

CAMPUS REPORT

DATE: June 6, 2016
TO: Board of Regents
FROM: Donald M. Blackketter, Chancellor, Montana Tech
RE: Campus Report for the July 2016 Board of Regents' Meeting

- Montana Tech hosted the F-1 in Schools competition March 24th and 25th. Twelve high schools from around the state with teams consisting of 3 to 6 students participated. Each of these teams competed in six different categories that included: Scrutineering, Design and Engineering, Verbal Presentations, Enterprise, Marketing, Car Servicing and Racing. Six students from Harlem High School went on to compete in the national competition held at the Michigan International Speedway in Brooklyn, Michigan in May. Four Montana Tech/Highlands faculty, 3 staff and 26 students were judges.

STUDENT ACHIEVEMENT

- Montana Tech American Society of Civil Engineers (ASCE) Student Chapter attended the 2016 ASCE Pacific Northwest Student Conference hosted by the University of Idaho on April 7-9, 2016. This year's event, held in Moscow, Idaho, saw student teams from 19 universities of the five ASCE Pacific Northwest Region states, which included Idaho, Washington, Oregon, Montana and Alaska, as well as Canada. Montana Tech's Team competed with all other student teams and placed 1st in the Surveying Competition. Team members were Spencer VanWichen and Kaden Bedwell.
- Kyle Eastman, graduate student in Geological Engineering, presented a poster at the Rocky Mountain Section meeting of the Geological Society of America entitled: "Geochemical investigation of the historic Hecla Ag-Pb mining district, Pioneer Mountains, Montana".
- Mr. Rick LaDouceur, Materials Science Ph.D. candidate, under the supervision of Dr. Courtney Young, will receive a Ph.D. Fellowship from SME in recognition of his professional experience, desire to follow an academic career, and pursuit of a doctoral degree in the field of Extractive Metallurgy/Mineral Processing at a US-accredited university. His research is funded by Army Research Laboratory and involves modelling flotation using, for the first time ever, a four-zone technique. SME implemented the program to address the long-term challenges that threaten the sustainability of U.S. mineral processing/extractive metallurgy academic degree granting programs, as well as the looming future labor deficiencies associated with retirements over the next two decades.
- Freshman Jordan Foster of the Environmental Dynamics in Geobiochemical Engineering (EDGE) Lab in the Department of Chemistry and Geochemistry received the Laurie Henneman Outstanding Student Presentation Award at the Montana Academy of Sciences Meeting on April 9th for the best undergraduate student oral presentation entitled, "Stormwater in Silver Bow and Blacktail Creeks: Implications for the Microbial Community".

FACULTY EFFORTS

- Assistant Professor Alysia Cox of the Environmental Dynamics in Geobiochemical Engineering (EDGE) Lab in the Department of Chemistry and Geochemistry and six other early career scientists organized the 2nd Deep Carbon Observatory Early Career Scientist Workshop held at the University Centro De Vulcanologia e Avaliação de Riscos Geológicos, University of the Azores, São Miguel on 31 August-5 September 2015.
- Assistant Professor Alysia Cox of the EDGE Lab in the Department of Chemistry and Geochemistry was invited to present at the Thermal Biology Institute at Montana State University in December 2015. Her talk was entitled "Coevolution of Earth's chemistry and life: A metalloprotein perspective."
- Assistant Professor Alysia Cox of the EDGE Lab in the Department of Chemistry and Geochemistry participated in the University National Oceanographic Laboratory System (UNOLS) Chief Scientist training voyage February 11-20th aboard the R/V Thompson off the coast of Southern California.
- Dr. Alysia Cox is a co-editor for the research topic "Deep Carbon in Earth: Early Career Scientist Contributions to the Deep Carbon Observatory" in Frontiers in Earth Science Geochemistry and Frontiers in Earth Science Microbiological Chemistry & Geomicrobiology.
- Dr. Courtney Young, Metallurgical & Materials Engineering Department Head, was named a Distinguished Member of the Society for Mining, Metallurgy and Exploration (SME). To receive this

honor, the awardee must have been a full member of SME for at least 15 years and must have demonstrated significant and sustained contributions to the minerals industry and SME.

- Prof. Chris Gammons, along with undergrad student Jon Szarkowski and graduate student Ryan Stevenson, published a paper in the June web-exclusive supplement of Mining Engineering journal entitled: "New investigations of the mineralogy of silver in the world-class porphyry-lode deposits of Butte, Montana."
- Dr. Henrietta Shirk, Associate Professor in the Writing Program, was invited to present a paper titled "The Invisible Woman in the Archives: New Perspectives on Historical Research Methods" at the 67th Annual Convention of the Conference on College Composition and Communication (CCCC) in Houston, Texas, on April 9th.

HIGHLANDS COLLEGE INNOVATION

- Highlands College had the first review of its proposed new Department of General Studies by the Board of Regents at the May meeting in Havre, MT. Assuming all goes well, the BOR will officially approve the new department at the July BOR meeting in Billings, MT. This new department will serve Associate of Science students with a larger portfolio of available courses. Additionally, it will serve all students with Math courses up to College Algebra.
- In an example of inter-college cooperation and sharing of resources, Highlands College is hosting two sessions of a Commercial Driver's License course conducted by Bitterroot College.
- Highlands College's faculty member, Paul Hart, will be teaching a summer graduate course in the Graduate Program in Historic Preservation for the University of Pennsylvania School of Design as part of their UPenn Summer 2016 Architectural Conservation Praxis. Paul is a 2013 Highlands College graduate with an Associate of Applied Science in Historic Preservation. He also holds a Bachelor of Science degree in Public Administration from Upper Iowa University as well as an Associate of Science degree in Police Science from the Community College of the Air Force.
- Dr. Elyse Lovell, faculty member in the department of General Studies, was named the first Montana Tech Distinguished Researcher from Highlands College.
- Highlands College's Workforce Navigator, Kehli Hazlett, has been awarded the Career Development Facilitator Certificate from the National Career Development Association. Kehli was one of the first three individuals in Montana to obtain this national certification. The announcement of the award was made by the Office of Public Instruction.
- The Board of Trustees of the Montana Historical Society will grant the MONTANA HERITAGE GUARDIAN award to Evan Barrett of Highlands College/Montana Tech. Bruce Whittenberg, Director of the Montana Historical Society, said that the recognition was for Barrett's production of the 43-episode Montana History series "In the Crucible of Change," which chronicles Montana's dramatic period of progressive change from 1965-80.

MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY

- In mid-March 2016, the ASARCO Trust donated 150–3,000 pound pallets of historic Heddleston Mining District drill core to the Montana Bureau of Mines and Geology (MBMG). The MBMG will catalog the collection and make it available to researchers interested in the porphyry sulfide and secondary mineralization at the Mike Horse Mine.
- Dr. John Metesh, State Geologist and Director of the MBMG, served his final session on the U.S. Geological Survey's (USGS's) National Geologic and Geophysical Data Preservation Program Board. During the April 4-8, 2016 meeting, the board reviewed 40 proposals intended to preserve geologic and geophysical data and recommended funding levels. Dr. Metesh also helped author the National Geologic and Geophysical Data Preservation Program's 5-year planning document, to be published by the USGS later this year.
- Ground Water Investigations Program Hydrogeologist Thomas Michalek presented *Hydrogeologic investigation of the Belgrade/Manhattan Study Area, Gallatin County Montana*, to the District Court's Spring Water Meeting in Bozeman.
- On April 23, 2016, MBMG Hydrogeologist Camela Carstarphen presented a powerpoint and informational outreach display to the public during the Lolo Watershed's Watershed Fair in Lolo.
- Ground Water Investigations Program Hydrogeologist Thomas Michalek presented *Gallatin Valley Groundwater: the key to sustainability?* to the annual Montana American Water Works Association/Water Education Association conference in Bozeman.

- Ground Water Investigations Program leader Ginette Abdo presented *Overview of groundwater in the Bitterroot Valley*, to a meeting of the Bitterroot Water Symposium at the Bitterroot College in Hamilton. Ground Water Investigations Program Hydrogeologist Todd Myse also presented a paper, *Investigating groundwater and surface-water*, to the Symposium.
- Dr. John Metesh attended the Western States Seismic Policy Council Board meeting in Long Beach, California, on May 3-7, 2016. The council helps coordinate seismic response policies among the earthquake-prone western states.
- Mike Stickney, MBMG Director of Earthquake Studies, attended the biennial meeting of the Yellowstone Volcano Observatory in Mammoth, Wyoming. A primary topic of discussion was, "What might precursory phenomena to a Yellowstone volcanic eruption look like?"
- MBMG Hydrogeologist Alan English participated in the U.S. Forest Service's Bear Creek Summer Camp at the Bear Creek Ranger Station in the Madison Valley. Alan presented information on faults and earthquakes to more than 100 elementary school children.
- MBMG geoscientists Dr. Richard Berg, Stan Korzeb, Jeff Lonn, Dr. Jesse Mosolf, Dr. Kaleb Scarberry, Director of Earthquake Studies Michael Stickney attended the Geological Society of America, Rocky Mountain Section Meeting in Moscow Idaho. Each attendee presented on their research and Dr. Mosolf co-chaired a session on *Cenozoic volcanism in the inland northwestern United States*.
- MBMG Geologic Map Program Leader Katie McDonald attended the National Digital Mapping Techniques Annual Conference in Tallahassee, Florida on May 23-25, 2016. Ms. McDonald presented a paper on *Montana's 1:100,000-scale seamless geodatabase: progress and challenges using the NCGMP09 format*.
- On May 24, MBMG Hydrogeologist Dr. Gary Icopini and graduate student employee Jeremy Harwood provided guidance and technical assistance to Montana Tech Assistant Chemistry Professor Dr. Alysia Cox and her students as they collected chemical and biological samples from Butte mine shafts for Renee Schmidt's MS thesis.
- The MBMG Data Preservation Program was awarded a \$49,222 grant from the USGS National Geological and Geophysical Data Preservation Program to accession, preserve, and digitize the *John W. Taber Crystal Mountain Fluorite Mine Collection*. The collection contains geologic, engineering, development, and production information about one of the two commercially viable fluorite mines in Montana.
- The Montana Bureau of Mines and Geology released Geologic Map 66: *Geologic map of the Wilson Park 7.5' quadrangle, southwestern Montana*, by Dr. Kaleb Scarberry; Open-File Map 674, *Geologic map of the Sugarloaf Mountain 7.5' quadrangle, Deer Lodge, Powell, and Jefferson Counties, Montana*, by Dr. Kaleb Scarberry; Open-File Map 675, *Geologic map of the Windy Rock 7.5' quadrangle, Powell County, Montana*, by Dr. Jesse Mosolf; Open-File Map, *Geologic map of the Tash Peak 7.5' quadrangle, southwest Montana*, by Dr. Colleen Elliott and Jeff Lonn; Montana Ground Water Atlas 07-04, *Potentiometric surface in the Madison Group Aquifer, Cascade County, north-central Montana*, by James Madison; and Ground Water Open-File Report 23, *Baseline water-quality investigation, Emigrant Creek watershed, south-central Montana*, by John LaFave.