

John C. Lacy, partner in the law firm of DeConcini McDonald Brammer Yetwin & Lacy, P.C. has been elected president of the Mining Foundation of the Southwest.



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

BOARD OF GOVERNORS

Ken C. Bennett -
Phoenix - Chairman

William J. Miller -
Phoenix - Vice Chair-
man

Eric A. Nordhausen -
Tucson - Secretary

Richard Oldham -
Quartzsite - Secretary

Roy Miller - Phoenix -
Member

STAFF

H. Mason Coggin -
Director

Ken A. Phillips -
Chief Engineer

Nyal J. Niemuth -
Mining Engineer

Ann Turney - Admin-
istrative Assistant

Diane Bain - Editor

Marianne Char-
nauskas - Secretary

Glenn Miller - Curator

Susan Celestian -
Curator of Education

Tour Guides
Alice Rosenfeld

Joe MacIntosh

Ann Baker

Doug Duffy

Jerry Myers

Mineral Resource

MINING

Mined Land Reclamation Bill Update

Senate Bill 1380, which places the Mined Land Reclamation Program under the administration of the State Mine Inspector, was signed by the Governor on May 1, 1996. SB1380 requires the Mine Inspector's office to establish rules for the reclamation of surface disturbances by October 1, 1996 and extends the date for the submission of reclamation plans from July 1, 1996 to April 1, 1997 to provide adequate time for the mines to develop their reclamation plans after the final rules are adopted.

Audrey Akhavan or Paul Catanzariti of the newly established Division of Mined Land Reclamation in the Office of the State Mine Inspector can be reached at 602-542-5971 for more information.

USBM Information Available

With the U.S. Bureau of Mines closed, much of the information formerly available there has been transferred to the U.S. Geological Survey in Reston, Virginia. The following phone numbers can access this information.

- Mines FaxBack: 703-648-4999
- Mines Data (bulletin board): 703-648-7799
- Metals: 703-648-4968, Fax: 703-648-7737
- Special Projects: 703-648-4911, Fax: 703-648-7792
- Data Collection : 703-648-7940, Fax: 703-648-7792
- Publication Services: 703-648-4750, Fax: 703-648-7792
- Minerals Information Systems: 703-648-4920, Fax: 703-648-7792
- Minerals Availability (Denver): 303-236-5200, Fax: 303-236-4028



Do you need this information in an alternative format? Please call the Department office at 255-3791.

Scams and Scoundrels

From the *The Northern Miner* 6-24-96

When markets are hot, scoundrels come out of the woodwork. That is the only way to explain the recent Timbuktu Gold fiasco, a salting scam that lured in unsuspecting investors by conjuring up the romance of Africa's legendary gold mines.

According to street gossip, the salting was so crudely done that shavings of the South African Kruggerand could be found in the worthless samples. Another theory is that placer gold was added. Whatever the case, the salting was deliberate and meant to deceive.

The incident cast a pall over the Alberta Stock Exchange, where Timbuktu was listed, and a black cloud over the brokerage firms involved in selling and/or recommending the stock. And rightfully so. These firms are sufficiently sophisticated to know that if it sounds too good to be true, it usually is. Where was the due diligence?

Salting scams pop up once every 10 or 20 years. Most remain unsolved, usually because the salting is done in a foreign jurisdiction, which hinders the investigative process. Getting to the bottom of the Timbuktu case, for example, would require the cooperation of law enforce-

continued

Mining History Association

The Mining History Association, a forum for miners, museum curators, engineers, geologists and history scholars, meets in a historic mining community each year to hear papers on mining history and tour the host community. This year's meeting was held in Rossland, BC from June 6-9. The association has a quarterly newsletter that is distributed to association members. Membership is open to all interested in the history of mining. Dues are \$25.00 per year. The Association address is P.O. Box 150300, Denver, CO 80215.

Scams and Scoundrels cont.

ment authorities from Canada, the U.S. and Mali. We hope it happens, but we won't hold our breath. Fortunately, salting is rare. A more common headache for regulators is the modern-day alchemists who, each year, bilk millions of dollars from unsuspecting investors, particularly doctors, dentists and retired couples with substantial savings.

A few years ago, the Northwest Mining Association mentioned that, in 1987 alone, an estimated US \$250 million had been lost to gold scams in North America. The most elaborate of these involve projects where millions of ounces of gold are in the ground but can't be measured by conventional assaying because of "interfering elements" or because of "wicking" (whatever that means), or because the temperature is not "high enough" or the right "pretreatment" was not used.

Sometimes these promoters will have their own laboratories, where all sorts of exotic steps are taken to produce the "right" assay results. Or, they go to labs that specialize in the people pleasing business. Granted, the going rate may be 10 to 20 times higher than normal, but business is business, and someone has to pay for the gold they find.

Investors are kept hanging by a string while the promoters work furiously to solve the "complex chemistry" through never-ending, costly research. Or they try to build some sort of pilot plant . . . a blackbox that allows them to recover the mysterious gold that reputable, certified labs are not able to find. When the jig is up, they close up their tents without ever producing an ounce of gold and move on to the next "big discovery." Sometimes they do produce a few ounces, but at a cash cost per ounce that would be incalculable.

Years ago, the mining industry urged regulators to take a tough stand against these types of scams. The Vancouver Stock Exchange was probably the first of all Canadian exchanges to address the issue, through its disclosure policy on assaying. Companies can still use the exotic labs but, at the same time, must report results from a certified Canadian lab using accepted techniques. When the results do not compare, both parties cannot be right. Investors should keep in mind that when faced with this situation, regulators will side with the tried and the true. After all, conventional technology has had no trouble finding all the deposits in production today.

Phil Eckman

Louise Philip Eckman, Canadian mining engineer, died on December 14, 1995. Although Eckman confined most of his mining career to Canadian companies, all of North America benefited from his contributions to the mining industry. His exploration and mine evaluation work took him from the Yukon to Costa Rica, Newfoundland to the Queen Charlottes, and North Carolina to California. He contributed to the acquisition of Inspiration Consolidated Copper Company in Arizona by Hudson Bay.

In the 1980's Eckman suggested to the Mining Club of the Southwest that it establish an American Mining Hall of Fame. It was due to his vision that this institution has become a reality.

Phil Eckman will be greatly missed by his wife Majorie, daughter Heather, son Cameron, and his many friends in the mining community.

The following quote was found in a summary of a 1909 Forest Service Examination Report on an Arizona claim called the Blind Tiger, located near Crown King.

"No mining machinery of any kind on claim. The mouth of the discovery is boarded up. Cut used as a stable. Another cut is used for a beer cellar. There are no other excavations on this claim. No water conduits on claim. The claimants operate a saloon and disreputable resort upon this claim. I think this claim is invalid."

PROPERTY NEWS

New Westwin Acquires the Gladiator

New Westwin Ventures, Inc. has acquired an option on the Gladiator Mine from Nor-Quest Arizona Inc. The property, located near Crown King, was first worked in the 1870's. Between 1890 and 1906, 20,000 tons of ore averaging 1.02 was mined from the Gladiator-War Eagle vein. An additional 22,000 tons averaging 0.44 ounces were mined during the period 1937 to 1942. Nor-Quest worked the property from 1985 to 1988 but could not sustain operations because of the market conditions of 1987.

New Westwin is doing some further drilling and sampling before trying to reopen the property. They are

MUSEUM NOTES

Help Wanted

Volunteers are an invaluable part of the effective outreach of the Arizona Mining and Mineral Museum's programs. The efforts of volunteers has enabled the Museum to become a valuable community asset.

Currently we are hoping to initiate two new programs. We would like to offer *daily* demonstrations of lapidary arts, crystal growing, and mineral testing. Staffing has been so short we have had very few demonstrations during the past year.

We would also like to offer a half day, once-a-month program for junior high students.

If you would like to contribute to these innovations - even one day or morning per month - contact Glenn Miller or Susan Celestian. Of course, there are other continuing needs as well that you might be able to address. Among others, we need a computer programmer, carpenters, front contact personnel, and jewelry makers.

Your Museum needs your help!

Harold Hill

On June 10, 1996 a beloved volunteer for the Museum lapidary shop died. Harold Hill succumbed to emphysema and pneumonia at age 82. A retired carpenter, he was a lapidary craftsman with a penchant for perfection. His specialty - shield bola ties - were always popular items in the Museum gift shop.

Harold and his late wife, Marie, were charter members of the Arizona Leaverite Gem & Mineral Society. He was also a member of the Maricopa Lapidary Society, an instructor at the Glendale Community Center, and shop monitor for the Museum. Forays into the the field to collect gave him great joy.

Harold Hill was a sweet, talented, generous man who will be very much missed by all who knew him.

Educators Educated

So far this summer approximately 125 teachers have participated in formal programs at the Museum. Activities have included Minerals in Society, the Mineral Educators Conference, Urban Systemic Initiative, and a Chapman University summer course.

BOOK REVIEW

Photographing Minerals, Fossils, & Lapidary Materials by Jeff Scovil

ISBN 0-945005-21-0

1996, 224 pages, \$40.00

Forty-four color plates, 74 black and white photographs, and 42 line drawings stylishly illustrate this useful and informative work. A former Department staff member, Scovil is a regular contributor to all of the major mineral-related publications including *Rock & Gem*, *Lapidary Journal*, *Mineralogical Record*, *Rocks and Minerals*, and the German periodical *Lapis*.

Arizona Mining Heavy Equipment and Fleet Maintenance: Pollution Prevention Practices and Opportunities by Charles G. Burke and Peggy S. Dierking, Department of Environmental Quality

Open File Report 96-11 provides an overview of pollution prevention and examples of applications in the reduction of wastes and pollutants in wastewater, spent solvents, greases, oils, vehicle fluids, solid wastes, paints, and strippers.

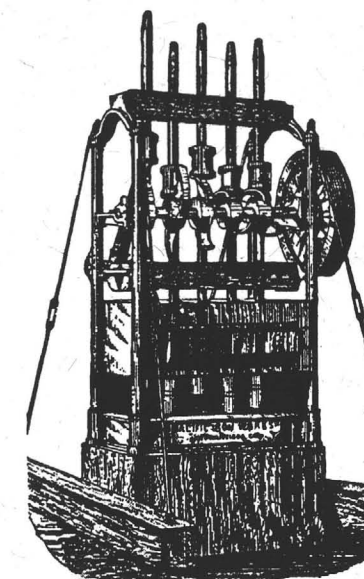
Supplying the Mining World, The Mining Equipment Manufacturers of San Francisco, 1850 -1900

by Lynn R. Bailly

ISBN 0-87026-096-0

1996, 133 pages, \$36.95

Includes a fine collection of line drawings taken from company catalogs, mining publications, and patent applications. Available at the Museum store.



raising about \$1,000,000 through a private placement to support this work.

Tin Cup Leased to Nevada Pacific

Santa Fe Pacific Mining has given an option to Nevada Pacific Mining Company on their Tin Cup property in the Secret Pass district of Mohave County. The Tin Cup is considered by Santa Fe to contain about 100,000 ounces of gold in a deposit similar to those of the San Francisco district. There has been no announcement of Nevada Pacific's plans for the property.

Oracle Ridge Shuts Down

The Oracle Ridge Mining Partners have closed their Oracle Ridge copper mine north of Tucson pending successful negotiations for the sale of the mine. Santa Catalina Mining Corporation will sell their 70 percent interest in the mine. The project has had difficulties with the milling and crushing operations.

Santa Fe Pacific Offers Arizona Properties

Santa Fe Pacific Corporation is offering four Arizona mining properties for joint venture or lease. The Courtland-Gleenson in Cochise County has a defined resource of 650,000 tons grading 3.1 percent copper and 0.12 opt gold. Lone Copper Peak, Mohave County, is a chloritic, silicified and hematitically altered area of Paleozoic carbonates and Mesozoic volcanics overlying an extensive detachment surface. The target is a leachable copper oxide deposit. Black Ranch in Mohave County is a copper/zinc -rich time horizon at the contact of fragmental rhyolite with sedimentary Precambrian rocks. Gold Basin in Mohave County is a known gold occurrence. Tertiary-aged mineralization has been emplaced into the Muddy Creek fanglomerates along the west side of the Gold Basin district.

The properties are being handled by Fred Jenkins or Nick Kohlmann in Reno at 702-858-8000.

Crane operator Art Hamrick Sr. of APS lifts the Boras Headframe and gently places it on the prepared foundation. Helping ease it into place are Director Mason Coggin, Chief Engineer Ken Phillips, and Department volunteer Keith Halsey.

Cyclopic Permitting

The Arizona Department of Environmental Quality has announced their preliminary decision to issue an individual aquifer protection permit for the Cyclopic Mine in Mohave County. Nevada Pacific Mining Company is planning a facility that will include crushing and agglomeration as well as leaching. The initial heap leach pad has been designed to accommodate 4.7 million tons. Nevada Pacific Mining plans to produce about 750,000 tons of gold ore per year for a period of 4 to 6 years.

Silver Consumption

Mine supply of silver increased in 1995, but fell significantly short of meeting fabrication demand by 154.8 million ounces. Photography, still a major consumer, used 222.1 million ounces, jewelry and silverware consumed 228.2 million ounces, while coins fell off to 22.9 million ounces. Arizona produced 194 metric tons, or 6.327 million ounces, in 1995.



ARIZONA'S ACTIVE MINES

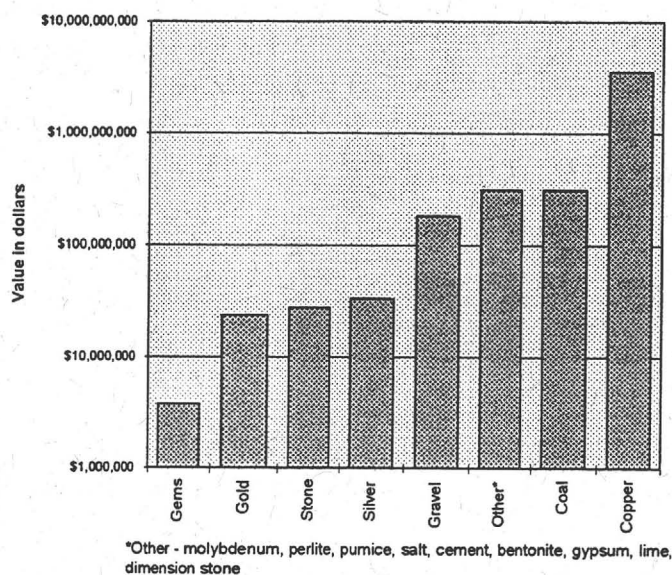
The *Directory of Active Mines in Arizona - 1996*, now available at the Department, reflects the strength and diversity of Arizona's mining industry. Fifty-seven companies, operating 108 mines are listed this year. Seventy sand and gravel operations are also listed.

Arizona again ranks first in nonfuel mineral production in the U.S. as it has for 7 of the past 8 years. The value of all mineral output was \$4.2 billion, an increase of 27 percent over 1994. Arizona also remains the leader in U.S. copper production, supplying 63 percent of the U.S. total. Arizona copper production was 2.6 billion pounds valued at \$3.6 billion.

In addition to being first in copper production, Arizona also leads in molybdenum production; is second in gemstones, silver and perlite; and fifth in pumice and iron oxide pigments.

Coal is a distant second to copper in economic importance of mineral commodities produced in the State. In 1995 Arizona's coal production was valued at \$310,000,000.

1995 Arizona Mineral Production



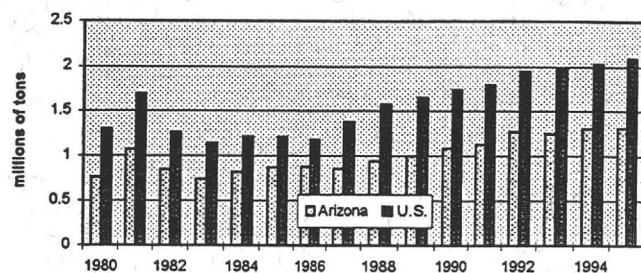
While Arizona remained 11th in gold production, the State climbed from 7th to 6th in the production of construction sand and gravel. Arizona also produces bentonite clay, cements, dimension stone, lime, gypsum, diatomite, salt cinders, smelter slag, pumice, zeolites, crushed stone, decomposed granite, flagstone, silica flux, and hydrofrac sand.

The *Directory of Active Mines* lists company name, corporate address and key personnel,

mine, mill or smelter location, and a description of the operation. Metal mines, non-metal mines (excluding sand and gravel), smelters, and company offices or plants are plotted on a 1:1,000,000 scale map that accompanies the publication. The directory is cross referenced to 29 commodities.

The directory is available at the Department offices, the Museum gift shop, by mail, and is also available in several local bookstores. The directory, including map, is \$5.00, or \$6.50 if mailed.

Copper Production in the U.S. and Arizona



Copper Prices

