
ARIZONA MINING SCAMS AND UNASSAYABLE ORE PROJECTS OF THE LATE 20TH CENTURY

Open File Report 02-20
December, 2002

by W. Scott Donaldson



Arizona Department of Mines and Mineral Resources
1502 West Washington
Phoenix, Arizona 85007

ARIZONA MINING SCAMS AND UNASSAYABLE ORE PROJECTS OF THE LATE 20TH CENTURY

by W. Scott Donaldson
Mining Attorney
Phoenix, Arizona

OFR 02-20
December, 2002

Arizona Department of Mines and Mineral Resources
1502 West Washington
Phoenix, Arizona 85007
(602) 255-3795
www.admmr.state.az.us

© December, 2001, by W. Scott Donaldson

*Dedicated to the memory of H. Mason Coggin,
a passionate combatant of mining scams.*

W. Scott Donaldson

Table of Contents

| | | |
|------|--|----|
| I. | Introduction..... | 3 |
| II. | Characteristics of Modern Mining Scams..... | 5 |
| III. | Mining & Early Arizona | 10 |
| IV. | Case Histories | 14 |
| | A. Desert Gold Mining Company..... | 14 |
| | B. Tracon International of Phoenix | 16 |
| | C. Pannos Mining Company..... | 16 |
| | D. Mammoth Mine | 17 |
| | E. New Times Article..... | 18 |
| | F. Xenolix Technologies, Inc..... | 18 |
| | G. International Precious Metals Corp. | 20 |
| | H. Orex Gold Mines Corp..... | 22 |
| | I. Other Unassayable Ore Projects | 23 |
| V. | Conclusion | 26 |

I. Introduction

“A gold miner is a liar standing next to a hole in the ground.”

The quote, traditionally misattributed to Mark Twain,¹ defines the experience of the many investors who have lost money in dubious Arizona mining projects. The state has a long and glorious history of mining scams, a history that continues today. The introduction to the Arizona Department of Mines and Mineral Resources’ (ADMMR) mining scams circular² describes the phenomenon:

A time-honored method to bilk the public of millions of dollars is the ubiquitous mining swindle. Since an unusually rich ore deposit, or bonanza, has historically produced enormous profits for the developer, many of us believe that we too, like the ‘49er, can strike it rich. The glamour attached to “discovery” creates, in the imagination of some people, a relatively easy way to attain fantastic wealth.

Although money can be made in mining and this Department certainly encourages mining, we also have a responsibility to urge the public to exercise prudence in its investment. Too many people have lost their hard-earned savings on an ill-advised mineral scheme. Archives are full of outrageous examples of mining scams and swindles in which the only beneficiary was a glib entrepreneur with unbounded optimism. In most cases, he disappeared before his investors realized what happened.

Arizona history is inextricably tied to the mining industry. Unfortunately, a lot of the invested money has gone to promoters and projects that had nothing to do with actual mineral exploration and development. The state’s effort to educate the public against mining swindles has been going on for over a century. A front-page story in an 1899 edition of the *Arizona Republic’s* predecessor newspaper contained the following admonition while discussing an early Graham County mining scam:³

Smalley concluded his story by charging, “The Spenazuma company is committing a crime against Arizona which its people should punish. They are obtaining money under false pretenses, and at the same time injuring the mining interest of the entire territory.”

The effort continues today.

¹ Kim A. McDonald, “Many of Mark Twain’s Famed Humorous Sayings Are Found to Have Been Misattributed to Him,” *Chronicle of Higher Education*, 4 September 1991, A8.

² *Mining Scams – Circular No. 59*, Revised March 1997, Arizona Department of Mines and Mineral Resources, 1.

³ Earl Zarbin, *All the Time a Newspaper* (Phoenix: Arizona Republic, 1990), 45.

This article studies the characteristics of modern Arizona mining scams or non-traditional mining projects and describes a number of examples. The purported mines or properties were located in Arizona, or the schemes had other substantial ties to the state.

II. Characteristics of Modern Mining Scams

A mining scam, for purposes of this article, is a money-raising scheme whose alleged potential profit is based on mineral exploration and/or development but which does not conform to generally accepted geological or metallurgical industry practices, did not profitably produce precious metals and was subject to civil, criminal or administrative enforcement action by state or federal government.

An unassayable ore project, for purposes of this article, is a mineral exploration and/or development endeavor whose assay methods do not conform to generally accepted geological or metallurgical industry practices. Both the mining scam and unassayable ore cases discussed in this article were reported in other publications.

Fraud or misrepresentation involving mining schemes has occurred for centuries. Although some of the cited cases are more than a few decades old, most correspond to the high gold prices of the mid-1980s and the stock market declines of the late 1980s. Organizers of fraudulent schemes look for an angle to fuel their activities; their use of mining will correspond to economic events.

Gold prices jumped from \$227.20 per ounce at the beginning of 1979 to \$672.00 per ounce in 1980. They fell and rose through the 1980s, peaking at \$476.10 in 1988. The price then generally declined to \$284.90 per ounce in 2000.⁴

Black Monday struck the United States on October 19, 1987. The stock market crashed, dropping more than 500 points in the worst one-day loss in its history. The crash affected the way people invested their money:⁵

Yet the market's plunge left real devastation in its wake. Small investors suffered heavily, and many were so alienated by the experience that they never returned to trading. Already suspicious of the market's integrity, these investors were now convinced that the stock market was a rigged game for professionals.

Ripples from the crash showed up immediately in Arizona mining scams. It went so far the State of Arizona took steps to educate the public about the dangers of investing in mining:⁶

“We want to stop the ‘fool’s gold rush of 1988’ before it reaches epidemic proportions in Arizona,” said Matt Zale, director of the ACC’s [Arizona Corporation Commission] Securities Division.

⁴ *Gold Comex Monthly Average Spot Settlement 1979 – 2000.*

⁵ James B. Stewart, *Den of Thieves* (New York: Simon & Schuster, 1992), 419.

⁶ *Pay Dirt*, September 1988, 13A.

“This new breed of fraud has spread like wildfire across the nation since last October’s market crash and is now the fastest growing investor fraud threat of 1988,” Zale said.

The phenomenon was nationwide and caused alarm in both public and private circles.⁷

“Dirt pile” investments will yield nothing but fool’s gold for the thousands of people who fall for the latest telemarketing scam to crisscross the country, warn state securities regulators and the Council of Better Business Bureaus. In an ‘investor alert’ issued in September, the two groups claim that phony gold mine schemes will cost Americans an estimated \$250 million this year.

“The success of the new breed of gold swindle is attributable in large part to the decline in investor confidence since the Black Monday stock market crash last October,” James C. Meyer, president of the North American Securities Administrators Association, said upon issuing the alert.

By July of 1988 the Arizona Corporation Commission was investigating 19 operations in Arizona.⁸ Project Goldbrick, a multistate task force coordinating efforts against phony gold mines in the western states, investigated 8 potential cases in 1987. The number increased to 52 cases by September of 1988.⁹

Many of the 1980’s mining scams utilized similar sales techniques:¹⁰

The ACC said victims typically pay \$5,000 for title to a 100-ton unit of unprocessed dirt “guaranteed” by the promoters to contain 20 ounces of gold . . .

Investors learn too late the dirt is just that – a worthless pile of dirt somewhere in the desert regions of the Southwest.

Boiler rooms, using high-pressure telephone sales tactics, offer ore, stock or royalties for sale. Sometimes promoters use similar tactics on friends and associates.

The promoters’ purported proof of an ore body generally falls into two categories. During the middle and late 1980s the schemes were mostly structured as “desert dirt” ventures. Little or crude evidence was offered by the promoters explaining why the precious metals were present.

A more sophisticated approach increased in popularity in the 1990s although it developed over several decades:¹¹

⁷ *Insight*, 3 October 1988, 48.

⁸ Susan C. Albrecht, “‘Dirt pile’ deals top area scams,” *Arizona Business Gazette*, 11 July 1988, 1.

⁹ William Hart, “Hundreds duped by the lure of gold,” *The Dallas Morning News*, 18 September 1988, 37A.

¹⁰ *Pay Dirt*, see note 6 above.

¹¹ W.G. Bacon et al., “Gold analyses – myths, frauds and truths,” *CIM*, November 1989, 29.

“Unassayable gold and platinum group metals” have come into vogue in the 70s and 80s in certain jurisdictions as a means of perpetrating fraud. Usual arguments are that a particular ore is not amenable to “conventional fire assaying”. Explanations for unassayable gold usually revolve around: evaporation of micron-size gold; vaporization of organic gold complexes; volatilization of gold halides; alloying of gold with PGM’s [Platinum Group Metals] which prevents fusion or alloying which prevents collection.

This paper reviews several of the myths and truths of gold and PGM assaying with the knowledge that not a single mine operates in the free world producing gold from unassayable ore.

The victim is told that the promoter has an ore deposit in which only the promoter can find precious metals using his special metallurgical processes. Standard industry techniques, such as fire assaying, are dismissed as hiding or masking the gold and/or platinum.

Planting or salting gold in ore samples is also a relatively inexpensive method of conducting business. A few purchased ounces of gold or other metal, if used properly, can indicate large ore reserves, as shown by this 1968 discussion:¹²

A few grains of gold dust flicked into an ore sample may indicate an astonishingly rich deposit of the precious metal.

Ten cents worth of free gold artificially added to 100 pounds of placer sampling material would assay at \$27 per ton, according to accepted testing standards, said Hall F. Susie, district BLM [United States Department of the Interior, Bureau of Land Management] chief of lands and minerals.

“Salting is easily accomplished,” said Susie, “but nevertheless, it’s an exacting trade. You have to know what you’re doing if you really want to fool someone.

“The big danger,” he explained, “is adding just the right amount of gold to the sample. Add too much, perhaps just a pinch too much, and you’ll arouse suspicions.”

The samples themselves need not be salted, said Susie. A sprinkle of gold dust on a shovel or bulldozer blade or on any of the ore processing equipment may be sufficient to produce a deceptive show of gold.

Once touted as and traded on the Toronto Stock Exchange (TSE) as if it were the largest gold find of the century, Bre-X Minerals finally collapsed in 1997. The scam reached from the Busang mine site in the jungles of Indonesia to the financial centers of

¹² Albert J. Sitter, “Rule 1 of Gold Salting Art: Don’t Be Too Generous,” *Arizona Republic*, 15 January 1968.

North America. The company estimated it had found 71 million ounces of gold in February 1997. Within a month, Bre-X's chief geologist had reportedly jumped to his death from a helicopter taking him to a meeting with a major mining company's irate geologists and Bre-X stock had plunged by 85 percent, wiping out some \$3 billion in shareholder value.¹³ A Bre-X consulting geologist described the salting scheme with these words:¹⁴

“ . . . the magnitude of the tampering with core samples that we believe has occurred, and resulting falsification of assay values at Busang, is of a scale, and over a period of time, and with a precision that, to our knowledge, is without precedent in the history of mining anywhere in the world.”

This record-breaking gold salting scam probably used about 60 ounces of gold, worth perhaps \$21,000.¹⁵

The number of phony gold schemes has declined since its heyday in the late 1980s but the scams continue. The price of gold has declined and remains below \$300 an ounce. However, gold demand remains strong¹⁶ and the platinum group metals maintain high values, allowing scam perpetrators to still find gullible investors. All the regulatory hurdles in the world will not deter con artists from trying to profit from man's most formidable vice – greed.¹⁷ We can look forward to many more scams so long as precious metals keep their value:¹⁸

When one or more of the precious metal prices increases significantly, there is generally an increase in mining scam activity. Platinum-group elements have recently experienced substantial price increases (especially palladium and rhodium) and an increase in fraudulent mining promotions involving these metals should be anticipated.

The State of California's ongoing electrical energy shortages and the Bush Administration's emphasis on energy development will promote their own variety of mining scams. The Bush Administration will order federal agencies to dismantle regulatory barriers to gas and coal power production and proposes opening federal lands for oil drilling. This policy is couched in terms of an energy crisis that will undermine our economy, our standard of living and our national security.¹⁹ This national debate, like the late 1980's stock market declines, provides an ideal feeding ground for fraud

¹³ Richard Ernsberger Jr. and Ron Moreau, “Fever in the Jungle,” *Newsweek*, 28 April 1997.

¹⁴ James Whyte, “Falsification and misrepresentation taint Bre-X,” *The Northern Miner*, 12 May 1997, 1.

¹⁵ “Indonesian gold was mixed with rock, paper reports,” *The Times-Picayune*, 23 July 1997.

¹⁶ Magnus Grimond, “Gloom replaces gleam for gold,” *Evening Standard*, 1 December 1997.

¹⁷ Vivian Danielson and James Whyte, *Bre-X: Gold Today Gone Tomorrow* (Toronto: The Northern Miner, 1997), 273.

¹⁸ *Fraudulent Mining Promotions*, Nevada Bureau of Mines and Geology, 2000.

¹⁹ Ron Fournier, Associated Press, “Bush to scrap energy rules,” *Arizona Republic*, 17 May 2001, 1.

promoters. We will experience a wave of scams in the coal, oil and gas mining industries tied to the compelling language of the national debate and taking advantage of people's fears and greed.

III. Mining & Early Arizona

Arizona's historically rich and still vibrant mining industry provides an ideal backdrop against which the unscrupulous can plausibly promote their mining scams. The earliest Spanish explorers into Arizona were looking for gold, and they wanted the natives to give it to them:²⁰

. . . The conquistadors wanted to convert the natives to Christianity and to take their gold. No attempt was made by these early Europeans to mine gold and silver; they wanted instant wealth handed over to them by the conquered Indian nations.

Stories of "seven cities of gold" brought Fray Marcos de Niza's expedition through the Santa Cruz Valley in 1539 and Francisco Vasques de Coronado's through the San Pedro Valley in 1540.

Arizona is named after an ancient silver strike. Very large masses of pure silver were found lying on the surface by Spanish miners in 1736 at Arizonac, or Arizona as the Spaniards later called it. The site was just west of Nogales. The Spanish stayed and opened mines around Tubac, Patagonia, Ajo, and Arivaca between 1790 and 1820.

The Gila Trail was well known to Anglo-American trappers, traders and explorers as a route across Arizona by 1846. Some of these men also panned for gold.

Many people used the Gila Trail to reach California in the Gold Rush of 1849. By the mid-1850s most of the easily worked placer deposits in California had been cleaned out and many fortune seekers worked their way back into Arizona. Stories of the old Spanish mines in southern Arizona attracted the miners after the Treaty of Guadalupe Hidalgo in 1848.

The first Anglo-American mining company to conduct business in Arizona, the Arizona Mining and Trading Company, was created in 1854 to mine the ores of Ajo. The first gold strike occurred in 1857 near the confluence of Sacramento Wash and the Colorado River. By 1864 almost one-fourth of the population of the Territory of Arizona was a prospector or a miner. Miners composed 44 percent of the first Territorial Legislature in the same year. The first Governor of the Territory, John N. Goodwin, and several members of his cabinet were struck with gold fever and co-signed a number of mining claims. The American and Mexican Mining Exchange, established in 1880 at Tucson, provided a place for capitalists and engineers to view ore specimens, trade information and undoubtedly make deals.

1880 and 1909 statistics show miners representing 21 percent of the workforce and well over 200 producing mines. The total estimated value of metal production in

²⁰ J. Michael Canty et al., *History of Mining in Arizona* (Tucson: American Institute of Mining Engineers, Southwestern Minerals Exploration Association, 1987), 13.

Arizona, in its first 50 years through 1910, is over \$600 million. On Valentine's Day, February 14, 1912, the Territory of Arizona achieved statehood and had 445 active mines. By 1940 Arizona was producing 41 percent of the nation's copper.²¹

Arizona continues as a leading mineral producer. The state ranked third in non-fuel mineral production in 1998 and 1999 and led the nation in copper production, accounting for 65 percent of the total United States' copper production.²² It is among the leaders in the production of gemstones, molybdenum, silver, perlite, and sand and gravel. As of February 2000, there are 72 mining companies operating 126 mines in the state, with an additional 70 sand and gravel producers. More than 15,000 people are directly employed by the mining industry.²³

The existence of this massive industry does not mean that any claim to mineral wealth should be blindly accepted. Arizona has not had any confirmed economic platinum group occurrences and the potential for finding platinum group metals is poor.²⁴

The fleecing of unwary and greedy investors began early in Arizona's history and carries on in the 2000s. The story of the famous mineral deposits of Ajo, later developed into Phelps Dodge Corporation's New Cornelia Mine, began at the onset of the twentieth century. It includes a spiritual medium, a beautiful spirit maiden, tunnels whose direction was determined by the spirit, and a smelter which melted off all the elements of the ore without needing fuel.²⁵ Innumerable hordes have chased Peralta gold and the Lost Dutchman Mine in the Superstition Mountains since the mid-1800s.

The ingenuity exhibited by territorial-era promoters demands admiration. Putting the potential investors into the proper frame of mind is an important ingredient of any swindle.²⁶

A con artist of first magnitude was Doc Flowers, promoter of the Spenazuma Mine in Graham County, advertised as nothing less than "the greatest mine in the world." For one group of dude investors, Flowers hired cowboys to stage a fake holdup. The Easterners foiled the robbery with a hail of lead, and felt so much a part of the wild West, they opened their wallets for Flowers.

The Spenazuma Mine was reported in Eastern newspapers in early 1899 as a fabulous gold, silver and copper strike. The prospectus of the Spenazuma Gold Mining & Milling Company of New York gave greater detail.²⁷

²¹ Ibid., 15.

²² *Directory of Active Mines in Arizona – 2000*, Arizona Department of Mines and Mineral Resources, 2000, 1.

²³ Ibid.

²⁴ *Bulletin 180*, Arizona Bureau of Mines, 243.

²⁵ Jack Williams, *From the Ground Up* (Phoenix: Arizona Department of Mines and Mineral Resources, 1993), 4.

²⁶ Don Deder, "Territorial Con Men Mined Skillfully – In Suckers' Pockets," *Arizona Republic*, 11 January 1968.

Running through the center of this property is a vein of ore one-half mile in width and two miles in length, every foot of it rich in gold, copper and silver. It is said this is the richest and largest continuous vein of ore (rich from the surface rock into the bowels of the earth) ever discovered in the world. And of this rock of which there are millions and millions of tons, yields of the precious metals \$12 to the ton and upwards, and doubled in value every few feet as you tunnel into the side of the mountain on either side.

The prospectus also described how the deposit was originally found by Spenazuma, the son of Aztec Emperor Montezuma, and relocated by the entirely fictitious Professor T.A. Halchu of Longhorn, Montana. The Professor learned of the riches from an aged, dying Mexican who said the secret to finding the wealth was unearthing the profile of the lost Spenazuma. Almost \$3 million in stock was sold to easterners who knew nothing of mines and mining before the *Arizona Republic* predecessor uncovered the scam.²⁸

A prospectus for one doubtful Prescott mine circulated among Eastern investors even resorted to doggerel:²⁹

Come, little brother, and sit on
my knee,
And both of us wealthy will
grow, you see;
If you will invest your dollars
with me,
I will show you where money
grows on the tree.

Some historians suspect that, before the days of the copper mines, more money was lost to mining scams than was produced as income from actual mining operations.³⁰ The scams have been based on whatever will catch an investor's interest. One of the oddest and most audacious salting schemes is called "The Great Diamond Swindle."³¹

In 1872 one Arnold and one Slack excited New York and San Francisco with displays of some splendid rough diamonds and some top grade rubies.

The men said the gems were from an extensive diamond field north of Ft. Defiance in the Arizona Navajoland.

Not to be gulled so easily, experienced San Francisco investors dispatched a team of investigators. They returned, sure enough, with more diamonds they

²⁷ Zarbin, see note 3 above.

²⁸ Zarbin, see note 3 above.

²⁹ Deder, see note 26 above.

³⁰ Deder, see note 26 above.

³¹ Deder, see note 26 above.

said they plucked from the Ft. Defiance locations. Clarence King, famed Western geologist, who visited the alleged discovery and concluded the gems resembled stones from African and Brazilian diamond mines, uncovered the hoax.

IV. Case Histories

The case histories cited below were selected to give an overview of Arizona's experience with modern mining scams. The list is not complete, more mining scams occurred in Arizona than are known to any one private entity or governmental authority. Some victims reacted with little more than embarrassment, failing to seek reimbursement for an investment that would never have occurred with the exercise of common sense.

The histories show that not only investors have been swindled. Both the United States government and the State of Arizona have fallen prey to outlandish claims of mineral wealth.

A. Desert Gold Mining Company

The BLM was victimized by one of the biggest gold salting hoaxes in recent history in this case.³² BLM manages 19 percent of the surface and 45 percent of the subsurface of the entire State of Arizona.³³ It is responsible for implementation of the federal mining laws³⁴ on those lands.

Desert Gold Mining Company claimed discovery of a large and easily accessible gold deposit north of the Phoenix city limits in the early 1960s. In 1961 the United States issued eight mineral patents³⁵ for 8,200 acres of public land to that company and others, based on their claims of gold discovery. The land stretched between Morristown and Beardsley east of U.S. Highway 93 and spanned Castle Hot Springs Road.

A mineral patent, issued by BLM if the land contains valuable mineral deposits, is outright ownership of the land for all purposes, after payment of a \$2.50 per acre fee.³⁶ The actual value of the land, with or without gold, far exceeded the \$2.50 per acre fee.³⁷ The patented land clearly had speculative residential or commercial development potential.

Prior to issuance of the patents, BLM examiners collected hundreds of samples of gravel deposits, some weighing more than 30 pounds, in checking Desert Gold's claims of vast mineral wealth. The sacks containing the samples were placed in a pile on the 8,200 acres, covered with a canvas tarpaulin and left unguarded for several days before being processed with Desert Gold's own equipment.³⁸

³² Sitter, see note 12 above, A21.

³³ "Fast Facts," Arizona Bureau of Land Management, 26 February 2001, <<http://azwww.az.blm.gov/fastfact.htm>> (18 April 2001).

³⁴ 30 U.S.C. § 21, et seq.

³⁵ Ibid.

³⁶ See note 34 above.

³⁷ "1st Gold Salting Trial in Years Begins," *Arizona Republic*, 10 January 1968.

³⁸ Ibid.

Desert Gold then became careless and greedy. Mining activities on the 8,200 acres stopped four months after the patents issued. The Desert Gold principals formed other companies, which applied for patents to 13,320 acres of federal lands closer to growing Sun City.³⁹ BLM became suspicious of Desert Gold, declared its intent to resample the 13,320 acres and obtained a court order to re-examine the original 8,200 acres. The applicant on the 13,320 acres closer to Sun City withdrew the application upon BLM's announcement of intent to resample. The results from resampling the 8,200 acres caused considerable confusion in BLM.⁴⁰

The confusion, he explained, was because each day only the first sample showed any evidence of gold. And this happened with unfailing regularity, McCullough said.

"We concluded," he asserted, "that someone was salting our equipment during the night."

To prove this conclusion, McCullough said, the research group scrupulously cleaned all of its digging and processing equipment before leaving it at the claim site on Feb. 28, 1963.

The following morning, the crew examined the same equipment and found gold dust sprinkled over the bed of the utility trailer used to haul ore samples from test holes to the nearby processing plant.

The "free gold," which was typical of the type found in placer deposits, McCullough said, was carefully covered with a fine layer of sand.

BLM then tightened security procedures and concluded there was only a smattering of gold in the same places that, only a few years before, held fabulously rich deposits.⁴¹

Efforts were made to catch the individuals salting the samples. On April 4, 1963, Federal Bureau of Investigation agents observed Dale Moran, a Phoenix contractor and principal in the companies, handling government ore samples. Mr. Moran was indicted for gold salting.⁴² He pleaded guilty to a charge of deception of a prospective purchaser on December 21, 1964, and was sentenced to six months in jail. The sentence was suspended and Moran placed on probation.⁴³

In 1963 BLM determined that the patents had been obtained by fraud or mistake and referred the case to the United States Department of Justice. Suit to rescind the

³⁹ Albert J. Sitter, "Alleged Land Grab Connected To Gold-Salting Gyp Charge," *Arizona Republic*, 11 January 1968, B1.

⁴⁰ Ibid.

⁴¹ Albert J. Sitter, "Gold Samples Tailed Off, Witness Says," *Arizona Republic*, 12 January 1968.

⁴² "U.S. Asks Return of 'Gold-Salt' Land," *Arizona Republic*, 10 September 1963.

⁴³ "Gold Salting Issue In U.S. Court Trial," *Arizona Republic*, 11 January 1968.

patents was instituted and judgment for the United States granted. The patents were rescinded and a mortgagee removed from the land on the basis that the pertinent loan was usurious.⁴⁴

B. Tracon International of Phoenix

This classic 1980's gold scheme centered on operations at a dubious gold mine at Rich Hill, northwest of Wickenburg, Arizona. Tracon International of Phoenix sold stock to investors from all over the United States, telling groups that Rich Hill was the largest gold mine ever discovered in Arizona.

Religious groups were targeted, including entire church congregations, through the promoters' contacts. Hundreds of investors, mainly from the Midwest, lost more than \$2 million before the scam was halted in 1984. Targeting of groups is known to some regulators as "affinity group fraud" and remains one of the 10 most prevalent investment fraud techniques in the United States as of 2000.⁴⁵

A stockbroker involved in some of the transactions described the mind-set of the investors, despite his efforts to dissuade them from involvement: "It was almost a sweet gullibility that they had: 'Praise the Lord, I'm getting the opportunity to invest in this company . . .'"⁴⁶

Tracon's top four officers were indicted in 1987 after an undercover Federal Bureau of Investigation operation. The charges included sale of unregistered securities and interstate transportation of a victim. All defendants were either convicted or pled guilty.⁴⁷

C. Pannos Mining Company

A bleak, 1,900 acre tract of brush-covered desert about 45 miles northwest of Phoenix was promoted as a vast deposit of rich gold and silver ore beginning in 1988 by Pannos Mining Company. The company, through three boiler room companies operating 18 facilities across the country, recruited thousands of investors.⁴⁸ It raised millions of dollars by selling worthless certificates for gold and silver to be delivered to purchasers at a fraction of market price.⁴⁹

⁴⁴ United States v. Desert Gold Mining Company, et al., 282 F.Supp. 614 (D. Arizona, 1968).

⁴⁵ "Scammies: Regulators list year's worst frauds," *Arizona Republic*, 24 April 2001, D4.

⁴⁶ Lisa Morrell, "'Gullibility' led investors to mine deal," *Arizona Republic*, 17 April 1990, C5.

⁴⁷ Ibid.

⁴⁸ Associated Press, "Mine firm accused of gold scam," *Arizona Republic*, 4 November 1988, F1.

⁴⁹ Eric Malnic, "FTC Moves to Close Alleged Gold-Mining Scam," *Los Angeles Times*, 3 November 1988, 35.

Pannos' own documents describe the property as containing \$826 million in recoverable gold and silver, and a mine life expectancy of 302 years. The documents also state investors could expect a return on investment of between 60 percent and 329 percent within one year, that the company was daily processing 50 tons of ore and that a 1,000-ton-per-day processing plant was under construction at the mine site.⁵⁰ Not only was no gold or silver found in samples from the property by experts from the State of Arizona, but no significant processing occurred and plant construction never started.⁵¹ The fabulous mine was basically a vacant site.

The promotion continued for a number of years until the Federal Trade Commission (FTC) filed suit and obtained a temporary restraining order halting Pannos', and the boiler rooms', selling activities. Consumer authorities from Arizona, Oregon and Illinois worked with the FTC in stopping Pannos.

D. Mammoth Mine

This scheme involving the 107-year-old Mammoth Mine, located in Apache Junction, Arizona proves that investors will believe the most far-fetched tale of mineral wealth. In 1990 the Securities Division of the Arizona Corporation Commission ordered the owner, one Marshall Ott, of a company named Western Labs and Engineering to stop selling securities to the mine. Despite the order, the company convinced approximately 130 investors to contribute \$800,000 to the mining venture.⁵²

Western Labs offered gold ore for sale at \$10 a ton. A staff of up to 35 employees sold the securities nationwide over the telephone, promising returns of 300 to 400 percent after the gold was mined and processed from the ore. No profits were paid,⁵³ although the form of payment was supposed to be gold coins bearing the words "Jesus Is Lord."⁵⁴

The company based its claim of mineral value on unusual grounds.⁵⁵

Ott told investigators, however, that the idea to reopen the Mammoth mine came to him during an epiphany.

"Ott claims he died in 1980 and spent 2½ hours in heaven with God, who mapped out the Mammoth plan," Johnson said.

⁵⁰ *The Pannos Mining Company – A Unique Opportunity*, Company Release, 1987.

⁵¹ Malnic, see note 49 above.

⁵² Karen Fernau, "Company's gold mine called a scam," *The Phoenix Gazette*, 27 March 1990,

B1.

⁵³ *Ibid.*

⁵⁴ "Promoter is arrested in gold mine promotion," *Pay Dirt*, January 1991, 15A.

⁵⁵ Fernau, see note 52 above, B10.

According to investigators, Ott secured the investments in the Mammoth Mine using an assay analysis from the 1920s, a time when large quantities of gold were extracted from the mine's veins.

Ott was indicted by an Arizona grand jury on charges of conspiracy, fraudulent schemes and artifices, and sale of unregistered securities.⁵⁶

E. New Times Article

Mining fraud promoters can always find greedy investors to believe their tales. Even obviously and outrageously false stories will find an audience in those who want to believe badly enough.

New Times, a Phoenix weekly newspaper, reported in a deliberately and patently preposterous 1991 article that gold was buried beneath the upscale Scottsdale Galleria shopping mall located in downtown Scottsdale, Arizona, specifically beneath The Coffee Beanery Ltd.⁵⁷ The newspaper thoughtfully provided cut-out shovel patches for its readers to pin to their clothing before mining the Galleria.

About 30 people camped out overnight at the Galleria waiting for the mine to open. Police were called after an estimated 300 people arrived. By mid-morning only a few dozen dazed fortune hunters were still milling about the Galleria's interior wearing the patches.⁵⁸ Ken Phillips, ADMMR Chief Engineer, remembers that ADMMR received the most intense barrage of telephone inquiries regarding the Scottsdale Galleria mine that he can recall in his years of service with the agency.

F. Xenolix Technologies, Inc.

Non-traditional mining ventures can be tenacious and adaptable. The Nevada Secretary of State's Security Division started focusing on the questionable claims and inside deals of two firms in the early 1990s. The firms, Mariah International Inc. and Guild Mark Industries, Inc., purported to be able to produce gold from the Sheep Hill cinder deposit in Flagstaff, Arizona.⁵⁹ The investigation included allegations of misrepresentation of gold values, non-existent relationships with credible mining companies and other abuses. It also included allegations of failure to disclose State of Utah revocation of the companies' stock, affiliated transactions, and sale of stock by a "possible control person."⁶⁰

⁵⁶ *Pay Dirt*, see note 54 above.

⁵⁷ Manfred Barry, "There's Gold in Them Thar Malls!" *New Times*, 4 December 1991, 26.

⁵⁸ "Eureka! Bogus story redefines 'fool's gold,'" *Scottsdale Progress*, 4 December 1991.

⁵⁹ Douglas Green, "Gold-cinder mine under scrutiny of Securities Division," *Las Vegas Business Press*, vol. 6, no. 5.

⁶⁰ *Ibid.*

As of 1997, the United States Forest Service neither approved of nor thought there was any merit in mining gold from cinders. Likewise, the Arizona State Land Department (ASLD) denied a prospecting permit⁶¹ for the Sheep Hill property, stating there was no indication of precious metals existing on the subject parcels.⁶²

The companies' management was up to the challenge presented by the States of Arizona, Nevada, and Utah and the United States Forest Service. They merged into a new company named MG Gold Corporation, which continued to trade on the Over-The-Counter Bulletin Board. Shifting away from the infamous Sheep Hill, the new company targeted another cinder deposit in the Flagstaff area named the Sinagua Cinder Cone.⁶³ By November 1997, MG Gold had 8,469,647 issued shares and 3,912,516 free trading shares.⁶⁴

In June 1999, MG announced appointment of a new manager of the Sinagua Pilot Plant, expressed impatience with external refinery reports and anticipated having the plant ready for production at ten tons per day within two weeks. The cinders were described as containing in excess of 1.5 ounces of gold per ton.⁶⁵

Somehow the gold did not materialize but the company did once again change its name, this time to Xenolix Technologies, Inc., incorporated in Nevada. It also started to claim it had developed a process for extracting precious metals from fly ash, the by-product of coal mining generally used in concrete and road building operations.

Along with these changes came, in early 2001, an administrative action against the company and one of its officers by the Securities Division of the ACC for fraud in the sale of unregistered securities.⁶⁶ The heart of the ACC action is the allegation that Xenolix committed fraud by withholding from investors the fact that the technology the company was relying on had failed for some 20 years to produce any economically viable product from processing the cinders. Press releases touting the Xenolix technology as being on the verge of producing highly successful results are also targeted.⁶⁷

Xenolix has consistently claimed that conventional chemical analyses of samples do not detect its gold mineralization. It also claims to have proprietary nanotechnology to detect and recover the gold, together with a precursor material for precious metals in the coal ash.⁶⁸ The company's attorney has fired back at the ACC with an April 18, 2001 letter threatening litigation against the ACC, the Arizona Attorney General's Office, the

⁶¹ A.R.S. § 27-251, et seq.

⁶² Green, see note 59 above.

⁶³ *MG Gold Corporation*, Company Release, 13 November 1997.

⁶⁴ *Ibid.*

⁶⁵ *Dr. Alvin Johnson Becomes Project Manager for the Sinagua Pilot Plant*, Company Release, 11 June 1999.

⁶⁶ "Mining Company Accused of Fraud in Stock Promotion," *Commission News*, Arizona Corporation Commission, 1 March 2001.

⁶⁷ *Ibid.*

⁶⁸ "CDNX suspends Birch again", *The Northern Miner*, 19 March 2001.

ADMMR, the BLM, and their employees. The letter appears to demand the ACC cease communicating with members of the public about Xenolix.⁶⁹

G. International Precious Metals Corp.

The mother of all recent Arizona desert dirt plays is the International Precious Metals Corp. (IPM) project 90 miles west of Phoenix, just off Interstate 10. IPM started as a small platinum exploration company whose shares were traded on the TSE. The company acquired the Arizona property, called BRX, in 1993 by raising \$27 million through private placement.⁷⁰ It also owned 18.2% of Xenolix as of December 1997.⁷¹

A Canadian newspaper account provides an excellent summary of the company's next years:⁷²

IPM had been listed on the Toronto Stock Exchange in early 1994 when it announced sensational gold and platinum grades from its Black Rock property in Arizona.

As in the case of Naxos, TSE officials asked the company to hire an independent firm to audit its results. That firm, Kilborn Engineering, found no significant amounts of precious metals.

The Arizona Department of Mines also conducted an investigation: "I have checked hundreds of platinum samples in Arizona and I have never come up with any positive platinum values," said department director Mason Coggin.

He added that he couldn't find gold and only trace amounts of silver.

When trading resumed in April 1994, the stock plunged. The following month, the company's shares were delisted for failing to file financial statements.

Like Naxos, the company found a new listing on the Nasdaq [National Association of Securities Dealers Automated Quotations] in the U.S. and announced more sensational gold and platinum results using a "modified" fire assay procedure.

The company was also heavily promoted on the Internet, which became a battleground for desert dirt supporters and detractors. (To date, more than 30,000 messages have been posted to the IPM thread on Silicon Valley, a popular Internet stock-talk forum.)

⁶⁹ ADMMR Xenolix Technologies, Inc. file, 18 April 2001.

⁷⁰ Zina Moukheiber, "Glitter, but not gold," *Forbes*, 16 June 1997, 46.

⁷¹ *MG Gold Corporation*, Company Release, 15 December 1997.

⁷² David Baines, "Naxos in forefront of desert dirt plays," *Vancouver Sun*, 13 January 1998, Local Business, 1.

IPM's shares peaked at \$14 in April 1994 but things then began to unravel. *The Northern Miner*, a prominent Canadian mining journal, questioned IPM's BRX project. ADMMR continued to respond negatively to inquiries:⁷³

Furious, IPM sued⁷⁴ the Arizona Department of Mines and Coggin, and obtained an injunction against them discussing the investment value of the stock. But if Coggin is contrite, he isn't showing it.

"We can still tell you that we have not been able to corroborate their values using registered Arizona assayers and fire assay procedures," he said in a recent interview.

"Their claim is that they have to have special fluxes, and we just don't have any bat wing or eye of newt to put in there."

IPM's share price slumped steadily to less than \$2 in 1998. It was delisted from Nasdaq on April 16, 1998.⁷⁵ On June 19 of the same year IPM filed a voluntary petition for reorganization under Chapter 11 of the United States Bankruptcy Code.⁷⁶ The proceeding was converted to a Chapter 7 full discharge on October 1, 1999, leaving behind a creditors' list 158 members long. The list includes employees, attorneys, service providers, the State of Arizona, the United States of America, banks, and others.

The 78 million remaining unissued shares were sold, with the approval of the Bankruptcy Court, on October 12, 2000 for \$20,000. The shares were therefore valued at \$.0003 each.

Prior to falling apart, IPM displayed remarkable power and influence for a mining company that did not profitably produce any precious metals. Its stock marketing succeeded on a worldwide scale:⁷⁷

Some big fund operators have been eager to play. Capital Research & Management Co., which has \$150 billion under management through American Funds, owns almost 12% of International Precious Metals. Midas Fund, the London-based precious metals fund, has picked up 200,000 shares. IPM's stock is trading on Nasdaq at 8 15/16, more than double its price one year ago, bringing its market capitalization to almost \$160 million.

⁷³ Ibid.

⁷⁴ International Precious Metals Corporation v. State of Arizona, et al., In the Superior Court of Arizona, Maricopa County, No. CV 97-14220.

⁷⁵ *IPM De-Listed from Nasdaq*, Company Release, 17 April 1998.

⁷⁶ *IPM files for Chapter 11 Bankruptcy Protection*, Company Release, 19 June 1998. In Re: International Precious Metals Corp., Debtor, In the United States Bankruptcy Court For the District of Arizona, Case No. B-98-07721-PHX-SSC.

⁷⁷ Moukheiber, see note 70 above.

IPM stock was the focus of intense investor interest on both the TSE and Nasdaq. The shares were traded in huge volumes, temporarily averaging about 2 million shares every trading day until halted by the exchanges.⁷⁸

The highest levels of Arizona state government were accessible to IPM. A 1997 meeting in Governor J. Fife Symington's offices failed to resolve the differences between ADMMR and IPM.⁷⁹

David Kornhauser, IPM corporate secretary and board member, Eli Constantine, IPM investor relations, Samuel Shaw III, IPM, Amy Porter, IPM's attorney from Lewis and Roca, Bernard Guarnera, president BD [Behr Dolbear & Company] by speaker phone, Rachal Lewis, BD, Joe Layne of the Governor's Office, Joe Dean and Marcus Osborn of the Arizona Dept. of Commerce, Patricia Boland, Arizona Attorney Generals Office, and Mason Coggin and Nyal Niemuth of ADMMR met at the Arizona Governor's Office. ADMMR requested information as to BD's investigation of BRX. BD was not allowed to report on their activities by IPM personnel. Mr. Kornhauser of IPM reported only that they had found measurable quantities of gold.

The ability to retain a large and prestigious Arizona law firm is impressive in itself and is a measure of IPM's effective fund-raising abilities. However, the ending to this part of IPM's tale is the law firm's bankruptcy court claim for \$98,000 in unpaid attorneys' fees.⁸⁰

H. Orex Gold Mines Corp.

Doc Flowers and the stock promoters of Xenolix and IPM are peaceful, mild individuals compared to some characters involved in recent Arizona mining scams. Orex Gold Mines Corp., a Florida corporation and the Santa Maria Mine, located on the Santa Maria River near Wickenburg, Arizona, were used by organized crime as the foundation of a contemporary bogus mining scheme. The 480-acre property was promoted as containing substantial reserves of moderate grade (0.25 oz/ton) oxidized gold ore and a fully permitted subterranean gold and silica mining operation.⁸¹

In April 2001 federal prosecutors announced the indictment of 45 alleged members and associates of New York City's five organized crime families on charges including murder, racketeering, stock fraud and bribery. 32 of the defendants are associated with the Genovese crime family, described by law enforcement officials as the strongest and most secretive of the New York Mafia families.⁸²

⁷⁸ *The Northern Miner*, 4 April 1994, 1.

⁷⁹ *ADMMR Information Summary*, ADMMR BRX file, 17 April 1997.

⁸⁰ In Re: International Precious Metals Corp., Debtor, see note 76 above.

⁸¹ "Orex Gold Mines Acquires Santa Maria Mining Corp.," *The Mining Record*, 18 August 1999.

⁸² "Murder, Fraud Charges Filed Against 45 Alleged NY Mobsters," *Bloomberg News*, 25 April 2001.

Four of the men were charged with, amongst other indictments, an alleged “pump and dump” stock fraud involving the Santa Maria Mine and Orex. One of the four, Alan Longo, is allegedly a Genovese family captain who ran the family’s daily operations over the last several years due to the imprisonment of the regular family leader. A second, Paul Geraci, is allegedly a Genovese soldier.⁸³

Investors were sucked into paying about \$6.8 million for Orex stock at prices artificially inflated by two Florida brokerages. The stock peaked at \$7.50 in June 1999 but dropped to 13 cents two months later.⁸⁴

I. Other Unassayable Ore Projects

The wrestling matches between state and federal authorities and unassayable ore proponents continue on many levels, although new methods and tools have become available to the governments. Hexagon Consolidated Companies of America, Inc. claims 3 million ounces of gold, silver, and the platinum group metals on its state mineral lease⁸⁵ in Skull Valley, Arizona. Hexagon is a publicly traded company with interests in mining, health care, music publishing and real estate.⁸⁶ In 1998 the company claimed:⁸⁷

. . . a resource of “well in excess of” 450,000 tonnes at Skull Valley, grading 505 grams osmium, 300 grams iridium, 253 grams ruthenium, 180 grams platinum, 69.6 grams silver, 51.4 grams gold and 28.1 grams palladium per tonne. In a measure of its success at that time, the company subsequently consolidated its share capital, trading one new share for 1,000 old shares.

On October 20, 2000 ASLD issued a Notice of Default and Denial of Plan of Operation.⁸⁸ The Notice is based on ASLD’s inability to find precious metals on the lease and Hexagon’s failure to comply with past ASLD orders.

Final ASLD hearing was held March 16, 2001. Hexagon’s target on the mineral lease is the tailings from streambed placer operations in 1987 and 1988. The administrative law judge recommended and found⁸⁹ that Hexagon’s plan of operations was properly denied because the tailings constitute waste, have no special economically recoverable value and are a common variety mineral subject to auction and sale. The judge also found that the assay reports created by Hexagon’s purported expert witnesses,

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ ASLD Number 11-86475.

⁸⁶ *Hexagon Resumes Pre-Production Work at Peoples Mining/Skull Valley Site*, Company Release, 26 March 2001.

⁸⁷ “Desert-dirts back at it,” *The Northern Miner*, 12 March 2001, B3.

⁸⁸ ASLD Order No. 160-2000/2001.

⁸⁹ Arizona State Office of Administrative Hearings Recommended Decision of the Administrative Law Judge No. 01F-9-LAN, 14 May 2001.

Dr. Donald E. Jordan of Metallurgical Research and Assay Laboratory and Mr. Dnyanendra A. Shah, a registered Arizona assayer and president of Copper State Analytical Laboratories, are highly suspicious and unreliable.⁹⁰ Whether ASLD can make the recommendation stick in the inevitable appeal against an existing mineral lease issued in 1983 remains to be seen.

Maxam Gold Corporation is a publicly-traded company engaged in the acquisition, exploration and development of mineral properties, with a primary focus in southwestern Arizona.⁹¹ Its Peoria 7 property, comprised of federal unpatented mining claims⁹² is south of Gila Bend, Arizona and purportedly rich in gold ore not amenable to standard assay techniques.⁹³

On June 28, 1998 BLM issued a Decision⁹⁴ refusing parts of Maxam's application for occupation of the mining claims pursuant to 43 C.F.R. § 3715, et seq. The Decision was based upon BLM's inability to find any proven or probable ore reserves, as defined by the United States Securities Exchange Commission. Maxam appealed the Decision to the United States Department of the Interior Board of Land Appeals (IBLA).⁹⁵ The appeal was dismissed by Order dated October 28, 1998 after Maxam withdrew its notice of appeal.

Ralph J. Costa, Arizona BLM Mining Engineer and Mining Law Program Lead, commented on the relatively new BLM use and occupancy regulations:

“In 1996, the BLM issued the 43 CFR 3715 regulations which govern the use and occupancy of mining claims and mill sites. These regulations deal with all types of unauthorized uses of mining claims including safety hazards, environmental contamination and investment fraud. The regulations shift the burden of proof to the claim holder to show that any planned activity is incidental to mining.

“Specifically, an operator must show that his activities are ‘reasonably incident,’ are calculated to lead to the extraction of minerals and that the equipment planned for use is presently operable. The regulations continue to define reasonably incident as actions or expenditures to prospect, explore or mine using methods, structures and equipment appropriate to the geologic terrain, mineral deposit and stage of development of the operation.

“In Arizona, BLM has used the requirements of 3715 to challenge operators to demonstrate that their planned activities are reasonably incident. Operators who wish to prospect on public lands using methods that are generally accepted by the

⁹⁰ Ibid.

⁹¹ Maxam Gold Corporation, n.d., <<http://www.maxamgold.com>> (8 May 1997).

⁹² See note 34 above.

⁹³ Maxam Gold Corporation, see note 91 above.

⁹⁴ BLM Decision Number AZA-29594, 30322.

⁹⁵ IBLA 98-439.

mining industry and who do not wish to engage in a long term occupancy have little trouble meeting the requirements of 3715. However, when permanent structures or large mining operations are planned, the full force of the 3715 regulations begins to be felt.

“When an operator proposes mining or occupancy, he must have some measure of proven or probable reserves before BLM would allow the construction of a mill or other facilities. BLM wants to have some assurance that any proposed mining activities conducted on public lands stand a reasonable chance of success.

“Under the new regulations, the burden of proof is squarely on the claimant to show that mining is based on sound exploration data. Often, when evaluating new mining proposals, BLM Arizona will search the Internet to determine the extent of the reserve base the company is touting to the public for the property in question. If the company gives a figure for proven reserves, this often becomes the benchmark for the operation to proceed.

“To assure that the operation is reasonably incident and appropriate to the geologic terrain and stage of development represented by the proposed operation, companies are asked to provide the data they used to calculate their proven reserve base. If the data and calculations presented follow accepted industry practices, the proposed operation is granted concurrence under 3715 and, pending obtaining all necessary permits, is allowed to proceed.

“Occasionally, BLM may elect to take additional samples to verify the results of the assay data submitted by companies. BLM will only use industry accepted assay techniques when verifying data. So far, BLM Arizona has not had a case in which a company has appealed our decision based on the assay techniques. If challenged, BLM Arizona is prepared to answer such an appeal.

“It’s important to support new technologies, but there are certain tenants of simple chemistry that are going to stay with us. When a procedure for assay is proposed that yields gold in a sample that cannot be detected by any industry accepted analytical technique, that really raises the red flags, and it’s doubtful that an operation proposed, based on such a procedure, would ever meet the requirements of 3715.

“The 3715 regulations are an important and powerful regulatory tool that is now available to BLM. The regulations allow for criminal as well as civil penalties and have proven to be very effective in preventing the environmental impacts of operations that stand little or no chance of success.”

V. Conclusion

The lesson we learn from recent Arizona mining scams is neither new nor complicated: there is no such thing as a free lunch. Add in the concept that if something sounds too good to be true it probably is and the result is a better common sense fraud prevention system than anything state or federal governments can accomplish.

Excessively optimistic promoters have and will use vast mineral wealth to inflame investors' greed. Arizona's history and immense existing mining industry make the state an attractive area for mining fraud. The promoters are a fearless and resilient breed whose optimism is well described in *Jim Finche's Mine Report*, by Ashhurst Whiteside:⁹⁶

*So onward went Jim and onward went Bill,
On up the Sonora, past valley and hill;
On up the Sonora, no thought to turn back -
Sans booze and sans money, sans grub and sans jack.
On up the Sonora and still did not flinch,
Jim found Judge Stevens and Bill found Jim Finch.*

*Says Finch: 'I've a mine, and, yes, it's for sale;
A heritage priceless, to describe it words fail.
It's as wide as the river and almost as long,
One million dollars? Hell! That's just a song
A mine report? No! But there's plenty of ink,
An engineer nothing, the're all on the blink.
I can romance myself," says Jim with a wink.
"And I'll write a report to make em sit up and think."*

*Jim labored and wrote, and labored and swore,
And started again as sheet on sheet tore,
Till along toward evening, says Jim: "It's complete.
A good full shift's work and all on one sheet.
It sure is a gem and from my own brain,
But, by your leave, Bill, I'll just read it again."*

*But the mine was not sold, for said Jim, as he swore:
"That mine's too good to sell" and this too he tore.
Himself he'd convinced, but I question in short
If that mine were as priceless as that mine report.*

An investor considering entering into a mineral exploitation project cannot rely upon the due diligence or advice of other investors, property owners or their

⁹⁶ "Jim Finche's Mine Report," *Rhymes of the Mines – Life in the Underground* (Phoenix: Cowboy Miner Productions, 1999), 28.

representatives. Geology is a complex science and Arizona's easily accessible precious metal deposits were generally worked out long ago. Experienced mining companies can spend fortunes expertly evaluating a property and then simply walk away if the profits are not present.⁹⁷

In every mineral development there is a logical sequence of events with which the enthusiastic, yet uninitiated, investor may be unfamiliar. Each project can be broken into phases, the completion of which can be evaluated before expending large sums of additional funds. There is no legitimate reason for throwing good money after bad. Classic examples exist which have expensive land being purchased on the basis of someone else's assays or a costly mill being constructed without proven ore.

Engineering reports are useful tools that will assist the mine developer and investor. Decisions to pursue a project into the next stage, and in a particular manner, will be made easier and more logically after consultation with the appropriate professional engineer, whether a geologist, mining engineer, or metallurgist. Other professional assistance such as financial and legal is generally warranted.

In general, professional evaluation and advice should be sought outside of the developing organization. Principals with the firm and other vested partners, though well intentioned, may write overly optimistic reports. Statements, for example, referring to the attractiveness of a deposit because of its close proximity to a famous producer or the historically proven improvement of ore grade with depth in the mining district may have the ring of authority but are often pure speculation. Such reports frequently speak glowingly of questionable assets that may be virtually worthless, e.g., raw mill sites, dilapidated buildings or sheds, and rusted, dismantled equipment. Past production records may be doctored, and projected production/cost data may be presented in an unrealistic manner. Profits are often inflated or guaranteed in such company-prepared prospectuses. It is recommended, therefore, that most professional advice be obtained from consultants who have no financial connection with the company principals, the property, the mineral technology to be employed, or any part of the proposed operation.

The savvy investor will immediately seek outside expert advice and listen to his own counselors, not promoters or investors already enmeshed in a scheme.

Practical experience has revealed some axioms that commonly appear in Arizona mining scams. Kent J. McGrew,⁹⁸ a metallurgical engineer who spent his life in mining

⁹⁷ *Mining Scams*, see note 2 above, 4.

⁹⁸ Kent J. McGrew, B.S. and M.S. in Mineral Dressing Engineering, currently lives in Congress, Arizona, home of the world famous Congress gold mine, and can see Rich Hill from his front window. Rich Hill has been the locus of more gold scams than anywhere else in Arizona. One of his most enjoyable pastimes is listening to present day gold scams being touted in the local Arizona Café over a morning cup of coffee.

projects, and this author developed these axioms over years of involvement with mining property evaluations:

1. The investors live in a flat land;
2. The investors did not make their money in mining;
3. The ore is incredibly rich;
4. Only one assayer or metallurgist can get the right answer;
5. There is a reason the major mining companies overlooked the deposit.

The axioms should be applied much like the old adage about buying a horse:

One white sock, buy him
Two white socks, try him
Three white socks, be on the sly
Four white socks, pass him by.

The presence of one axiom in a mining deal is reason for caution. If two axioms appear the deal is probably a scam; three axioms and it is undoubtedly a swindle. Some classic fraudulent schemes in our recent history have included all five elements, but none of them were from the periodic table.