

**Note: These three Guidance Notes all reference specialized trading properties**
Market Value of a Mine as a Business

1. Determine using business value parameters drawn from the market indicators
2. Sum the market value contribution of the component property types:
   1. Real Property Interest – coal reserves-resources, land surface, buildings, other surface improvements
   2. Personal Property – mobile equipment
   3. Intangible/financial property – cash, bonds, debt
Market Value Appraisal
Reporting for the Real Property

• Intended Use and Intended User
• Identify the property interest appraised
• Effective Date of Appraisal and the Report Date
• Exposure Time to Market
• Scope of Work
  – Level of research
  – Appraised as is, or conducted drilling, testing, market study
Market Value Appraisal
Reporting for the Real Property

- Highest and Best Use
  - Legally Permissible
  - Physically Possible
  - Financially Feasible
  - Maximally Productive
Market Value Appraisal
Reporting for the Real Property

• Sales and other transaction analysis
  – Leases, royalty payments, joint ventures

• Reserve-Resource Classification Adjustment
  – SEC Industry Guide 7
  – CRIRSCO
  – United Nations Framework Classification
  – USGS
Market Value Appraisal
Reporting for the Real Property

Three Approaches to Value
- If one not used, state why not

- Sales Comparison Approach
  - Principle of Substitution
  - Does not mean *Comparable Sales*
  - Can adjust to Subject from very different property
Cost Approach

- Principle of Contribution to Value
- Based on sales analysis
- Methods:
  - Depreciated Replacement Cost
  - Multiples of Exploration Expenditure
  - Kilburn Matrix
  - Rural Appraisal Contribution Method
Market Value Appraisal
Reporting for the Real Property

Income Approach

- Principle of Anticipation
- Extract financial parameters from sales analysis and other market sources

Methods:

- NPV of before income tax cash flows
- NPV of after income tax cash flows (disliked)
- NPV of royalty income from leasing
- Income capitalization ratios

- All methods should give similar results
- Use probability factors/analysis
Market Value Appraisal
Reporting for the Real Property

Reconciliation of all value estimates

• Don’t pick result from preferred method
• Explain the differences, weaknesses, strengths
• Reconcile to determine the conclusion as to Market Value
Trevor’s Observations

• Minerals appraisers who provide high value estimates generally get the most work.

• The common practice of lenders of allowing their client to choose and pay the minerals appraiser, encourages very high appraised values.

• The minerals appraiser who provides a well developed estimate of market value after another consultant has provided an astronomical value to the same client, will generally not get his last invoice paid.