



Updates on friends and colleagues in the materials community

TMS Offers Members Access to Newly Acquired Historical Publications

TMS currently offers a variety of benefits customized to meet the needs of each of the Society's four membership categories. Each is designed to assist members in advancing their professional careers. This month, TMS unveiled a new benefit that will give members access to additional books and individual papers that represent historical publications.

The new service, TMS On Reserve, features a collection of 12 newly digitized library archive documents from the American Institute of Mining, Metallurgy, and Petroleum Engineers (AIME) and TMS. The collection also includes nearly 140 foundational documents as well as selected conference proceedings papers from the TMS library.

The newly digitized AIME and TMS

books are:

- *Bergwerk und Probierrbuchlein*, translated from German
- *A Brief History of the Science of Metals*
- *Centennial Volume American Institute of Mining, Metallurgical, and Petroleum Engineers 1871–1970*, including proceedings
- *Dana's Textbook of Mineralogy with an Extended Treatise on Crystallography and Physical Mineralogy*
- *De Re Metallica*, translated from the First Latin Edition of 1556 (Georgius Agricola)
- *Dislocations in Metals*
- *Glossary of Mining & Metallurgical Terms* from *AIME Transactions*, Volume 9
- *Metallurgical Reminiscences*

- *Nonferrous Melting Practice Symposium Series*
- *Nonferrous Rolling Practice Symposium Series*
- *The Pirotechnia of Vannoccio Biringuccio*, translated from Italian
- *The Solidification of Metals and Alloys Symposium*, February 12, 1950

Currently, over 100 papers are available on-line as part of this collection, which includes award-winning, keynote, and plenary papers. Access to the collection is free to all members. A small fee will be charged for nonmembers to access individual papers, chapters, or whole volumes. Papers can be accessed by both members and nonmembers through the Knowledge Resource Center on-line bookstore.

TMS WIMSEC Chair Mary Juhas Elected to the WEPAN Board of Directors

Mary Juhas was elected Director of Strategic Partnership for the Women in Engineering Pro-Active Network (WEPAN). She took office July 1 and will serve in this position until June 2011.



Juhas is Senior Assistant Dean for Diversity and Outreach in the College of Engineering and program director for Project Comprehensive Equity at The Ohio State University (OSU)—a National Science Foundation (NSF) ADVANCE program. She

also works as a research scientist in the Department of Materials Science and Engineering at OSU where her graduate students research friction stir processing of titanium.

Chair of the TMS Women in Materials Science and Engineering Committee (WIMSEC), Juhas is an advocate for women, underrepresented minorities, and persons with disabilities across all engineering disciplines. She recently completed a two-year rotation as the first program director for Diversity and Outreach in the Directorate for Engineering at NSF. She was responsible for establishing a sustainable diversity roadmap that serves learning

communities ranging from kindergarten through post-graduate career levels.

Juhas earned a B.S. degree in Chemistry from Seton Hill University, an M.E. degree in Materials Science and Engineering from Carnegie Mellon University, and her Ph.D. in Materials Science and Engineering from OSU.

WEPAN is the nation's leading organization for transforming culture in engineering education to promote the success for all women. The organization helps meet strategic engineering workforce demand through promoting the success of women who traditionally have not pursued engineering.

Corby Anderson Joins Colorado School of Mines

Corby Anderson joined the Department of Metallurgical and Materials Engineering at the Colorado School Mines. An expert in the fields of extractive metallurgy, mineral processing, waste



management, and recycling, he joins the department as Harrison Western Professor of Metallurgical and Materials Engineering.

Anderson will teach and conduct research as a member of the Kroll Institute for Extractive Metallurgy at the college. He has an extensive background in industrially oriented research. Previously, he was responsible

for the development and success of the Center for Advanced Mineral and Metallurgical Processing at Montana Tech of the University of Montana.

Each month, *JOM* profiles a TMS member and his or her activities outside of the realm of materials science and engineering. To suggest a candidate for this feature, contact Francine Garrone, *JOM* news editor, at fgarrone@tms.org.



TMS Member Profiles

Meet a Member: Raymond Smith: Hazardous Abandoned Mine Finder

Editor's Note: This profile piece was submitted by Raymond Smith as a first-person account in response to a Meet a Member inquiry.

In a 10,000 square mile section of south central Arizona, it took 150 years for innumerable prospectors and miners to burrow over 6,000 holes, adits, and shafts into the hard, dry, desert mountain soil and rock. It was man's insatiable quest for gold, silver, and copper that drove him to face the scorching heat of summer days, the deep penetration of the night desert's chill, and the gripping loneliness shared only with the pick, shovel, and burro.

It has taken since 1989 for eight old men to seek out those thousands of mines and holes from maps and records. It has been their mission to erect safety signs, pin point their exact location with satellite positioning units, and record environmental data such as acid drainage and wildlife presence.

During the past 20 years, half of the

original group has passed away. However, three are still at it—myself, Ray Smith, 92, retired president of Michigan Technological University; Don Blicke, 90, a metallurgist; and Carter Beach, the youngster at 87, a chemical engineer. New men have been recruited to follow the enduring legacy of the Hazardous Abandoned Mine Finders—a Forest Service volunteer group skilled in the by-ways of the Arizona desert. To the young, we mine finders are truly old—but those same questioning youngsters might have difficulty following the old in their demanding scramble up the cactus and thorn-studded cliffs carrying metal posts, signs, hammers, drills, radios, global positioning system units, and, of course, an adequate supply of water.

So, each week we gather at the starting base, unfold oft-used and tattered maps, trace out the day's route, assign partnership teams, agree on meeting

points, and then with a final check on our powerful portable radios pile onto four wheelers. A new day has started. A day that will titillate the senses, stimulate the curiosity, and then bring satisfaction as mine after mine reveals its hiding place. It will bring the gift of another day brimmed to the top with the good life and close companionship. We are the men who fight to draw on the bounties that nature has to offer and in the process strive to do our fellow man good by helping prevent the unwary from venturing into unsafe man-built adits and shafts where killer bees, rattlesnakes, scorpions, cougars, and bears may have taken refuge or where crumbling rock waits for the tremor of man's foot to break it loose. We are men of all walks of life with two things in common—love of the desert and mountains and an unbridled curiosity of the never ending quest for minerals. We find holes dug in desolate areas with no signs of mineralization and adits on cliffs where it would seem impossible to get ore to safe ground.

These old mines hold a thousand stories, some fact, some fancy; but the darkened adits, ominous deep shafts, twisted mine rails, and rusted equipment have their own stories. It is the unanswered story that tweaks that touch of prospector in the searcher so that you always look forward to another day in the mountains for more unmarked mines. Yet, even more precious to us than curiosity, physical exercise, and service to the State, is the enduring companionship and deep respect for each other that has been built in our years of searching for old mines.

In 1995, our group of searchers received the Governor's Award for our unique service. A year later, we were honored by the National Forest Service. But an important payoff is not these awards, but rather the stimulation of reliving and partially understanding the travails endured by the early miners and prospectors.



Figure 1: Ray Smith stands outside of an abandoned mine in south central Arizona after posting a "DANGER!" sign at its entrance.



Figure 2: Smith uses a pickaxe to chip away at an underground mine. A rope is tied around his waist in the event that the ground would give away causing him to plunge down a five foot wide shaft.