

## CAMPUS REPORT

**DATE:** January 15, 2017  
**TO:** Board of Regents  
**FROM:** Donald M. Blackketter, Chancellor, Montana Tech  
**RE:** Campus Report for the March 9, 2017 Board of Regents Meeting

### STUDENT ACHIEVEMENT

- Renee Schmidt, MS in Geochemistry student in the Laboratory Exploring Geobiochemical Engineering and Natural Dynamics (LEGEND) of the Department of Chemistry and Geochemistry presented her poster about geochemical changes in flooded mine shafts at the American Geophysical Union (AGU) Fall Meeting in San Francisco Dec. 11-16.
- Georgia Dahlquist, MS in Geochemistry student of LEGEND (Chemistry and Geochemistry), presented her poster entitled "What's in the Mud? Water-Rock-Microbe Interactions in Thermal Mudpots and Springs" at the AGU Fall Meeting in San Francisco Dec. 11-16.

### FACULTY EFFORTS

- John Getty, Instructor in Geophysical Engineering, attended the ASTM Conference D18 (Soil and Rock) in Norfolk Virginia, 30 Jan to 1 Feb, 2017. He is the author of the new "Standard Practice/Guide for Exploratory Sampling and Testing of Natural Materials for Consideration as Proppant for Use in Hydraulic Fracture Stimulation Operations." He also chairs the ASTM D18.26.03 section on materials characterization for hydraulic fracturing.
- Dr. B. Todd Hoffman, Petroleum Engineering, was invited to present his work on "Improved Recovery for Unconventional Reservoirs: Current State of the Industry" as the lead speaker at the SPE Reservoir Engineering Study Group in Oklahoma City on January 25, 2017.
- Dr. Robert Pal, Assistant Professor, Biological Science published a peer-reviewed paper in PLANT ECOLOGY & DIVERSITY in the frame of an international collaboration (authors: Tamás Henn, Dávid U Nagy, Robert W Pal) entitled: Adobe bricks can help identify historic weed flora— a case study from south-western Hungary.
- Dr. Robert Pal, Assistant Professor, Biological Science published a peer-reviewed paper in PLANT ECOLOGY in the frame of an international collaboration (authors: Rita Filep, Robert W Pal, Viktória L. Balázs, Mátyás Mayer, Dávid U Nagy, Bradley J. Cook, Ágnes Farkas) entitled: Can seasonal dynamics of allelochemicals play a role in plant invasions? A case study with Helianthus tuberosus L.
- Dr. Courtney Young was honored as a Distinguished Member by the Society of Mining, Metallurgy and Exploration (SME) on February 22 at the Awards Dinner of the Annual Meeting. A distinguished Member must be a full member for at least 15 years and must have significant and/or sustained contributions to the minerals industry and SME. Dr. Young did both.
- The Professional & Technical Communication Department hosted visiting professor Han Zhiguo from the Guangdong College of Business & Technology in Guangzhou, China. Professor Han delivered two public lectures on traditional Chinese culture and the role of Guangdong College, an institution with about 30,000 students at several campuses.
- Dr. Chad Okrusch of the Professional & Technical Communication Department went to China as part of a faculty exchange with the Guangdong College of Business & Technology. Dr. Okrusch delivered guest lectures on American culture, American higher education, and the role of Montana Tech.
- Dr. Waleed Al-Rawashdeh, Associate Professor of Mathematics, is the author of the peer-reviewed paper entitled "Weighted Differentiation Composition Operators from Nevanlinna Classes to Weighted-type Spaces" that was recently accepted for publication and will appear in the "Journal of Mathematical Analysis", Volume 2017.
- Dr. Alysia Cox, Assistant Professor of the Laboratory Exploring Geobiochemical Engineering and Natural Dynamics (LEGEND) in the Department of Chemistry and Geochemistry gave an oral presentation entitled "Habitability from the surface to the deep" at the American Geophysical Union (AGU) Fall Meeting in San Francisco Dec. 11-16. LEGEND members and Tech Chemistry and Geochemistry undergraduates, Jordan Foster and McKenzie Dillard, and MS in Geochemistry students, Renee Schmidt and Georgia Dahlquist, were coauthors. Dr. Cox was a coauthor on four other poster

presentations (Dahlquist and Cox, 2016; Schmidt and Cox, 2016; Leong et al., 2016; and Giovanelli et al., 2016).

- Dr. Pat Munday, Professor of Science & Technology Studies with the Technical Communication Department, co-wrote a successful grant proposal to the Butte-Silver Bow Redevelopment Trust Authority on behalf of the Mai Wah Society. The society was awarded \$18,340 for an architectural and engineering assessment of the Mai Wah/Wah Chong Tai building. The building is a historic structure at the heart of Butte's historic Chinatown district, and is operated as a Chinese history museum by the society.
- Dr. Munday has accepted a placement with Ninxia University in Yinchuan, China, for his Spring 2017 Fulbright award. Munday will teach upper division and graduate classes in American history and qualitative research methods.
- Dr. Munday delivered a one-day lecture/workshop in summer 2016 on research methods for a group of visiting Chinese students with the Yellowstone English/Environmental Studies Program.
- J. H. Fletcher & Co., of Huntington, West Virginia, has graciously arranged for the loan of their Single Boom Drill Jumbo (model J101-AD/E) to Montana Tech. The drill was delivered in early October following the MinExpo in Las Vegas. The single boom jumbo is made for narrow vein underground mining and will be used in Montana Tech's Mining Engineering Department's Practical Underground Mining Class held at the Underground Mine Education Center.

#### **CAMPUS KUDOS**

- In December cooperative agreements were finalized with four universities in China: China University of Mining and Technology--Beijing, Sun Yat Sen University School of Earth Science and Geological Engineering, Tsinghua University, and Wuhan University of Science & Technology. The agreements commit to faculty and student exchanges and research collaboration.
- 70 student-athletes were named Academic All-Conference.
  - 43 football
  - 9 women's basketball
  - 8 volleyball
  - 6 men's golf
  - 4 women's golf

#### **MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY**

- Martin B. Lorenzo, former graduate student at Montana Tech and the Montana Bureau of Mines and Geology, and William Drury published their paper Sediment metal concentrations in a southwestern Montana stream impacted by smelter emissions deposition in the August 2016 Volume of the Journal of Multidisciplinary Engineering Science and Technology. Lorenzo was an Sloan Indigenous Fellowship scholar and is currently employed by the Bureau of Indian Affairs in Bloomington, Minnesota. The Montana Bureau of Mines and Geology supported his graduate research.
- MBMG geologist, Dr. Petr Yakovlev, gave invited presentations on the Evolution of the Tibetan Plateau to faculty and students at Idaho State University (December 11, 2016) and at the University of Montana-Western (December 30, 2016). Dr. Yakovlev spoke about the Tibetan Plateau to faculty and students at Montana Tech on January 12.
- On December 14, 2016 MBMG Director and State Geologist, Dr. John Metesh, and MBMG Hydrogeologist, Ted Duaine, were interviewed by the Associated Press regarding water-quality in the Berkeley Pit. The interview resulted from worldwide attention to the December 7, 2016 deaths of migrating Snow Geese that had landed on the pit waters.
- On January 10, 2017, MBMG hydrogeologists Kevin Chandler and Jon Reiten presented the MBMG's Medicine Lake groundwater model to a meeting of the Williston Area Aquifer Models Consortium (WAAMC), a group that coordinates groundwater modeling within the Williston Basin. WAAMC includes scientists from the MBMG; the ND Water Resources Commission; the USGS in MT, SD, CO, and ND; and scientists from Saskatchewan and Manitoba.
- MBMG hydrogeologists Kevin Chandler and Jon Reiten participated in the Southeastern Montana Winter Ag Series sponsored by the MSU Extension Service January 16-20, 2017. Kevin and Jon spoke about the Ground Water Information Center database, using geology to help find groundwater supplies in eastern Montana, and the Hydrogeology/history of water-level declines in the Fox Hills Hell Creek aquifer. Chandler presented at Jordan, Circle, Broadus, and Baker. Reiten presented at Wibaux, Glendive, Terry, Miles City, and Forsyth.

- The Montana Department of Natural Resources and Conservation invited Dr. Elizabeth Meredith to present Results of groundwater sampling around oil and gas development to the Legislature's Long Range Planning Committee on January 23, 2017. The work was funded by the 2015 Regular Session of the Montana Legislature.
- On January 24, 2017 MBMG Director and State Geologist, Dr. John Metesh, and MBMG Hydrogeologist, Ted Duaine, answered questions from the Montana Standard about arsenic and lead in groundwater between Ramsay and Anaconda, Montana.
- On January 24, 2017, MBMG Hydrogeologist Jon Reiten discussed the Clear Lake Aquifer (Sheridan County, Montana) at the Montana Association of Conservation District's Legislative Reception in Helena, Montana.
- Ginette Abdo, Ground Water Investigations Program Leader, presented Over 150 year of Irrigation: Implications for the Gallatin Valley to about 75 people attending the Upper Gallatin Watershed Council's annual meeting in Bozeman, Montana, on January 26, 2017.
- MBMG Director and State Geologist Dr. John Metesh spoke about the MBMG Surface Water Program to the Montana Water Resources Association at their annual meeting in Helena on February 3.
- The Montana Bureau of Mines and Geology released Geologic Map 67: *Geologic map of the Coyote Creek 7.5' quadrangle, southwest Montana*, by Jo-Ann Sherwin, Elizabeth Younggren, Paul Link, and Richard Gaschnig; Open-File Report 685: *Proceedings of the 2016 Mining and Mineral Symposium*, compiled by Stan Korzeb and Dr. Kaleb Scarberry; Open-File Report 683: *Geologic Map of the Opportunity 7.5' quadrangle, Deer Lodge and Silver Bow Counties, Montana*, by Dr. Kaleb Scarberry and Dr. Coleen Elliott; Geologic Map 68: *Geologic Map of the Boulder East 7.5' quadrangle, southwestern Montana*, by Dr. Kaleb Scarberry, I.M. Kallio, and Alan English; Information Pamphlet 10: *Groundwater sampling around oil and gas development*, by Dr. Elizabeth Meredith, Allison Brown, and Simon Bierbach; Hydrogeologic Map 10: *Fluoride concentrations in Montana's groundwater*, by John LaFave, Camela Carstarphen, and Jeremy Crowley; Open-File Report 686: *Geologic map of the Moose Creek 7.5' quadrangle, Lewis and Clark and Powell counties, Montana*, by Catherine McDonald; Open-File Report 687: *Geologic map of the Helmville 7.5' quadrangle, Powell County, Montana*, by Catherine McDonald and Susan Vuke; and Open-File Report 684: *Occurrence and distribution of organic wastewater contaminants in waters of the Gallatin Valley, Gallatin County, Montana*, by Dr. Gary Icopini, Tammy Swinney, and Alan English.