Ethical Dilemmas Posed During a Mineral Project Appraisal[1]

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Abstract

The author carried out an assignment in 1998 to develop two appraised value reports on a "proven reserve" of an industrial mineral that were to be used in financing. One report was on an *as is* basis and the other follows guidelines provided by the lending institution to support its proposed loan. The partner companies developing the reserves contracted directly with the author's one-person consulting corporation for the work. Unforeseen complexities and dubious arrangements were uncovered during the assignment. The relationship between the partners soured as did their relationship with the author. As the assignment progressed, the author received specific directives for determining the product selling price, which the client expected would result in the favorable appraised value required to obtain the loan. This paper addresses many ethical issues which confronted the author during this assignment, including the issue of his own areas of competency; the level of reasonable due diligence; obligations to the contracting partners versus the lender; the issue of independence and whether he could resign from the project or not follow his client's instructions; and his strong desire to get paid.

Introduction

One beautiful day in 1998, I was attempting to act productive in my Denver home office, while looking out the window at the plants blooming outside, and thinking that maybe my dog needed a good walk. At that moment, I received one of those rare, unexpected phone calls out of nowhere. The man on the other end of the line was essentially asking me to drop everything and jump on a plane the next day to inspect a mineral property in the middle of the western desert. We will call him Mr. Rising Sun. He was the owner of a small, independent investment business, Rising Sun Investments, based in one of the US East Coast cities.

Although I wasn't exactly hungry for work, times were slow, and I was keen to get more. So I was willing to jump. But he seemed unusually anxious for me to do the work, without asking me much. He had found me from an Internet search and didn't have any professional references. I was cautious. I asked him lots of questions about the project and his involvement.

He had partnered his company with a small, privately owned mineral exploration development company. We will call its owner Mr. Apex and the company Apex Exploration. Apex was based in the southwest US. Mr. Apex and his exploration company had apparently been around for a lot of years, and had a moderately successful and profitable track record.

Mr. Rising Sun told me that Apex had pulled a coup in securing the purchase rights to a proven reserve of many hundreds of thousands of tons of a valuable industrial mineral. He told me that processed product was selling throughout the US and internationally at about $6/lb, and they had three written expressions of interest to purchase the product at that price. The feasibility study of Apex's consulting metallurgist had shown that the cost to extract a product of adequate purity would be around $2/lb. An independent geological report had estimated that the mineralization contained in the reserve had potentially astronomical value. Mr. Rising Sun had lined up a lender to provide the many millions of dollars for the plant and equipment. My report of appraised value was needed very quickly by the lender to support the loan.

He asked me to give a rough estimate over the phone of how much the appraisal would cost. I threw out a figure. No problem. The retainer I asked for up front to work against would be wired to my bank account the next day.

Competency

Next he asked me if this was a job that I had the appropriate experience to conduct. I thought for a few moments about my competency to conduct the assignment. I told him about my qualifications as a Certified Minerals Appraiser and a Certified Professional Geologist, with a Masters Degree in Mineral Economics, and 25 years of experience. He was already aware of these, which is why he had called me. I explained to him that I generally did my reports to abide by the *Uniform Standards of Professional Appraisal Practice* (USPAP) of the Appraisal Foundation, which I expected the lending institution would require. He asked me if I had ever appraised this type of industrial mineral before. I told him no, but explained to him that every property that I worked on in my career was different. I always built time into my budget for doing an extensive amount of research to get up

1 This paper was presented at the1999 Annual Meeting of the Geological Society of America, held in Denver, October 25- 28, in the AIPG-sponsored session, *Geoscience Ethics Guidelines: A Discussion of Their Development, Utility, and Implementation*. A narrative of the events that occurred during the assignment discussed here also appeared in the June 1999 issue of the Newsletter of the American Institute of Minerals Appraisers, without substantive addressing of the issues raised here (Ellis, 1999).

to speed on the particular commodity and the issues involved relating to that property. He was satisfied.

The relevant AIPG Rule, 3.3.1 states:

A Member shall perform professional services or issue professional advice which is only within the scope of the education and experience of the Member and the Member's professional associates, consultants, or employees, and shall advise the employer or client if any professional advice is outside of the Member's personal expertise.

The American Institute of Minerals Appraisers (AIMA), under which I am certified as a minerals appraiser, has identical language for Rule 3a of its Code of Ethics. This is because I used some of the AIPG's Code when I was drafting AIMA's Code, with permission and appropriate credit. In a very narrow perspective, I did not have everything pre-loaded in my brain that I needed to know to do the job. However, I believed that I had the education and experience to determine what I needed to know, to locate the information efficiently, and to understand the necessary information adequately when I obtained it.

In my mind, the metallurgy presented the biggest issue. However, Mr. Rising Sun assured me that their consulting metallurgist had done a feasibility study. Therefore, I should only need to check the metallurgist's credentials, and review the study to assure that it appeared professional and credible.

Regarding the market for the product, with my mineral economics credentials and experience, I was well qualified to conduct the necessary research. Also, Mr. Rising Sun told me that I would need to do essentially no market research because of the three letters of expressions of interest accounting for all of their proposed production. In addition, he would send me a large amount of information they had accumulated during their market research.

I was still suspicious. Things sounded too positive and simple to be true. My suspicions increased when Mr. Rising Sun told me that I could talk to anyone I liked, except for Mr. Apex. Apparently he and Mr. Apex were having a falling out over how to do business together. This didn't sound good. No communication with such an important partner was certainly an unusual ground rule.

I asked him about the geological work, and how quickly he would be able to get me a copy of the geological report. By coincidence, I knew the geologist and geochemist who had done the work, and their office was just across town. Thirty minutes later, I was in their office going over the geological report. They had thoroughly sampled, tested, and investigated the reserves. The reserves were definitely there. It seemed like a coup for Apex.

Their words of advice indicated that I shouldn't worry about doing the job. They had done work for Mr. Apex a number of times over the years. He wasn't good at paying. Mr. Apex still owed them a few thousand from the last job. However, Mr. Rising Sun would take care of everything. He was the type who paid immediately, and was taking care of their bills. His credit history and his company's sparkled.

The contract I faxed was returned the next day, signed by both Mr. Rising Sun and Mr. Apex for their companies. My bank told me that their retainer was in my account. Their lending institution had already approved my credentials. I was to write two appraisal reports. The first report was to value the reserves *as is*. The second report was to be produced under strict terms provided in written instructions from the lending institution. The report would determine what the lender termed "the net processed value" of the small portion of the reserves that would be run through the plant in the first two years of production. The lender wanted to know the net value of the selling price minus direct operating cost for the resulting processed product. This would be an indicator of how much money would be available to service the loan. It seemed like a relatively easy assignment with all of the information that would be available to me.

Independence and Due Diligence Obligations

The following day I was out at the property examining samples with the consulting geologist and metallurgist. After the inspection I asked the metallurgist to show me his design and cost calculations for the processing plant. He pulled out a couple of worn sheets of writing paper with a hand sketched flow chart and some rough calculations. I had no intention of relying on those. I asked him lots of probing questions. He was working for a piece of the action, and hadn't been paid anything yet. He had no direct experience with this particular mineral, but could talk a good story and could quote metallurgical text references about the mineral.

The metallurgist showed me the three letters from third parties expressing interest in purchasing the product at about $6/lb. These buyers wanted everything that Apex could possibly produce. One was a trading company based in Europe buying for the European market. Another was a minerals trading company based in the South Pacific buying for the Asian market. They looked good, but I would do some verification.

I phoned Mr. Rising Sun and told him that I couldn't rely on the metallurgist's work. Without a valid process, the "net processed value" would obviously be zero. At his request I gave him a couple of names of metallurgists I respected. I headed for the state's capital city to do some historical research into the property. The next evening, I found out that the metallurgy professor that I had suggested was on his way out to take some bulk samples back to a major minerals research laboratory for bench testing of the mineral recovery and concentration. I could rely on his report. However, at the same time Mr. Rising Sun was becoming nosey about what I was doing in my research. He and a partner in his company made mild expressions of dissatisfaction with me doing research into the history of the property without his approval. In particular, they told me that there was no need for me to research the market for the product. I countered that I must work independently to produce a valid appraisal report.

Two areas of difficulty were arising for me here. My client wished to limit my research. Also, I didn't have much in the way of guidelines that I knew of as to how much due diligence research I should invest. Essentially, I was working from personal experience and gut feel. Although I had obligations to my client, I was bound by the following statements.

USPAP Standard Rule 1-1(b) provided the following binding statement regarding due diligence:

In performing appraisal services an appraiser must be certain that the gathering of factual information is conducted in a manner that is sufficiently diligent to ensure that the data that would have a material or significant effect on the resulting opinions or con-

clusions are considered. Further, an appraiser must use sufficient care in analyzing such data to avoid errors that would significantly affect his or her opinions and conclusions (USPAP, 1998).

The AIMA Code of Ethics under which I am bound has a similar requirement, being Rule 4b:

A Member shall not give a professional opinion nor submit a report without being as thoroughly informed as might be reasonably expected, considering the purpose for which the opinion or report is requested.

It also provides the following about independence from the client's influence, being Rule 5a:

While realizing that Members are contracted to perform appraisals with many differing purposes or characteristics, Members shall perform their appraisal work with independence from influence or bias from their client's, employer's, or any other party's desires, needs or wishes as to the outcome of their valuation.

Therefore, I was required to conduct a prudent amount of independent due diligence research into the history of the property and the market for the product. My interpretation was that I should do enough that I could comfortably sleep at night without worrying about what I might have missed. I was also required to maintain my independence from the influence of my client.

Obligation to Resign

A week later, the metallurgy professor's tests weren't coming up with the recoveries needed for a viable project. Mr. Rising Sun was getting very worried. He told me that he was now in a severe legal fight with Mr. Apex. He was fighting to get control of the project and the reserves from Mr. Apex.

Then an unexpected breakthrough came. Mr. Rising Sun had been talking with the management of an operating toll processing facility. It sounded like it had everything going for it. The trucking distance for the raw mineral was long, but not too long. I talked on the phone to the operator and his process chemist. They sounded like they knew this specific reserve and its product well. The chemist had already been to the property and taken a bulk sample. His initial tests looked good. He would fax me the results of more comprehensive tests in two or three days.

In the meantime, I continued to investigate the product market, even though Mr. Rising Sun told me I must rely on the market data he provided. He said that he didn't want me running up the bill for unnecessary research. He was worried about the fast mounting legal costs of fighting Mr. Apex. I assured him that I was within budget, but he still told me that he didn't want me doing my own market research.

Again, he banned me from talking to Mr. Apex. However, Mr. Apex phoned almost daily to ask me how my work was proceeding and to slander Mr. Rising Sun. I wasn't giving Mr. Apex any direct answers about my work. This was a very awkward position to be in, since Mr. Apex was the primary signer of my contract. I was getting worried as to whether I could proceed under these conflicts.

Through my research, I determined that the two international trading companies that had provided letters of expressions of interest did indeed exist. However, my suspicions about them were fast mounting. I could not locate the third potential buyer which was a western-US based outfit. I asked the "consulting" metallurgist for help in locating it. Mr. Rising Sun sent a stream of faxes with price quotes and specifications from trade magazines and market literature to support his theory that the product selling price should be much higher than $6/lb.

The professor came to my office to discuss his test results and the project status. I suggested to the professor that we should cut our losses and resign from the project. I went over the above problems with him.

I was approaching violation of AIPG's Code of Ethics Standard 3.5:

Members who find that obligations to an employer or client conflict with professional or ethical standards should have such objectionable conditions corrected or resign.

The AIMA Code of Ethics Rule 1b has similar wording.

Despite Mr. Rising Sun's directives, so far I felt that I had been able to maintain my professional and ethical standards. Although Mr. Rising Sun and Mr. Apex had employed me, I viewed my major client as being the lending institution. As a lender, it was entitled to receive a high quality, independent appraisal to use in its lending decision. The lender could lose millions of dollars if I did not do adequate due diligence.

If I resigned, the professor faced bigger financial losses than me for unpaid time and thousands of dollars in bills for laboratory testing. We concluded that we certainly wouldn't be paid for the balance of our time, and he might be forced to personally pay for the laboratory bench testing.

The professor phoned Mr. Rising Sun from my office. After a lengthy conversation, the professor was convinced that all of the problems were coming from sleazy Mr. Apex. Mr. Rising Sun didn't seem to be trying to do anything underhand. Also, the small-scale bench test by the toll processing facility had proved positive. Mr. Rising Sun wanted us to immediately go to the property and take a larger, secure bulk sample. We would then drive it to the processing facility, where we would provide secure supervision of a larger test. We agreed to Mr. Rising Sun's request.

The next day my payment for my first invoice arrived by wire in my bank account. I still had the initial retainer, so I was breaking even. A fax from Mr. Rising Sun doubled the value of my contract. The lender had given a one week extension on my delivering the appraisal report. The professor's major laboratory bill was paid. We caught a plane the following morning.

Conflict with Additional Instructions

At the site we collected sealed buckets of sample. We drove them to the toll processing facility for the chemist to bench test. The professor supervised the testing for the next couple of days, while I continued my research from the motel.

In three days we had a sample of the product from bench testing that was ready for us to take back to Denver. By then, I was convinced that the three letters expressing interest in purchasing the product were a sham. I assumed they were the result of a scheme by Mr. Apex. I told Mr. Rising Sun what I had found out. He and his partner did not seem to believe my conclusion, but sounded depressed and very frustrated.

Mr. Rising Sun insisted that I base my "net processed value" calculations on quotes he had found for small lots of the material. I told him that his partnership did not have the marketing ability to sell a significant amount of product in small lots. They would be a producer rather than a wholesaler. In no sense would they be a retailer of small lots.

Mr. Rising Sun began sounding desperate. He and his partner remained insistent that I must use their prices for small lots. "Who are you to tell us that we can't sell all of the product in small lots?" I began wondering what Mr. Rising Sun and his partner planned to do with the cash from the loan. I doubted that much of it would be going into processing the "reserves."

Back in Denver, a laboratory chemical analysis found that the purity of the sample product was borderline. Nevertheless, the professor assured me he was confident that the recovery could be improved sufficiently. I received the professor's moderately positive written report on the process. His cost estimates for the toll processing did not kill the project.

I continued the market research investigations that I had been ordered to cease doing. Whether or not I was within the expanded budget, I needed answers. I took some of the product sample to a petrographer for X-ray diffraction determination of its crystallography. The result was that most of the product had the wrong crystal form to meet high end market specifications. I confirmed this conclusion by hiring a consultant to some major US consumers of this mineral. Material of this crystal composition could only be sold into an intermediate level market. The selling price would not cover the direct operating costs of toll processing.

Payment First or Report Delivery First

I concluded my two reports very negatively, giving zero value for both appraisals. By this time, Mr. Rising Sun had a pretty good idea of what he would be receiving. He was irate, severely bad-mouthing me with foul language. I asked for payment of my large, outstanding invoice before sending the copies of my two reports, which were already bound and signed. He refused to pay. He insisted that he first needed to review the report as a draft. He knew that a negative report would be useless to him. I held my ground and he held his. More than a year later, the reports are still sitting in my office.

In this step, to my knowledge I was not violating any US codes that I was operating under. However, if I had been operating under the Australasian Institute of Mining and Metallurgy's highly regarded VALMIN Code for valuation of mineral and petroleum properties and securities, I would have been in violation of Code item 36:

> *The Commissioning Entity must be given a draft copy of a Report to determine and advise the Expert or Specialist as to any information not taken into account, the accuracy of the facts stated and the non-objection or otherwise to the assumptions made and to inform the Expert or Specialist of those parts of the Report which the Commissioning Entity regards as confidential (AusIMM, 1998).*

It is rare that I have provided a draft of any appraisal report for critique by the commissioning property interest holder. I believe that this reduces my independence. Any haggling over changes to the draft would be an attempt to influence the appraiser. A lender relying on the appraisal report could well view giving the potential borrower an opportunity to critique the draft report as providing an opportunity for the borrower to impart bias. Therefore, the lender might view it as an impropriety. If the appraiser's payment is dependent on the borrower being satisfied with the outcome of his review, then the review is not impartial. The AIMA's Code of Ethics Rule 1a states:

> *Members shall avoid even the appearance of impropriety.*

On two occasions, I have provided a draft report to the commissioning property owner. However, these were complex, high value appraisals, where this provision was written into my contract. In neither of these cases was the appraisal designed for use in external financing. Nor was the appraisal the basis of settlement of sale of the property. I have conferred with a few appraisers of large value real estate properties, such as farms. They tell me that they never provide a draft. They insist on full payment before or at the time of delivery of the report.

Postmortem

Mr. Rising Sun won his legal battle against Mr. Apex, and he now owns the interest in the minerals. In the process, he had to sell off his family investment business. Mr. Apex spends a lot of time in the Bahamas, living on Mr. Rising Sun's initial investment. Perhaps he spends his days planning his next minerals scam. The two payments I had received covered the cost of my education on the project. The professor came out a little better. A collection agency is attempting to squeeze some more money out of Mr. Rising Sun for my unpaid work. I don't expect to see any. Mr. Rising Sun often phones the geologist and geochemist who worked on the property. He tries to pick their brains about how he can peddle the mineral interest. He is seeking a specialist to produce the type of report he needs in order to make the property salable.

Conclusions

This paper has illustrated how Codes of Ethics can prove important in supporting an ethical approach by a geologist in interactions with an employer. During this appraisal assignment, I received verbal instructions, payment contingencies, and false and misleading information. All of these were designed to upwardly distort my determination of the appraised value. Maintaining my independence as an appraiser, with an ethical obligation to provide an accurate, unbiased report to the lending institution, required breaching the on-going directives of the principal of the commissioning firm. The principal was angry that I performed adequate due diligence in my investigations and research in violation of his instructions. However, I did not breach my written contract.

Perhaps I should have resigned at the mid-point of this assignment when I was seriously discussing this option with the professor of metallurgy. Hindsight is wonderful. On weighing the pros and cons from the information available to us at the time, I believe my colleague and I made the correct decision to proceed. Resigning at that time, or a later time, would have had serious financial implications for my colleague. It would also have left me open to a lawsuit for breach of contract from the two companies holding the mineral interest.

Some of the issues that confronted me arose out of the question of whether we would be paid. This has historically been a major problem for geological consultants, particularly those working for small exploration companies. It is even more of a problem for those of us who have specialized as minerals appraisers. Often our clients have a lot riding on the result of our report or legal testimony. Frequently the value we report does not meet our client's expectation, and this can lead to bitter feelings and nonpayment.

There are ways in which I may have been able to prevent the eventual nonpayment of invoices. The obvious solution would have been for me to have refused the assignment when things didn't smell quite right. I was skeptical about the property during my initial phone conversation with Mr. Rising Sun. However, I prefer doing paying work rather than watching the garden grow from my home office window. I also enjoy intellectually challenging assignments.

A second possibility would be to have a contract with the lender rather than the borrowers. The lender could have paid me from funds deposited in advance by Rising Sun Investments. This is the typical arrangement under which residential appraisers work. The lender would pay me on completion of predefined stages of the assignment. The final payment would be made on delivery of my final reports to the lender. A third possibility would have been for me to set up an escrow account with an escrow company. This would have the same arrangements for payment as that suggested with the lender. There are, of course, complexities and significant cost associated with this arrangement.

Some large banks that fund major mining projects take on the payment arrangements for appraisals. Appraisers of farms and office buildings are often provided with this security. However, a well-respected appraiser of large, high-value, western agricultural tracts told me that it is rare that he is provided with this arrangement. Without the benefit of a comprehensive survey, my impression is that many lenders do not like to be involved in contracting appraisers for any properties that they view as unusual. Lenders that do contract for minerals appraisals typically use appraisers they already know, or they contract with one of the major mining consulting houses.

When we are all charged up ready to rush off into the heat of battle to meet a tight assignment deadline, it is very difficult for the independent consultant to tell the potential client to hold off for a couple of days while we attempt to negotiate and set up a secure payment arrangement. This action would cast an air of distrust. The potential client may easily turn to someone else for the work who is going to give him less hassle.

I did the next best thing. I found out the credit history of both companies. Printed reports are available quickly for a fee through reporting agencies such as Dun & Bradstreet, Experian, and affiliated brokers. Verbal reports can sometimes be obtained for free from a debt collection firm. We need to obtain a credit report before signing a contract with a client we don't know well, although the reports are only as good as the data received by the reporting service. Requesting some trade references to check may also be helpful. However, credit reports and references do not necessarily tell us whether the principal or manager who contracted us will continue to feel obligated to pay us if he receives severely negative results from our assignment. I obtained a retainer more than adequate to cover the travel and other expenses of my initial contract. A retainer of 50% of the contract budget would provide more security, but insisting on this high percentage may turn some clients away.

There may not be a good solution to this issue of how to assure that we get paid, without making the arrangement onerous for the potential client. I have resolved myself to the expectation that occasionally I will be left partially unpaid on a contract. As an independent minerals appraiser working in a lean, somewhat depressed mining industry environment, it is difficult to budget for that sad circumstance. However, doing so has been essential for my survival.

References

American Institute of Minerals Appraisers, "Code of Ethics," Newsletter, Vol. 1, No. 4, Oct. 1995, p. 3-5, also at www.mineralsappraisers.org/ethics.html

American Institute of Professional Geologists, "AIPG Code of Ethics," in Geologic Ethics and Professional Practices 1987-1997, edited by Abbott, David M, Jr., Reprint Series #1, AIPG, Arvada, CO, p. 9-13. Updated in *The Professional Geologist*, AIPG, April 1999, Vol. 36, No. 5.

Appraisal Standards Board, "Uniform Standards of Professional Appraisal Practice," 1998 Edition, Appraisal Foundation, Washington, DC, 173 pages, revised annually.

Australasian Institute of Mining & Metallurgy, 1998, (VALMIN Code), "Code and Guidelines for Technical Assessment and/or Valuation of Mineral and Petroleum Assets and Mineral and Petroleum Securities for Independent Expert Reports," 1998 edition, Carlton, Vic., Australia, 23 pages; see also the AusIMM website: www.ausimm.com.au/codes/valmin.

Ellis, T.R. 1999, "A Case Study of an Appraisal Project Turning Sour," in Newsletter, Vol. 4, No. 2, American Institute of Mineral Appraisers, June 1999, p. 3, 7-8.

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Printed in The Professional Geologist, *February 2000, Volume 37, Issue 2*