

**STATE OF ARIZONA
DEPARTMENT OF MINES AND
MINERAL RESOURCES**

**69TH Annual Report
FY 2007/2008**

Cover: Copper mineralization, near Doyle Mine, La Paz County

State of Arizona

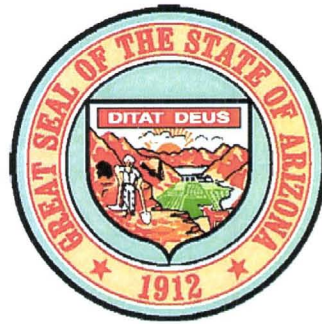
**DEPARTMENT OF MINES
AND MINERAL RESOURCES**

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Phoenix, AZ 85007-3210

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www.mines.az.gov



**69th Annual Report
Fy2007/2008**



Janet Napolitano, Governor

Mining is an indispensable industry for the economy and defense of the nation and the state. It produces materials that are vital for maintaining our standard of living, but does so with due concern for the environment, safety, and culture. The Department actively promotes education of the general public, with specific emphasis on children, about the immense benefits of minerals and their aesthetic beauty.

Table of Contents

Financial Statement	4
Personnel	4
Vision and Mission	4
Donated Funds	5
Mining Information Center	7
Mineral Resource Promotion	8
Advocate Development of Mineral Resources	9
Contracts	9
Surveys of Potential Economic Mineral Resources	10
Studies of Properties and Claims	12
Use Authority in Other Ways	12
Provide Mining Data Evaluation and Assistance	13
Conferences, Seminars, and Speaking Engagements	13
Repository of Mineral and Mining Information	15
Publications	16
Assist Other Agencies and Organizations	17
Cooperate with the Corporation Commission	19
Mining and Mineral Museum	20
Education	20
Visitation Statistics	21
Volunteer Activities	21
New Displays	22
Activities/Events	23
Board of Governors' meeting minutes	
1st Quarter	24
2nd Quarter	29
3rd Quarter	33
4th Quarter	39
Position Statement	43

Personnel

Board of Governors

Mr. P.K. Rana Medhi (2013)

Casa Grande (Chairman)

Dr. Raymond W. Grant

(2009) Chandler

Dr. Patrick F. O'Hara

(2010) Prescott

Dr. Mary M. Poulton (2011)

Tucson

Mr. Robert L. Holmes

(2012) Phoenix

Staff

Dr. Madan M. Singh

Director

Nyal Niemuth

Chief Mining Engineer

Frank S. Kimbler

Mining Engineer

Dr. Jan Rasmussen

Curator

Diane Bain

Public Information

Officer

Jacqueline Hall

Admin. Assistant

Yasmin Pedersen

Clerk/Typist

Part-Time Employees*

Liz Anderson

Ann Baker

Shirley Coté

Doug Duffy

Joanne Hesterman

Laurette Kennedy

Sandra McDonald

Tom Parks

Kim Rottas

Janice Snell

*Non-appropriated funds

2007/2008 Fiscal Year Financial Statement

Appropriated Fund #1000

Appropriation\$989,900

Expenditures.....990,494

Reverted (549)

Mines and Mineral Resources Fund #3156

Beginning Balance (7/1/2007)\$153,758

Revenue (store sales, donations,
publication sales).....291,199

Expenditures.....295,614

Ending Balance\$149,343

Vision

To be the premier resource center and repository for mining and mineral information, and to maintain a world-class museum to display the preeminent mineral collection in the State of Arizona

Mission Statement

The Department of Mines and Mineral Resources (DMMR) of the State of Arizona promotes and advocates the responsible development of mineral resources, in accordance with accepted principles of sustainable development, and provides pertinent data and support to those seeking to explore and develop mineral resources in the State of Arizona. In addition, DMMR maintains a world-class mining and mineral museum that portrays the economic and aesthetic value of minerals and educates the public with regard to the critical role of minerals and mineral resources in our society.

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Donated Funds

FY 2007/2008 Cash Donations

Donor	Amount
Arizona Public Service	375.00
Arizona Prospectors' Association	696.25
Beverly and Murry Everson	25.00
Braggin Rock Club	50.00
Donation Box	462.31
Eugene and Rosalind Meieran	25.00
First Western Resources Inc.	380.00
Friends of Arizona Mining and Mineral Museum	253.95
General Donations	123.50
Marlo and Jonathan Archer	10.00
Marilynn Steffen	50.00
Mineralogical Society of Arizona	100.00
Minquest Inc.	5,000.00
Naomi S. and Herb Duerr	500.00
Pinal Mountain Section, SME	1,000.00
Quaterra Alaska Inc	2,500.00
Roadrunners Prospectors' Club Inc.	40.00
Rock and Roll Arizona	1,200.00
Rose Mofford	100.00
Southwest Exploration Group LLC	2,500.00
Tucson Gem & Mineral Society	200.00

Friends of the Arizona Mining and Mineral Museum (FAMMM) Fiscal Year Summary

Income	\$23,647.29
Overhead Expenses	2,383.39
Museum Donations	
Food for Volunteer Dinner	416.42
Supplies for Copper Gallery	131.28
APS Outreach Grant Purchases	142.08
Phelps Dodge Outreach Grant Purchases	3,209.04
Maricopa Lapidary Society Display Cases	226.96
AZ Foundation for Resource Education Case Improvement	501.39
Mintec Case Lighting Improvements	88.02
Total Museum Expenses	\$4,715.19

Special thanks go out to our two support foundations:
 Arizona Mineral and Mining Foundation
 Friends of the Arizona Mining and Mineral Museum

In-Kind Donations

In addition to the cash donations enumerated above, the Department has received a host of other items including mineral specimens, gemstones, mining property reports, technical publications, maps, construction materials, museum displays and so forth. Thanks to these many benefactors.

We would like to express our sincere gratitude to all our 2007 – 2008 donors and hope they will continue to provide as much assistance as possible in the future.

Andy Clark
APS Hauling Services
Arizona Foundation for Resource Education
Arizona Mineral and Mining Foundation
Arizona Prospectors Association
Asarco
Beverley A. Everson
BHP Billiton Copper, Inc
Brown and Caldwell
Candice Smith
Carol Gilbert
Charles Adams
Chris Bradford
Client-Server International
Dana Slaughter Minerals
Dave Douglas
Dave Huber
David H. Thornton
David Taylor
Dick Morris
Don Soardes
Duane Silvis
Erhardt Schwartz
Ethyl/Charlie Brown
Ev Dixon
FAMMM
Friends of the Arizona Mining and Mineral
Museum
Gail Fleming
Gene and Roz Meieran
Gene Knuckey
George V Polman
Gia Firicano
Godber's Jewelry, Inc
Heather Magill
Hellmut Golde
J. David and Stephanie S Walker
Jack Camm
James A. Rice
Jan Walls

Jay and Karri Jones
Jennifer Sheperd/Susan Dalton Estate
Jim Kaufman
Jimmy and Joyce Vacek
Joe Greenthal
John Beerhalter
Ken Goaker
Ken Hawk
Larry Jensen
Lenord/Peggy Sill
Lucy/Frank Holligan
Marc Watson
Maricopa Lapidary Society
Marilyn Price
Melissa and Andy Forshee
Morris Jackson
National Gypsum
Newmont Mining Corporation
Noel and Barbara Kirby
P & H Minepro Services
Paul Johnson
Paul Voorheis
Ralph Greenthal
Rebecca Miller
Roadrunner Rockhound Club
Roy and Jerry Muchna
Rudy and Sarah Pavlik
Ruth Wirkk
Salt River Materials Group
Salvador Arellanes
Sam Nasser
Sherry and Randy McIntosh
Stan and Susan Celestian
Steve Rice
Stuart Hanah
Stuart Schmidt
Tippy and Vince Mueller
UOP LLC
Westley Church
Wickenburg Gem & Mineral Society

Statutory Duty:

The Department shall serve as a source of mining information for this state in matters relating to its mineral resources and monitor current mining and exploration activity.

Mine Information Center

The Mining Information Center manages the mine files, databases, and library collections, responds to thousands of requests for information, produces the Department's publications, maintains the DMMR website, and provides assistance and co-operation on projects with other government agencies.

It is logical that in this Information Age, a major focus of the Department is information: collecting it, analyzing and cataloging it, and disseminating it. Information is gathered by field visits (limited by lack of funds), verbal information, and research. Information is evaluated, cataloged, entered into mine files, databases, and library collections. The information is made available to members of the industry, prospectors, historians, educational institutions, students, environmentalists, other government agencies, and the general public.

DMMR makes field contacts and preliminary mineral deposit assessments and studies market trends and technology to encourage investment in prospecting, exploration, development, and production of minerals.

Industry uses these data to make discoveries and generate jobs, which ultimately adds to the State's economy, as well as national defense and homeland security. Successful projects contribute the largest benefit to the economy in general and tax revenues to state and county treasuries. Exploration projects in themselves, however, also make a significant contribution to the state's economy in the form of purchased labor, equipment, lodging, subsistence, services, supplies, utilities, and tax revenues. This is especially important in the rural communities.

Website. The Department's website, www.mines.az.gov, contains general information on the Mine Information Center and the Museum, as well as technical information and data on Arizona mineral resources, mining, prospecting, geology, and mineral rights and mining law. The site contains 72 on-line DMMR publications, news of Museum events, and maintains over 300 links to mining and mineral related sites.

The entire series of US Bureau of Mines Mineral Land Assessments (MLA) for Arizona, 84 publications, has been scanned by the Department and posted on the website's Digital Library. The Department is currently scanning and posting the USBM Reports of Investigations and Information Circulars.

Statutory Duty:

The Department shall promote the development of the mineral resources and industry of this state.



Dr. Madan M. Singh, Director, at the Department booth, PDAC 2008.

Mineral Resource Promotion

Among its other promotional activities, the Department participates in seminars and conferences to encourage exploration and investment in the Arizona mining industry.

Prospectors and Developers Association of Canada (PDAC).

DMMR was an exhibitor at this year's PDAC International Convention, Trade Show and Investors Exchange held in Toronto. This function, the 76th annual, is the premier event of its kind. Mineral exploration and mining companies from all over the world assemble here each year. A record 20,000 industry professionals attended this meeting.

Representing the Department at the convention were Dr. Madan Singh, Director and Nyal Niemuth, Chief Mining Engineer. While the main tenet of DMMR was to expose the visitors to the mineral wealth of Arizona, handouts for other Arizona organizations were also distributed. These included the Arizona Office of the Bureau of Land Management, the Arizona Department of Commerce, the Arizona Geological Survey, the Arizona Geological Society, the Arizona Mining Association, the Arizona State Land

Department, and the University of Arizona Institute for Mineral Resources.

Ore and Orogenesis Symposium, SME Session

Dr. Singh's presentation topic was *Technology Innovations in Mining – Bane or Blessing?* DMMR also had an exhibit.

Northwest Mining Association Annual Meeting

Nyal J. Niemuth was a speaker at the Annual Meeting, Exposition, and Short Courses in Spokane, Washington this year. His presentation for the technical sessions, *Arizona Mining Update*.

Mining Engineering Article

Nyal Niemuth provided the Arizona mining article for the May, 2007 Annual Mining Review issue of *Mining Engineering*.

Niemuth also wrote the Arizona review article for 2006 for the USGS Minerals Information Series, including updating the map for publication.

Advocate Development of Mineral Resources

Statutory Duty:

The Department shall advocate the development of mineral resources and the production of minerals and mineral products in this state in support of its objectives.

Section 27-108. Powers and Duties of the Director:

The director shall receive any monies to support the objectives stated in section 27-101.01 arising from grants, contracts, contributions, gratuities or reimbursements payable or distributable to this state from the United States, from state, county, municipal or other governmental sources or from private persons or corporations.

Listed below are some projects that the Department supported as part of our advocative function.

1. Exploration Trenches in Blackhawk Canyon
2. TM Project Exploratory Drilling
3. Proposed Withdrawal of Guindani Basin Lands
4. Cochise County Highway and Floodplain Department
5. Pinal County Public Works Department
6. Pankow and Sons International, LLC
7. Rinker Materials, 3 Applications
8. Myers Trucking LLC
9. Continuing an EIS for the Rosemont Mine Project

Note: Many of the presentations listed elsewhere in this report also served as contributions to DMMR's advocacy role.

Contracts

The Department did not enter into any new contracts during FY 2008. Various proposals are under consideration.

The Larry and Iris Dykers Family Foundation will fund \$60,000 for a display of a copper mine to be placed in the museum. These funds were received early in FY 2009.

The Mining Foundation of the Southwest has agreed to fund an Outreach Program, which will include the hiring of an Education Curator who will conduct education programs for schools and community colleges throughout the State, with special emphasis on southern Arizona. This will be funded at a level of \$60,000 per year for a period of three years. This program is expected to begin in the second quarter of FY 2009.

Several companies have provided funds at \$2,500 each for the scanning of some materials that are now in the Department's possession. This moves the Department towards its goal of digitizing all archived material.

Statutory Duty:

The Department shall make surveys of potential economic mineral resources and conduct field and other investigations which may interest capital in the development of the state's mineral resources.

Copper Price

2004 - \$1.34/lb

2005 - \$1.74/lb

2006 - \$3.14/lb

2007 - \$3.28/lb

Molybdenum Oxide Price

2004 - \$16.41/lb

2005 - \$31.10/lb

2006 - \$24.75/lb

2007 - \$29.91/lb

Surveys of Potential Economic Mineral Resources

Copper and Molybdenum

Copper prices that averaged a record \$3.28 per pound in 2007 resulted in a production value of \$5.5 billion in Arizona. Continued strong demand and high prices are driving exploration and development activity to the highest level in many years. In 2007, Arizona accounted for over 60 percent of the U.S. domestic copper production.

The copper industry had a \$6.8 billion direct and indirect impact on the Arizona economy in 2007 and will probably have similar high impact in 2008. Production increased only slightly in 2007, but 2008 should see a large increase. Two new projects, Mercator and Carlota, will be completed, while Safford and Pinto Valley, with minor contributions for 2007, will contribute for the whole year.

Byproducts of mining porphyry copper deposits continue to be significant, accounting for all of Arizona's gold, silver, and molybdenum production.

In March 2007 Freeport McMoRan Copper and Gold (FCX) completed its acquisition of Phelps Dodge. The \$26 billion merger created the world's largest publicly-traded copper company. Freeport McMoRan moved its headquarters from New Orleans to the former Phelps Dodge offices in Phoenix.

At Morenci, by far Arizona's largest mine, Freeport McMoRan and Sumitomo completed a \$241 million investment to build the first commercial-scale copper concentrate pressure leach operation. Two leach vessels have been installed and began commissioning during the second half of the year. Morenci resumed concentration to supply feed to the new plants during 2006 and production is ramping up to 54k tpd capacity. Production of copper cathodes will be via electrowinning solutions from the new plants and continued feed from heap and dump leaches. Production was 808 million lbs in 2007, nearly half of Arizona's total.

Asarco has continued operations of its Arizona properties under the protection of the U.S. Bankruptcy Court. Asarco owns three copper mines in Arizona, Ray, Mission, and Silver Bell, as well as copper smelting operations at Hayden.

BHP resumed mining at Pinto Valley in October 2007 following an investment of \$140 million to rehabilitate the 75k tpd sulfide concentrator. A \$300 million contract was issued to the Washington Group to finish mining the slice 6 pushback that

contains 85 million tons of mill ore at 0.41 percent Cu plus Mo and 37 million tons of 0.21 percent Cu leach material.

Mercator Minerals' Mineral Park mine produced 11 million lbs of copper from SX-EW leach operations in 2007. Construction is underway on a flotation mill that will produce copper-silver and molybdenum concentrates that will greatly increase production.

Nord began residual leaching of existing heaps at Johnson Camp in November 2007 and announced the first copper cathodes had been harvested in January 2008. Nord anticipates that copper production from newly-mined ore will add an additional 14 to 20 weeks to their forecast production schedule, subject to the timing of the receipt of an air quality permit.



Gold and Silver

Fueled by rising gold prices, interest in Arizona gold deposits was widespread and numerous companies conducted exploration drilling and other work programs.

Uranium

Uranium spot prices softened to \$70 at year's end but remained 10 times the price of 5 years ago. That strength, along with the knowledge that plants under construction in Asia will create strong future demand, supported continued high levels of exploration activity in Arizona, particularly for high grade (over 0.5 percent U_3O_8) collapse breccia pipes.

Quaterra contracted Geotech Ltd. in early 2007 to conduct the first extensive test of an airborne time-domain electromagnetic system on the Arizona

Strip to identify mineralized collapse structures. The VTEM system has identified anomalies related to collapse structures in a majority of the known breccia pipes as well as 200 additional anomalies with similar geophysical signatures.

*Geotech Ltd. flies a VTEM survey for Quaterra on the Arizona Strip project.
Courtesy: Quaterra Resources*

Coal

Peabody Energy operates the Kayenta mine through lease agreements with the Navajo Nation and the Hopi Tribe. The mine produced about 8 million tons of coal from multiple seams and splits of seams, ranging in thickness from 3 to 18 feet that is shipped via automated unit trains to the Navajo Generating Station near Page. Peabody's Arizona mines have earned numerous awards for industry-leading reclamation efforts, including being honored at the Energy Globe Awards in 2007. Peabody was second in its category and was the only mining company honored.

Industrial Minerals

In early 2007, Cemex S.A.B de C.V. made a bid for Rinker Materials. They succeeded in April by raising the offer and proceeded with the acquisition subject to requirements of the U.S. Department of Justice. In November 2007, Cemex complied with those conditions that in Arizona required the disposal of 2 quarries and 5 ready-mix concrete operations in the Flagstaff and Tucson markets. Cemex announced plans to sell these to CRH plc, an Ireland-based building materials group.

Statutory Duty

The Department shall conduct studies of the properties and claims of companies and individuals to assist in the exploration and development of mineral resources.

Cemex announced in September 2007 that it began permitting to construct a 1.9 million tpy cement plant near Seligman. The company plans to invest \$400 million in the Seligman Crossing Plant that will begin operation by 2012. The state-of-the-art facility will increase supply to meet the growing needs of the southwestern U.S.

Studies of Properties and Claims

The Department deals with the economic problems of small mines and mine owners on a daily basis. Small mine operators are assisted in a variety of ways and are a major focus of the Department. Field visits and investigations of the small mine properties themselves has been limited by the budget and lack of personnel.

Use Authority in Other Ways

This statute was added by the Legislature to ensure the Department had enough flexibility to promote the development of the mineral resources of the State, and not be limited by the more specific statutes.

Statutory Duty

The Department shall use its authority in other ways to assist in more extensive exploration and development of the mineral resources of the state.

Provide Mining Data Evaluation and Assistance

Statutory Duty:

Provide quality mining data, evaluation and assistance relating to promoting mineral development to the legislature, federal, state and local governmental agencies and the public.

Statutory Duty:

The Department shall participate in conferences, seminars, forums, speaking engagements, public news media and other functions necessary to achieve its objectives.

Information about the Department and about mining was provided to the legislators and staff as required for bills or other purposes. One request to the Senate for information on the effects of mining in the Sahuarita and Green Valley area was forwarded to the Department for response. This was prepared addressing all the areas of concern and sent back to the Senate staff to forward to the constituent. Federal agencies assisted include, among others, the Bureau of Land Management, the Forest Service, and the Bureau of Indian Affairs. Information was supplied to the Office of Strategic Planning and Budgeting (OSPB) and to the Joint Legislative Budget Committee (JLBC), especially with regard to financial matters. There were several data exchanges with the Arizona State Land Department, Department of Administration, Department of Revenue, county and city agencies, industrial development entities, the media and the public. Details of some of these activities are given elsewhere in this report. Considerable information was provided to the Arizona Capitol Times for an article that they wrote about the Department.

Conferences, Seminars, and Speaking Engagements

Examples of some of the varied types of presentations are given below:

Roadrunners Prospectors Club, Presentation Topic: *Responsible Mining in Arizona – Perception and Practice*

Maricopa Lapidary Society, Presentation Topic: *Responsible Mining in Arizona – Perception and Practice*

Coconino Community College, Presentation Topic: *Transforming Learning into Action – Sustainable Development in Mining*

Mineralogical Society of Arizona, Presentation Topic: *History of the Development of the Department of Mines and Mineral Resources*

Paradise Valley Community College, Presentation Topic: *Arizona Geology*

Minerals of Arizona Symposium, Presentation Topic: *Vision for the Museum*

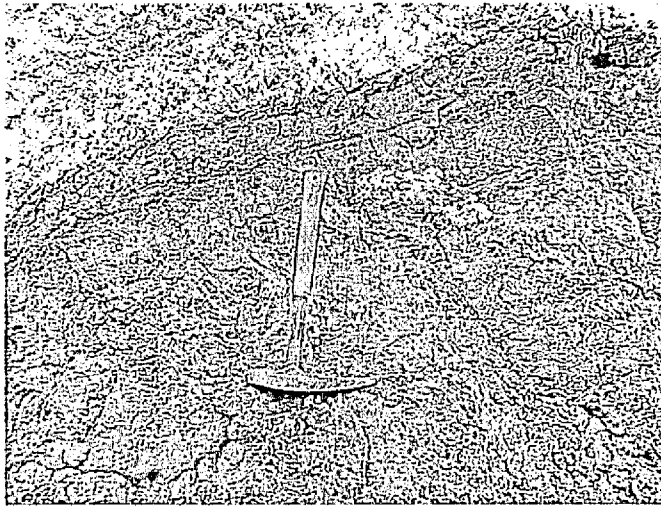
Gold Prospectors Association, Presentation Topic: *Lost Mines*

Arizona State University Class, Presentation Topic: *Coal Mining and Energy*

Minerals of Arizona Symposium, Presentation Topic: *Uranium*

Miners Creek Prospectors Club, Presentation Topic: *Responsible Mining in Arizona*

Arlington Elementary School, Presentation Topic: *Responsible Mining in Arizona*



Arizona Mineralogical Society,
Presentation Topic: *Gold Deposits Types*

Leaverites' Gem Club,
Presentation Topic: *Internet Tools for Field Mineral Collectors*

Sun City Lapidary Club,
Presentation Topic: *Museum Plans*

Arizona Prospectors Association, Presentation Topic: *South African Gold Mines*

Black Canyon City Community Center, Presentation Topic: *The Museum*

The Verdstone BVO mine, Yuma County. An example of an epithermal, low-sulfidation deposit

Note: Talks to some of the smaller groups, apart from its educational value, encourages individual participation in prospecting and in the minerals industry of the State.

Repository of Mineral & Mining Information

Statutory Duty:

Maintain a repository of mineral and mining information, including databases, books, periodicals, individual mine files, mine map repository files, mining district data and an archive of mine data

DMMR's library includes the Arizona mine file collection, reference library, map archive, and photo collection.

Mine Files and Special Collections

The mine file collection consists of the AzMILS database with over 11,000 records and over 5,000 hard copy files. The files contain information about mine location, mineral content, size, assay and drill data, technical and economic production potential and bibliographies. This data is unique and by far the most-used portion of the DMMR library. Newly developed information is added and additional files/records are created as new mineral occurrences are documented.

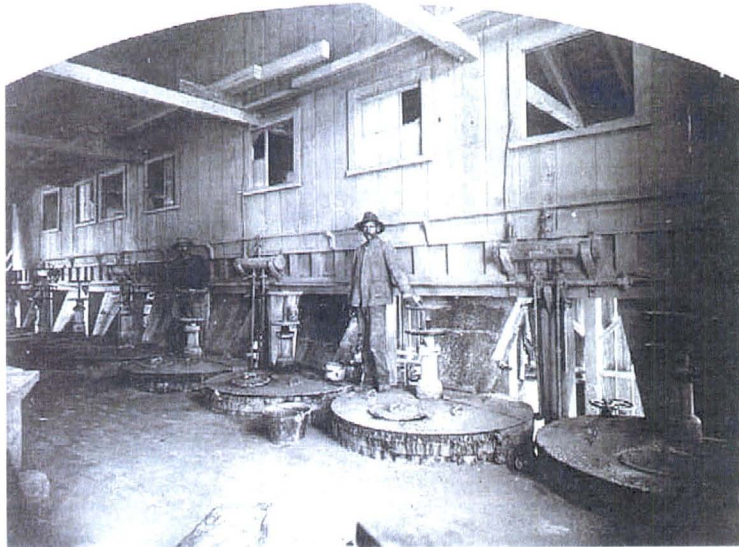
Map Archive

The Department has over 1,700 cataloged mine maps, 3,000 cataloged microfiche maps, over 5,000 mine maps awaiting cataloging, and over 5,000 published mineral resource, geology, and topographic maps.

Photo Archives

Thanks to volunteers, an estimated 9,000 photos, negatives, and slides have been cataloged and scanned into digital format. The images were photocopied to relieve use of the originals by the public and eventually to provide widespread access via the Department website.

Additionally, the Department has added over 4,000 digital images to the photo archives in recent years.

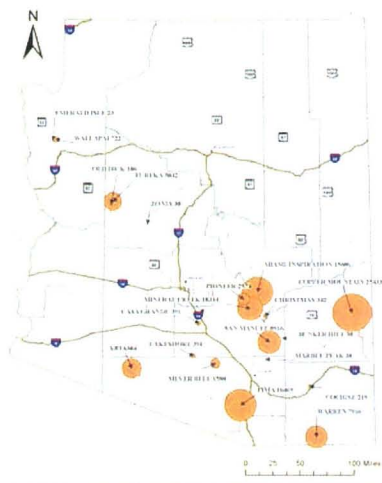


*Washoe pans,
Silver King, circa 1880*

Statutory Duty:

The Department shall publish and disseminate information and data necessary or advisable to attain its objectives

Cumulative Copper Production



From: *Arizona's Metallic Resources – Trends and Opportunities, 2008*

Publications

Newsletters

Arizona Mineral Resource, No. 45, - Directory of Active Mines released; Peabody honored for reclamation

Arizona Mineral Resource, No. 46 – A commentary on the U.S. Mining Law; *Checklist of Arizona Minerals* OFR released; Museum requests assistance for display cases

Arizona Mineral Resource, No. 47 – The energy scene - an Arizona perspective, Merger bill voted down, Record Arizona mineral production, Plans for the mining and mineral museum

Arizona Mineral Resource, No. 48 – Renewable Energy - Pros and Cons, Blind Uranium Discovery; Scanning support sought

Directory

D51 - Directory of Active Mines in Arizona 2007

by N. Niemuth, D. Bain, and F. Kimbler, 2007. The directory lists operating company, address, website, phone, key personnel, number of employees, mine name, location, and a description of the operation. Includes a 1:1,000,000 scale color map showing the locations of hard rock and aggregate mines. 34 p.

Circulars

C126 Guide to Online Land Status Records 2007. A guide to the online availability of ownership records for mining claims and other lands. Includes records of the Bureau of Land Management, State Land Department, and County Recorder Offices in Arizona.

C127 Arizona Gem and Mineral Shows 2008 - 2009

Includes date, location, sponsoring group, contact person.

C128 Arizona Earth Science Clubs 2008 - 2009

Includes rockhound, lapidary, and prospecting organizations.

C129 Arizona Mining Update 2007 by N. Niemuth, 2008. A review of mining activity in Arizona during 2007.

Open File Reports

OFR07-25 *Checklist of Arizona Minerals* by Dr. Raymond Grant, 2007. Lists all 861 minerals that occur in Arizona including the 61 identified since publication of the 3rd edition of *Mineralogy of Arizona*. 57 p.

OFR08-26 *Arizona's Metallic Resources - Trends and Opportunities* by Nyal Niemuth, 2008. Special for the Prospectors and Developers Association of Canada (PDAC) convention. Map Scale 1:3,000,000. Includes publications lists and other information from cooperating organizations. 26 p.

Annual Report

68th Annual Report, FY 2006/2007

Assist Other Agencies and Organizations

Statutory Duties

The Department shall assist federal, state and local governmental agencies and instrumentalities, economic development organizations and gem and mineral organizations.

The Department assists other agencies and various groups almost on a daily basis; hence the specific items for each agency are too numerous to list. The help provided ranges widely, from providing information, serving on committees, presenting materials, doing research on specific topics, to meeting with them for discussions on issues relating to the mining and minerals industries. Examples of presentations made to groups and some of the specific items discussed with the Corporation Commission and other law enforcement agencies are mentioned elsewhere in this report.

Meetings with the staff of the Arizona Geological Survey are held frequently, resulting in arrangements to sell each other's publications, sharing office space, providing technical information on a range of projects, and sharing booths and staffs at meetings. Discussions have been held on a Memorandum of Understanding, but no documentation has been produced.

Giving background information and interviews with reporters of the Arizona Republic, Tucson Daily Star, and other newspapers and journals, such as the Arizona Capitol Times, are common. With mining being in the news over the last year, calls to DMMR for data have been frequent. The high prices of metals, uranium, and industrial minerals (such as cement and gypsum) have created the buzz.

Throughout the year the Department provides information to the county sheriffs' offices on location, condition, and depth of mine shafts that are in areas involved in searches for bodies, lost children, or stolen property.

The above presents a sampling of the interaction of DMMR with a few agencies. The record of cooperative efforts with other departments and organizations is fairly extensive, so only a partial listing of these establishments is given below:

Assist Other Agencies (continued)

Arizona is the #1 copper producer in the U.S.!

Arizona is the #2 molybdenum producer in the U.S.!

Arizona is the #1 pumice producer in the U.S.

Arizona is the #2 gemstone producer in the U.S.!

Arizona is the #3 perlite producer in the U.S.!

Arizona is the #3 sand and gravel producer in the U.S.!

AMIGOS

Arizona Board of Technical Registration
Arizona Corporation Commission
Arizona Department of Commerce
Arizona Department of Economic Security
Arizona Department of Environmental Quality
Arizona Geological Survey
Arizona's Governor's Office
Arizona House of Representatives
Arizona Library, Archives and Public Records
Arizona State Mine Inspector's Office
Arizona Mining Association
Arizona Republic
Arizona Rock Products Association
Arizona Senate
Arizona State Land Department
Arizona State Parks, State Historic Preservation Office
Arizona State University
Arizona Water Resources
California Division of Mines and Geology
Desert Caballeros Western Museum
Gila County Sheriff's Office
Maricopa County Sheriff's Office
Mohave County Sheriff's Office
Navajo Nation
New Mexico, State of
New Mexico Bureau of Geology and Mineral Resources
Northern Arizona, Museum of
Northern Arizona University
Phoenix Police Department
Pima County Sheriff's Office
Pinal County Sheriff's Office
San Carlos Apache Nation
Society for Mining, Metallurgy and Exploration, Inc.
Tohono O'Odham Nation
U.S. Forest Service
U.S. Bureau of Indian Affairs
U.S. Bureau of Land Management
U.S. Federal Bureau of Investigation
U.S. Geological Survey
U.S. Mine Safety and Health Administration
University of Arizona
Utah Department of Natural Resources

Cooperate with Corporation Commission and Other Law Enforcement Agencies

Statutory Duty:

Cooperate with the Corporation Commission in its investigations, and administration of laws relating to the sale of mining securities.

Cinders to Gold

The Department worked with the Arizona Corporation Commission in an investigation of a company originally formed to remediate soil for agricultural purposes, who later claimed it had acquired proprietary rights to a nanotechnology process to concentrate gold and platinum from cinders. In August 2007 the Corporation Commission found individuals in the company responsible for defrauding investors of \$10.9 million. Sales representatives, who earned 25 percent commissions, lured more than 200 investors from 20 states.

Additional Areas of Co-operation

There are other on-going investigations in which the Department is cooperating, but cannot be made public until the cases are concluded.

Quail Placers and other similar black sand placer claims in Pinal County are being touted as a major source of precious metals. The Quail Placers were involved in a former action by the Arizona Attorney General's office. Recent offers have targeted: owners of private companies, short-term collateral for loans, life insurance companies, and individual investors.

A limited liability company has been seeking loans from officers of large banks to develop a precious metal placer deposit claimed by the LLC to contain \$250 billion in gold from a deposit within 50 feet of the surface within a square mile.

Mining and Mineral Museum

Statutory Duty:

The Department shall maintain a mining and mineral museum as the state depository for collecting, cataloging and displaying mining artifacts and specimens of various ores, gemstones, lapidary material and other valuable mineral specimens.

Museum Visitation: **48,501** in FY 2007/8

This year over **25,000** school children toured the Museum.

The Museum addresses the needs of many people – hobbyists, prospectors, educators, children, rockhounds, lapidarists, mining industry professionals, and the general public – through the education program, museum exhibits, and special events.

The message of the Museum is that civilization depends on minerals that must be mined and that Arizona is a major mining state.

Education

School Tours

Tours and classes for students educate the public about the use and importance of minerals.

The museum has developed a comprehensive minerals education program that reaches thousands of Arizona school children. During 30-minute programs, children are introduced to the beauty and utility of minerals – themes that continue during their activities in the exhibit halls. In FY 2007/2008, **25,527** students visited the Museum for a program.



*Dr. Jan Rasmussen
became Curator of the
Museum in August.*

Outreach Program

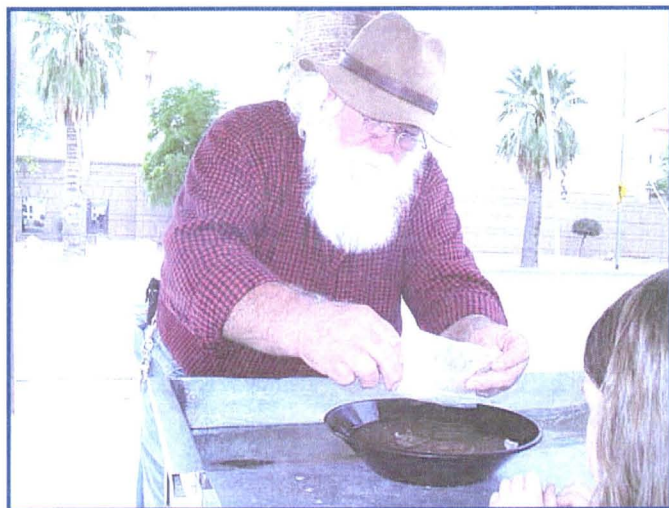
In FY 2007/2008 the Museum Outreach Program visited 25 Arizona schools that, for financial or other reasons, could not come to the Museum. This program, like the in-house programs, emphasizes both the usefulness and aesthetic appeal of minerals.

Lapidary Classes

The Museum contains an excellent lapidary shop, with facilities for cutting, faceting, polishing, and sphere-making. A variety of lapidary classes are offered including faceting, silversmithing, lost wax casting, and wire wrapping.

Teacher Workshops

Throughout the year free workshops are offered on a variety of subjects, such as rock identification, mineral identification, uses of rocks and minerals, crystals and crystal forms. These classes are available to public school, charter, and home school teachers.



Teaching children how to pan for gold

Family Day/Prospectors Day

These twice-yearly Museum functions have proven immensely popular. Events include gold panning, lapidary demonstrations, jewelry-making, and metal detecting.

Attendees – FY 2007/8 – **1,242**

Teachers Kits

Every Arizona classroom teacher may receive a free Teachers' Kit containing samples of rocks and minerals, a teacher's manual, posters, and other educational aids. Volunteers assemble the kits, using donated material that they have sized and numbered. The Museum has given out over 11,500 kits to Arizona teachers since the program started.

Annual Museum Visitation

For fiscal year 2007-2008

48,501

An increase of almost 9,000!



New Exhibits

Volunteers

Internal Exhibits

Kids' Corner
Peggy Sills Lapidary Art
Jerry Muchna's Cufflinks Donation
First draft panels in Copper Gallery



Volunteers at Family Day

External Exhibits

Gold Expo
State Fair Exhibit
Tucson Gem & Mineral Show
Wickenburg Gem & Mineral Show
Apache Junction Gem & Mineral Show

Last year volunteers dedicated
8,828
hours to the Department!

VOLUNTEER ACTIVITIES

- | | |
|---|--|
| <input type="checkbox"/> Data entry | <input type="checkbox"/> Catalog the photo collection |
| <input type="checkbox"/> Greet visitors | <input type="checkbox"/> Serve as docents |
| <input type="checkbox"/> Create jewelry to sell in the Museum gift shop | <input type="checkbox"/> Assemble Treasure Bags to sell in the gift shop |
| <input type="checkbox"/> Construct outside displays | <input type="checkbox"/> Prepare samples for Teachers' Kits |
| <input type="checkbox"/> Repair cases and other items | <input type="checkbox"/> Assemble Teachers' Kits |
| <input type="checkbox"/> Catalog technical data for Mine Information Center | <input type="checkbox"/> Catalog specimens for the Museum collection |
| <input type="checkbox"/> Teach silversmithing and lapidary arts | <input type="checkbox"/> Photograph the Museum collection |
| <input type="checkbox"/> Develop and install displays | <input type="checkbox"/> Work in the gift shop |
| <input type="checkbox"/> Outreach programs to schools | <input type="checkbox"/> Family Day activities |
| <input type="checkbox"/> General painting and construction tasks | <input type="checkbox"/> Cut and polish lapidary material |
| <input type="checkbox"/> Digitize the photo collection | <input type="checkbox"/> Work in gift shop |

16th Annual Minerals of Arizona Symposium

The symposium, sponsored by the Arizona Mineral and Mining Museum Foundation and the DMMR, provides a forum for professionals and amateurs to share their knowledge of mineral occurrences, habit, and locations.

Each year mineralogists gather for the presentations and field trips. There were 85 attendees at this year's event.

Activities/Events

Oct. 27, Family Day – 671 attendees

Jan. 4-6, Booth at A.L. Flagg Show, Mesa Community College

Jan. 12, Clean up day at Museum, clean the storage yard

Feb. 14-17, Booth at Tucson Gem and Mineral Show

Feb. 23, Prospectors Day – 571 participants

Mar. 10, 16th Annual Mineral Symposium

April 12, Volunteer dinner



BOARD OF GOVERNORS MEETING

Tuesday, 27 November 2007

Meeting Minutes

for

First Quarter FY 2008 (01 July 2007 through 30 September 2007)

Present: Mr. P.K. Rana Medhi, Chair, Dr. Raymond W. Grant, Vice-Chair,
Dr. Patrick F O'Hara, Secretary, Dr. Mary M. Poulton, Mr. Robert L. Holmes
Absent: Dr. Madan M. Singh, Director (hospitalized)
Staff: Mr. Nyal J. Niemuth, Chief Mining Engineer; Dr. Jan C. Rasmussen, Museum
Curator; Ms. Jacqueline D. Hall, Transcriber
Visitors: Ms. Genie Howell, Ms. Cynthia Grant, Mr. Charles Bentzen

The meeting was called to order by Chair Medhi at 10.05 AM. Niemuth presented the report in Singh's absence.

Upon motion by Grant, seconded by Poulton, the minutes of the meeting held on 09 August 2007 were approved as submitted.

Director's Report

Budget

The final budget that was approved for the Department was \$950,800.

The Breakdown for the Budget (Appropriated Funds) is as follows:

Rent	\$447,300 (47.1%)
Personnel Services (Salaries)	\$330,900
Employee Related Expenses (ERE)	\$ 93,700
Risk Management	\$ 5,500
Central Services Bureau – ADOA	\$ 3,220
Telephone – Accenture	\$ 8,400
Mailroom – ADOA	\$ 2,400
Attorney General Staff Adjustment	\$ 100
Total Committed	\$891,520 (93.8%)
ADT Security	\$ 113
Travel – In-State	\$ 4,000
Travel – Out-of-State	\$ 7,000
Total Expenses	\$902,633
Balance remaining for Operating Expenses	<u>\$ 48,280</u>

The expenses incurred during the first quarter were \$264,687. This includes only one fourth of the rent that is due for the year. This year we were not able to pay half the rent, as we usually do.

Non-Appropriated Funds:

Balance Carryover from FY 2007	\$150,703
Revenue – 1 st Quarter	\$ 38,243
Total Available	\$188,946

Total Expenses	\$ 56,719
Ending Balance	\$132,227

Building

Mr. Joseph Cole, Manager of Tenant Improvements was here on 09 July to look over the areas that required improvements. His estimates were:

Auditorium	\$1,245,000
Main Floor Engineering Study	\$ 55,000
Electrical Outlets in Museum Floor	\$ 26,400
Mezzanine Renovation for Display Purposes	\$ 200,000
Renovation of Storage for Offices	\$ 65,000
Total	\$1,589,600

Staff

Dr. Jan C Rasmussen joined the Museum as Curator on 13 August.

Meetings

On 03 July Singh visited with Dr. Robert J Kamilli at the USGS offices in Tucson, and toured their facilities. Later Singh attended a Geological Society meeting at which Representative Gabrielle Giffords gave a talk. He briefly met with her and her staff after the meeting.

Singh attended the last meeting of the Committee on Assessing the Need for a Defense Stockpile (CANDS) on 16 – 17 July.

Along with Niemuth, Singh met with Mr. Al Burch and his staff at the Bureau of Land Management (BLM) on 19 July.

On 23 July two members of the Mine Inspector's staff came to the office to get information. Niemuth and Kimbler helped them.

Singh met with Mr. Joe Hart, State Mine Inspector, on 25 July and discussed cooperation on the "Arizona Mining Summit." He stated that he would take it from here and he would handle it. He did not need our help.

Mr. Art Smith is the new DMMR analyst; he came to the office, along with Mr. Eric Jorgensen, his reviewer, to get acquainted and understand the operation of the Department on 26 July.

Mr. John L Alden, Mine Engineering Manager of Silver Bell came to the office on Saturday, 28 July.

"Transforming Learning into Action – Sustainable Initiatives in Higher Education" was held at Coconino College in Flagstaff on 16 – 17 August. Singh attended and gave a presentation.

Singh made a presentation to Representative Gabrielle Giffords at her Tucson office on 22 August, covering mine reclamation practices, the Mining Law of 1872, the need for students and faculty at the University of Arizona and the mining industry in general. Dr. Mary M Poulton, Dr. Robert J Kamilli, Dr. Eric Seedorff, Mr. Keith R Long, and a member of Giffords staff were in attendance. A CD of the powerpoint slides was sent to Giffords' office on 28 August at her request.

A meeting between Mr. James J Apperson, Director, OSPB, Mr. Marcel Benberou, Assistant Director, OSPB, and Singh was held to discuss operating and capital budgets on 12 September.

A meeting was held with Mr. Patrick Makin, DMMR Budget Analyst on 13 September, about the budget submission for FY 2009.

Ms. Kay M Sever, President, Optimiz Consulting, LLC met with Niemuth, Rasmussen, Bain and Singh to discuss the Strategic Plan on 17 September. Based on the meeting she prepared a set of slides for presentation to the Board for approval.

Singh went to the house of Mrs. Marnie Sell on 26 September to view the documents that her husband, James, had collected during his career. There were 8 file cabinets. She will sort through them and let us pick them up in a couple of months.

Presentations

Singh:

1. 19 Jul 2007 Roadrunners Prospectors Club, "Responsible Mining in Arizona – Perception and Practice," Loma Linda School, Phoenix – 70 persons
2. 06 Aug 2007 Maricopa Lapidary Society, "Responsible Mining in Arizona," DMMR Building – 35 persons
3. 17 Aug 2007 "Transforming Learning into Action – Sustainable Development in Mining – Where are We?" Coconino Community College, Flagstaff – 25 persons
4. 22 Aug 2007 "Briefing for Congresswoman Gabrielle Giffords," 1661 N Swan Road, Suite 112, Tucson – 6 persons
5. 28 Sep 2007 "Technology Innovations in Mining – Bane or Blessing?" Ores and Orogenesis Symposium, SME Session – ~30 persons

Niemuth:

14 Sep 2007 "History of the Development of the Department of Mines and Mineral Resources," Mineralogical Society of Arizona – 30 persons

Field Trip

On 23 August, Singh visited the Hardshell property near Patagonia (Santa Cruz county) along with Mr. Fleetwood R Koutz (Hardshell geologist), Mr. Richard Ahern (Coronado National Forest), Mr. William J Daffron, Ms Ann D Pattison, Mr. William Scott, and Mr. Jeffrey Cornoyer (all from the Rosemont project).

Publications

There were 4 publications during the quarter:

68th Annual Report, FY 2007
Arizona Mineral Resource, Newsletter No. 45
Directory of Active Mines, 2007, Directory 51
Guide to Online Records, Circular 126

Press Releases

New Museum Curator – Dr Jan C Rasmussen

Open-File Report 7-24, *Checklist of Arizona Minerals*, edited by Dr. Ray Grant

Directory of Active Mines
Family Day – 27 October 2007

Website

The website is continually being updated and improved.

Total number of hits during the quarter: 565,797

Number of unique hits (IP addresses): 26,073

Museum Visitors

Total number of visitors during the quarter: 4,415

Number of students during the quarter: 2,504

Number of teacher's kits distributed: 113

Volunteer hours during the quarter: 1862.25

Organization Meetings

20 Sep 2007 – SME Maricopa Section – Michael Eamon, General Manager, BHP Billiton spoke about "Pinto Valley Mine Restart." Niemuth, Rasmussen, Kimbler, and Singh attended.

26 – 29 Sep 2007 – "Ores and Orogenesis" meeting was held in Tucson. Rasmussen, Niemuth, and Singh attended all 4 days; Bain and Kimbler attended 2 days each. DMMR had a booth at the meeting. Singh made a presentation.

Activities for Ms Diane R Bain

Bain attended the Cabinet meeting on 18 July in place of Singh who was traveling back from the CANDS meeting.

Bain attended to 496 phone calls, 52 visitors, 124 letters and e-mails, and 12 mineral identifications.

Bain worked on the Annual Report, the Active Mines Directory, and the Ores symposium.

Bain also prepared posters, along with Niemuth, for the "Ores and Orogenesis" Symposium, updated the media mailing list, proof-read the Open-File Report prepared by Grant on the *Checklist of Arizona Minerals*, assisted in training the new clerk-typist, and put labels on Museum brochures.

Comments on the Report

Grant emphasized the need for pushing the building improvements. Niemuth responded that if enough funds for the plans are approved we can get the plans prepared and then seek further funds.

Holmes enquired about possible reduction in the rent amount. Poulton commended the staff for improvements in the Museum.

Chief Mining Engineer's Report

Niemuth reviewed the activity report and the highlights of the industry report that had been submitted to the Board. He outlined new acquisitions and oversight of current suspicious mining activities.

He outlined the help provided to industry and finally getting the Active Mines Directory into print. This is the most comprehensive directory to date.

Several improvements were made to the computer backup system, with some help from Tom Parks.

Comments on the Report

Niemuth mentioned that we are now scanning copies of reports and maps for clients, which allows DMMR to save digital copies. Poulton offered junior students to do some archiving as part of their senior design projects.

Museum Curator's Report

Rasmussen had compiled a statistical report on the various activities of the museum which was submitted to the Board.

Gift shop sales are improving. A letter will be sent out to a number of companies and individuals requesting donations.

Poulton enquired if there was contact with the Arizona Science Center in Tucson. Rasmussen stated she had visited it.

Shirley Coté is now full time on the Museum staff.

Strategic Plan

The plan prepared with Ms. Kay Sever's help was presented. Singh will send copies of the same to all Board members.

MOU with the Arizona Geological Survey

A meeting was held between Dr. M. Lee Allison of the Arizona Geological Survey and Niemuth and Singh of DMMR. Several areas of cooperation were discussed. There is some concern about mineral resources since the term appears in the Geological Survey statute. We will try to clear up the responsibilities there.

Position Statement

The staff at DMMR would like a clear policy statement on what the Department can undertake. When the need arises there is generally not enough time to get the Board's opinion. Niemuth stated he would e-mail the policy statement that is now available. Poulton volunteered to work on the policy.

Public Comments

Ms. Howell wanted to know when Board elections are held. Medhi replied that is in January.

Next Meeting

The date for the next meeting was set on Tuesday, 29 January 2008, at 10.00 AM.

The meeting was adjourned at 12.08 PM.

BOARD OF GOVERNORS MEETING

Tuesday, 29 January 2008

Meeting Minutes

for

Second Quarter FY 2008 (01 October 2007 through 31 December 2007)

Present: Mr. P.K. Rana Medhi, Chair, Dr. Raymond W. Grant, Dr. Patrick F O'Hara,
Mr. Robert L. Holmes
Absent: Dr. Mary M. Poulton, Ms. Jacqueline D. Hall, Transcriber
Staff: Dr. Madan M. Singh, Director; Mr. Nyal J. Niemuth, Chief Mining Engineer; Dr. Jan
C. Rasmussen, Museum Curator.
Visitors: Dr. M. Lee Allison, Director, Arizona Geological Survey

The meeting was called to order by Chair Medhi at 10.00 AM.

Upon motion by Grant, seconded by Holmes, the minutes of the meeting held on 27 November 2007 were approved as submitted.

Director's Report

Budget

Appropriated Funds:

The final budget that was approved for the Department was \$950,800.

Expenses for the Second Quarter were \$221,315

Non-Appropriated Funds:

Revenues for the Second Quarter were \$70,566

Expenses for the Second Quarter were \$65,381

Staff

Mr. Christopher Roy left as Tour Guide on 31 October 2007.

Meetings

Singh attended a meeting of the National Humanities Institute at the Pueblo Grande Museum to explore the possibility of grants from that organization or the Arizona Arts Institute.

Kimbler and Singh attended a workshop by the Toronto Stock Exchange about the procedures for getting funds and getting listed on it or the Toronto Venture Exchange.

Singh attended a Budget meeting with Mr. Benberou and Mr. Thomas Soteros-McNamara of the Office of Budget and Strategic Planning (OSPB).

Ms. Tracy Hannah is the new liaison with the Governor's office for DMMR. Singh met with her on 05 October and explained the workings of the Department and the budget requirements.

Mr. Grant Buma, who works for the Colorado River Indians came to discuss his work on their placer gold property evaluation. He met with Niemuth and Singh and reviewed how DMMR might help.

Bill Coates of the *Capitol Times* came for an interview with Singh on the new Mining Law bill (HR 2262). He came again on 08 November for photographs and further questions.

On 29 November Ms. Catherine Liu and Dr. Daniel von Dincklage from Eisenerz and Rohstaff GmbH came to the Department; Niemuth attended on them; the Chinese are interested in acquiring properties in the US.

Mr. William Williams of Freeport-McMoRan Copper and Gold visited on the same day; Bain showed him the facilities and the Museum, including the Copper Gallery. She sent him a CD with the AzMILS data and gave him a copy of the Active Mines Directory.

On 17 December a number of visitors from the Democratic Republic of the Congo, employees of Freeport-McMoRan mostly engaged in mineral processing, came to the Museum. Rasmussen escorted them through the facility; Singh met with them. They were escorted by Mr. Ian Carter, International Process Leader with Freeport.

Support

Mr. John Rickus, President of Resolution Copper, called to thank Singh for his offer to help on the Land Exchange hearings in the House of Representatives; Rep. Raul Grijalva chairs the committee.

Training

Singh attended the Mine Safety Training given by the State Mine Inspector's Office, along with a number of the volunteers that work in the Museum – Charles Connell, Everette Dixon, Jerry Ohlund, Steve Sharley, Jeremy Pettinguil, Morris Jackson, Stuart Harrah, Paul Huber, John Hollas.

Presentations

Kimble gave a talk to the Gold Prospector's Association of Phoenix on 18 September 2007, on "Mojave Desert River of Gold Kokoweef."

Publications

Checklist of Arizona Minerals, by Ray Grant; released in October

Arizona Mineral Resource, No. 46

Revised and Released Circular 92, *Arizona Rockhound Information*

Press Releases

Press release for *Checklist of Arizona Minerals*

Advertisement in Arizona Mining Association's *Southwest Contractor*

Website

The website is continually being updated and improved.

Total number of hits during the quarter: 582,678

Number of unique hits (IP addresses): 26,973

Museum Visitors

Total number of visitors during the quarter: 5,801

Number of students during the quarter: 6,327

Number of teacher's kits distributed: 212

Volunteer hours during the quarter: 1,994

Prospector's Day was held at the Museum on 27 October; 671 persons attended.

Organization Meetings

18 October 2007 – SME Maricopa Section; Dr. John C Wilmot, Freeport-McMoRan Copper & Gold, Inc., gave a talk on "Sulfate-Based Process Options to Treat Copper Sulfide Concentrates." Niemuth, Rasmussen, Kimbler and Singh attended.

Human Resources of ADOA held a meeting to discuss new programs that were being initiated on 01 November, to which Singh went.

20 November 2007 – SME Maricopa Section; Mr. Richard Rhoades of ASARCO spoke about "Asarco Ray Operations Overview." Niemuth, Rasmussen, Kimbler and Singh attended.

01 December 2007 – Rasmussen and Singh went to the Mining Hall of Fame of the Southwest dinner in Tucson; Medhi also attended.

Singh was at the Arizona Conference Board Meeting on 02 December.

03 December 2007 – Arizona Conference attended by Niemuth, Rasmussen and Singh.

Singh attended the EEO Orientation by the Governor's office of Equal Employment Opportunity on 12 December.

Donations to the Mine Information Center

Received and inventoried by Bain; some material and a photograph of Mr. Frank Knight, a past director of DMMR by Robert Knight, his grandson; stock certificates and maps of old mines.

Activities for Ms Diane R Bain

Bain responded to visitors, e-mails, letter and phone calls. She volunteered on Prospector's Day at the Museum and produced a CD for the same. She also volunteered for Gold Expo on 10 November. She updated the DMMR mail database and created a deed for a legal transfer of ownership of gifts received by the Department. She made preliminary arrangements for PDAC.

Mr. Eric Johnson of the Pima County Sheriff's Office came to enquire about abandoned mines in the Mt. Lemon area. They were looking for a missing person and the State Mine Inspector's office referred him to DMMR. Bain gave him the required information.

Discussion

There were no comments on the Director's report.

Chief Mining Engineer's Report

Updated the web and requested GITA to help accommodate online sales of publications; solicited donations for scanning data; responded to enquiries on suspicious mining activities; kept abreast of industry progress; set up touch screen computer in museum; was contacted by Updike family about loan of diorama, but no documentation to that effect has been received.

Kimbler helped a number of clients and setup the uranium ore display; worked with State Mine Inspector's office on abandoned mine locations.

Discussion

Clients are encouraged to get their data digitally; this helps to have more data archived in digital format. O'Hara suggested having all data in one file organized geographically; it is proposed to store data in a relational database for easy retrieval.

Museum Curator's Report

Rasmussen presented a detailed statistical report on museum activities.

Discussion

Rasmussen attended a number of meetings and made a number of contacts. She has spoken to Jim Bob Moffitt of Freeport-McMoRan and with Dennis Washington of Washington International. Museum activities are improving.

Discussion of HB 2584 by Dr. M. Lee Allison

The bill mandated that the Department of Mines and Mineral Resources be merged into the Arizona Geological Survey as a division of the latter. Dr. Allison made a presentation to the Board about his plans for the merged departments. He expected some administrative savings financially. The physical location of the two departments would not change. The museum would probably be placed under the Survey's outreach section. He expected to appoint two panels, one to review the way the mining and mineral resources division would work and the other to recommend improvements for the museum.

Grant asked some questions on structure; this would be determined later. O'Hara expressed concerns about the lack of a Board to serve as a shield against political pressures on mining.

Public Comments

None

Next Meeting

The date for the next meeting was set on Thursday, 17 April 2008, at 10.00 AM.

The meeting was adjourned at 2.10 PM.

BOARD OF GOVERNORS MEETING

Thursday, 17 April 2008

Meeting Minutes

for

Third Quarter FY 2008 (01 January 2008 through 31 March 2008)

Present: Mr. P.K. Rana Medhi, Chair, Dr. Patrick F O'Hara, Vice-Chair,
Dr. Mary M. Poulton, Secretary, Mr. Robert L. Holmes, Member, Dr. Raymond W.
Grant, Member

Staff: Dr. Madan M. Singh, Director; Mr. Nyal J. Niemuth, Chief Mining Engineer; Dr. Jan C.
Rasmussen, Museum Curator; Ms. Jacqueline D. Hall, Transcriber

Visitors: None

The meeting was called to order by Chair Medhi at 10.00 AM.

Upon motion by Grant, seconded by O'Hara, the minutes of the meeting held on 29 January 2008 were approved as submitted by e-mail.

The minutes of the Special Meeting held on 18 March 2008 were approved with corrections; moved by O'Hara and seconded by Grant.

Director's Report

Budget

Appropriated Funds

Total Annual Budget	\$950,800
Expenses through the Third Quarter	<u>\$709,216</u>
Balance	\$241,584

The rent for the 4th Quarter of \$111,825 is to be paid from this amount. To the best of our knowledge the budget will be cut by \$25,000 for FY 2008.

Non-Appropriated Funds

Total Available Funds	\$342,154
Expenses through Third Quarter	<u>\$222,885</u>
Balance	\$119,269

Singh testified at the Appropriations Committee meeting for the Senate and attended the House Appropriation meetings. This resulted in some adjustment to the proposed cuts for DMMR.

Staff

The Clerk-Typist will leave on 16 May. It is not clear if she can be replaced with the hiring freeze.

Doug Duffy, who has been running the Lapidary Shop, will be retiring at the end of June. Again, it is not known whether we can hire someone else in his place.

Merger with Arizona Geological Survey

Late in the afternoon of 17 January 2008, HB 2584 was filed by Representative Theresa Ulmer of Yuma. This bill mandated that the Department of Mines and Mineral Resources (DMMR) be merged into the Arizona Geological Survey (AZGS). Consultation with many of the stakeholders resulted in the conclusion that this was not in the best interests of the mining industry.

On 23 January Dr. Lee Allison came to the Department to meet with the staff and to explain his view of the merger. He also made a presentation to the Board at the Board meeting on 29 January.

Meetings in this connection were held with some legislators, including two meetings with the sponsor. Presentations were also made to the Mining Foundation of the Southwest (MFSW) at their Annual meeting and the SME Section in Tucson, both on 13 February. Presentations by both Dr. Allison and Singh were made to the AIPG (American Institute of Petroleum Geologists) Board on 16 February. Medhi attended that meeting.

HB 2584 was heard by the House Environment Committee on 23 February. The bill was voted down 4 to 3, with one member voting present and two absent.

Meetings

Rasmussen and Singh attended the AFRE Reception to find out about their new initiatives and directions on 08 January. They also attended the FAMMM Board meeting.

Mr. Donald Ratcliff came to see Singh on 28 February to see if he could take the two bronze statutes on loan to the Museum for the original owner. He was going to contact Freeport McMoRan about those.

Mr. Bryan Beaulieu came to see Singh about the contractual arrangements for the Great Globe project. Rasmussen attended the meeting.

Support Letters

The following letters were written:

07 February – Cochise County Highway and Floodplain Department

07 February – Pinal County Public Works Department

28 February – Pankow and Sons International, LLC

28 February – Rinker Materials

Rock and Roll Marathon

On 09 January, Niemuth, Rasmussen and Singh met with Ms. Anneliese Morgan of Elite Racing to discuss the details of the arrangements for the P F Chang Rock and Roll Marathon.

The Rock and Roll Marathon was held on Sunday, 13 January. Niemuth, Rasmussen and Singh attended, from 4.00 AM, and took care of the arrangements.

Presentations

On 28 January Singh made a presentation to an Arizona State University (ASU) class on coal mining and energy.

On 15 March Rasmussen presented a paper on the Vision for the Museum at the Mineral Symposium.

Kimbler presented a paper on uranium at the Mineral Symposium on 15 March.

On 18 March Kimbler spoke on gold types in Arizona to the Gold Prospectors Club.

Field Trips

Niemuth, Bain and Singh went on a field trip to the Verdstone V3W prospect site in the Sheep Tank Mountains, in the Kofa area, on 15 January. Mr. Marshall Smith arranged the trip, and Mr. Pete Myers accompanied him.

Publications

OFR08-26 *Arizona's Metallic Resources – Trends and Opportunities – 2008*

OFR07-25 Addendum *Checklist of Arizona Minerals*

Arizona Annual Review, for Mining Engineering

Posters for Booth at PDAC

Posters for the Tucson Gem and Mineral Show

Press Releases

A release was put out for Family Day

Website

The website is continually being updated and improved.

Total number of hits during the quarter: 803,763

Number of unique hits (IP addresses): 36,959

Museum Visitors

Total number of visitors during the quarter: 14,841

Number of students during the quarter: 8,278

Number of teacher's kits distributed: 207

Volunteer hours during the quarter: 2,896

Prospector's Day was held at the Museum on 23 February; 571 persons attended.

Organization Meetings

Niemuth, Rasmussen and Singh attended a presentation by Mr. Richard Adkerson at a Harvard Business Club meeting on 17 January.

On 17 January the SME Maricopa Section heard Mr. Gordon M Stevens, of C and E Consultants, Downers Grove, IL. He was a Krumb Lecturer. The presentation was entitled "Resource Development and Planning: A Multidisciplinary Approach." Niemuth and Singh attended.

Singh attended the presentation "Sustainability in Mining," given by Mr. John Rickus, President of Resolution Copper to the Arizona Geological Society (AGS) in Tucson on 05 February.

On Saturday, 09 February, Singh attended the Phoenix Resource Investment Conference. Kimbler also attended part of the meeting.

Singh attended the Annual meeting of the MFSW on 13 February.

Singh attended the seminar held by the Department of Mining and Geological Engineering (MGE) at the University of Arizona (UA) on 15 February. The seminar was given by Mr. Douglas B Silver, Chairman and CEO of International Royalty Corp.

On 16 February Singh attended the Annual AIPG (American Institute of Petroleum Geologists) Board meeting and presented the highlights of work done by the Department.

On 21 February Mr. Ronald E Lowery, Chief Engineer – Safford Operations, Freeport McMoRan Copper & Gold, gave a talk on “Producing Copper in Safford, Arizona” to the SME Maricopa Section. Niemuth, Rasmussen, Kimbler, and Singh attended.

Singh attended the Annual SME meeting in Salt Lake City between 22 and 26 February. There were over 4,500 attendees at the meeting.

Niemuth and Singh attended the Prospectors and Developers of Canada (PDAC) Annual Meeting between 29 February and 05 March. DMMR had a booth there. Several prospective contacts were made at the meeting. There were 20,000 attendees there.

Rasmussen, Grant and Singh attended the Mineral Symposium in the DMMR building on Saturday, 15 March. Niemuth attended a part of the meeting.

The topic of the 20 March SME Maricopa Section meeting was “Peak Oil and Peak Metals.” The speaker was Dr. Donald Burt of ASU.

Donations to the Mine Information Center

There was a large donation of reports and maps from Mrs. Marnie Sell, which belonged to her husband, James. This consisted of 8 file cabinets full of documents and other material.

Activities for Ms Diane R Bain

Bain was interviewed in person and on the phone by CNN news for a program on gold. She was interviewed by Copper Basin News on gold panning. There was also an article about the museum by Cronkite News Service which was picked up by several newspapers.

Bain fielded 360 inquiries, including phone calls, e-mails, letters, and visitors. Many of these dealt with gold. In addition, 46 mineral occurrences were added to the data base.

Discussion

O’Hara asked what the overall reactions were to Singh’s meetings with outside personnel. The comments were mostly positive.

Poulton wanted to know if industry personnel were requesting information from the Department. Recently enquiries have been made for gold, potash and fluorite.

Chief Mining Engineer's Report

Niemuth reviewed the activity report and the highlights of the industry report that had been submitted to the Board. He outlined new acquisitions and oversight of current suspicious mining activities.

He also outlined the work done by Kimbler.

Discussion

In response to various questions from the Board, Niemuth responded that there were several properties that were discussed with interested parties at PDAC; the Department had received the Sell collection of reports as a donation; there were airborne geophysical data in the southern part of the State, 30,000 sq km were flown – some of this was for Phelps Dodge (now Freeport); some is available for review; Quaterra has located a 600-ft deep breccia pipe, with uranium discovery, in the Arizona strip based on airborne geophysics which is not visible on the surface.

Poulton asked about the ASARCO sale – it is not clear whether it will be mine by mine or as a package. Grant asked about the Brighter Day shaft. O'Hara remarked that the old waste dumps are being cleaned up but these were sources of reliable information in the old mines. Niemuth stated that an Australian geologist had collected a suite of rock samples from across the world. Medhi questioned the "unfinished business" part of the report. Niemuth explained that he was in the process of obtaining information from George Eliopoulos and Robert Livermore on their projects, but still only getting bits and pieces.

Museum Curator's Report

Rasmussen had compiled a statistical report on the various activities of the museum which was submitted to the Board.

Gift shop sales are improving. A letter requesting funds will be sent out to a number of companies and individuals.

Discussion

Rasmussen fielded some questions. The Lapidary shop is in good shape, but Doug Duffy plans to retire at the end of June. APS provided cranes when cleaning up the basement; shelves are being put in by the "Monday crew." Some details of the "Mine to You" were discussed, including installing some videos showing the workings of certain operations in buildings. Food for the Volunteer Banquet was donated by the Arizona Mining and Minerals Foundation. Advertisements should be used to attract visitors. O'Hara suggested that the Convention Center ads should be checked. Rasmussen stated these were \$400 to \$600 per year. (Actually these are \$1,600 per insertion; details to be determined). O'Hara stated the Museum should be proactive in having a mechanism to transfer funds, if necessary.

Follow up on Special Board Meeting on 18 March

Singh has contacted some organizations for funding.

Strategic Plan

Singh will send copies of the slides used for the presentation to the Board.

Position Statement

This should be included in the Annual Report.

There were no public comments since there were no guests present.

Next Meeting Date and Time

Another Special Meeting will be tentatively scheduled for 22 May 2008, at 10.00 AM.

The next Quarterly meeting will be held on 17 July 2008, at 10.00 AM.

Adjournment

The meeting was adjourned at 11.32 AM.

These minutes will be formally approved by the Board at their next meeting in October 2008.

BOARD OF GOVERNORS MEETING

Thursday, 17 July 2008

Meeting Minutes

for

Fourth Quarter FY 2008 (01 April 2008 through 30 June 2008)

Present: Mr. P.K. Rana Medhi, Chair, Dr. Patrick F O'Hara, Vice-Chair,
Mr. Robert L. Holmes, Member, Dr. Raymond W. Grant, Member

Absent: Dr. Mary M. Poulton, Secretary

Staff: Dr. Madan M. Singh, Director; Mr. Nyal J. Niemuth, Chief Mining Engineer; Dr. Jan C. Rasmussen, Museum Curator; Ms. Jacqueline D. Hall, Transcriber

Visitors: Ms. Genie Howell, Mr. Larry Dykers, Mr. Bryan Beaulieu

The meeting was called to order by Chair Medhi at 10.00 AM.

Upon motion by O'Hara, seconded by Grant, the minutes of the meeting held on 17 April 2008 were approved as submitted by e-mail.

The minutes of the Special Meeting held on 22 May 2008 were approved.

Presentation by Beaulieu

Beaulieu presented a short discussion on how a model of the mine display might be built and he had a small demonstration model for the Board. He discussed some of the details, but these could change. He suggested making the system in modular fashion so that sections could be readily upgraded or changed. Niemuth provided him with some literature on mining.

Director's Report

Budget

Details of the FY 2009 budget are not yet known. The final budget bill has cut \$40,000 from the DMMR allocation.

Staff

The clerk-typist left on 16 May 2008. A request for permission to replace her has been submitted to ADOA. A response has not yet been received.

Doug Duffy, who runs the Lapidary Shop, will retire on 17 July, but will continue to come in on some Saturdays. Tom Parks will replace him temporarily.

Meetings

A "Volunteer Banquet" was held in the museum which Rasmussen, Niemuth, Kimbler, Bain and Singh attended. Grant and Holmes were also there.

The Arizona Conference Board meeting was attended by Singh at Loew's Ventana Canyon Resort, Tucson on 16 April. After that meeting Singh met with Mr. Lawrence G. Dykers to consider possible funding for an Education Curator by the Mining Foundation of the Southwest (MFSW).

Mr. Jamie Sturgess, Vice President of Rosemont Copper came to the office to discuss the economic studies on their project performed to date.

Rasmussen and Singh met with the Foresight Committee of MFSW to present a proposal for the Education Curator, Hall of Fame, mine model display, and possible field trip to mines for teachers.

Singh talked to Dr. Tamara Dickinson about the Geological Survey program. She stated that any information given was entirely up to DMMR and voluntary. DMMR had all rights to the information.

Letters

18 April – A letter was sent to the Senate from Ms. Sarah Dodge on the potential environmental impacts of the Rosemont Mine. This was forwarded to DMMR for response, which was prepared and sent to the Senate staff for forwarding to the constituent.

Presentations

On 10 April 2008, Singh made a presentation to the Miners Creek Prospectors Club, Wickenburg, AZ, at the American Legion, titled "Responsible Mining in Arizona."

Singh made a presentation to the Arlington Elementary School on 24 April, "Responsible Mining in Arizona." (The talk had the same title as above but was different; oriented for school children.)

Kimbler made a presentation to the Arizona Mineralogical Society on 13 June on "Gold Deposits."

On 24 June Niemuth made a presentation on "Internet Tools for Field Mineral Collectors" to the Leaverites.

Support Letters

Some support letters for mining projects were written.

Field Trips

The offices of the Anderson Mine, owned by Concentric Energy, were visited by Singh on 10 April and discussions held with Mr. Ed Huskinson, Jr. on their uranium exploration project.

Kimbler and Singh went on the field trip to the Rosemont mine location, organized by SME. On the trip Singh worked out details of the agreement for the model mine funding with Mr. Larry Dykers.

Publications

Newsletter – *Arizona Mineral Resource* – No. 48

Circular 127 – *Arizona Gem Shows* – 2008-2009

Circular 128 – *Earth Science Clubs* – 2008-2009

Circular 129 – *Arizona Mining Update 2007*

Revisions were made to Open File Report 08-26, *Arizona Metallic Resources – Trends and Opportunities* – 2008

Vision for the Arizona Mining and Mineral Museum, by Jan Rasmussen for FAMMM newsletter. Museum ad and photo were supplied to Arizona Capitol Times for their article.

Procedure and protocol for *Mineral Identification for the Public*, for the Museum and the Mineral Information Office, by Diane Bain.

Website

The website is continually being updated and improved.

Total number of hits during the quarter: 619,196

Number of unique hits (IP addresses): 29,350

Museum Visitors

Total number of visitors during the quarter: 12,761

Number of students during the quarter: 7,787

Number of teacher's kits distributed: 280

Volunteer hours during the quarter: 1,886.5

Organization Meetings

On 17 April, Dr. Casey McKeon, Environmental Superintendent, Resolution Copper, gave a presentation on "Implementing an Environmental Management System in a Dynamic Work Environment at Resolution Copper" to the SME.

On 15 May 2008, Dr. Timothy Marsh, Vice President for Exploration, Bell Copper, gave a talk to SME on "Bell Copper – Arizona Explorer and Near-Term Producer."

Kimble and Singh attended the US Forest Service hearing for Rosemont Copper at Sahuarita High School on 07 June.

Ms. Janet M Krolczyk, Director, Environment South Region, CEMEX USA, gave a talk on "CEMEX and Sustainability" to SME on 19 June.

Activities for Ms Diane R Bain

302 public information requests (includes phone calls, e-mails, visitors, letters)

Made 38 additions to AzMILS database.

Discussion

Medhi wanted to know the progress of the MOU with the Arizona Geological Survey. There has been little progress. He also wanted to know about placing advertisements on the DMMR website. The question had been raised with the Attorney General's office, but there were concerns as to who would be allowed to post ads.

Dykers Statement

Dykers expressed appreciation of the Mining Foundation of the Southwest to be able to participate with DMMR on the Outreach Program. The Board expressed their thanks to the Mining Foundation and the Dykers Family Foundation for their support of the projects.

Chief Mining Engineer's Report

Niemuth and Bain visited Doyle Vanadium with Dick Morris; got Sell and some Dugdale reports; noted several suspicious mining activities; reported on industry news; worked on computers; and publications and talk mentioned elsewhere.

Kimbler reviewed Geowall 3-D system; got Guledge reports; assisted ADOT with I-17 quarries and State Mine Inspector's office with abandoned mines locations; helped several clients; worked with NITON XRF instrument.

Museum Curator's Report

Rasmussen had compiled a detailed statistical report on the various activities of the museum which was submitted to the Board.

She planned to work on the mine display and to edit the CD for the teachers' kit.

Discussion

Medhi asked about the status of the Globe project. That depends upon when the printers are donated.

Follow up on Special Board Meeting on 22 May

None

Public Comments

None

Next Meeting Date and Time

The next quarterly meeting will be held on 21 October 2008, at 10.00 AM.

Adjournment

The meeting was adjourned at 11.35 AM.

**STATE OF ARIZONA
DEPARTMENT OF MINES AND MINERAL RESOURCES
Position Statement**

Mineral products are critical to a technology-intensive modern society. Arizona has one of the richest mineral endowments on the planet, especially for copper and molybdenum. "The process of producing, using, and recycling minerals could help society reach many other goals – providing jobs directly and indirectly, aiding in the development of national economies, and helping to reach energy and resource efficiency targets." *

The Board of Governors of the Department of Mines and Mineral Resources supports the development of mineral resources on public lands in a manner that is consistent with the Mining and Minerals Policy Act of 1970 (and subsequent Acts of 1980 and 1984) and internationally adopted standards for sustainable resource development: promoting environmental stewardship, economic stability, and effective governance processes.

The statutes governing the Department of Mines and Mineral Resources task the Department with promoting the commercial development of the State's mineral endowment. It is the position of the Board of Governors that the Department and Board are allowed to make public (oral and written) statements, render expert opinions, and publish factual reports pertaining to mineral exploration and development.

It is the position of the Board that any proposal for withdrawal of public lands from mineral exploration or development shall be supported by independent, fact-checked, and peer-reviewed studies of the sociological and local, regional and national economic impacts. An analysis should be performed of the cost-benefit factors involved, taking into account the effect on both short-term and long-term national security by the withdrawal of any potential mineral resources. The analysis should be conducted by a qualified person**.

The Board believes all parties involved in the discussion or reporting of restrictions placed on mineral entry must adhere to principles of transparency, accountability, factual arguments, and fiduciary responsibility for public and private monies expended in the deliberation of changes to law, policy, or practice.

*** A qualified person is an engineer, geoscientist, or other minerals professional who must have over five years of experience that is relevant to the type of analysis under consideration. It is preferred that said qualified person is registered with a regulatory organization (agency, board, or commission) which requires compliance with the professional standards of competence and ethics established by the organization, and has disciplinary powers, including the power to suspend or expel a member.*

*Breaking New Ground, Mining, Minerals, and Sustainable Development (2002), The report of the MMSD Project, Earthscan Publications Ltd, London and Sterling, VA, 441 pp, p xiv, ISBN 1 85383 942.

Accepted.


Member, Board of Governors

03/25/08
Date


Member, Board of Governors

03/25/08
Date


Member, Board of Governors

03/26/08
Date


Member, Board of Governors

3/31/08
Date


Member, Board of Governors

3/28/08
Date