

# MINERAL PROPERTY VALUATION

*International movement to standardize property valuation gathers momentum.*

By Virginia Heffernan

**A** couple of investors put their life savings into an industrial mineral site valued at \$300 million, only to discover that the stockpile is so remote and difficult to process as to be worthless. A junior exploration goes bankrupt after realizing that its \$30-million precious metal property investment is worth about one-tenth that amount. An individual is out of luck after lending \$200 million for the purchase of dormant gold claims in the western U.S. valued at an exorbitant \$10 billion.

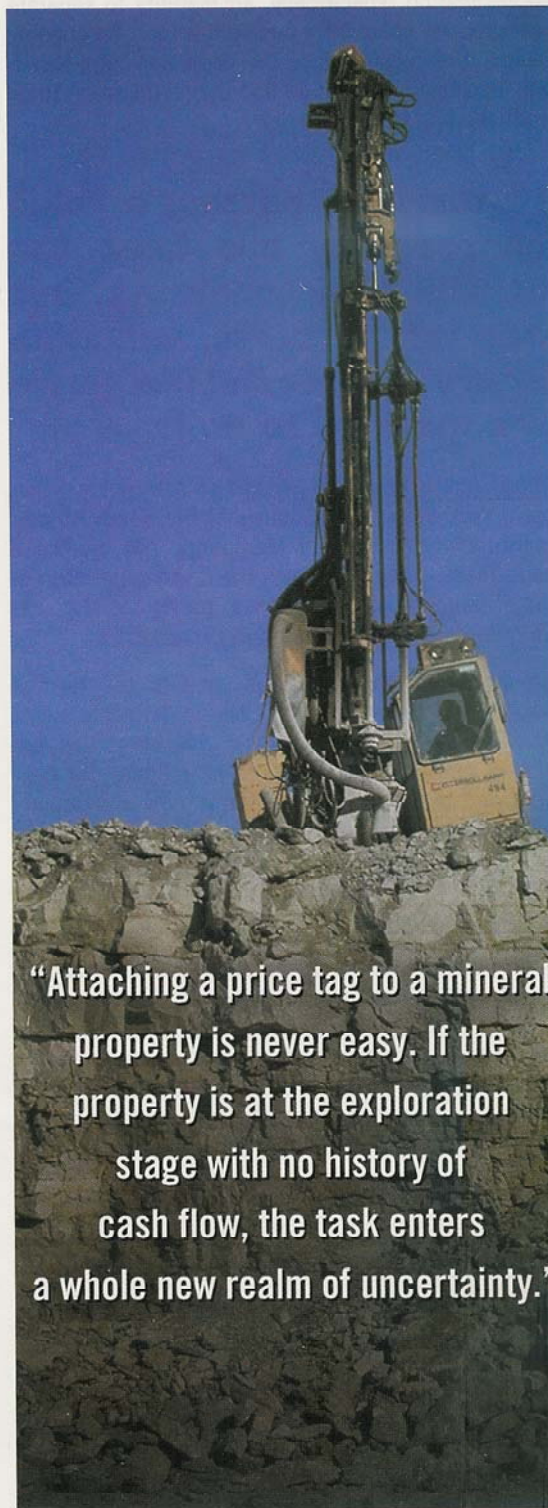
Are these victims of con artists? Not exactly. In each case, respected consultants calculated property value using standard techniques such as net present value of potential income. But by neglecting market valuation principles, the consultants produced wildly optimistic notions of worth. Litigation ensues.

These are extreme examples of mineral property valuations gone wrong. But attaching a price tag to a mine property is never easy, even for the experts, given variables such as metal prices, expansion potential and environmental issues. If the property is at the exploration stage with no history of cash flow, or has a significant resource component, the task enters a whole new realm of uncertainty.

As a result, valuations of mineral properties are often overstated or unacceptably variable depending on the methodology or bias of the valuator. Value, like beauty, tends to be in the eye of the beholder.

To help address this lack of consistency and introduce some transparency, there is a movement afoot to standardize the valuation process. Some jurisdictions are developing or revamping their own national standards. On a much larger and more ambitious scale, representatives from Australia, Canada, South Africa and the United States have formed a task force to establish an international code companies can use regardless of where their properties are located.

"Each country was tending to go in its own direction and we need to have things unified so that companies don't have to work with different standards in different countries," says Trevor Ellis, a Denver-based valuator who is leading the Extractive Industries Task Force of the International Valuation Standards Committee (IVSC), the group charged with developing property valuation standards for the mining and petroleum industries. In a world where cross-border operations are becoming the norm rather than the exception, Ellis regards international standards essential to the future financial health of the mining industry.



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The first organization to set domestic standards was the Australasian Institute of Mining and Metallurgy (AusIMM) in 1995. The resulting VALMIN Code has served as a basis for independent valuers not only in Australia, but worldwide, for several years. Lately, the code has come under attack for its lack of sophistication (specifically, an inability to separate real property value from business value). An ongoing review, the second since the code was introduced, will lead to a restructured and updated version to be published later this year.

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South Africa has also joined the standards movement and, under the auspices of the South African Institute of Mining and Metallurgy, has drafted a code that closely resembles the developing international standards, but makes provisions for the unique realities of operating in that country.

Stung by the Bre-X scandal, one of the biggest frauds in history of mining, Canada moved to adopt its own standards five years ago when securities regulators formed a task force to investigate the conduct and practices of Canadian mining companies. After four years of industry consultation, the Canadian Institute of Mining, Metallurgy & Petroleum (CIM) published the final version of its CIMVal standards in February 2003.

"CIMVal is the new and improved Australian code," says Keith Spence, president of Toronto-based Alliance Pacific Resources, who co-chaired the committee to develop national standards in Canada. "It's just a matter of time before it becomes a generally accepted way to value mineral properties across the country."

The detailed Canadian standards span 35 pages, but their underlying philosophy is simple: that property valuations be carried out by qualified individuals and all information relevant to the property disclosed. They are based on industry best practices and allow for professional judgment in some cases.

At the beginning of 2004 the TSX Venture Exchange, where most Canadian juniors trade, made the standards mandatory for all those listed on the exchange.

"The CIMVAL standards seem to be having some implications," says Ellis. "In my previous experience, I didn't see groups involved in the investment side of the mining industry worrying about getting a formal valuation done on a property. Now I have enquiries about getting them done to CIM standards."

The adoption of the CIMVal code by some U.S. valuers is unsurprising given that this country has no standards specific to mineral properties. Instead, valuers tend to rely on a "patchwork" of regulations, as Ellis describes it. The ability to establish standards here is limited because publicly-listed companies are allowed to make value estimates only for proven and probable mineral reserves, not for resources.

The belief that resources have no value "does not match the realities of transactions taking place on a regular basis in the marketplace," says Ellis in a paper entitled *Reporting Standards—The USA Experience* published in CMMI Congress 2002. "Those show that the value of resources and exploration potential often reach many tens of millions of dollars, sometimes exceeding the value of any associated reserves."

Ellis says the U.S. will likely adopt the IVS code when it's finalized. Meanwhile, most U.S. valuers who work with mineral properties will continue to use the Uniform Standards of Professional Appraisal Practice to assess value, even though they do not contain any specific provisions for mineral assets.

The IVSC was founded in 1981 with the objective of formulating standards for property valuation and harmonizing standards among the countries of the world. Several countries have incorporated the IVS codes into their own domestic standards.

The need for a specific code for mineral property valuation, which is expected to serve as an umbrella over the disparate national standards, stemmed from the rapid development of international financial reporting standards by the International Accounting Standards Board (IASB), the big sister to the IVSC. As of 2005, most of the world is expected to report under, or encourage convergence with, the IASB standards.

There was a feeling among some in the mineral property valuation field that the standards being developed by the IASB could put the mining industry at a disadvantage to other industries because of a lack of understanding of reserve and resource reporting and best practices for determining fair market value of mineral properties.

"Historically, putting a value on property has been the domain of accountants," says Spence. "But we

kicked up a storm and tried to wiggle ourselves in. (Mineral property) valuation is very complex and only a few people are qualified to do it."

In early 2001, Ellis and four other mineral property valuers formed a volunteer task force to address these concerns and develop new standards for property valuation under the IVSC, an NGO member of the United Nations that works closely with other standard-setting bodies. By the end of 2003, the IVSC had published a draft guidance note (GN) specific to the extractive industries, including mining and petroleum, and released it for public comment. A final version of the GN will be included in the next edition of the annual IVS handbook.

The draft standards were met with a collective yawn by the mining and petroleum industries. "Some of the best comments came from accounting-related groups who have a vested interest in that area from a financial reporting point of view," says William Roscoe of Roscoe Postle Associates, who co-chaired the Canadian CIMVal committee and is a member of the Extractive Industries Task Force. "But there were few comments from mining."

There is a large gap between the current standards and the new standards.

Ellis adds that there may be some resistance by mining companies to the shift away from historic cost accounting, in which new discoveries are unaccounted for, towards current value accounting. The new method will make many mining assets worth more on paper and the resulting return on those assets look worse.

"A lot of the industry just doesn't understand the significance of what's going on in the world in terms of financial reporting, and may even be opposed to the shift that's occurring," he says.

But financial reporting is just one component of the new international standards. They can also be used to calculate formal valuations for mergers and acquisitions, taxation, litigation or insurance claims, wherever the property or the valuator may be.

"There is a convergence going on in the world right now in terms of standards," says Spence. "I definitely support that because it increases mobility."

But Spence admits that one of the main challenges of developing valuation standards in the mining business, be they national or international, is the friction between real estate appraisers, who have

traditionally dominated the valuation field, and mining professionals, who sometimes resent the use of real estate principles to value mining assets.

"There are two polarities in mining valuation. I would argue that the people who come from the financial side, preferably with a mining background, are better equipped to do a valuation," he says. "The real question has always been: what is the quality of the data? If the integrity of the data has been opined by a qualified technical person, the valuator can then superimpose their skills on the job."

Under both the CIMVal and draft international standards, valuers are expected to choose appropriate valuation approaches and associated methods to calculate the value of properties. There are three main approaches they can use, depending on the stage of exploration or development: cost, income and market. Within each approach are several different methods.

The cost approach focuses on what was spent on the property, plus a discount or premium depending on the circumstance. The income approach focuses on the cash flow generated by the property. The sales comparison (market) approach attempts to calculate what a likely buyer is willing to pay for the property, based on the analysis of other transactions in the marketplace.

The most appropriate approach depends on what stage of exploration or development the property has reached. The cost approach is best suited for exploration properties, where future cash flow is unknown. The net present value of future cash flow, a method under the income approach, is useful once the property has reached late-stage exploration or early development. Comparing the property to similar properties that have been sold or optioned is applicable at any stage.

The new standards encourage valuers to use more than one approach to derive value. For instance, international consulting firm SRK Consulting, following CIMVal guidelines, used both the sales comparison and cost approaches to come up with a fair market value of Anaconda Peru's 51% interest in the Magistral copper-molybdenum property, an advanced exploration property in central Peru.

In 1998 the Government of Peru auctioned Magistral. Inca Pacific Resources, a Vancouver-based junior, won the bid by agreeing to spend \$2.1 million on the property and pay \$750,000. Anaconda Peru, a leading copper producer in Chile, later earned a 51% interest in Magistral by completing a \$5.75 million work program.

Using the sales comparison approach, SRK reviewed past transactions of the property and compared

Magistral to other South American copper deposits with similar assets. These methods yielded a value indicator expressed as U.S. dollars per pound of contained copper. SRK then multiplied this number by the pounds of copper equivalent to arrive at a fair market value for Magistral.

Using the cost approach, the consultants determined the current value of past expenditures on Magistral, accounting for their contributions to the technical understanding and expected economics of the project.

Both approaches arrived at roughly the same value. "When these two approaches resulted in almost identical numbers, the analysis provided confidence in determining the fair market value," the company reported in its international newsletter. Based on SRK's valuation, Anaconda Peru sold its 51% interest in the property back to Inca Pacific for \$2.1 million in March 2004.

Here is a summary of the main features of valuation standards worldwide:

#### **VALMIN (Australia)**

Australia leads the pack in the development of standards for disclosure of reserves and resources (JORC Code) and of technical information in the assessment and valuation of mineral properties (VALMIN Code). When the VALMIN standards were introduced in 1995, they were considered unique in the valuation field because they were the first to insist that material information on a property be reviewed by independent, competent professionals. Transparency and reasonableness of assumptions were also main tenets of the code. However, although members of the Australasian Institute of Mining and Metallurgy are required to use the code, the Australian Stock Exchange has no such requirement. The code was deliberately drafted to avoid specifying the valuation approach to be used by the expert, but the expert must explain the choice of methodology. Resources can be included in the valuation.

#### **CIMVal (Canada)**

The CIMVal standards were introduced in 2003 to widespread applause by the mining industry. The guiding philosophy of CIMVal is that all the information relevant to the property must be disclosed and the valuation carried out by a qualified valuator (QV), a member of a professional organization with extensive experience in the valuation field. The QV can choose among three accepted approaches, but must justify and explain each approach used. All of the underlying data in the valuation report must be verified by one or more technical persons as defined under National Instrument 43-101, a rule that governs

how mining companies disclose technical information in Canada, and the standards are mandatory for all companies listed on the TSX Venture Exchange. The CIM standard for disclosing resources and reserves has been incorporated into CIMVal allowing resources to be included in the valuation, with some restrictions. The major drawback of the CIMVal standards is that, until Canada introduces a national securities regulator, enforcement of the code is limited in its reach beyond provincial borders.

#### **SAMVal (South Africa)**

The SAMVal standard is still at the draft stage, but is intended to be used as a supplement to the code being developed by the IVSC. Under SAMVal, the valuator must be a member of a recognized national valuation body and follow the code of conduct established by the IVS, but does not necessarily have to be independent. (S)he has flexibility in the selection of approaches and methods. Those commissioning or preparing reports subject to the jurisdiction of the Johannesburg Stock Exchange must adhere to the code. Although due diligence of the underlying information is a "guiding principle" of the code, there is no guidance about how the assessment should be done.

#### **IVS (International)**

The International Valuation Standards are in the process of being finalized for inclusion in into the next edition of the IVS handbook. While the CIMVal and VALMIN standards are designed to operate as stand-alone documents, the "Extractive Industries GN" is dependent on the standards of the whole IVS handbook. There is no mechanism for enforcement of the standards, except where they are adopted by a regulatory body, but valuers are expected to adhere to a Code of Conduct, a unique feature of the IVS standards. The Code of Conduct states that the valuator must be competent, have an appropriate degree, and be a member of a professional valuation body. Although there is no specific requirement for independence, the valuator must disclose any direct or indirect relationships with the client. To ensure the integrity of the underlying data, the valuator must rely heavily on the assessment of a "technical" expert. S(he) can choose among the three main approaches, but must state the reason why a certain approach was not used. The IASB is likely to restrict valuation to reserves only, although Ellis says the organization has demonstrated considerable flexibility in this regard.

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