US Views on Valuation Methodology

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Disclaimer
Views expressed are the Author’s
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Note on US Terminology

- Appraisal
  - A Valuation Assignment
  - A formal Valuation Report

- Appraiser
  - A Professional Valuer
Purpose of Paper

- Mineral Valuation from US perspective
  - US Standards and Regulations
- Differences between Australian and US regulatory environment
- VALMIN modification for international use
  - Why now is the right time
  - How to do it
US Mineral Valuation Setting

- No Valuation Standard designed specifically for minerals or petroleum
- USPAP – US National Valuation Standards
- UASFLA – Supplemental Federal guidelines
- US SEC – Does its own thing (Rules, no Standards)
- Professionals regulated by State Licensure
  - Valuers, Geologists, Engineers
  - 50 independent States
Financial Institutions Collapse and USPAP
Uniform Standards of Professional Appraisal Practice

- Verify information and data
- Highest and Best Use
- Sales Comparison Approach
- Cost Approach
- Income Approach
- Reconcile the three Approaches

USPAP requires full disclosure of the character of the property, valuation methods used, and other relevant information.
US National Valuation Standards and State Licensure

History

• In late 1980s, US$100+ Billion in Federal bailout funds required for financial institutions
• Real Estate and Business Valuers partially blamed due to overvalued Valuations
• US Congress authorised The Appraisal Foundation as “The Source of Appraiser Standards and Appraiser Qualifications”
US National Appraisal Standards and State Licensing

History

• In 1986-87, first edition of the Uniform Standards of Professional Appraisal Practice (USPAP)

• USPAP revised annually
  – 2001 Edition 230 pages

• Binding on:
  – Major national valuation institutes’ Members
  – All State Licensed Real Property Valuers
US National Appraisal Standards and State Licensing

History

• In 1989, Financial Institutions Reform, Recovery and Enforcement Act (FIRREA)

• Required the States to set Standards for Real Property Valuations and Valuer Licensing.

• By 1995 all 50 States had complied
  – Adopted USPAP
  – Uniform Valuer qualifications
  – Similar Regulations
Definitions

• **Real Estate**
  – The physical Land and appurtenances attached
  – Ownership of Land in Fee goes to the centre of the Earth (normal US ownership)
  – **Minerals** are part of the **Real Estate**

• **Real Property**
  – The interests, benefits and rights inherent in Real Estate ownership holdings
  – **Mineral Rights** are **Real Property**
Minerals Valuations under Federal and State Laws

• FIRREA provides some exemption of severable Mineral Rights (not Minerals) from its jurisdiction

• A few States exempt Mineral Rights from valuer Board jurisdiction, but not if the Land surface is included
  – Sand, gravel and stone may be regulated as Surface

• Some States mandate a State Certified Real Property Appraiser License for all Real Property Valuations
US Versus Australian Ownership

History

• Australian States
  – Minerals reserved to the Crown since late-1800s
  – Reversion regulations imposed
  – Minerals effectively severed from surface
  – Private parties effectively ‘lease’ Minerals Rights from the Crown
US Versus Australian Ownership

History

• US
  – All land grant types included minerals until mid-1900s (ownership in fee)
  – Minerals in Federal lands now effectively ‘leased’
  – Customary historically for Real Estate Valuations to include the minerals
USPAP

- Minimum requirement for Banks and Government Agencies
- Liked by Valuation Report users
  - Many minerals industry clients now demand it
- Most minerals practitioner ‘valuers’ ignore it
  - But regular users generally like it
- Real Estate Valuers making great inroads into Minerals Valuation
State Appraiser Board Certification

- Certified General Real Property Appraiser
  - 3,000 hours of verified (supervised) USPAP valuation experience, 1,500 non-residential
  - 180 hours of approved valuation courses (10)
  - Pass the Certified General exam
  - Continuing education

- Major barrier for minerals industry practitioner
USPAP

• Contains paired Standards for the Valuation Process and Valuation Reporting

• Four Property Categories
  – Real Property (Standards 1 & 2)
    • Minerals and Mineral Rights
  – Personal Property (Standards 7 & 8)
    • The mining equipment
  – Business (Standards 9 & 10)
    • The mining company or mining operation
  – Intangible Assets (Standards 9 & 10)
    • Shares, loans, contracts
Ingredients of a Real Property Market Valuation

• Client and Users, Purpose, Intended Use
• Property Identification
  – Interest to be valued
• Scope of Work
• Limiting Conditions, Assumptions
• Effective Date of Valuation
  – Exposure Time to Market (before Effective Date)
• Definition of Value
Ingredients of a Real Property Market Valuation

• Type of Valuation
  – Complete Appraisal
  – Limited Appraisal

• Type of Valuation Report
  – Self-Contained
  – Summary
  – Restricted Use
  – Oral Testimony
Ingredients of a Real Property Market Valuation

• Based on **Highest and Best Use**
  – Reasonably Probable
  – Legally Permissible
  – Physically Possible
  – Financially Feasible
Ingredients of a Real Property Market Valuation

- Sales Analysis
- Must consider all three Approaches to value estimation
  - Various Methods of value estimation available within each Approach
- Sales Comparison Approach
- Cost Approach
- Income Approach
- Reconciliation of the results
Sales Comparison Approach

Principle of Substitution

- Rejected by most minerals valuers, except for gold properties
- “There is far more comment on the limitations of the comparable sales method than its merits.” (Grant, 1994)
Sales Comparison Approach

Principle of Substitution

• Basic assumptions don’t apply to mineral properties (??)
  – 1. Reasonably comparable properties
    • Generally no directly comparable sales
  – 2. Ready market exists
    • Can take 2 or 3 years for the right buyer to emerge
  – 3. Sales were at market value
    • Complex terms
    • Often must resort to analysis of JV and lease terms
Sales Comparison Approach
Principle of Substitution

• Typically a severe shortage of data
• Time consuming and expensive to obtain
• The sales are almost never comparable sales
  – e.g. 6 years old, different geology, another country
• Assumptions and adjustments introduce uncertainty
  – can be objected to as speculation
Sales Comparison Approach

Principle of Substitution

• Use component analysis of sales
  – as employed in Rural Real Estate Valuation

• Employ ratio analysis
  – calculate $/unit values for components
    • eg $/tonne, $/hectare

• Adjust the mix of components to the subject at the unit level
Cost Approach

Principle of Contribution to Value

- Most minerals valuers consider not applicable
  - “almost always inappropriate approach”
- Some use only for valuing plant and equipment, but:
  - We can’t create an identical mineral deposit near a plant at any cost
  - Without the deposit, the plant only has salvage value
Cost Approach

Principle of Contribution to Value

• Reliance on Replacement Cost Method or Historic Cost Method not necessary

• In theory can estimate the contributory value of each component of the property
  – commonly done for rural real estate
  – calculate the contribution of each category of reserve and resources, exploration targets, surface and improvements
  – US SEC prevents reporting of adequate data
Cost Approach

Principle of Contribution to Value

• Historic Costs (expenditures) are generally poor direct indicators of value
  – Based more on geological knowledge.

• Flexible thinking for exploration properties allows:
  – Multiples of Exploration Expenditure
  – Appraised Value Method
Income Approach

Principle of Anticipation

- Net Present Value relied on heavily or exclusively by most minerals valuers
- Method accepted by USPAP with lots of caution (Stmt 2, p 74)
  - Could be open to misuse and abuse
Income Approach

Principle of Anticipation

- “Market-value DCF analyses should be supported by market-derived data, and the assumptions should be both market- and property-specific.” (USPAP Stmt 2, p 74)
  - Implies commonly used discount rates, such as CAPM and WACC, should be supported or replaced from Sales Analysis
  - But, the necessary sales data are hard to find
Reconciliation and Certification

- Reconcile and weigh the results based on:
  - Quality and quantity of data
  - Applicability and suitability of the Approaches

- Certification signed by the responsible (liable) valuer, addressing nine items:
  - Verifies independence and impartiality
  - Whether property inspected, by whom and when
  - Who provided significant assistance
U.S. State and Federal Courts

- Courts love Sales Comparison Approach
- They generally hate Net Present Value Method
- Leery of the Cost Approach
- Testimony of Certified General Real Property Appraisers generally wins over minerals industry valuers’ testimony
  - Follow the rules
  - Analyse market transactions
State Licensure of Geologists and Engineers

- All 50 States License Engineers
- 29 States License Geologists
  - Mining company geologists generally exempted
  - State Boards generally could claim jurisdiction over mineral valuation if desired. Some do
  - State statutes highly variable
  - Reciprocity/comity between States unworkable
- Prevents free trade in Professional Services
US Securities & Exchange Commission (SEC)

- Regulations fundamentally based on Herbert Hoover’s 1909 book
- SEC uses own Reserve definitions
- Only allows reporting of Proven and Probable Reserves
- Only allows value reporting for Proven and Probable Reserves
A US Perspective on VALMIN and the Future Internationally

- Silly for each country to modify VALMIN
  - A lot of work to govern few professionals
- The Valuation framework of the International Valuation Standards (IVS) is similar to USPAP
- The international mining industry should support the IVSC’s Extractive Industries Task Force in developing an Extractive Industries section within IVS
- Mining institutes should then reference IVS as binding on members.
CONCLUSIONS

• USPAP and IVS provide very good, similar frameworks for Valuation
  – VALMIN should be restructured to match

• For minerals valuation, all Approaches and Methods have severe weaknesses.

• Applying the three Approaches strengthens the Valuation.

• State Licensing of Professionals prevents Competent Professionals from plying their trade nationally
  – Is Anybody Qualified AND Competent?