

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?