



AGS NEWSLETTER

ARIZONA GEOLOGICAL SOCIETY, INC., TUCSON, ARIZONA

February 2008

FEBRUARY DINNER MEETING

John Rickus, Resolution Copper Sustainability in Mining

February 5, 2008

Abstract: Rio Tinto is a world leader in mining, with over 75 operating mines, 40 smelting and refining operations, and a large number of new projects in the pipeline. The company employs over 50,000 people. In the USA, Rio Tinto mines copper, molybdenum, gold, copper, talc, and borates. In Arizona, Rio Tinto owns 55 percent of the Resolution copper project located near Superior, with BHP Billiton holding the remaining 45 percent. Rio Tinto manages the project.

With operations around the world, Rio Tinto's commitment to economic, social and environmental development is global. Rio Tinto's approach to sustainable development is embedded through all levels of the organization, holding the health and safety of employees and the environment as a core value. Rio Tinto has been at the forefront of many initiatives on sustainable development and is included on the Dow Jones Sustainability Index and FTSE4Good. In 2006 Rio Tinto businesses supported 855 socio-economic programs

covering a wide range of activities—from health, education, and business development to housing, the environment and agriculture. The company spent an estimated US \$96 million on community programs related to the business. These programs encompassed commercial and business development initiatives, charitable gifts, and legally binding agreements to trusts, funds, and foundations.

This presentation will discuss why Rio Tinto attaches so much importance to sustainability in its business activities and approach to sustainable development. Initiatives from a diverse number of operations around the globe will be used to illustrate this. The presentation will conclude with a brief overview of the Resolution project and of the sustainable development plans and activities, including the strategic map that helps the track progress in the areas of health and safety, environment, community relations, operational excellence, market reputation, financial strength, and commitment to people.

Dinner Meeting Information — Four Points at the Sheraton, Salon B, Conference Center 1900 East Speedway Blvd., Tucson

To reserve your place for dinner, call 520-663-5295 before 5 pm, Friday, February 1, 2008.

AGS CAN NO LONGER GUARANTEE DINNER SEATING FOR THOSE WHO SHOW UP WITHOUT A RESERVATION.

Cost: Members \$24, Guests \$27 Students \$10. (+\$3 for late registration)
Cash Bar @ 6 pm Dinner @ 7 pm Talk @ 8 pm

For dinner selection, indicate if a low-salt or vegetarian meal is required. Please cancel if you are unable to attend.

Free parking is available at the Four Points, around the building and in the garage beneath. Enter the building on the north side and make your way towards Salon B, Conference Center, at the back.

Announcements

Congratulations to Rich Brown, AGS V.P. of Field Trips, and his wife on their new daughter, born on December 14.

ASBOG Exam Geology Practice Problems & Quizzes and *ASBOG Exam Geology Flash Cards* are for sale by Professional Publications, Inc. Check their web site: www.ppi2pass.com. Promo Code GP181 may save shipping charges.

The Arizona Board of Technical Registration recently approved a requirement that an Arizona Registered Geologist must include his/her registration-expiration date on a document or drawing that is sealed. The language states there must be "A notation beneath the seal either written, typed, or electronically generated that provides the day, month, and year of expiration of current registration." The requirement becomes effective March 8, 2008. Visit the BTR website for more information:

http://www.btr.state.az.us/regulations/latest_rule_changes.asp

A new report, co-produced by the US Geological Survey and the Geological Survey of Canada, presents evidence from two case studies in Canada that updated, higher resolution maps made mineral exploration campaigns "...more efficient, more effective, and less risky than old, coarser resolution maps" and that the mapping produced a multiplier value of up to more than eight times what it cost to produce. The analysis found they located 60 percent more targets with an exploration campaign that is 44 percent more efficient.

The 2007 report, *Analysis of Improved Government Geological Map Information for Mineral Exploration: Incorporating Efficiency, Productivity, Effectiveness, and Risk Considerations*, is by R. L. Bernknopf, A.M. Wein, M.R. St-Onge, and S.B. Lucas, U.S. Geological Survey Professional Paper 1721 and Geological Survey of Canada Bulletin 593. Downloaded it for free at: <http://pubs.usgs.gov/pp/pp1721/>.

Courtesy of Lee Allison's web site, "Arizona Geology, blog of the State Geologist of Arizona"

O&O AV Equipment Still Available

VGA cable: 35-, 50-, 75-, and 100-ft lengths (\$3-\$13)

Power cords: lengths of 25 (\$4), 50 (\$8), and 100 (\$25) feet.

High quality, heavy duty, indoor/outdoor.

Audio cabling Power Strips: 2 for \$5

Laser Pointers/Remotes: \$10

Keyboard + mouse: \$8

Duct Tape (60 yd roll, black): \$3

Microphones (hands-free + receiver): \$75

For information contact Greta Orris: greta@espri.arizona.edu

TILLMAN'S CORNER

Neither Fish nor Fowl

Landforms of Southern Utah: A Photographic Exploration (Paperback) by Richard L. Orndorff (author) and David G. Futey (photos), 2007 Mountain Press, \$15 tp, 92 pp

I picked up this little book of photos with high hope, as it's a part of the country I know and love. The format is interesting: a geologic/photographic tour of the redrock country (and beyond) of southern Utah— God's country—by a geology prof and a local photographer.

Unfortunately, the concept wasn't executed very well. The color printing quality is indifferent, and the geologic writeups were shallow and, well, pretty dull.

The highlight of the book, for me, was the splendid shaded-relief maps of the areas described, prepared from USGS data but otherwise uncredited.

There are better choices, perhaps including these authors' *Geology Underfoot in Southern Utah*, which was a Southwest Notable Book in 2006 (but which I haven't seen.)

Peter D. Tillman, Consulting Geologist
Arizona and New Mexico (USA) [pdtilman@gmail.com]

2008 CALENDAR OF EVENTS

- | | |
|--------|--|
| 3/4/08 | Dave Maher, Bronco Creek Exploration: <i>Reconstruction of Middle Tertiary extension and Laramide porphyry copper systems, southeast Arizona</i> |
| 4/1/08 | Phil Davis, USGS: <i>Remote sensing characterization of the mineral resources of Afghanistan</i> |
| 5/6/08 | Adam Schwarz, Resolution Copper: <i>Geology of the Resolution porphyry copper-moly system</i> |
| 6/3/08 | Mark Myers, Director, USGS: <i>Topic to be determined</i> |
| 7/1/08 | Steve Enders, Newmont, <i>Bridging the gaps in exploration and mining opportunities for research and development across the life cycle of an ore deposit</i> |
| 8/5/08 | Dick Heermance, USGS: <i>Terrace formation and climate change in southern California</i> |

60 Years and Going Strong

THE PRESIDENT'S COLUMN

BY LEE ALLISON

lee.allison@azgs.az.gov

The Arizona Geological Society celebrates its 60th anniversary during 2008 and a number of events are being planned to recognize this milestone. Significant anniversaries are good times to acknowledge and thank all those who have contributed to making the Society a success, but it's also a time to take stock of where we want to go in the next decade and beyond.

The good news is that the Society is wonderfully successful. We are financially solvent, our membership is active, we are doing things important for our members and our profession, and to advance the understanding of the geology of Arizona.

The recent Ores and Orogenesis symposium was a huge success, technically, scientifically, and financially. Over 900 attendees came from across the country and 27 other nations. Praise for the technical program as the best of the last ten years or more, was widespread. The field trip guidebooks are almost entirely sold out and we are reprinting to meet continuing demand for them. The proceedings volume, currently being compiled, looks to be tremendously exciting and important.

The Society also has a group of dedicated volunteers that is the hallmark of successful professional associations. Many people spent vast amounts of time over the last four years to make the symposium the success that it was. We are also extremely fortunate to have a dedicated group that organizes and runs the monthly dinner meetings, a variety of field trips, publishes a membership directory, and produces top-quality scientific reports on the geology of Arizona.

During my term as president I want to look at the services we provide our members and how we can engage more members and more participation in Society activities. At the recent Executive Committee meeting of Society officers and councilors, I laid out some ideas for ongoing discussion.

Our monthly dinner meetings are a great place to socialize, meet new members to the community and hear excellent talks. But a number of our members, including many with young families, tell me they can't easily make these

meetings. So, I suggest we look at having some alternative venues during the year that offer additional opportunities for networking and dialogue—perhaps some luncheon meetings and an annual barbeque or picnic.

I will also be inviting members to serve on committees including a new Publications Committee and an ad hoc 60th Anniversary Committee.

Our current by-laws require that the election of officers be done by voting at the September dinner meeting. Since only 30-50 members usually attend that meeting, it means that most of members don't have an active voice in directing our future, and those who live out of the area, effectively cannot vote. I will be proposing a change to the bylaws so that a ballot, electronic or paper, will be sent to every member.

We are also looking at something many of you have asked about in recent years, digitizing older, out-of-print AGS publications, and putting them online or on CD/DVD. The Publications Committee will be looking at what should be digitized and how to do it. We have an offer from Google Books to scan any publication we give them and host it online, at no cost to us, although their web page linked to the Societies, would have Google ads on it. This is one of the options we will examine.

The Society also will be watching issues affecting the practice of geology in Arizona. One concern is a formal complaint in front of the Arizona Board of Technical Registration to limit the use of high-precision GPS equipment to only licensed surveyors. The Society may weigh in on this issue to help protect the rights of geologists.

In coming months, I will be sharing other ideas and invite your comments and suggestions on how AGS can best meet your needs and continue to thrive. Thanks to all of you who have worked so tirelessly to make the Society a vibrant and dynamic organization. It's been a great 60 years so far, and the future looks exciting. Let's talk about what we want that to be.



ARIZONA GEOLOGICAL SOCIETY

P.O. Box 40952
Tucson, AZ 85717-0952
Phone: 520-663-5295
www.arizonageologicalsoc.org

NON-PROFIT ORG.
U.S. POSTAGE PAID
TUCSON, ARIZONA
PERMIT NO. 1346



FOR INFORMATION
ABOUT THE
ARIZONA GEOLOGICAL SOCIETY
AND UPCOMING EVENTS
VISIT OUR WEBSITE
www.arizonageologicalsoc.org

AGS books and maps are sold at the monthly dinner meeting and by the Arizona Geological Survey. Visit the AZGS website www.azgs.state.az.us and click on Non-AZGS Publications



As always, please keep us up to date as you move, change jobs, or change your e-mail address.

2008 AGS MEMBERSHIP APPLICATION OR RENEWAL FORM

Please mail check with membership form to: Arizona Geological Society, P.O. Box 40952, Tucson, AZ 85717. Dues (circle one): 1 year: \$20; 2 years: \$35; 3 years: \$50. (Full-time students receive free membership. The newsletter is by e-mail only, and a membership application form must be returned to AGS annually to remain on the membership list.)

.....

Name: _____

Position: _____

Company: _____

Mailing Address: _____

Street City State Zip Code

Work Phone: _____ Home Phone: _____

Fax Number: _____ Cellular Phone: _____

E-Mail: _____

Please send the newsletter by e-mail only by regular mail only by e-mail AND regular mail

If registered geologist or engineer, indicate registration number and state: _____

Enclosed is a _____ tax-deductible contribution to the J. Harold Courtright Scholarship Fund.