

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

**68TH Annual Report
FY 2006/2007**

Cover: Exploration drilling continues at Resolution Copper, Pinal County

Photo courtesy of Resolution Copper

State of Arizona

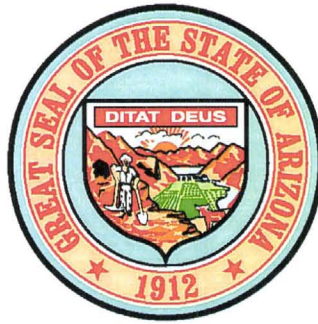
**DEPARTMENT OF MINES
AND MINERAL RESOURCES**

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**68th Annual Report
Fy2006/2007**



Janet Napolitano, Governor

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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.

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2006/2007 Fiscal Year Financial Statement

Personnel

Board of Governors

Mr. P.K. Rana Medhi (2008)

Casa Grande

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 Engineer

Frank S. Kimbler

Mining Engineer

Susan Celestian

Curator

Diane Bain

Public Information

Officer

Jacqueline Hall

Administrative Asst.

Eileen O' Connell

Clerk/Typist

Part-Time Employees*

Liz Anderson

Ann Baker

Shirley Coté

Doug Duffy

Joanne Hesterman

Laurette Kennedy

Alice Rosenfeld

Appropriated Fund #1000

Appropriated Fund #1000

Appropriation..... \$843,900

Expenditures 843,215

Reverted 685

Mines and Mineral Resources Fund #3156

Beginning Balance (7/1/2006)..... \$145,453

Revenue (store sales, donations,
publication sales) 242,797

Expenditures 237,497

Ending Balance \$150,703

Vision

To be the premier mineral resource center and a 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

The mission of the Department of Mines and Mineral Resources (DMMR) of the State of Arizona is to promote exploration and support development of mineral resources and to provide pertinent data and assist those seeking to explore and develop mineral resources in the State of Arizona. In addition, DMMR is responsible for maintaining a world-class mining and mineral museum that portrays the economic and aesthetic value of minerals and for educating the public with regard to the critical role of minerals and mineral resources in our society.

*Non-appropriated funds

Donated Funds

FY 2006/2007

Donor	Amount
A. Hill	\$100.99
Arizona Mineral & Mining Foundation	1600.00
Arizona Public Service	125.00
Arizona Prospectors' Assoc.	485.41
Arizona Treasures Unltd.	30.00
Desert Gold Diggers Inc.	50.00
Ed and Barbara Kirby	100.00
Friends of Arizona Mining and Mineral Museum	500.00
Leaverites	637.00
Maricopa Lapidary Society	160.00
Mesa Spirit Rock & Gem Club	50.00
Mingus Gem & Mineral Club	100.00
Pinnacle West Phoenix	125.00
Rock and Roll Arizona	1000.00
Rose Mofford	100.00
Tucson Gem & Mineral Society	200.00
General Donations	154.00
Donation Box	207.68

Funds Donated to the Friends of the Arizona Mining and Mineral Museum

Donated by:	For:	Amount
Phelps Dodge Corporation	Outreach Program	\$3500.00
Maricopa Lapidary Society	Lighting in Copper Gallery	1500.00
Wickenburg Rock and Gem	Copper Gallery Materials	1000.00
Arizona Public Service	Outreach Program	1,857.00

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 donors and hope they will continue to provide as much assistance as possible in the future.

Gemstone Donation

The David and Stephanie Walker Donation

In-Kind Donations

One of the special donations to the Museum this fiscal year included a collection of 63 faceted gems from David and Stephanie Walker of Kalispell, Montana. This is the Walkers' fourth donation of gemstones in the last three years.

One of the remarkable things about the donation is the unusual materials;



Diopside

that cerussite, "can be faceted, with difficulty, into striking highly dispersive gems of considerable beauty." These Walker Donation gems demonstrate that 'considerable beauty' quite well.

The donation includes faceted diopside, a rare and lovely copper silicate. Yet another rare gem in the collection is one of scheelite, an ore of tungsten. Tungsten is the metal used for the filament in light bulbs. The donated stone is a golden scheelite from Mexico; 7.79 carat in an oval cut.

The more traditional gems in the Walker collection are also distinctive. Along with a red spinel from Myanmar – red being spinel's most common color - there is a sapphire-blue spinel from Ceylon, and a smoke-colored one with brilliant highlights from Myanmar. Red spinel looks very much like ruby, as well as being chemically similar. In fact, many of the great rubies of history, when tested, are turning out to be spinels.



Cerussite

lovely faceted gemstones from minerals ordinarily not faceted. For instance there are two gorgeous cerussites from Tsumeb, Namibia. Cerussite is an ore of lead, but these stones bear no resemblance to galena. One is a large (14.74 carat) colorless stone in a square cut. The other is a 15.39-carat round cut in golden brown. John Sinkankus, in his book, *Gemstones of North America*, writes



Ametrine

Mine Information Center

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.

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, verbal information, and research. Information is evaluated, cataloged, entered into mine files, databases, and library collections. Distribution of information is accomplished through personal contact, seminars, publications, technology transfer, and the operation of the Arizona Mining and Mineral Museum. 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.

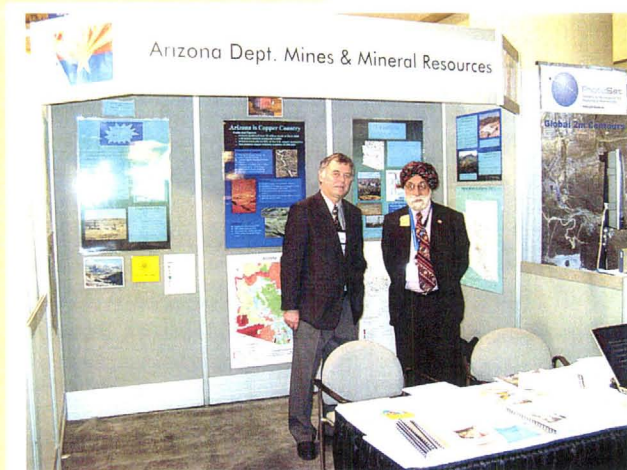
Industry uses these data to make discoveries and generate jobs, which ultimately adds to the State's economy. Successful projects contribute the largest benefit to the economy in general and tax revenues to state and county treasuries. Exploration projects in themselves, however, also make a significant 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 mining, prospecting, geology, and mineral rights and mining law. The site contains 56 on-line DMMR publications, news of Museum events, and maintains over 200 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 (RI's) and Information Circulars (IC's).

Statutory Duty:

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



Dr. Madan A. Singh, Director, (right) at the Department booth, PDAC 2007.

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 75th annual, is the premier event of its kind. Mineral exploration and mining companies from all over the world assemble here each year. A record 17,600 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.

Northwest Mining Association Annual Meeting

Nyal J. Niemuth was a speaker at the Annual Meeting, Exposition, and Short Courses in Reno, Nevada this year. He gave two presentations at the technical sessions, *Arizona Mining Update* and *Gemstones of Arizona*.

Mining Engineering Article

Nyal Niemuth provided the Arizona mining article for the May, 2006 Annual Mining Review issue of *Mining Engineering*.

Niemuth also wrote the Arizona review article for 2005 for the USGS Minerals Information Series, including updating the map for publication.

Society of Mining, Metallurgical and Exploration, Inc.

Dr. Singh participated in the 2007 Annual SME meeting and Exhibit and 109th National Western Mining Conference in Denver in February. The conference had 4,601 attendees.

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.

This duty has now been added to the responsibilities of the Department. Some examples of this advocative function are listed below.

1. Letters to each of the Supervisors of Pima County in support of the Rosemont Project (25 October 2006).
2. Calls to ADEQ in support of Mr. Daryl Merrick requesting he be issued a dust permits. He obtained the requisite permit (4-12 December 2006).
3. Presentation to the Governor's Growth Cabinet on the need for mining and minerals to accommodate the projected growth (09 February 2007).
4. Letter to Prescott National Forest supporting the Squaw Peak Exploration Project on behalf of American Copper Nevada (15 February 2007).

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

Contracts

The Department entered into a contract with the US Bureau of Land Management on 30 September 2005 to "digitize paper mine and mineral documents," primarily on federal lands. The contract was for \$30,000 through 30 September 2006. This was towards the implementation of BLM's objective:

To transfer hard copy mine records to electronic format and provide them to BLM for use in mineral-related actions, (realty, validity, planning, etc.)

Most of the work had been completed in the last fiscal year, but the final portions were prepared in the first quarter of FY2007.

Another small job was performed for the US Forest Service.

This obligation also meets the Department's goal to digitize its archival 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

Molybdenum Oxide Price

2004 - \$16.41/lb

2005 - \$31.10/lb

2006 - \$24.75/lb

Surveys of Potential Economic Mineral Resources

Copper and Molybdenum

The copper price continued to increase spectacularly, rising to a record average price in 2006. The U.S. Copper Cathode Producer price increased \$1.41 per pound, an 82% increase to an average of \$3.14 per pound. Prices rose during the year to reach an all time high of \$4.13 in May, after which they trended slowly downward for the rest of the year. Increased production at Mission and the other major mines was enough to offset a large drop at Bagdad, resulting in Arizona's copper production rising for the first time since 1997.

The value of by-product molybdenum recovered at the Bagdad and Sierrita mines remained near historic highs but decreased from last year's record levels. The mean annual price reported by Platts Metals Week averaged \$24.75 per pound in CY2006, a \$6.98 decline. The metal contributed significantly to the dramatic rise in the value of the state's mineral production.

New mining operations are expected to begin at Pinto Valley, Carlota, and Safford. The Resolution Copper Project near Superior is continuing pre-feasibility studies. If there is Congressional approval of the Southeast Arizona Land Exchange and Conservation Act of 2007 the company will proceed with planned multi-million dollar exploration work.

Gold and Silver

Interest in gold exploration and development in Arizona has remained high. American Bonanza completed a 40,000-meter drill program at the detachment-hosted Copperstone deposit in February 2006 and announced a verifiable resource of 330,000 ounces of gold.

At the Hardshell mine in Santa Cruz County, Comcorp Ventures Inc. spent \$10 million to acquire 80% of Arizona Minerals Inc, a private Nevada company, to gain control of the property.

Teryl Resources optioned the Gold Hill patented claims in Cochise County and conducted



Drill core showing high-grade gold (upper center) from underground portion of Copperstone gold mine in La Paz County.

reconnaissance sampling along fault structures. Columbus Gold explored four projects in western Arizona: Clara Moro, Burnt Well, Silver District, and Clanton Hills. Cordex Exploration carries out the company's exploration work and project generation activities. Patriot Gold resumed drilling on the Moss mine in the Oatman District of Mohave County. Farther north, in the Black Mountains, Tonogold Resources optioned the Van Deeman deposit.

Uranium

With the spot price for uranium hitting \$72/lb. in December of 2006, doubling the price at the end of 2005, and went over \$130/lb in June 2007, uranium exploration in Arizona continued at a high level.



Uranium exploration

Uranium activity was concentrated in three areas of Arizona in 2006 - the collapse breccia pipes on the Colorado Plateau, central Arizona, and the Date Creek Basin in west central Arizona.

Coal

Hopes were raised that the Black Mesa mine could resume production when Salt River Project announced that they would organize a group to acquire the closed Mohave generating plant and would increase its 5% ownership share to 20%. The generating plant was the sole consumer of the

Black Mesa mine coal. Despite upgrades required at the plant, SRP believed it would be cheaper than building a new plant. Later, SRP announced that it was ending its efforts when tribal and regional environmental groups asked the Office of Surface Mining and Reclamation to reexamine the Black Mesa Project.

Peabody's adjacent Kayenta mine in Navajo County, that supplies the Navajo power plant at Page, produced over 8 million tons of coal.

Industrial Minerals

During CY 2006, Arizona produced \$616 million worth of sand and gravel. The State's production of crushed stone, ready-mix concrete, asphalt and concrete products, cement and related products were also at a high level. The industrial minerals industry employed over 11,300 workers. In addition, the construction industry, which is also a major contributor to the State's economy, is dependent on these mined products.

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.

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.

La Farge North America entered the Arizona market in the metropolitan Phoenix area and Vulcan Materials expanded into the Tucson area.

Gypsum

Arizona is among the top 10 producers of gypsum in the United States. The six operating mines produce about 2 million tons of the commodity per year, worth nearly \$50 million. The construction industry is the greatest consumer of gypsum, but it is also used as a soil enhancer in agriculture.

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.

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.

As requested by each entity, mining data is provided to the Legislative Council, legislators and their staffs, the Joint Legislative Budget Committee (JLBC) and office of Strategic Planning and Budgeting (OSPB) fiscal analysts, the Arizona State Land Department, Department of Administration, Department of Revenue, county boards of supervisors, county planning and zoning agencies, and county and city business and industrial development entities as well as the media and public.

Details of these some of activities are mentioned elsewhere in the report.

Conferences, Seminars, and Speaking Engagements

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

Pinal Mountain Section of SME, Presentation Topic: *Sustainable Development – Where Does Arizona Stand?*

Tucson Section of SME, Presentation Topic: *Impact of Mining on Arizona*

Mingus Gem and Mineral Club, Presentation Topic: *Role of Mining in the History of Arizona*

Arizona Geological Society, Presentation Topic: *Sustainable Development in the Mining Industry*

Governor's Growth Cabinet, Presentation Topic: *Role of Mining in the Growth of Arizona*

Board of Governors Conference, Presentation Topic: *Department of Mines & Mineral Resources' Background*

Desert Gold Diggers' Prospecting Club, Presentation Topic: *Responsible Mining in Arizona – Perception and Practice*

Braggin' Rock Club, Black Canyon City, Presentation Topic: *Responsible Mining in Arizona*

Speaking Engagements (continued)

Arizona Geological Society, Presentation Topic: *Exploration and Mining Activity in Arizona*

Leaverites' Gem Club, Presentation Topic: *Mineral Resources*

Leaverites' Gem Club, Presentation Topic: *History of the Stamp Mill*



Maricopa Lapidary Society,
Presentation Topic: *Mountains of the World*

Sun City Rock Club, Presentation
Topic: *Collecting Regulations in Arizona*

Photo courtesy of Peabody Energy

From 'Sustainable Development in the Mining Industry,' Navajo residents survey the coal-reclaimed land. Sheep grazing is 20 times more productive than prior to mining.

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 4,500 photos, negatives, and slides have been cataloged and have been scanned into digital format. This formidable task, overseen by staffer Nyal Niemuth, involved identifying the date of each photograph, labeling, photocopying, cataloging, and then scanning each image. The images were photocopied to relieve use of the originals by the public and eventually to provide widespread access via the Department website.

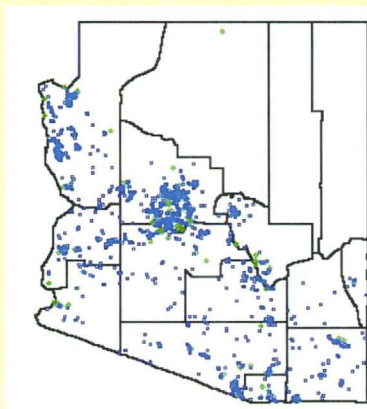


Silver King miners, circa 1880

Statutory Duty:

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

"Arizona's cumulative gold production exceeds 16 million ounces."



Primary and by-product gold occurrences.

From: *Arizona's Metallic Resources – Trends and Opportunities, 2007*

Publications

Newsletters

Arizona Mineral Resource, No. 43, - November, 2006

Arizona Mining Review - 2005, Role of Minerals in Arizona's Economy

Arizona Mineral Resource, No. 44 – February, 2007

Status of Mining in Arizona, Record 2007 Production Value, New Engineer Frank Kimbler, San Manuel Stacks demolished, New Board Member Bob Holmes, ADMMR participates at PDAC in March, Museum notes, Board invites participation to improve services

Circulars

C119 – *Listing of U S Bureau of Mines Mineral Land Assessments in Arizona*, A listing of all MLA Open File Reports conducted in Arizona.

C120 - *State Agencies Concerned with Mining and Mineral Resources in Arizona*

C121 - *Federal Agencies Concerned with Mining and Mineral Resources in Arizona*

C122 - *County Agencies Concerned with Mining and Mineral Resources in Arizona*

C123 *Arizona Gem and Mineral Shows – 2007-2008* -Includes date, location, sponsoring group, contact person.

C124 – *Earth Science Clubs – 2007-2008*, Includes, lapidary, and prospecting organizations.

C125 – *Arizona Mining Update 2006* - N.J. Niemuth, A review of mining activity in Arizona. Describes copper, gemstone, industrial mineral, and coal mines as well as mineral exploration and government news.

Open File Reports

OFR07-24 – *Arizona's Metallic Resources – Trends and Opportunities, 2007*, by Nyal J. Niemuth. Provides overview of porphyry copper, uranium, gold and volcanogenic massive sulfides deposits and exploration activity. Includes maps of Federal mining claims and Arizona state exploration permits. Includes publications lists and other information from cooperating organizations.

Statutory Duties:

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

Assist Other Agencies and 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 an MOU, but no documentation has been produced.

Giving background information and interviews with reporters of the Arizona Republic, Tucson Daily Star, Paydirt Magazine, and other newspapers and journals, 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.

DMMR staff served as one of the judges for the Arizona Rock Products Association Community Excellence Awards at their request. Several meetings have been held to discuss progress on one of the Museum exhibits and other issues of mutual interest.

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
Consulate of Canada
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
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
Yavapai County Sheriff's Office

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.

Potential Gold Mine

A mining company claims to have a property in the State with extensive gold reserves. In fact, the gold claimed to exist exceeds all the gold mined in Arizona since the precious metal was first discovered in the Territory. The firm has been promoting the proposed mine very actively, mostly in California. DMMR has cooperated with Mr. Erik Brunkal of the California Department of Corporations in bringing all the facts that it has in its possession to the Department's attention. Mr. Niemuth was to give a deposition, but that has been postponed pending a settlement with the company.

Cinders to Gold

A company, originally formed to remediate soil for agricultural purposes, using cinders because of their high mineral content, then claimed it had acquired proprietary rights to a technique to concentrate gold from the cinders. Then it signed an agreement with another firm to make this even more efficient. DMMR is cooperating in this on-going investigation with the Arizona Corporation Commission.

Additional Investigations

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

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.

Mining and Mineral Museum

Museum Visitation: 39,747 in FY 2006/7

Each year over 20,000 school children tour the Museum.

The Museum addresses the needs of many facets of the industry and the hobbyist – prospectors, educators, rockhounds, lapidaries, and the general public – through the education program, museum exhibits, and special events.

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

Education

School Tours

Tours and classes for students and teachers are offered as part of the effort to 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 2006/2007, 22,428 students visited the Museum for a program.

Outreach Program

In FY 2006/2007 the Museum Outreach Program visited 30 Arizona schools that, for financial or other reasons, could not come to the Museum. This program, like the in-house programs, underscores both the usefulness and aesthetic appeal of minerals.



Curator, Susan Celestian, is honored by Gov. Janet Napolitano upon her retirement in May.

Lapidary Classes

The Museum is proud of its lapidary shops, with facilities for cutting, faceting, polishing, and sphere-making. A variety of lapidary classes are offered.

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.



Family Day/Prospectors Day

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

Attendees – 2007 – 1,203

Teaching children how to pan for gold

Teachers Kits

Every Arizona teacher may receive a free Teachers' Kit containing samples of rocks and minerals, a teacher's manual, maps, posters, and other educational aids. Volunteers assemble the kits, using donated material that they have sized and numbered. The Museum has given out over 11,000 kits to Arizona teachers since the program started.

Annual Museum visitation for fiscal year 2006-2007

July	1,675
August	1,271
September	2,272
October	3,909
November	3,074
December	3,177
January	3,721
February	4,009
March	4,693
April	4,812
May	4,222
June	2,912
TOTAL	39,747

Volunteers



Family Day

Last year volunteers
dedicated **7,931**
hours to the
Department!

New Exhibits

Internal Exhibits

Kids' Corner – *Minerals in Your House*
Kids' Corner – *Minerals in Your Thanksgiving Dinner*
Kids' Corner – *12 Days of Christmas*
Kids' Corner – *Valentines Day*
Kids' Corner – *Common Ground*
Cases 37-41 – *Discover the Treasure*

External Exhibits

Arizona State Fair – *Banquet of Rocks*
Prescott Gem & Minerals Show – *Rainbow of Minerals*
Wickenburg Gem & Mineral Show – *Rainbow of Minerals*
Gila County Gem & Mineral Show – *Rainbow of Minerals*
Tucson Gem & Mineral Show – *New Acquisitions*
Apache Junction Gem & Mineral Show – *Meteorites*

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 Days activities |
| <input type="checkbox"/> General painting tasks | <input type="checkbox"/> Cut and polish lapidary material |
| <input type="checkbox"/> Digitize the photo collection | |

15th 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 80 attendees at this year's event.

Activities/Events

July 26, Sue Celestian and Liz Anderson attended a meeting at Resolution Copper's corporate office to discuss curricular involvement of Resolution and the Museum Outreach program.

Sept. 21, Sue and a group of 12 left for 2 weeks in China. On Sept. 24 she signed an agreement of cooperation with the Mineral Museum at University of China in Wuhan.

Oct. 6, First Friday – 39 attendees, 9 vendors

Oct. 28, Family Day – 533 attendees

Nov. 3, First Friday – 11 attendees, 10 vendors

Dec. 1, First Friday – 36 attendees. 9 vendors

Jan. 5, First Friday – 10 attendees

Feb. 2, First Friday – 20 attendees

Feb. 8, Sue Celestian attended Soc. For Mineral Museum Professionals in Tucson

Feb. 17, Family Day – 670 attendees

Mar. 2, First Friday – 11 attendees

Mar 4-5, Sue and Stan Celestian, with Ray and Cynthia Grant, drove 4 visitors from Univ. of China at Wuhan on tour of northern Arizona.

Mar. 10, Mineral Symposium – 80 attendees

Mar. 16, Homeland Security Training for police department, in Museum with Diane Bain