



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

**70TH Annual Report
FY 2008/2009**

Cover: 400-ton Liebherr T282B truck at Ray Mine, 2009

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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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Personnel

Board of Governors

Dr. Patrick F. O'Hara
(2010) Prescott (Chairman)
Dr. Mary M. Poulton (2011)
Tucson
Mr. Robert L. Holmes
(2012) Phoenix
Mr. P.K. Rana Medhi (2013)
Casa Grande
Lyn White (2014) Phoenix

Staff

Dr. Madan M. Singh
Director
Nyal Niemuth
Chief Mining Engineer
Diane Bain
Public Information
Officer
Jacqueline Hall
Admin. Assistant
Sandra Regalado
Clerk/Typist
Dr. Jan Rasmussen
Curator
Pamela A.K. Wilkinson
Education Curator*
Shirley Coté
Tour Guide*

Part-Time Employees*

Liz Anderson
Ann Baker
Judith Evans
Joanne Hesterman
Laurette Kennedy
Sandra McDonald
Tom Parks
Kim Rottas
Janice Snell
Danielle Touhey

*Non-appropriated funds

2008/2009 Fiscal Year Financial Statement

Appropriated Fund #1000

Appropriation	\$990,000
Expenditures	883,000
FY09 Reductions	107,000
Reverted	0

Mines and Mineral Resources Fund #3156

Beginning Balance (7/1/2009).....	148,063
Revenue (store sales, donations, publication sales)	418,898
Expenditures	416,610
Reduction	8,300
Ending Balance	\$143,051

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.

Donated Funds

Donor	Amount
Arizona Mineral & Mining Museum Foundation	\$3,000.00
Arizona Mining Claims.com	2,500.00
Arizona Prospectors Association	504.50
Auric Resources International Inc.	2,500.00
Boris Headframe	10.50
Bronco Creek Exploration	2,500.00
Carole Kellerman	100.00
Clarence J. Wendt	2,500.00
Donation Box	355.49
First Western Resources Inc.	378.50
General Donation	296.50
Ivy Minerals	2,500.00
Larry & Iris Dykers Family Foundation	75,000.00
Maricopa Lapidary Society, Inc.	105.00
Marilyn Steffen	50.00
Mesa Spirit Rock & Gem Club	50.00
Mineralogical Society of Arizona	550.00
Mining Foundation of the Southwest	30,000.00
North American Environmental Inc.	378.50
PF Chang's Rock 'N' Roll Arizona Marathon	1,300.00
Randy and Petty McNeil	25.00
Rosemont Copper	14,550.00
Sean P. Horan	26.00
Searchlight Exploration, Inc.	2,500.00
Southern Silver Exploration, Inc.	2,500.00
Steve J. Van Ert	2,500.00
Sun City Rockhound Club	200.00
Teck Cominco American Inc.	2,500.00
Tucson Gem & Mineral Society, Inc	200.00
Wickenburg Rock and Gem Club	100.00
Wondjina Research Institute	10,800.00

In-Kind Donations:

In addition to the cash donations, 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 2008 – 2009 donors and hope they will continue to provide as much assistance as possible in the future

A Bit of USA
 ADOT Donation
 AFRE
 Asarco LLC/Mission Complex
 Asarco LLC/Ray
 Asarco LLC/Silverbell
 Arizona Geological Survey
 Arizona Leaverite Rock & Gem Society
 Arizona Mineral & Mining Foundation
 Arizona Prospectors Association
 Arizona Public Service Hauling Services
 Arizona Rock Products
 Avian Oasis
 BHP Billiton
 Barrett's Minerals
 Baxter, Shirley
 Belica, Bob
 Berkson, Seth
 Burch, Alvin L.
 Burns, Frank
 Carey, Don
 Celestian, Susan
 Chartier, Wayne
 Christie, Mike
 Christofolo, Tony
 Clark, Andy
 Connell, Charlie & Kathy
 Cote, Shirley
 Cribben, Richard
 Davies, Vicky
 Dee, Larry
 Dewyer, Ken & Lillie
 Dixon, Ev
 Dorsey, Patricia
 Douglas Minerals

Duffy, Doug
 Dyer, J.P.
 Eastman, Steve
 Electric Supply Co.
 Exhibit Services
 Finell, Paul
 Firicano, Gia
 Flagg, Richard
 Flores, Rachel
 Flynn, Judy
 Freeway Metals
 Furgo West Inc.
 Gauthier, Sandy
 Green, J.P.
 Greenthal, Joe
 Greenthal, Ralph
 Hahman, Richard
 Hayes, Jay
 Horan, Sean P.
 Huber, Dave
 Hunt, Bill
 Hunt, Bonnie
 Jackson, Morris
 Jenkins, Wayne
 Jensen, Larry
 Johnson, Pual
 Jong, Harvey
 Keiser, Dale & Debbie
 Knight, Bob
 Kovacsik, Miklos
 Leff, Ben
 Lindco Equipment & Supply
 Marco Crane & Rigging
 Maricopa Lapidary Society
 Michel, Emory

Miller, Brittany Ellen
 Miller, Linda,
 Myers, Carl
 Neale, Steve
 Nelson, Kay
 Ohlund, Jerry
 O'Reilly, Kevin
 Payne, Stan
 Polman, George
 Poundstone, Ellen
 Presmyk, Les
 Provenance Resources
 Quesads, Chris
 R & C Supply Co.
 Reed, Valerie
 Roy, Shari
 Rubin, Phillip
 Salt River Materials Group
 Silver King Minerals
 Slaughter, Dana
 St. Laurent, Andy
 Stairs, Mel
 Strokes, Kevin
 Stuttard, David & Carol
 Tempe Historical Society
 Top Gem
 Townsend, Bill
 Tozier, Ted
 Trow, Mary Ellen
 Underwood, Anita
 Walton, Cory
 Way Too Cool
 Weber, John H.
 Wells, John
 Werner, K.J.
 Wheeler, Carlton W. Jr.



*A recent donation of a
 Dyrosaurus phosphaticus,
 a 65 million-year-old relative
 of the crocodile.*

Friends of the Mining and Mineral Museum (FAMMM)

Project	Amount
Quarterly newsletter	\$800.00
Food for Cleanup Day and Volunteer Recognition Banquet	285.37
Museum Outreach	3,794.12
Museum case upgrades	2,196.59
Outside display projects	1,962.86
Teacher kits	4,798.37
Copper Gallery	12,071.14
Total	\$25,909.41



*New kiosks in the
Copper Gallery*

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

Statutory Duty:

Mining Information Center

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 (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 Mining 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.

A significant library project was 85 percent completed during the year. It consisted of preparing and scanning of the sizeable (39 feet of file cabinets) Sell Exploration and Data files.

Mineral Resource Promotion

Statutory Duty:

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

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

Northwest Mining Association Annual Meeting

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

USGS Minerals Information Series

Nyal Niemuth wrote the Arizona review article for 2007 for the USGS Minerals Information Series, including updating the map for publication.

Arizona Strip Field Trip

Dr. Singh joined BLM, Game and Fish staff, industry representatives and others on a visit to various sites on the Arizona Strip. Sites visited included A 51, Arizona One, and the reclaimed Hack and Hermit sites.

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.

- Continuing support for Rosemont Mine Project
- Continuing support for the Land Exchange for Resolution Copper, including a letter to Sen. Wyden.
- Nov 17, 2008 – Letter support drilling by Vane Minerals for breccia pipes in the Kaibab National Forest
- Nov 20, 2008 – Support for ABC Sand and Rock Company for sand and gravel operations to continue
- Dec 16, 2008 – Support for ABC Sand and Rock Company for previous project with increased acreage
- Feb 11, 2009 – Support for South West Sand and Gravel, Inc. to mine sand and gravel
- April 16, 2009 – Support for expansion of Morenci Copper Mine
- April 16, 2009 – Support for CalPortland Company for 8 sand and gravel operations at various locations
- May 08, 2009 – Support for Kilauea Crushers, Inc. to mine rock products

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

Contracts

Rosemont Copper Company

A contract with Rosemont Copper Company was signed on January 30, 2009 for \$48,500 to conduct an economic and social study of the project. A subcontract for \$38,500 was signed with the L. William Seidman Research Institute of the W. P. Carey School of Business of the Arizona State University in January to perform the economic part of the project.

The Larry and Iris Dykers Family Foundation

A contract was signed with the Larry and Iris Dykers Family Foundation for \$60,000 to make a diorama of a copper mine for the museum. This was later supplemented with a \$15,000 grant to prepare a portion of the model that can be transported to various locations for demonstration purposes.

Surveys of Potential Economic Mineral Resources

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

2008 - \$3.19/lb

Molybdenum Oxide Price

2004 - \$16.41/lb

2005 - \$31.10/lb

2006 - \$24.75/lb

2007 - \$29.91/lb

2008 - \$28.42/lb

Even with the depressed economy, and a low copper price, Arizona had a record value copper production, as well a record overall mineral production of over \$8 billion! Arizona remains the Nation's number one mining state.

By the end of 2008, copper, very much the bellwether of the base metals sector, had slumped to \$1.60 a pound. Only six months before the copper price was around the \$4 mark. LME copper prices averaged \$3.61 per pound in the nine-month period ending September 30, 2008, \$2.23 per pound in October 2008 and further declined to \$1.68 per lb on December 1.

Copper Activity

Morenci - Arizona's largest mine, and Freeport McMoRan's flagship operation, laid off over half its work force in recent months. Employment dropped from a peak of about 4,000 to about 1,500. The mining rate has gone from 1.1M tpd to 500K tpd. Leach production will taper off as less newly mined material is added. The production cuts are intended to reduce costs here and at other North American operations sufficiently to generate a positive cash flow at a \$1.25 per lb copper.

Safford - At Safford, production ramped up during the first full year of production. Safford produced 107M lbs of copper by SX-EW in 2008. A number of start-up issues are being addressed principally associated with achieving design capacity of the ore stacking circuit and leach recovery optimization. Freeport announced a 50 percent reduction in the mining and stacking rates at Safford. Layoffs were announced November 2008 and the construction of a sulfur plant (acid) at the Dos Pobres mine was put on hold. When completed the \$100-million-plant will be used to produce sulfuric acid that is then used to leach copper from ore.

Mineral Park

While continuing to mine and produce cathode copper via leach SX-EW, Mercator has pursued a plan to renew sulfide concentration of copper and the deposit's high-grade 0.04% molybdenum. Construction of the 25,000-tpd mill was completed in December 2008. The commencement of concentrate shipments from the copper molybdenum milling facility marks the completion of the construction/development phase of the project and the operations will now focus on ramping up production to design levels. By early 2009 the mine had produced over 9,400 tons of copper concentrates that are shipped to the Port of Guaymas.

Surveys of Potential Economic Mineral Resources, cont.

Pinto Valley: Following the October 2007 concentrator restart Pinto Valley produced 126 million lbs in 2008. Unfortunately low copper prices forced BHP to announce in January 2009 that copper concentrate production at the mine will be suspended and the operations returned to care and maintenance in February. Leach production will continue.

Mission: Production totaled 153 million lbs in 2008. Asarco LLC's operation will leave more than 3.2 billion gallons of water in the ground each year now that it has switched part of the mine operations to use water obtained from the Central Arizona Project.

Silver Bell: Asarco/Mitsui's Silver Bell produced at its SX-EW-plant-capacity of 47 million lbs a year.

Ray: Asarco's Ray mine, the third largest producer in Arizona, typically moves 250,000 tons of ore per day using the new 400-ton Liebherr T282B trucks that have the largest capacity in the state. Additional investments in the mine include installation of a new in-pit crusher.

Bagdad: This Freeport McMoRan mine in Yavapai County hosts the world's first commercial-scale concentrate leach processing facility (2003) and one of the longest continuously operating SX-EW plants in the world (since 1970). In 2008 Bagdad produced 226 million lbs of copper. Freeport's plans for expansion at Bagdad have been put on temporary hold.

Sierrita: Operated by Freeport McMoRan, Sierrita produced 184 million lbs of copper in 2008. Sierrita is the largest producer of by-product molybdenum in the state, recovering 20 million lbs last year. Plans for expansion have been deferred.

Carlota: Quadra Mining Ltd. has moved forward rapidly with construction of the open-pit and SX-EW facility. In October Carlota commenced leaching activity and in December produced its first cathode copper. Forecast annual recovery is expected to be up to 75 million lbs per year for the mine's 11-year life.

Rosemont: Augusta reported in November 2008 that it has completed an update of proven and probable reserves. The total, including oxide and sulfide, is now 616 million tons of ore, an increase of 14 percent. The mining plan of operations has been submitted for review to the Coronado National Forest, lead agency for the NEPA process. A decision is expected to be issued by the 3th quarter of 2010.

Resolution Copper: Resolution Copper Co., is a 55/45 joint venture of Rio Tinto and BHP-Billiton. The company has decided to proceed with mine dewatering and the sinking of the 7,000 ft. deep #10 shaft. Pre-feasibility studies are expected to be completed by 2012 with production at the new mine expected to start by 2020. Congress began hearings on the Southeast Arizona Land Exchange and Conservation Act to transfer title to land essential to development of the deposit. When in production the mine will provide approximately 25% of the United States' copper requirements.

Johnson Camp: In 2008 Nord Resources Corp. produced 2.9 million lbs of copper cathodes from leaching of ore left on the Johnson Camp leach pads from prior years of mining. In mid-August of 2008 the mine received the air quality permit that was needed to proceed with construction of the crushing circuit. In early 2009 Nord commenced the mining of new ore. The mine has proven reserves of 55 million tons of 0.338 percent copper.

Surveys of Potential Economic Mineral Resources, cont.

Other Metal Activity

Manganese

Manganese, a commodity that has not been produced in Arizona in over 40 years, is currently receiving exploration interest. Encouraged by the 300 percent rise in manganese prices in 2007, Roucher Deboule Minerals Corp. optioned about 90 claims in the Artillery Peak district. The district contains one of the largest resources in the United States. In 2009 the company reported a 9.6-billion lb inferred resource from its sampling and drilling efforts.

Uranium

With the highest-grade uranium deposits in the United States (over 0.6 percent U_3O_8), the southwestern area of the Colorado Plateau continues to support high levels of exploration activity. These are in breccia-pipe deposits at considerable depth. Quatterra announced that drilling resulting in the discovery of two mineralized pipes recently identified by geophysical surveys. Denison pursued acquisition of permits from ADEQ for three mines. The Arizona One deposit is expected to begin production in early 2010.

Gold

Rising gold prices has lead to renewed interest in Arizona gold deposits. Exploration drilling and other work programs are being conducted by numerous companies.

Industrial Minerals Activity

Arizona produced \$563 million worth of sand and gravel in CY 2008, slightly lower than the previous year, reflecting the slow-down in the construction industry. Production is falling, however, as growth slows.

As potash prices reached a record high due to the global shortage of potash, numerous companies, including Ringbolt Ventures, Passport Metals, and Southwest Minerals Exploration have acquired many square miles of leases on State and private lands in the Holbrook Basin area. Passport/Southwest have recently completed initial exploration drill holes, the first in decades for this commodity.

Drake Cement's new greenfield plant north of Chino Valley is expected to be on-line by December 2009. Permitting for the plant was initiated in 2003, with construction commencing in June 2007. Their near-by Cedar Glade quarry will supply limestone to the plant.

Cemex announced in September 2007 that it began permitting to construct a 1.9 million tpy cement plant near Seligman. The company has began base-line studies and 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.

Surveys of Potential Economic Mineral Resources, cont.

Arizona Mineral Production

Commodity	2005 Value	2006 Value	2007 Value ³	2008 Value ³
Clay (bentonite)	\$1,670,000	\$1,710,000	\$1,520,000	\$1,570,000
Copper	\$2,640,000,000	4,950,000,000	5,290,000,000	5,930,000,000
Gemstones	1,370,000	1,560,000	1,950,000	1,960,000
Sand & gravel	516,000,000	662,000,000	652,000,000	563,000,000
Stone, crushed	72,400,000	102,000,000	145,000,000	86,900,000
Other ¹	1,120,000,000	1,020,000,000	1,170,000,000	1,260,000,000
Coal ²	290,000,000	190,000,000	200,000,000	200,000,000
Total	\$4,640,000,000	\$6,930,000,000	\$7,460,000,000	\$8,040,000,000

1) Includes cement, clay, lime, gypsum, gold, molybdenum, perlite, pumice, silver, salt, dimension stone, and zeolites.

2) Arizona Department of Mines and Mineral Resources value for coal.

3) U.S. Geological Survey (USGS) data, subject to change; data rounded and may not add to totals shown, published final 2005 – 2006 data, unpublished 2007 – 2008 data will be published in the Arizona Chapter of the USGS Mineral Yearbook, Area Reports: Domestic 2007 - 2008, volume II.

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.

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.

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 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

Information on the budget was provided to both the House and the Senate. Testimony was presented to the appropriate committees on SB 1256 which had two clauses that pertained to the Department. One clause permitted DMMR to have a separate account for contracts, and the other specified that research projects could be undertaken. Considerable help was also provided in formulating HCM 2006, which emphasized that Congress should not act on land laws pertaining to Arizona without consulting with the State Legislature.

Federal agencies to which information was provided included the Bureau of Land Management, the National Forest Service, the U.S. Geological Survey (USGS), and the Securities and Exchange Commission (SEC). A Memorandum of Understanding (MoU) was signed with the Coronado National forest for DMMR to serve as a cooperating agency on the Rosemont Copper Project. A MoU was also signed with the USGS to provide information on Arizona mineral production for their annual reviews. Information on some suspicious mining activities was provided to SEC.

At the State level, financial information on the Department was given to both the Office of Strategic Planning and the Joint Legislative Budget Committee. Several meetings were held with the Arizona State Land Department. The case for a potash exploration permit was discussed at length. The requests for the expansion of some sand-and-gravel and aggregate mines were reviewed. A review of the request to enlarge the Morenci mine, belonging to Freeport-McMoRan Copper and Gold, Inc., was performed. Consultations were held with several divisions of the Arizona Department of Administration on a number of varied subjects. The Arizona Department of Revenue was contacted to get tax information for mining activities in the State. Information on suspicious mining actions was also provided to the Arizona Corporation Commission. Requests for the records of old mines were also referred to the Commission. Data was also provided to the State Mine Inspector.

Information of different types was provided to a number of county and local agencies, industrial development entities, the media and the public. Details of some of these activities are presented elsewhere in this report. Several articles related to mining appeared in the press, data for which was provided by the Department.

Conferences, Seminars, and Speaking Engagements

Statutory Duty:

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

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

Tucson Section of SME, Presentation Topic: *Overview of Mining in Arizona*

Arizona Mineralogical Society, Presentation Topic: *Uranium*

Sun City Rockhound Club, Presentation Topic: *Status of Mining in Arizona 2008*

Roadrunners Prospectors Club, Presentation Topic: *Resources for the Gold Prospector*

Wickenburg Gem and Mineral Club, Presentation Topic: *Climate Change in Arizona through Geologic History*

Arizona Mineral Symposium, Presentation Topic: *Wulfenite*

Arizona Prospectors Club, Presentation Topic: *Overview of Mining in Arizona*

Leaverites, Presentation Topic: *Map Reading for Rockhounds*

Usery Park, Presentation Topic: *Gold Panning in the Goldfields*

Sun City Rockhound Club, Presentation Topic: *U.S. Mining—Where is it Headed?*

Pinal Partnership Government Affairs Committee, Presentation Topic: *Minerals and Pinal County*

Miners' Creek Rock Club, Presentation Topic: *U. S. Mining—Where is it Headed?*

Tucson Gem and Mineral Society, Presentation Topic: *Wulfenite*

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

Repository of Mineral & Mining Information

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.



Harvesting of cathode copper at the Morenci mine

Statutory Duty:

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

Publications

Newsletters

Arizona Mineral Resource, No. 49
Arizona Mineral Resource, No. 50
Arizona Mineral Resource, No. 51

Circulars

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

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

Circular 130, *Federal Agencies Concerned with Mining and Mineral Resources in Arizona*

Circular 131, *State Agencies Concerned with Mining and Mineral Resources in Arizona*

Circular 132, *County Agencies Concerned with Mining and Mineral Resources in Arizona*

Update, Circular 92, *Rockhounding in Arizona*

Update, Circular 63, *Reference Material Listing*

Update, Circular 20, *Maps and Books for Arizona Gold and Gold Prospecting*

Revision, Circular 56, *Annual Assessment Requirements*

Revision, Circular 7, *Services of the Department to Potential Purchasers of Arizona Mineral Commodities*

Open File Reports

Addendum to OFR 07-25, *Checklist of Arizona Minerals*

Annual Reports

69th Annual Report, FY2008—2009

Assist Other Agencies and Organizations

Statutory Duty:

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. Some of the agencies involved include the Arizona Department of Environmental Quality, Arizona Corporation Commission, Securities Division, Radiation Regulatory Agency, Arizona Geological Survey, State Land Department, State Mine Inspector, Department of Economic Securities, Department of Revenue, State Parks, Board of Technical Registration, the three State universities, Department of Water Resources, the Bureau of Land Management, the regional National Forest offices, Bureau of Indian Affairs, the U.S. Geological Survey, and the Mine, Safety & Health Administration. 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.

A formal Memorandum of Understanding (MoU) was executed with the Coronado National Forest for cooperating in the National Environmental Policy Act (NEPA) for the Rosemont Copper Project on April 14, 2009.

Statutory Duty:

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

Cooperate with Corporation Commission and Other Law Enforcement Agencies

The recession and rise in gold price has resulted in an increasing number of suspicious mining activities.

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

A sampling of a few of the suspect mining activities is given below:

- A group claims to be able to acquire rights to and recover large amounts of gold from the water in an underground mine workings.
- A company's geology report infers billions of dollars of gold production and a mine life of over 50 years.
- Promissory notes have been issued to buy additional equipment for a mine that is purported to be in production, but is not.
- A company claims deposits of platinum, a commodity not generally found in Arizona.



Illustration courtesy of Nevada Bureau of Mines and Geology

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: **48,100** in FY 2008-2009

Each year over **24,000** school children tour 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 uses 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 2008/2009, **24,894** students visited the Museum for a program.

Outreach Program

In FY 2008/2009 the Museum Outreach Program visited 34 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.

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.

Education, cont.

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.

Activities/Events

Oct. 6, Banquet of Rocks exhibit at State Fair

Oct. 18, Family Day – 768 attendees

Jan 9—11, Information booth at the A.L. Flagg Show

Jan. 18, P.F. Chang Marathon, Museum is host to elite runners and VIP staging area

Feb. 13-16, Information booth at Tucson Gem and Mineral Show

Feb. 23, Prospectors Day – 571 participants

March 28, Clean-Up Day

Mar. 21, 16th Annual Mineral Symposium

April 24, Volunteer appreciation dinner

Volunteer Activity

How do you move a locomotive? Very carefully. The moving and set-up of our HK Porter locomotive and rail, indeed all outdoor exhibits, was executed entirely by our volunteers.



Last year volunteers
dedicated

10,529

hours to the
Department!

The Department's Mining Information Center and the Museum have rewarding and useful volunteer opportunities for everyone.

VOLUNTEER ACTIVITIES

Data entry

Greet visitors

Create jewelry to sell in the Museum gift shop

Construct outside displays

Repair cases and other items

Catalog technical data for Mine Information Center

Teach silversmithing and lapidary arts

Develop and install displays

Outreach programs to schools

General painting and construction tasks

Digitize the photo collection

Catalog the photo collection

Serve as docents

Assemble Treasure Bags to sell in the gift shop

Prepare samples for Teachers' Kits

Assemble Teachers' Kits

Catalog specimens for the Museum collection

Photograph the Museum collection

Work in the gift shop

Family Day activities

Cut and polish lapidary material

Work in gift shop

BOARD OF GOVERNORS MEETING

Tuesday, 28 October 2008

Meeting Minutes

for

First Quarter FY 2008 (01 July 2008 through 30 September 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.

Absent: Dr. Raymond 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: Mr. Robert Metz (MFSW)

The meeting was called to order by Vice-Chair O'Hara at 10.00 AM.

Upon motion by Poulton, seconded by Holmes, the minutes of the meeting held on 17 July 2008 were approved as submitted by e-mail.

Director's Report

Budget

The budget for FY 2009 was \$989,900 from which \$42,200 was deducted at the beginning of the fiscal year in accordance with the budget bill. This leaves us with \$947,700. The rent portion of this is \$486,400. The balance is \$461,300 for all other expenses.

The FY 2010-2011 budget was submitted to the Office of Strategic Planning and Budget (OSPB) on 29 August.

Staff

The vacant clerk-typist position was filled by Ms Sandra E Regalado on 11 August 2008, after getting special permission from the Department of Administration (ADOA).

An agreement with the Mining Foundation of the Southwest (MFSW) is being negotiated for an Education Curator position.

Meetings

A meeting was held with Mr. Manuel Mendiola on 01 July 2008 to discuss the mine display for the Museum.

On 08 July, Singh met with Mr. Tom Parks to discuss Lapidary Shop position after Mr. Doug Duffy leaves.

He made arrangements with Ms. Rose Herman and Ms. Mindy Williams for audit on 09 July.

Singh attended a budget hearing at the Capitol on 21 July.

Mr. Bryan Beulieu came by the office and met with Rasmussen, Niemuth, and Singh.

The Audit Committee met here and discussed the scope of work with Singh. They then examined some of the financial records and met with Ms Jacqueline Hall on 22 July.

On 12 August met with Mr. Jack Brown and Mr. Art Smith of Joint Legislative Budget Council (JLBC). Brown will be the new analyst for the Department.

13 August – Attended meeting about transferring the Central Services Bureau of ADOA to the Management Services Division.

Niemuth and Singh met with Mr. Al Burch of the Bureau of Land Management on 21 August here in the office to discuss potential projects.

An Arizona Foundation for Resource Education (AFRE) Advisory Board meeting was attended by Singh on 09 September. He met with Mr. Michael Eamon of BHP Billiton about funding for the Museum mine display.

Mr. Bill Milnes and another representative of the Arizona Capitol Times came to describe their bill tracking system – Legislation on Line Arizona (LOLA).

Singh met with Mr. Larry Dykers on 19 September in Tucson to finalize the Press Release and Agreement with MFSW.

On 26 September Singh met with Ms. Judith Evans, a potential candidate for a Tour Guide position.

Letters

16 July – Wrote a letter to Ms GladysAnn Wells at the Library about the Greenway statue in the Capitol in Washington, DC.

16 July – Prepared a draft of a press release for the MFSW.

Annual Report

The Annual Report to the Governor was sent to the Board for review on 12 August, and the final version was submitted on schedule on 15 August.

Presentations

On 13 August Niemuth gave a presentation to the Tucson Section of SME on “Overview of Mining in Arizona.”

Niemuth presented “Overview of Mining in Arizona” to the Arizona Prospector’s Club on 21 August. Although the title of the talk was the same the presentation was different.

Kimble gave a talk on 12 September to the Arizona Mineralogical Society on “Uranium.”

Field Trips

Singh went on a field trip to the Arizona Strip to see the uranium mining area on 22 and 23 September. The trip was arranged by the Bureau of Land Management. Singh joined Mr. Ron Sieg and Ms Andi S Rogers of the Game and Fish Department in Flagstaff and went with them for the rest of the trip. There were 17 persons in the group; visited a Quaterra drill site at A 51, the Arizona One mine site, the Hack reclaimed site, the Hermit reclaimed site, and site for a potential new mine at EZ-1.

Publications

69th Annual Report

Arizona Mineral Reserve, No. 49

An addendum was added to OFR 07-25 – *Checklist of Arizona Minerals*

Press Releases

Press release on Outreach Grant from the Mining Foundation of the Southwest

Website

The website is continually being updated and improved.

Total number of hits during the quarter: 650,562

Number of unique hits (IP addresses): 27,862

Museum Visitors

Total number of visitors during the quarter: 4,677

Number of students during the quarter: 2,760

Number of teacher's kits distributed: 99

Volunteer hours during the quarter: 1,854

Organization Meetings

Singh attended a class on 15 July on budgeting, using Buddies 2010.

On 22 July Singh attended meeting organized by the Office of Strategic Planning and Budgeting (OSPB).

Most staff members of the Department heard Mr. John Rares Almasan of the Arizona Automobile Theft Authority give a talk.

On 18 September Mr. Rhett B Larson of Gallagher and Kennedy gave a presentation titled "Pinto Creek and Impaired Waters," to the SME Maricopa Section. Niemuth, Kimbler and Singh attended.

Singh attended a meeting of the Arizona Geothermal Working Group on 19 September at the Arizona Geological Survey in Tucson. There were 13 attendees.

The Friends of the Arizona Mining and Mineral Museum (FAMMM) had a Board Meeting on 29 September. Rasmussen and Singh attended.

Donations

Over 3,000 gemstones and mineral specimens were received (see details in Curator's report). There was \$596 in cash donations to the Museum.

Activities for Ms Diane R Bain

Prepared an ad for the AGS directory. Updated the Department's mailing list and Media database. Fielded 245 inquiries (phone calls, e-mails, letters, and visitors). Added 61 occurrences to the AzMILS database. Set up interviews and helped interview candidate for the clerk-typist position. Help train new clerk-typist.

Metz Statement

Mr. Metz expressed satisfaction with the work done with regard to the Mining Foundation of the Southwest contract.

Chief Mining Engineer's Report

Niemuth updated the website, attended a multi-agency meeting on abandoned mines, and acquired the report on Wilson/Kellogg La Paz County underground placer mine. He solicited companies for scanning Sell data. He followed several suspicious mining activities. He kept the computers and other equipment working as needed. He reported on industry activities for the quarter.

Museum Curator's Report

Rasmussen collected samples from Silverbell and Mission mines. She toured the Miami smelter, Bagdad, and Pinto Valley mines and the Gaston Toy Train museum for the diorama display. She attended the Geological Society meetings. She gave talks at the Tucson Gem show and Paradise Valley Community College.

Public Comments

None

Next Meeting Date and Time

The next quarterly meeting will be held on 22 January 2009, at 10.00 AM (tentative).

Adjournment

Upon motion by Poulton, second by Medhi, the meeting was adjourned at 11.00 AM.

BOARD OF GOVERNORS MEETING

Thursday, 22 January 2009

Meeting Minutes

for

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

Present: Mr. P.K. Rana Medhi, Chair, Dr. Patrick F. O'Hara, Vice-Chair, Dr. Mary M. Poulton, Secretary, Dr. Raymond W. Grant, Member, Mr. Robert L. Holmes, 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: Mr. Albert J. Perry (MFSW); Ms. Cynthia Grant

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

Upon motion by Poulton, seconded by O'Hara, the minutes of the meeting held on 28 October 2008 were approved as submitted by e-mail.

Strategic Plan

The Strategic Plan was reviewed by Singh. It was clarified that only the Vision and Mission statements would be on the website, not the entire plan.

Director's Report

Budget

The budget for FY 2009 was \$989,900 from which \$42,200 was deducted at the beginning of the fiscal year in accordance with the budget bill. This leaves \$947,700. The rent portion of this is \$486,400. The balance is \$461,300 for all other expenses. Salaries and ERE add up to \$427,703. Further cuts are expected in the final budget when it is passed by the Legislature.

Staff

A new Tour Guide, Ms Judith Evans, was hired starting in January, but the application for hiring during freeze was made during the quarter.

The selection process for the Education Curator is in progress.

Meetings

09 Oct – Met with Mr. James Mack about uranium mining.

24 Oct – Interview by KNOW 99 TV on Museum.

27 Oct – Met with Science Foundation Arizona (SFAz) staff.

29 Oct – Spoke with Mr. Ryan Smith, attorney from Senator Kyl's office about Arizona strip.

07 Nov – Met with Dr. McPheters of ASU about Rosemont study.

10 Nov – Met with Ms. Tracy Hannah of Governor's office about budget. Mr. Thomas Soteros-McNamara of OSPB also attended.

20 Nov – Met with Mr. Mack and Ms. Pamela Hill from Quatterra Resources.

26 Nov – Attended Light Rail meeting, organized by Ms. Shannon L Scutari of the Governor's office.

02 Dec – Met with Ms Lyn H. White of Freeport-McMoRan about Ajo locomotive.
04 Dec – Met with Mr. Bryan Beaulieu and Rasmussen about mine model.
04 Dec – Met with Mr. Larry Dykers about MFSW agreement.
04 Dec – Met with Ms. Kathy Arnold, Mr. Rod Pace and other Rosemont staff.
07 Dec – Singh attended the Arizona Conference Board Meeting.
12 Dec – Meeting with Mr. Mark Adams and others of AGATE Inc. about shed in backyard.
23 Dec – Met with Beaulieu.

Presentations

25 Nov – Niemuth spoke to the Leaverites on “Map Reading for Rock Hounds.”
03 Dec – There was a presentation of the “2008 Arizona Report,” at the Northwest Mining Association, Reno, NV by Niemuth.
06 Dec – “Gold Panning in the Goldfields,” was discussed by Kimbler at Usery Park.

Publications

Arizona Mineral Resources – No. 50
Revised Circular 56, *Annual Assessment Requirements*
Revised Circular 7, *Services of the Department to Potential Purchases of Arizona Mineral Commodities*
Revised Circular 127, *Arizona Gem Shows, 2008-2009*
Revised Circular 128, *Earth Science Clubs, 2008-2009*

Press Releases

Flyer sent out for Holiday sale for government employees.

Website

The website is continually being updated and improved.
Total number of hits during the quarter: 694,383
Number of unique hits (IP addresses): 27,391

Museum Visitors

Total number of visitors during the quarter: 12,900
Number of students during the quarter: 6,750
Number of teacher’s kits distributed: 236
Volunteer hours during the quarter: 3,012.75

The Museum Curator’s report presents more detailed information.

Organization Meetings

14 Oct – Singh went to the Rocky Mountain Law Institute program meeting.
14 Oct – Staffing Workshop on “Panning for Gold,” in which Singh participated.
16 Oct – Staffing Workshop on “General Guidelines for Interviewing,” was held by ADOA which Singh attended.
16 Oct – SME Maricopa Section Meeting – the speaker was Alan Weakly, SME Krumb Lecturer, “An Inconvenient Realty.” Niemuth, Kimbler and Singh attended.
18 Oct – Family Day at the Museum. Most staff was there. There were 768 visitors.
24 Oct – Singh attended a Risk Management meeting.

18 Nov – Science Foundation Arizona (SFAz) held the announcement about Mineral Institute in Museum. Medhi, O'Hara, Holmes attended. Also ex-Sen. Mack and Rep.-elect Russ Jones were there. Poulton was a speaker; she heads up the Institute.

20 Nov – SME Maricopa Section Meeting– Alvin L Burch, Group Manager, Minerals and Renewable Resources Group, U.S. Bureau of Land Management, Phoenix, "Mineral Withdrawals and Valid Existing Rights –Their Importance to the Mining Industry in Arizona." Niemuth, Kimbler and Singh attended.

06 Dec – Rasmussen and Singh attended the Hall of Fame Dinner, Mining Foundation of the Southwest. Medhi also attended, as did Bryan Beaulieu.

08 Dec – The SME Arizona Conference in Tucson was attended by Niemuth, Kimbler, Rasmussen and Singh.

18 Dec – Arizona Rock Products Association (ARPA) lunch with Niemuth and Bain. Singh met Sen. Harper, Mr. Russell "Rusty" Bowers, Mr. Steve Trussell, Mr. Frank P Mendola of CEMEX, and others.

Donations and Contracts

DMMR received \$30, 933.79 in cash and a large number of in-kind donations.

Activities for Ms Diane R Bain

Bain updated the Department listing in the *Arizona Capitol Times*; submitted an ad for AMA in the *Southwest Contractor*; produced Department brochures for Science Foundation Arizona for announcement of the Mineral Institute; completed adding new mineral occurrences to the AZMILS database in which a total of 226 occurrences were added.

Responded to 182 e-mails, 132 phone calls, and assisted 68 visitors. She updated the Department mailing list.

Comments

Singh briefly indicated his plans for the next quarter. He gave some details of the expected Rosemont study. He mentioned that a hearing was scheduled on 23 February by the House Natural Resources and Rural Affairs Committee.

Chief Mining Engineer's Report

Niemuth updated the website, adding new material. He attended the GITA security and privacy conference; DMMR was selected as one of the small agencies for a test of computer security – they did not find anything seriously wrong with the system. Scanning of some of the files for clients continued. He followed some of the suspect mining activities in the states and responded to questions about these. Niemuth supervised the work done by Kimbler. Kimbler helped the State Mine Inspector personnel in the location of several abandoned mined lands. Niemuth gave an overview of the progress of the mining activities in the quarter.

Museum Curator's Report

Rasmussen attended several meetings of various organizations and oversaw the activities of the volunteers. She helped AFRE with some posters.

Comments

Medhi wanted to know the status of the Globe project. Rasmussen replied that it was slow because the approval of an Indian tribe was to be obtained. She thought the printers will be installed on the mezzanine in about a year.

The posters for the Bagdad mineral case are made, but the case is not there; funds for that need to be solicited.

Poulton said she would work with University of Arizona personnel to get videos for the Museum.

Remarks by Mr. Albert (Al) Perry

Mr. Perry pointed out that the diorama display did not look like an open-pit; the contours were reversed. The headframe on the side also seemed out of place. Besides, he thought the model would be portable so as to be taken around during presentations, which is not the case.

He expressed concern on the part of the Mining Foundation about the budget cuts for the Department and the Goldwater Institute's suggestion to eliminate it. Singh responded that the Legislature makes those decisions, not the Goldwater Institute; the Senate and House Chairmen's budgets for the DMMR are out for both years – there are cuts but the Department continues to exist.

What is the status of the Education Curator? Singh stated the process is proceeding slowly; the resumes are out for review but the short list is not ready.

Library and Archive Status and Tour

This was to occur after the meeting and Executive Session. Niemuth will lead the tour.

Mineral Development Policy for the State

Check on policies that other states have then draft one for Arizona. This will be an on-going project for some time.

Public Comments

None

Election of New Officers

Medhi presented a slate of officers: Dr. Patrick O'Hara, Chair, Dr. Mary Poulton, Vice Chair, Mr. Robert Holmes, Secretary.

With a Motion by Grant, seconded by Medhi, the motioned passed unanimously.

Singh presented the outgoing Board Member, Dr. Raymond W Grant, with a small token of appreciation and a certificate, and thanked him for his service.

Next Meeting Date and Time

The next quarterly meeting will be held on 08 April 2009, at 10.00 AM.

Adjournment

The meeting was adjourned at 12.00 noon.

BOARD OF GOVERNORS MEETING

Wednesday, 08 April 2009

Meeting Minutes

for

Third Quarter FY 2008 (01 January 2009 through 31 March 2009)

- Present: Dr. Patrick F. O'Hara, Chair, Dr. Mary M. Poulton, Vice-Chair, Mr. Robert L. Holmes, Secretary. Ms. Lyn H. White, Member, attended by teleconference.
- 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: Mr. Robert Metz (MFSW); Ms. Pamela A. K. Wilkinson for introduction as Education Curator.

The meeting was called to order by Chair O'Hara at 10.00 AM.

Upon motion by Poulton, seconded by Holmes, the minutes of the meeting held on 22 January 2009 were approved as submitted by e-mail.

Director's Report

Budget

Currently the budget for FY 2009 stands at \$883,000 after reductions of \$47,400 from the base budget and \$17,400 from salaries. There is another cut of \$6,800 from the non-appropriated funds. At this time the projected FY 2010 budget entails further cuts of \$24,400 in the salary component of the appropriated funds and \$16,200 from non-appropriated funds. This has not been finalized at this time.

Staff

Frank S Kimbler resigned on March 15, effective immediately. He plans to teach.
Pamela A. K. Wilkinson joined the Department on 30 March as the new Education Director.

Meetings

Singh attended the meetings listed below, unless indicated otherwise:

08 Jan – Met with Charlie Connell and Rob Artac on restoring the locomotive. Rasmussen was present.

13 Jan – With Rasmussen and Niemuth meeting with Anneliese Morgan on Rock and Roll Marathon

14 Jan – Along with Niemuth, visited with Al Burch of BLM to discuss possible projects

15 Jan – Attended briefing on budget

18 Jan – Rock and Roll Marathon. Rasmussen and Niemuth also attended

20 Jan – Met with Thomas Soteros-McNamara of OSPB to clarify budget

22 Jan – Board meeting

22 Jan – Met with Mr. Al Perry

26 Jan – Met with Dr. Byron Schlomach from the Goldwater Institute, along with Niemuth

28 Jan – Meeting with Bryan Beaulieu

06 Feb – Met with Teresa Ann Ciapusci and Beverley A Everson on the MOU with the U S Forest

Service on Rosemont Copper Project

- 12 Feb – Meeting with Larry Dykers
- 19 Feb – Audit Committee meeting
- 20 Feb – Met with Jessica Gonzales about Science Foundation Arizona news conference
- 27 Feb – Meeting with Michael Anable, Policy Advisor on Natural Resources
- 02 Mar – Conference call on Education Curator selection process
- 12 Mar – Along with Niemuth met with Darrell Mills, Scott Burzynski, and Tracy Starling of ADOA
- 20 Mar – Interviews with candidates for Education Curator; O'Hara presided, Rasmussen, Hawes, Schedler, Singh were on the committee. White absent
- 25 Mar – Niemuth and Singh met with representatives of the Southwest Exploration Group, Joshua Bleak of NPX Metals and Terrence Smithson of Passport Metals, regarding the difficulties they were having with the State Lands Department in getting a permit for drilling an exploratory hole

Organization Meetings

- 15 Jan – SME Maricopa Section Meeting, Joe Hart, Arizona State Mines Inspector, "Mining in Arizona and its Abandoned Mines."
- 29 Jan – Attended meeting called by Rep. Jones for mining stakeholders; along with Niemuth
- 06 Feb – Attended Southwest Mineral Exploration Association (SMEA) meeting
- 12 Feb – Attended the Annual Meeting of the Mining Foundation of the Southwest. Rasmussen also attended
- 14 Feb – Attended AIPG Annual Meeting
- 19 Feb – SME Maricopa Section Meeting, Harry "Red" Conger, President, Freeport-McMoRan Copper & Gold, Inc. Americas, "Copper Markets and Trends in Today's Global Economy – and our work with ethical investors."
- 22-25 Feb – Attended SME Annual Meeting in Denver, CO
- 16 Mar – Mining Stakeholders Meeting called by Rep. Jones; Niemuth attended
- 19 Mar – SME Maricopa Section Meeting, R Joe Sandberg, President and Director, Redhawk Copper Inc. and Redhawk Resources, "Copper Creek – An Unusual Breccia and Porphyry Copper District."
- 21 Mar – Flagg Mineral Symposium; Rasmussen and Niemuth attended, Rasmussen presented a paper
- 23 Mar – David Salisbury, President, Resolution Copper gave a talk to the Leaverites; Rasmussen, Niemuth and Singh attended

Administrative Activities

A memo on use of personal computers and equipment in the Department was issued.

No Policy on Mineral Development by any of the States was located. A policy for India was found on the internet. Any policy that may be developed would have to be considered by the Legislature.

Presentations

- 02 Feb – To the Natural Resources Committee of the House; Niemuth present
- 06 Feb – Bryan Beaulieu and Rasmussen gave a presentation to Larry Dykers, Al Perry, Cori Hoag, and Kevin Horstman at the SRK office on the mine model; Singh attended
- 12 Feb – Niemuth made a presentation to the Sun City Rock Hound Club on "Review of Status of

Mining in Arizona for 2008,” – 50 attendees.

- 17 Feb – Niemuth presented “Map Reading for Rockhounds” to the Arizona Prospectors Club – 60 attendees.
- 19 Feb – Bain made a presentation to the Roadrunners Prospectors Club on “Resources for the Gold Prospector” – 125 attendees
- 06 Mar – Rasmussen presented “Climate Change in Arizona through Geologic History” to the Wickenburg Gem & Mineral Club.
- 12 Mar – Made presentation to Sun City Rock Hound Club on “U S Mining – Where is it headed?” – 71 attendees
- 21 Mar – Rasmussen presented a paper on “Wulfenite” in the Flagg Mineral Symposium

Field Trips

- 31 Mar – Pam Wilkinson and Singh accompanied Dr. Timothy D Hogan and Dr. Lee McPheters for a trip to the Rosemont mine site; Dennis Fischer of Rosemont escorted the group.

Publications

- Updated Circular 20, *Maps and Books for Arizona Gold and Gold Prospecting*
- Updated Circular 63, *Reference Material Listing*
- Revised and released under new release number, Circular 130, *Federal Agencies Concerned with Mining and Mineral Resources in Arizona*
- Revised and released under new release number, Circular 131, *State Agencies Concerned with Mining and Mineral Resources in Arizona*
- Revised and released under new release number, Circular 132, *County Agencies Concerned with Mining and Mineral Resources in Arizona*
- Updated Circular 92, *Rockhounding in Arizona*

Press Releases

- Bain was interviewed on telephone by Rebecca Cooney for *Newsday* Magazine for an article on travel in the southwest. She also e-mailed some photographs
- Interview with Kristina Jenkins of *Where* magazine for an article on the Museum by Bain. She e-mailed some images
- Information provided by Bain to Katy Spining, executive editor of *Valley Guide* Magazine for on article on the Museum for their Spring issue

Website

- The website is continually being updated and improved.
- Total number of hits during the quarter: 783,767
- Number of unique hits (IP addresses): 31,895

Museum Visitors

- Total number of general visitors during the quarter: 7,124
- Number of students during the quarter: 7,852
- Club members: 984
- Persons with disabilities: 29
- Scouts: 82
- Number of teacher’s kits distributed: 71

Volunteer hours during the quarter: 3,284

The Museum Curator's report presents more detailed information.

Donations and Contracts

During the quarter the Department received \$17,496.90 in cash. This included \$16,768 for the Mining Information Center, of which \$14,550 was for a contract with Rosemont Copper Mining Co.; \$11,550 of this went towards a subcontract with Arizona State University. The museum received \$728.90 in cash and several in-kind donations of rocks and gemstones. The information Center received some historical maps, photographs, and documents.

Activities for Ms Diane R Bain

Bain fielded 302 inquiries – phone calls, e-mails, letters, and visitors. She added 5 occurrences to the AzMILS database, and researched and located 4 'lost' mine files, which she added to the database.

Comments

In response to a question on the subject the Director stated he would complete the Justification for a Mining Engineer soon and submit it to ADOA, for approval during the hiring freeze.

A Memorandum of Understanding (MOU) has been executed with the U.S. Forest Service for the EIS on the Rosemont Mine.

Chief Mining Engineer's Report

The Chief Mining Engineer (CME) reported that the website was updated. He helped on setting the Copper Gallery for a Science Foundation Arizona press conference. He received 6 sets of donations. Considerable work was done on the AzMILS and mine data library. He followed at least 7 suspicious mining operations. He reviewed the industry news for the quarter. Interest in potash is of particular note. He worked on the agency computers and publications, and worked with new volunteers.

Comments

There is no response yet from BLM on their funding. The resource conference the CME attended was about 1/3 the size of the one last year. The Sell project is about 2/3 done. Preliminary data form USGS still shows Arizona as the No. 1 mining state.

Poulton thanked Niemuth for his quick response to Rick Deary's request from BLM.

Museum Curator's Report

Rasmussen attended the Quartzite and Tucson gem and mineral shows. She accompanied Ann Baker during her purchasing trips. She attended the SME Annual meeting, and the Denver and Colorado School of Mines museums. She attended the CAMA (Central Arizona Museum Association) and other meetings.

Comments

FAMMM will assist with \$5,000 for Teacher's Kit books. White wanted to know if Freeport had been approached for funds; an informal request had been made. FAMMM paid \$5,500 for the posters in the Copper Gallery. The mucker and stamp mill were operated on Family Day and were popular.

O'Hara suggested using photographs for a 2010 calendar; postcards could be made too. Photographing of minerals is in progress.

Education Curator Remarks

Wilkinson stated she was happy to join the Department; she would welcome any suggestions.

Mining Foundation of the Southwest Representative's Comments

Mr. Metz stated that the honorees for the Hall of Fame Banquet have been selected but will not be released until acceptances from the recipients have been received. Progress on the Hall of Fame would be appreciated.

General Comment

White stated that the Governor was supportive of the industry.

Public Comments

None

Next Meeting Date and Time

The next quarterly meeting will be held on 14 July 2009, at 10.00 AM.

Adjournment

The meeting was adjourned at 10.56 AM.

BOARD OF GOVERNORS MEETING

Wednesday, 14 July 2009

Meeting Minutes

for

Fourth Quarter FY 2008 (01 April 2009 through 30 June 2009)

Note: The Fourth Quarter Minutes have been sent out to the Board Members by e-mail for comments but are scheduled for formal approval at the next Board Meeting to be held on November 16, 2009

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

Absent: Ms. Lyn H. White, Board Member; Mr. Nyal J. Niemuth, Chief Mining Engineer; Ms. Jacqueline D. Hall, Transcriber

Staff: Dr. Madan M. Singh, Director; Dr. Jan C. Rasmussen, Museum Curator

Visitors: Mr. Robert Metz (MFSW); Mr. Charles Connell (Volunteer); Mr. Robert Artac

The meeting was called to order by Chair O'Hara at 10.00 AM.

Upon motion by Medhi, seconded by Poulton, the minutes of the meeting held on 08 April 2009 were approved as submitted by e-mail.

Director's Report

Budget

A budget of \$858,000 from the General Fund was approved for the Department. In addition, \$23,000 will be swept from the non-appropriated funds.

Staff

08 Apr – Submitted an application to hire a person for the Mining Engineer position. Permission was received. Two candidates were interviewed. A decision is still to be made.

Meetings

Singh attended the meetings listed below, unless indicated otherwise:

02 Apr – Coronado Forest Service Meeting on Rosemont

02 Apr – NSF Talk on Contracts at U of A

02 Apr – Mining Foundation of the Southwest Board Meeting

07 Apr – Ms Alicia Bewsey on Diorama contract

09 Apr – Mr John Driggs, Centennial Committee

23 Apr – Ms Sodontogos Erdenetsogi from Mongolia, Eisenhower Fellow

04 May – Ms Caroline Hartley of Freeport about statue; Mr Red Conger, Freeport

05 May – House Appropriations Committee

20 May – Senate Appropriations Committee
 29 May – Mr Mahesh Thanki of India, Managing Director, Rawmin Mining and Industries, Pvt., Ltd.; Niemuth also attended
 15 Jun – Testified at Senate hearing on SB 1256
 18 Jun – Coronado Forest Service Meeting on Rosemont
 18 Jun – Dr. John Chesley, Department of Geosciences at U of A, about uranium study
 22 Jun – Conference call to Mr Jamie Sturgess, Dr Tim Hogan, Ms Kathy Arnold, Mr. Rod Pace, and Mr. Fermin Samorano
 22 Jun – Visit to Mr Bryan Beaulieu home so see model
 24 Jun – Testified to House Natural Resources Committee on SB 1256
 25 Jun – Testified to Senate Committee on Retirement and Rural Development on HCM 2006
 25 Jun – State Lands Department, with Mr Robert Worsley, Renegy, and others; Niemuth attended

Organization Meetings

09 Apr – Capitol Police on Security
 16 Apr – SME Meeting, David Salisbury, President, Resolution Copper, “Resolution Copper Project Update.” Niemuth, Wilkinson, and Rasmussen also attended
 21 Apr – AMA Lands Meeting; Laura Skaer, Esq. of Northwest Mining Association attended
 24 Apr – Volunteer Banquet
 11 May – Arizona Conference Board Meeting
 20 May – Geothermal Energy Session, Bureau of Land Management; Wilkinson also attended
 21 May – SME Meeting, Craig Smith, Project Manager, Mineral Park, Inc., “Fast Tracking the Mineral Park Mill Project.”
 26 May – Leaverites; Rosemont Copper Project meeting; Mr Dennis Fischer and Mr. Jeff Cornoyer Presented; Niemuth attended
 11 Jun – Meeting with Ms Hogue and Mr Dixon, State Department of Land on Potash; with Mr Joshua Bleak and Terrence Smithson, Southwest Exploration
 18 Jun – SME Meeting, David Cook, General Manager, Carlota Mine, “Introduction to Carlota Copper Company.”

Presentations

04 Jun – “U.S. Mining – Where is it headed?” Miner’s Creek Rock Club, American Legion, Wickenburg, 15 persons
 16 Jun – “Minerals and Pinal County,” Pinal Partnership Government Affairs Committee, SRP Administration Building, 5 persons

Field Trips

29 Apr – Resolution Copper, with Niemuth and Holmes; tour by Mr David Salisbury and Mr Adam Hawkins
 29 Apr – Carlota Mine, with Niemuth and Holmes; tour by Mr David Cook
 09 May – SME Annual Field Trip to Ray Mine; Niemuth, Bain, Rasmussen, Holmes, Medhi were also on the trip

Publications

Arizona Mineral Resources - No. 51

In order to save printing and postage costs the Department launched its first digital release of the newsletter.

Bain researched 2008 mining activity in the State for the annual *Mining Engineering* article, the Department's Open-File Report on *Trends and Opportunities* and the Annual Review for the USGS.

Website

The website is continually being updated and improved.

Total number of hits during the quarter: 664,267

Number of unique hits (IP addresses): 27,938

Museum Visitors

Total number of general visitors during the quarter: 5,225

Number of students during the quarter: 7,532

Club members: 639

Persons with disabilities: 25

Scouts: 159

Number of teacher's kits distributed: 20

Volunteer hours during the quarter: 2,379

Donations and Contracts

During the Quarter \$30,757 were received by the Mining Information Center; of which \$30,000 was for the Education Curator. The \$757 was towards a magazine which has been ordered.

The Museum received \$307.47 in various donations and an additional \$94.00 for outside exhibits. There were a large number of in-kind gifts.

Activities for Ms Diane R Bain

She added a free listing for the Museum to a website for Phoenix convention-goers.

www.wwtc.com. She gave a phone interview with the East Valley Tribune on the Peralta Stones; responded to 182 e-mails, 164 phone calls, and assisted 48 visitors

Plans for Next Quarter

A brief outline of projected plans was presented

Comments

Medhi requested that he be informed in the future of any presentations to Pinal County

Chief Mining Engineer's Report

The Chief Mining Engineer (CME) reported on his activities for the quarter and presented a brief review of the industry. He updated the website with a number of new items and had several meetings with GITA. He attended an Abandoned Mined Lands meeting with BLM and guided some potash prospectors through some meetings, including attending a SME meeting in Tucson on potash. He worked on some MILS data, and followed up on donations. He worked with several industry personnel to help obtain information, and tracked a few suspicious mining activities. He worked on publications and on computers as required.

Comments

Niemuth noted that China is buying many minerals worldwide and Korea is following suit. This will make access to foreign supplies more difficult in the future. O'Hara said they were working on outside sources for funds, but not having much success. Singh remarked that to his knowledge the Department has obtained more support in the last two years than the last 30 years; the Department is trying, but there was no base to begin with.

Museum Curator's Report

Rasmussen toured the Ray mine and the Clarkdale cement plant. She worked on the posters for the Mining Hall of Fame, which are nearly completed. She made several trips to Tucson for a variety of reasons. She is working on getting the kiosks in the Copper Gallery. Several displays were rearranged during the quarter.

Mining Foundation of the Southwest Representative's Comments

Metz stated that funds for the poster stand had been authorized. The Education Curator's activities were being published in the Newsletter. Dr Poulton will be one of the honorees at the forthcoming Hall of Fame Banquet – she is a Medal of Merit winner.

Discussion of Restoration of Porter Locomotive

Rasmussen stated that she would like to have this done before the 2012 State Centennial celebration. Artac presented a detailed scheme for getting the restoration done; the cost would be \$250,000. Connell suggested that fees be charged for rides on the locomotive when it is working. Singh said that charging fees would require a rule with the Secretary of State; currently there is a one-year moratorium on new rules. Also the title to the locomotive should be assured; Singh would follow up with Freeport. O'Hara stated that the question of fees should be tabled.

Public Comments

None

Next Meeting Date and Time

The next quarterly meeting will be held on 16 November 2009, at 10.00 AM.

Adjournment

The meeting was adjourned at 11.15 AM.

This was followed by a trip to a display of the portable section of the mine diorama, explained by the contractor Mr Bryan Beaulieu of Sustainable Engineering, LLC.

An Executive Session was held after the trip.