

A Word from the Secretary General

Dear colleagues and friends,

In March, IMWA held its annual Mine Water Symposium. This year, IMWA joined forces with INAP, the environmental division of the Society for Mining Metallurgy and Exploration (SME), and the American Society of Surface Mining and Reclamation (ASMR) to host the 7th International Conference on Acid Rock Drainage (ICARD); approximately 500 delegates attended the ICARD conference, in addition to the 2,000+ individuals who were there to attend the SME meeting. IMWA also had its own session within the conference. Furthermore, PADRE had the chance to introduce itself to a broader audience during the opening ceremony. A new thing for IMWA was our IMWA booth. Many delegates visited us or got to know IMWA there and we think that having a booth was a good chance to promote IMWA to a new audience. Unfortunately, because it was such a large meeting and shared with SME and the ASMR, there was not as much one-on-one interactions among IMWA members as during most IMWA meetings.

The IMWA EC held its annual meeting and decided about our next venues (see below), a mining and environment book series with Springer (see “Dear Readers” on page 69), and to support and encourage closer cooperation between IMWA, PADRE and the M-WINE network. M-WINE is a network of research-focused European scientists with a broad interest in geochemical and microbiological aspects of mine water development. There is an announcement of the next M-WINE meeting (July 1–8) at the end of these Mine Water Notes.

Our next IMWA Symposium will be held in Sardinia, Italy in May 2007. It will be organised by Rosa Cidu,



The IMWA booth at the 7th ICARD in St Louis Missouri/USA.

who is a hydrogeochemist with much experience in mining-related research. There will be two new topics at this IMWA Symposium: “Geothermal Use of Mine Water” and “Mine Water and Global Change”. Several recent papers on these two topics lead us to believe that they will become more important in the future. We also decided that the 10th IMWA Congress shall be organised by Ostrave University and the University of Silesia. This will be the first time that two countries will co-organise and co-host a meeting. The venue will be one of the nicest spas in Europe: Carlsbad (Karlovy Vary) in the Czech Republic. If are interested in organising the 2009 or 2010 IMWA Symposium (preferably in a non-European country), please contact me with your ideas.

A highlight of the IMWA Symposium was the three day field trip, organised by our two editors, Bob Kleinmann and Colin Booth. We visited many interesting mine reclamation projects in Illinois and Indiana (see report below). Fifteen international delegates took the chance to visit an underground coal mine and several abandoned mine sites.

Finally, I would like to thank the secretary of our Treasurer, Fran Strayer. Fran did most of the IMWA accounting during the last couple of years, but left Adrian’s company at the end of April. Thanks, Fran! It was excellent to work with you.

Glückauf, yours Chris Wolkersdorfer, Freiberg/Saxony

INAP – Scoping for an Acid Drainage Guide

Since 2005, INAP has been leading an effort to scope a collaborative project with the Global Alliance to establish a global guide on acid drainage. A number of partners have been engaged in the steering process (ACMER, ADTI, MEND, PADRE, the Water Research Council of South Africa, and CANMET). The group has come to the consensus that there is a need for such a guide and is progressing towards defining what it would look like. It is hoped that the development of the guide can be initiated during the next twelve months.

from INAP Newsletter March 2006

NOAMI – Inventory of Orphaned and Abandoned Mines in Canada

A report, Capacity Building for a National Inventory of Orphaned/Abandoned Mines in Canada (Cal Data 2005), reviewed Canadian, U.S., and international efforts to inventory orphaned/abandoned mines. Recommendations were made for a web-based inven-



MAP from NRCAN site: Mapping Federal-Provincial-Territorial Mining Knowledge

tory that would include all inactive mineral sites and have a map interface. The system would act as a portal to existing inventories maintained within the provinces, territories, and federal agencies. Use of a map interface would allow ease of use without expert knowledge of

inventory data systems. Various options were explored to determine the most suitable host for the NOAMI Internet map site. The Mineral and Mining Statistics Division of Natural Resources Canada (NRCAN) was selected to host the portal. NRCAN maintains several sites that deal with mineral producers and related areas, such as Aboriginal communities, using Map-Guide based technology.

NOAMI has given NRCAN a mandate to develop a working model of the database populated with orphan and abandoned mines for several jurisdictions. Subsequent phases would integrate datasets for the other provinces and territories to produce a nationwide inventory.

from NOAMI Newsletter April 2006

IMWA Field Trip 2006

IMWA's 2006 field trip, starting on March 30th and ending on April 1st, was organised by Bob Kleinmann and Colin Booth. It included an interesting selection of active, abandoned, and reclaimed mine sites in southern Illinois and Indiana.

The first stop was at Consol #7 Mine, near Staunton, IL. This mine is an abandoned underground coal mine, mine waste pile, and refuse disposal area, with extensive AMD discharging from the site into two small gullies and an acidic pond. During 1983 and 1986, the mine site was successfully reclaimed but began to discharge acid mine water in the early to mid 1990's. At



The IMWA field trip at the Gibson County Coal mine.

the time of our site visit, the pH of the mine water ranged between 2 and 4 and the impacted stream channels showed substantial staining.

Tab-Simco, our next stop, is located near Carbondale, IL. The site has an abandoned underground coal mine with seeps and a huge "kill zone" where the acid mine water destroys nearly all type of life. According to the literature, this site is "considered to be one of the most contaminated acid mine drainage sites in the mid continent region". Electrical conductivity ranges between 3 and 4 mS and the pH goes down to ≈ 2.5 .

From Illinois, our field trip led us to Southern Indiana, where we visited the Gibson County coal mine near Princeton, Indiana. This mine is an effective room and pillar operation supplying the local power factory with high quality coal; longwall mining is not practiced because subsidence cannot be tolerated in the area. Currently, the mine has no major mine water problems except high salinity from some isolated wells. The company was extremely hospitable and gave the visitors the rare opportunity to take photographs very near the working face in an underground coal mine.

Next was the interesting Enos mine reclamation project. There, a coal refuse re-processing operation produces coal that is currently being marketed to Germany. A large (280,000 m²) passive treatment system, consisting of RAPS and aerobic wetlands, treats pH 2–4 mine water. Nearby, the Log Creek Church site receives AMD from waste rock that was used to construct roads. The pH 3 mine water severely impacts the headwaters of the South Fork Patoka River. A passive treatment scheme is currently in the planning phase. We then visited the Weber Lake reclamation project within Lincoln State Park. Weber Lake was rehabilitated by constructing a reactive barrier within a reclaimed waste rock pile and an aerobic wetland to further treat the water before it flows into the lake. Originally, the lake's pH was about 4 but it rose to above 7 after reclamation.

We returned to Illinois on the third day, visiting the Palzo and Will Scarlet abandoned strip mine sites near Stonefort. Mining ceased in the 1960's and both sites have been reclaimed since then. Yet, even after 25 years of reclamation at the Palzo site, and an investment of \$10 million (U.S.), the area continues to discharge high loads of metals and acidity. Mine water discharging from the covered Palzo strip mine severely impacts Sugar Creek, which is biologically dead downstream; pH values as low as 1.8 have been recorded, due to pyrite concentrations of 5–12% in the shale separating the coal seams. We also stopped at a couple of historic and visually attractive park sites.

All participants acknowledge the time spent by our

tour guides! Photographs of the IMWA field trip can be found at <http://www.imwa.info/fieldtrip>

Chris Wolkersdorfer, Freiberg/Saxony

Back Issues

An overview of European mine water was provided in three of last year's issues. We received many requests for those three issues and therefore decided to put together those country studies in one electronic article. You can download it from IMWA's home page or use the following Digital Object Identifier: <http://dx.doi.org/10.1007/s10230-005-0081-3>.

Members who recently joined IMWA can find a complete index (issues 1–25) of the *International Mine Water Association Journal* and *Mine Water and the Environment* at our web-page www.IMWA.info. Volumes 17(1), 18(1), 19(2), 20(1) and 21(1) as well as proceedings of the 7th and 8th IMWA Congresses are still available for \$ 15.00 (U.S.) a copy. Some other back-issues are available on request – copies of single pages at \$ 0.60 (U.S.) each. Please add \$ 5.00 (U.S.) for shipping/handling. You can also access the journal on line, using <http://springerlink.com>

Chris Wolkersdorfer, Freiberg/Saxony

New Members

We welcome our following new members:

Celedonio Aranoa, Huaraz, Brazil
Michel Aubertin, Montreal, Canada
Paul T Behum, Jr., Edwardsville, USA
James L. Conca, Carlsbad, USA
Tim J Cox, Denver, USA
Paul Didzerekis, Richland, USA
Martin Y. P. Fung, Fort McMurray, Canada
Inaki Garcia-Pascual, Basque Country, Spain
Phoebe Hauff, Arvada, USA
Jan Horbaczeliski, Bryan, USA
Christopher Hubbard, Ilford, United Kingdom
William A. Price, Smithers, Canada
Craig Thompson, Vancouver, Canada
Shane Wilkes, Kardinya, Australia
Patrick Williamson, Denver, USA
Judith Wright, Carlsbad, USA
Paul F Ziemkiewitz, Morgantown, USA

We hope that our new colleagues will benefit from and contribute to the extensive mine water knowledge and expertise gathered within our group of international experts. Please use your membership number in any correspondence, especially money transfers with IMWA. You can find it easily on your journal's address

label, in front of the word "GES". European Union members please ask for our German account details, convert US dollars to EURO and use our IBAN and BIC numbers, as they make money transfers within the European Union as cheap as it would be in your home country! You can also use ebay's PayPal function to pay your membership fees.

Adrian Brown, Treasurer, Denver, Colorado, USA
Chris Wolkersdorfer, Secretary General, Freiberg, Germany

Forthcoming Events

22nd – 23rd June 2006, Freiberg, Germany

57. Berg- und Hüttenmännischer Tag: Behandlungstechnologien für bergbaubeeinflusste Wässer

with IMWA, PADRE, DGG and FH-DGG
<http://www.geo.tu-freiberg.de/bht>

1st – 8th July 2006, Kjeøy, Norway

4th M-WINE Workshop on Hardpan Formation and Waste Rock Geochemistry and Hydrology
www.mwine.org

20th – 23rd August 2006, Ottawa, Canada

Annual Meeting Canadian Land Reclamation Association (CLRA/ACRSD); <http://www.clra.ca>;
btisch@nrca.gc.ca

13th – 15th September, 2006, Perth, Australia

1st International Seminar on Mine Closure;
<http://www.acg.uwa.edu.au>; acg@acg.uwa.edu.au

December 2006, Vancouver, Canada

13th Annual BC/MEND Workshop
grembla@NRCan.gc.ca

27th – 31st May 2007, Cagliari/Sardinia, Italy

IMWA Symposium 2007
www.IMWA.info; imwa2007@IMWA.info

December 2007, Bangkok, Thailand

SWEMP 2007 – 9th International Symposium on Environmental Issues and Waste Management in Energy and Mineral Production

2008, Carlsbad, Czech republic

10th IMWA Congress
www.IMWA.info; imwa2008@IMWA.info