



Mineral Business Appraisal

Your Resource for Solid Mineral Property and Mining Business Valuation

Michael R. Cartwright, CMA/RPG/CQP, Principal Consultant

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ARE YOU INVOLVED WITH OR DO YOU HAVE QUESTIONS ABOUT?

- Valuation/Appraisal: Mineral Property, Mining Business, Royalty, Partial/Fractional Interest, Joint Venture
- Legal/Litigation Consulting ■ Eminent Domain/Condemnation ■ Property, Estate, Gift and Severance Taxation
- Gross, Net Smelter Returns, Net Revenue, Net Proceeds, Net Profits Royalties ■ Working or Carried Interests
- Mining Partnership ■ Before/After Payout ■ Payment-In-Kind ■ Farm In/Out ■ Unitization ■ Net Back
- Commingling ■ Mineral Trespass ■ Breach of Contract ■ Damages ■ Fair Market Value ■ Depletion
- Mining Claim Validity / Patenting ■ Reserve Auditing and Estimation ■ Due Diligence ■ USPAP/FIRREA
- Financing, Investment, Feasibility, Competitive, Merger, Acquisition, Divestment, or Market Analyses
- Royalty, Division/Apportionment, and Joint Venture Auditing and Project Performance Compliance
- Royalty Creation and Royalty Based Financing ■ Evaluation of New Business Opportunities
- Mineral Property, Business, and Product Marketability ■ Development of Strategic Plans
- Mineral Potential Analysis/Mineral Material Appraisal for Land Exchanges

Practical, Time, and Cost Effective Solutions for Mining Industry Problems

BROAD TECHNICAL EXPERIENCE ... PROVEN TRACK RECORD

- Industrial Minerals ■ Construction Materials ■ Precious and Base Metals ■ Geothermal Energy
- Surface and Underground Mining Geology, Exploration, Development, Operations, and Economics
- Equity, Debt, and Collateral Analysis ■ Current Value of Assets/Liabilities ■ Fee/Lease/License
- Locatable, Leaseable, Salable, Common and Uncommon Varieties ■ Highest and Best Use Analysis
- Mineral Property Valuation - Producing/Non-Producing, Lode/Placer, Surface/Underground
- Property, Royalty, Partial Interest, Joint Venture, and Securities Valuation and Management
- Consultant/Expert, Discovery, Deposition and Trial Questions, Case Strategy, Exhibits
- Excellent Grasp of Mining, Processing, Marketing, Economic, and Financial Concepts

Strengthen Your Decision-Making Position with Independent Analysis and Objective Valuation

LICENSES / REGISTRATIONS / CERTIFICATIONS / PROFESSIONAL AFFILIATIONS

- BS Geology - Mackay School of Mines ■ Master of Business Administration - University of Nevada
- Certified Minerals Appraiser (CMA) - American Institute of Minerals Appraisers - 1992
- Accredited Senior Appraiser: Mines and Quarries (ASA) - American Society of Appraisers - 1995 - 2003
- Registered/Professional Geologist (RPG) - AZ (19795) CA (4177) ID (586) NE (G-0307) OR (G943) NV
- Certified General Real Property Appraiser - CA (AG015207) NE (CG260218R) NV (A.0000187-CG)
- Mineral, Oil and Gas Broker - CA (01096046) ■ United States Marine Corps (1964 - 1968)
- Competent/Qualified Person (CQP) for Reports/Disclosures: Australia, Canada and South Africa
- Founding Registered Member - Society of Mining, Metallurgy and Exploration (AIME)
- President (1998 - 2000, 2006), Vice President (1997, 2005) - American Institute of Minerals Appraisers
- Board of Examiners Advisor: Mines & Quarries - American Society of Appraisers (1996-2003)
- Bank of America, Wells Fargo, and BLM - Approved Appraiser Lists
- American Institute of Minerals Appraisers ■ Appraisal Institute ■ Geological Society of Nevada
- Mineral Economics and Management Society ■ Canadian Institute of Mining and Metallurgy

Admitted as an Expert in Contra Costa County, California, Superior Court

Valuing North American Mining Properties and Royalties for Global Stakeholders



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Digging Out Value Information - Keeping You Profitable

APPRAISAL/VALUATION: Recent engagements have included complete, limited, and review appraisals of gypsum, geothermal resources, mixed use surface and mineral rights, precious metals, mica and feldspar, high purity silica, chemical limestone, construction materials, and high density crushed stone mineral properties, mining businesses, and royalties for purposes of sale, purchase, bank lending, equity investment, IRS estate valuation, bankruptcy, divorce, mineral trespass, malpractice, litigation support, and financial reporting. All appraisals performed under Uniform Standards of Professional Appraisal Practice (USPAP) and Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA).

ROYALTIES: Advise clients, attorneys and accountants on mineral royalties and leases for litigation, negotiation, and performance/reporting compliance. Served as Consultant-in-Charge of Royalty Valuation and Acquisition for a major public company specializing in purchasing and creating precious metal royalties. Assignments include valuation of total and partial interests from pre-development to production, for surface and underground mines using heap leaching, conventional, and refractory milling processes.

MINERAL RESOURCES/RESERVES: Independent reserve testing and auditing have included geological, mining, processing, economic, financial, in-situ, and recovered grade parameters, for capital budgeting, operating performance, litigation, and investment decision making. Extensive experience as part of interdisciplinary teams for conventional and geostatistical reserve determinations and feasibility study analyses of domestic and foreign surface and underground mining properties.

DUE DILIGENCE: Perform and manage due diligence and performance compliance on mineral property (fee simple, private/ government mining leases, and unpatented mining claims) held by public and private companies, including mineral / surface title, land status, reserves, production, financial and environmental criteria for property owners, attorneys, accountants, mining investment groups and operating companies.

CONSULTING: General mineral property, mining business and royalty consulting engagements include: litigation; mining geology; mineral potential analyses for land exchanges; mineral property marketing and sales; acquisition, merger and divestment analysis; production, operating income and royalty forecasting and planning; mineral exploration and mine development planning; mineral property and mining business appraisal review for litigation, and; royalty based financing analysis.

Proprietary Information is Always Held in Strictest Confidence

SELECTED CLIENTS/EMPLOYERS

Sheppard, Mullin, Richter
Brickley, Smolker & Bolves
Homestake Mining Company
Yuba Silica/Western Water Co
Euro-Nevada Mining Corp
Bureau of Land Management
California Portland Cement
P. W. Gillibrand Co

Parker Poe Adams & Bernstein
Bank IV - Kansas
Redding Bank of Commerce
University of Nevada
Internal Revenue Service
CA State Lands Commission
TMB Associates
Placer Dome, Ltd

Jones, Waldo, Holbrook
Cook & Franke
Meckler & Thomsen
Kris D. Knudsen, Esq
Shamrock Materials
Mountain Gate Limestone
Rio Algom Corp
Wells Fargo Bank



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CONTINUING PROFESSIONAL DEVELOPMENT



APPRAISAL INSTITUTE:

Standards of Professional Practice, 1992, 1997, 2001, 2003, 2005, 2007
Current Issues & Misconceptions in Appraising, 2007 Attacking & Defending An Appraisal in Litigation, 2007
Real Estate Finance, Statistics and Valuation Modeling, 2007
Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book), 2007
Introduction to GIS Applications for Real Estate Appraisal, 2005
Analyzing Distressed Real Estate, 2005 Valuation of Detrimental Conditions in Real Estate, 2005
Analyzing Operating Expenses, 2001 Scope of Work, 2003
Real Estate Fraud - Appraisers Responsibilities, 2001 Condemnation Appraising, Basic and Advanced, 2001
Internet Search Strategies for Real Estate Appraisers, 1999 Case Studies in Law and Ethics, 1998
Understanding Limited Appraisals & Reporting Options, 1995 Appraising Troubled Properties, 1993
Appraisal Practices for Litigation, 1994 International Valuation Standards, 1993
Discounted Cash Flow Analysis, 1993 Capitalization Theory and Techniques, Parts A and B, 1992

MACKAY SCHOOL OF MINES, UNIVERSITY OF NEVADA and TMCC:

Case Analysis, 2002
Law and Economics, 1999 Fundamentals of Geographic Information Systems, 2002
Mine Economics, 1996 Mining Law, 1977, 1996
Industrial Mineral Economics and Commerce, 1994 Geology of Industrial Minerals, 1994
Geostatistics Applied to Real Data, 1994 Mineral Inventory Estimation, 1993
Mineral Property and Mining Business Valuation, 1992 Structuring a Mining Deal, 1991

SOCIETY OF MINING, METALLURGY and EXPLORATION:

Due Diligence Review and Valuation of Industrial Mineral Acquisitions, 1999
Industrial Minerals Symposium, 1996 Small Mine Development in Precious Metals, 1987
Ore Reserve Estimation Symposium, 1985 Generic Mineral Conference, 1984
Essentials of Geological Mapping for Geotechnical and Mine Planning Purposes, 1984
Applied Mining Geology Symposium, 1983 Project Finance in the Development of Mineral Resources, 1980

INTERNATIONAL RIGHT OF WAY ASSOCIATION:

Eminent Domain Law Basics for Right of Way Professionals, 1998

AMERICAN SOCIETY OF APPRAISERS:

Business Valuation Education Sessions, 1995

McKISSOCK:

Disclosures and Disclaimers, 2005

NEVADA SOCIETY OF CPAs and NEVADA MINING ASSOCIATION:

Mining Taxation and Financial Reporting Conference, 1988

AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS, NEVADA SECTION:

Rights and Responsibilities of the Practicing Geologist, 1991

NEVADA/RENO-SPARKS ASSOCIATION OF REALTORS:

Agency Complications and Buyer Representation, 1994
Reducing Broker Liability, 1991
Business Brokerage Seminar, 1986

Real Estate Contracts, 1994
The Practice of Buyer Agency, 1991

NORTHERN NEVADA REAL ESTATE SCHOOL:

Real Estate Principles and Practice, 1990

LUMBLEAU REAL ESTATE SCHOOLS:

Real Estate Appraisal, 1990



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PROFESSIONAL PUBLICATIONS

- Cartwright, M. R., 2004, The Valuation of Mineral Properties, Guide to Property Assessment, International Association of Assessing Officers (IAAO), May/June 2004 (v.2, No.3).
- Cartwright, M. R., 2001, Direct Sales Comparison Approach to Value, AIMA Newsletter, June 2001 (v.5, n.3).
- Cartwright, M. R., 1998, The USPAP Competency Provision and the Mines & Quarries Appraiser, The M&TS Journal, Spring 1998 (v.14, No.4).
- Cartwright, M. R., 1998, Choosing A Minerals Appraiser, International California Mining Journal, June, 1998 (v. 67, n. 10).
- Cartwright, M. R., 1996, Confidentiality Under the Uniform Standards of Professional Appraisal Practice, AIMA Newsletter, July 1996 (v.2, n.1).
- Cartwright, M. R., 1996, Appraisals and Appraisal Reports Under USPAP, AIMA Newsletter, July 1996 (v.2, n.1).
- Cartwright, M. R., 1995, Revision of the Mines & Quarries Open Group Exam, M&TS Journal, Winter 1995 (v.12, n.3).
- Cartwright, M. R., 1995, Principal Author, Mines and Quarries Open Group Examination, American Society of Appraisers.
- Cartwright, M. R., 1995, Four Basic Types of Mineral Production Royalties, International California Mining Journal, April, 1995 (v. 64, n. 8).
- Cartwright, M. R., 1995, Understanding and Using Royalty Based Financing, International California Mining Journal, March, 1995 (v. 64, n. 7).
- Cartwright, M. R., 1994, Components of a Minerals Appraisal - Appraisal in a Management Context, Annual Meeting Presentation: California Mining Association.
- Cartwright, M. R., 1994, The Soda Ash Industry of the United States and European Community, Paper for Graduate Geology 695 - Industrial Mineral Economics and Commerce.
- Cartwright, M. R., 1994, Some Reflections on the Geopolitics of International Trade in Fertilizer Minerals and Products, Paper for Graduate Geology 695 - Industrial Mineral Economics and Commerce.
- Cartwright, M. R., 1993, Resource and Reserve Reporting Requirements, Paper for Graduate Mining Engineering 613 - Mineral Inventory Estimation.
- Cartwright, M. R., 1993, Effects of Licensing Law on Technical Valuators, The Journal of Technical Valuation (V 7-1).
- Cartwright, M. R., 1992, A Discussion of Michael Porter's 5-Forces Model - The Forces that Drive Industry Competition, Paper for Graduate Mining Engineering Seminar 790.
- Cartwright, M. R., 1992, Economics, Ecology and Mineral Development Policy, UNR MBA Program paper.
- Cartwright, M. R., 1991, Mexico, Minerals and Mining: An Area Study, Paper for Graduate Advanced Mining Engineering 701S - Mineral Economics.
- Cartwright, M. R., 1991, Accounting for Mineral Reserves, UNR MBA Program paper.
- Cartwright, M. R., 1991, CalMat Co. and the Aggregates Industry - An Extended Stock Analysis, UNR MBA paper.
- Cartwright, M. R., 1990, Gold Loans and the Futures Market, UNR MBA Program paper.
- Cartwright, M. R. and A. W. Marshall, 1990, A Marketing Audit of the 'B' Street Gambling Hall, UNR MBA paper.
- Cartwright, M. R. and C. B. Stinnett, 1987, Sample Oxidation and Its Effects Upon Ore Deposit Evaluation, Society of Mineral Analysts.
- Cartwright, M. R., 1985, The Discovery and Development of Gold Acres, Nevada, in Discoveries of Epithermal Precious Metal Deposits, Society of Mining Engineers.
- Cartwright, M. R., 1984, Historical Review and Evaluation of the Horse Canyon Exploration Program, Placer Development Ltd. Workshop.
- Cartwright, M. R., S. Foo, M. Hefner and A. Hills, 1984, Horse Canyon Mine Geology, Mineralization and Mineable Reserve Evaluation, Placer Development Ltd., proprietary report.