

CAMPUS REPORT

DATE: June 16, 2017, 2017
TO: Board of Regents
FROM: Donald M. Blackketter, Chancellor, Montana Tech
RE: Campus Report for the July 18, 2017 Board of Regents Meeting

STUDENT ACHIEVEMENT

- Jordan Foster, Chemistry and Geochemistry Undergraduate Research Program student in the Laboratory Exploring Geobiochemical Engineering and Natural Dynamics (LEGEND) had an abstract entitled "Stormwater in Silver Bow and Blacktail Creeks: Implications for the Microbial Community" published in the Intermountain Journal of Sciences. Dr. Cox was his coauthor.

FACULTY EFFORTS

- Dr. Alysia Cox, Assistant Professor of the Laboratory Exploring Geobiochemical Engineering and Natural Dynamics (LEGEND) in the Department of Chemistry and Geochemistry gave an invited presentation on May 29th at Yachay Tech University, Urcuqui, Ecuador entitled "Catalyzing Earth's chemistry throughout time: Environmental proteins".
- Dr. Courtney Young in Metallurgical & Materials Engineering was invited to present at the 67th Annual Meeting of the SME MPD Section of Colorado in Colorado Springs to help honor his friend, Mr. Len Harris, former Newmont VP of R&D, VP of Metallurgical Operations and President of Peru Limited. Dr. Young presented a talk on "Reducing Energy Consumption in Cu Production with a Novel EW Process" on May 5, 2017. The presentation was co-authored by Dr. Avimanyu Das.
- Dr. Alysia Cox won a small grant from the Butte Natural Resource Damage Council in the amount of \$50,306. The project is entitled: "Microbial Activity in Silver Bow and Blacktail Creeks".
- Dr. Courtney Young in Metallurgical & Materials Engineering was invited to present at Flotation '17 which will be held in Cape Town, South Africa, Nov 13-16, 2017. Although Dr. Young will not attend, he submitted an abstract entitled "Consideration of the Pulp/Froth Interface in the Compartment Model of Flotation" that was accepted. His PhD Student, Mr. Rick Ladouceur will be presenting.

CAMPUS HAPPENINGS

Summer Undergraduate Research. *Summer undergraduate student research is well underway on campus. Fourteen students have Summer Undergraduate Research Fellowships (SURF) sponsored by the campus and Montana INBRE (NIH). They are working on ten different projects mentored by eleven faculty. About twenty additional undergraduates and graduate students are involved this summer in other research projects funded by grants, contracts, the Center for Advanced Mineral, Metallurgical, and Materials Processing (CAMP), and the Montana Bureau of Mines and Geology. The SURF Symposium is scheduled for Thursday, August 3 at 2 p.m. in the Copper Lounge at the Student Union Building (SUB). The public is welcome to attend the poster presentations and learn from the students about their projects.*

MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY

- MBMG Hydrogeologist Kevin Chandler and Jon Reiten participated in a Williston Area Aquifer Models Consortium (WAAMC) conference call that was held on May 9, 2017. Kevin and Jon presented the status of a new project assessing the hydrogeology and water development for irrigation potential of the Lower Yellowstone Buried Valley aquifer near Sidney, MT. This project is part of the Groundwater Investigations Program (GWIP) of the MBMG.
- MBMG Hydrogeologist Kevin Chandler and Jon Reiten participated in a conference call with three representatives of the USGS held on May 23, 2017. This discussion focused on the use of Aerial Electromagnetic Conductivity surveys to help map and define hydrogeologic conditions of buried valley aquifers.
- MBMG Ground Water Investigations Program Leader Ginette Abdo and Hydrogeologist Camela Carstarphen participated in the **Surface and Groundwater Monitoring Field Trip**, to show some preliminary results and explain how groundwater and surface water interact to explain why Lolo Creek disappears in the summer, that was hosted by Lolo Watershed Group in Lolo, Montana on May 21, 2017.
- MBMG Emeritus Research Geologist Dr. Richard Berg presented **Montana Sapphires** at Bitterroot Gem & Mineral Show / Federation Show at the Ravalli County Fairgrounds in Hamilton, Montana on May 20, 2017.
- MBMG Hydrogeologist Alan English presented **Geology, History, Faults and Earthquakes in the Madison** at the Madison Ranger District Orientation in Ennis, Montana on June 9, 2017.
- MBMG Geologist Dr. Kaleb Scarberry presented **Rocks** to first graders at Kennedy Elementary School in Butte, Montana on May 11, 2017.
- MBMG Ground Water Investigations Program Hydrogeologists James Rose and Kirk Waren participated in two water-related planning meetings at Big Sky, Montana on May 24th, 2017. The first meeting was with the Upper Gallatin Drought/Water Supply Focus Group meeting. This group is working on drought vulnerability and priorities for drought planning and potential actions. It includes a new water conservation effort being undertaken by the Gallatin River Task Force. The second meeting was with the Big Sky Sustainable Water Solutions Forum Stakeholder meeting. Three break-out sessions were conducted for the topics of 1) Ecological Health of the River Systems, 2) Water Supply and Availability, and 3) Wastewater Treatment and Reuse. Many lively discussions and perspectives ensued.
- The Montana Ground Water Assessment Steering Committee met at the Montana Bureau of Mines and Geology on June 8, 2017 to discuss the Ground Water Assessment Program. The committee heard updates from MBMG Ground Water Assessment Program Leader John LaFave and approved work plans for fiscal year 2018.
- Director and State Geologist, Dr. John Metesh, presented **Enhancing Geological Survey Visibility** to the annual meeting of the American Association of American State Geologists in Branson, Missouri on June 13, 2017.

- MBMG Geologist Dr. Jesse Mosolf attended and presented a talk entitled **Eocene high-K, calc-alkaline magmatism within the eastern Lewis and Clark fault zone, west-central Montana, USA** at the Geological Society of America (GSA) Cordilleran section meeting in Honolulu, Hawaii on May 23, 2017 and attended a field trip exploring active volcanic processes on the Big Island of Hawaii.
- MBMG Hydrogeologist Dr. Gary Icopini participated in a tour for Israeli business men who were interested in designing treatment options for the Berkeley Pit water in Butte, Montana on June 6, 2017.
- MBMG Geologist Katie McDonald attended the Rocky Mountain Geological Society of America Section Meeting in Calgary, Canada on June 9-10, 2017 and participated in a mentoring session for geology students interesting in careers in field geology.
- MBMG Director of Earthquake Studies Michael Stickney is a co-author with colleagues from the University of Montana Geosciences Department, of a paper recently published in *Tectonics*, that discusses modern tectonic deformation in the northern Rocky Mountains and its relationship to plate boundary configuration along the west coast of North America (authors: Dylan Schmeelk, Rebecca Bendick, Michael Stickney, and Cody Bomberger), entitled: **Kinematic evidence for the effect of changing plate boundary conditions on the tectonics of the northern U.S. Rockies.**
- MBMG Director of Earthquake Studies Michael Stickney worked with Dr. Hillary Martens of the University of Montana Geosciences Department to deploy a state-of-the-art seismograph near a seismically active area in the Swan Valley on May 9th. This deployment is the first step of a seismic monitoring research project that will involve University of Montana students.
- The Montana Bureau of Mines and Geology released Open-File Report 690: **Geologic map of part of the Lick Creek 7.5' quadrangle, southwest Montana** by Jeff Lonn; Open-File Report 691: **Geologic map of the Wilborn 7.5' quadrangle, west-central Montana** by Martin Bregman and Open-File Report 692: **Geologic map of the Lima Peaks 7.5' quadrangle, Beaverhead County, Montana** by Betty Skipp, William Perry Jr., and Susanne Janecke.