



Partnering to Support Sustainable Mining

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U.S. EPA National Conference on Mining-Influenced Waters

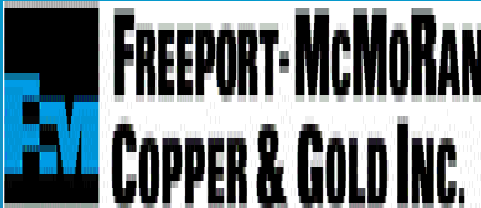
*August 12 - 15, 2014
Albuquerque, NM*

Summary

- INAP and what we are doing
- Update on the GARD Guide
- Capacity building
- Waste management - the elephant in the room
- Soil cover guidance
- Sustainable mining needs the efforts of all stakeholders



INAP

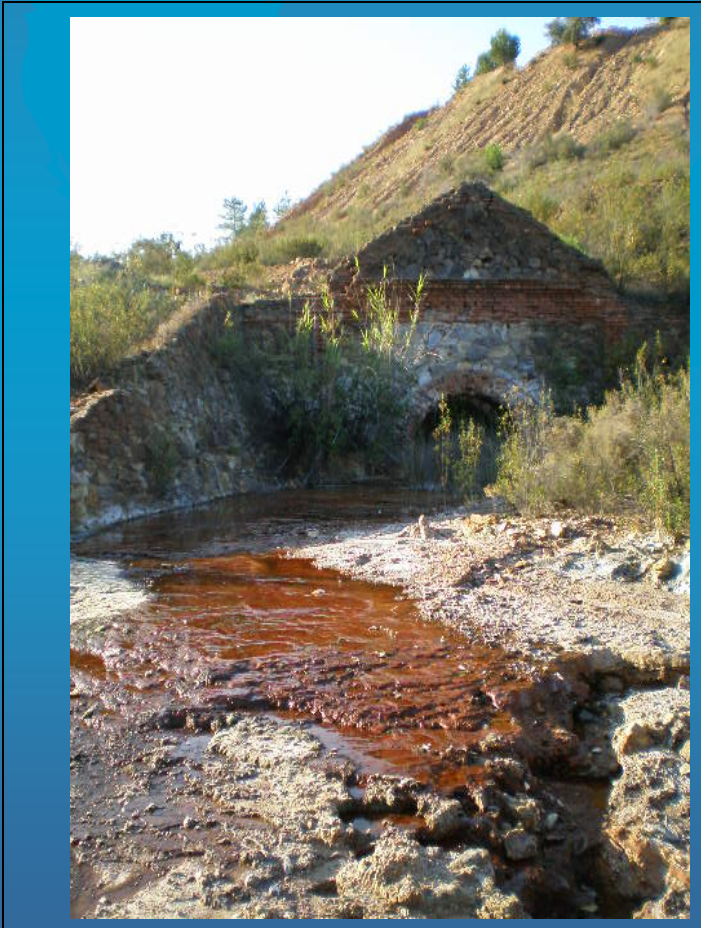


Rio Tinto



Global ARD Guide

www.GARDGuide.com



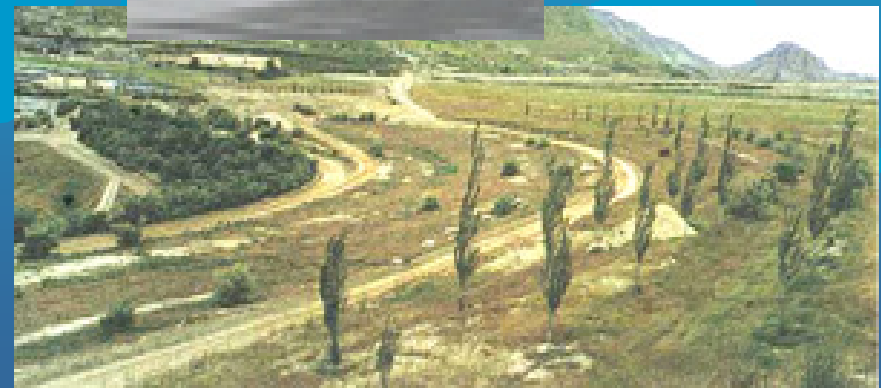
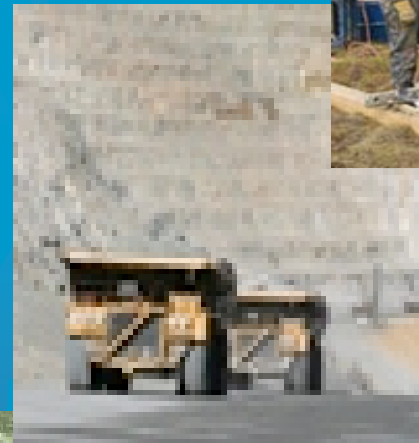
“An international guide for facilitating world-wide best practice in prediction, control, and mitigation of acid rock drainage.”

“The guide will become a reference document for all stakeholders involved in ARD and waste management issues.”

Gaining Value from the GARD Guide



- Prevent ARD rather than treat it
 - Minimize and characterize disturbed material
 - Plan and design for closure from the start
 - Integrate the GARD into operations
 - Update closure costs regularly
- Engage all stakeholders in the process – shared responsibility



BARRICK's Use of the GARD Guide



- Include ARD prediction & prevention in new mines
- Integrate ARD management into mine operations
- Assess environmental & financial risks
- Link future and current operations
- Used as a Standard of Practice



GARD Guide Summary Appended to CAFTA Mining Review Guideline



Volume I

EIA Technical Review Guideline: Non-Metal and Metal Mining

Regional Document prepared under CAFTA DR Environmental Cooperation
Program to Strengthen Environmental Impact Assessment (EIA) Review



Prepared by CAFTA DR and US Country EIA and Mining Experts with support from:



USAID ENVIRONMENT AND LABOR
EXCELLENCE FOR CAFTA-DR PROGRAM

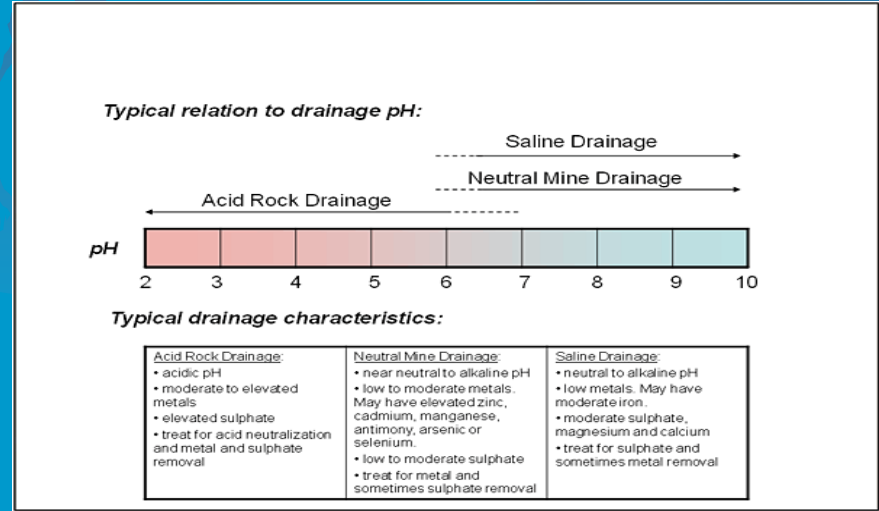


Also referenced in the

- U. S. EPA CLU-IN webinar
on mining – resources and
links

- ITRC mining waste
treatment technology
selection – additional
resources

Printable Version of GARD Guide



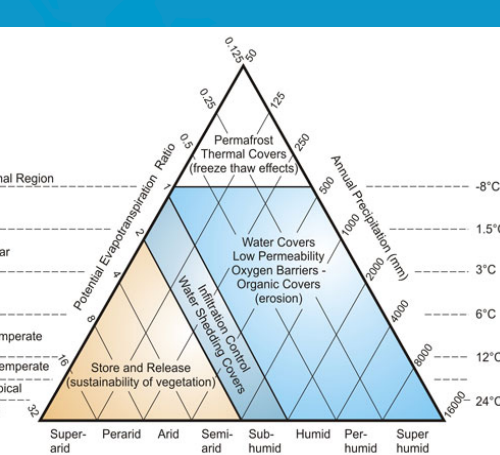
PREDICTION
•
PREVENTION
•
MANAGEMENT

The International Network for Acid Prevention
Global Acid Rock Drainage Guide

June 12, 2014



Development of the Global Acid Rock Drainage (GARD) Guide was sponsored by INAP with the support of the Global Alliance



The Global Alliance

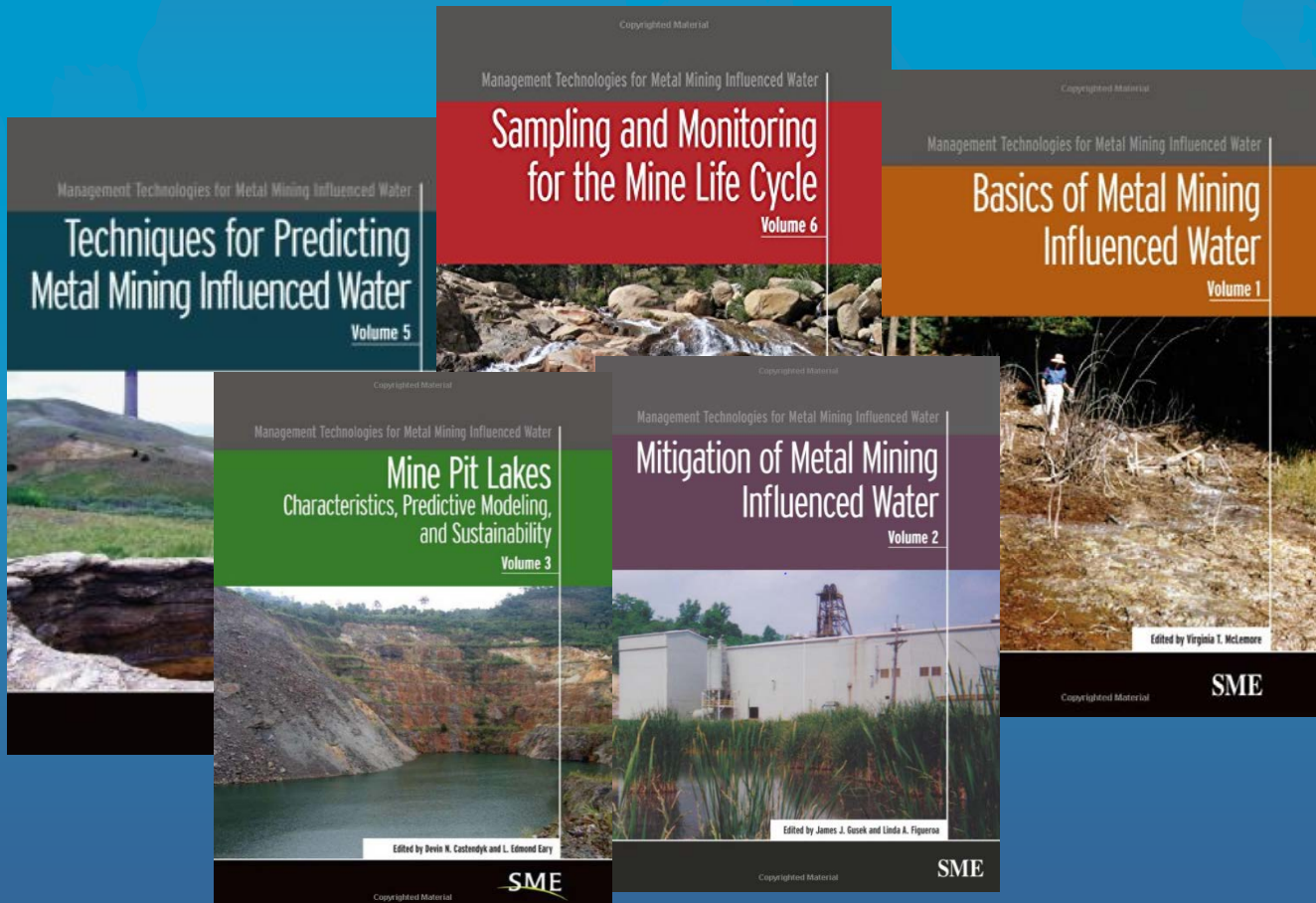


Acid Drainage Technology Initiative



Water Research Commission

ADTI - Metal Mining Influenced Water Workbooks



Sulfate Treatment Workshop



- 120 delegates from 5 countries
- 1 1/2-day program
- 22 presentations
- 5 breakout sessions
- Tour of Kennecott RO plant



7th AMD Workshop - Darwin



- Dr. Bruce Kelley - Elephant in the Room
- Mine Waste Management
- Ad hoc Committee & SMIKT proposal submitted to INAP



Soil Cover Guidance Document



Context for Cover Design & Performance

Climate

Hydro-geological Setting

Materials

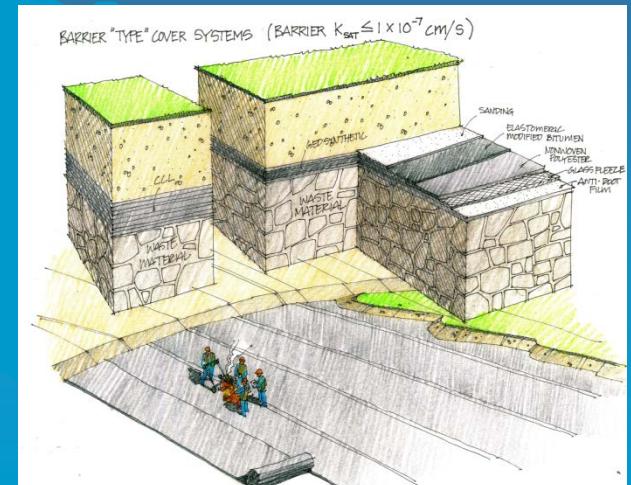
Vegetation

Design Methodology

Closure Objectives

Cover Systems

Water Management Systems



9th ICARD - Ottawa



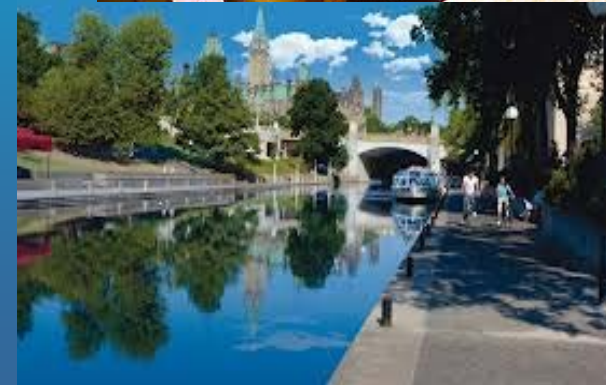
- 526 delegates from 19 different countries
- 3-day technical program
- 127 presentations & 43 posters
- 8 short courses - 250 participants
- Trade show with 25 exhibitors



INAP's Path Forward Symposium



- Held at 9th ICARD in Ottawa, Canada – 21 May 2012
- 17 presentations on innovative ARD technologies
- Over 70 international participants
- Focus groups
 - Biogeochemical processes
 - Mine waste management
 - Innovative treatment technologies
 - Stakeholder engagement
- Summary of findings



10th ICARD – Santiago

INAP

- April 20-25, 2015
- Short Courses – April 20-21
- Technical Meeting – April 22-24
- Field Trip – April 25
- <http://www.icard2015.com>



Case Study Competition



- Sponsored by INAP and the Global Alliance
- Awarded at the 10th ICARD
- Reclamation, Treatment, Mitigation, Prevention
- Strong Learning Tool
- Identify Lessons Learned
- Illustrate Best Practice



Where Do We Go From Here

- INAP is focusing on capacity building particularly in developing mining regions
- Enhancing capacity of all stakeholders
- What more needs to be done?
- How should we proceed?
- With whom should we partner?



Conclusions



- ARD management is critical to the success and reputation of the mining industry
- Measurement and ongoing improvement of the ARD Management Plan are necessary throughout the life of mine
- Successful implementation of an ARD Management Plan relies on commitment from company management and the systematic use of ARD management tools including partnering with all stakeholders
- ARD Management is improving due to the efforts of all stakeholders including the environmental community

