

## CAMPUS REPORT

**DATE:** October 31, 2012  
**TO:** Board of Regents  
**FROM:** Donald M. Blackketter, Chancellor, Montana Tech  
**RE:** Campus Report for the November 15-16, 2012 Board of Regents' Meeting

- Dave Reichhardt, Rich Schrader and Mary North-Abbott, Petroleum Engineering faculty, and 20 student-members of the Society of Petroleum Engineers Student Chapter, attended the SPE Annual Technical Conference and Exhibition (ATCE) in San Antonio, October 7-10, 2012. Chapter advisor is Dave Reichhardt.
- Five Petroleum Engineering students competed in the annual SPE Petrobowl competition at ATCE in October. Team members were: Kyle Haustveit, Eric Dickerman, Calvin Odom, Aaron Rooney, and David Peach. The team placed fourth out of 30 teams from all over the world. The Petrobowl tests knowledge of the petroleum industry and the Society of Petroleum Engineers.
- Four student computer programming teams from Montana Tech competed in the Montana qualifying Association for Computing Machinery (ACM) International Collegiate Programming Contest on October 13th at Montana State University in Bozeman. Montana Tech's teams placed 1st, 3rd, 4th, and 7th among a field of 10 teams from Carroll College and Montana State University. The 1st place team consisted of Mitchell Meyer and Justin Emge. Other representatives from Tech were Reid Alford, Nick Broden, Tony Morasco, Haythem Memmi, William Flynn, Steve Wilson, Cade Foster, Jon Wareham, and Jake Jones.
- The Student Chapter of the Society of Women Engineers held the 3<sup>rd</sup> Annual Save the Tata's Run/Walk/Bike on October 13<sup>th</sup>. The majority of the proceeds from the race and t-shirt sales are donated to the National Breast Cancer Foundation. SWE Student Chapter advisor is Mary North-Abbott.
- Waleed Al-Rawashdeh, Mathematical Sciences faculty, authored the paper "*Composition Operators on Weighted Hardy Spaces*," accepted for publication at [Rocky Mountain J. Math](#).
- Keith Vertanen, Assistant Professor of Computer Science, presented the paper "*Spelling as a Complementary Strategy for Speech Recognition*" at the International Conference on Spoken Language Processing in Portland, Oregon.
- Keith Vertanen co-authored the paper "*iSCAN: A Phoneme-based Predictive Communication Aid for Nonspeaking Individuals*" which won Best Student Paper at the ACM SIGACCESS Conference on Computers and Accessibility. Lead author was Ph.D. student Ha Trinh from the University of Dundee.
- John Getty, Petroleum Engineering faculty, attended the Frontiers in Education conference in Seattle in October, peer-reviewing four papers and serving as chair in two sessions. Sponsored by the American Society of Engineering Education and IEEE, the conference focus is engineering education research.
- John Getty was invited to sit on a 3-person webinar panel covering regulatory issues, mining and laboratory methods of evaluating proppant used in oil and gas well hydraulic fracture stimulation operations. The [Rock Products](#) magazine webinar will be released at the end of October.
- Liberal Studies faculty Chris Danielson's next book, *The Color of Politics: Race and Racism in the American Political Arena Today* will be published by Praeger Press in April 2013.
- The Montana Bureau of Mines and Geology and the Montana Tech Mineral Museum entered an exhibit for the 2012 Denver Gem and Mineral Show held September 14-16, 2012. Themed 'Copper and Copper Minerals,' Bureau Museum Assistant John Foley created the exhibit that received second place.
- Montana Tech Safety, Health and Industrial Hygiene (SHIH) faculty members Julie Hart and Marlin Maynard and nine industrial hygiene graduate students attended the Northwest Occupational Health Conference in Bellingham, WA October 10-12, 2012. The Pacific Northwest Section of the American Industrial Hygiene Association and the Occupational Medicine/Occupational Health Nursing communities honored Professor Emeritus Terry Spear as the Distinguished Industrial Hygienist for 2012. IH graduate students Stacey Harper, Nicole Santifer, Kari Taylor, and Jamie Robinson were awarded \$1,000 scholarships. Graduate Matthew Gruber (2012) was invited to present his graduate research, "*Using QPCR for Rapid Quantification of Occupational Exposures to Brucella abortus*."

- An evaluation team from the Applied Science Accreditation Commission of ABET conducted a site visit for the B.S. in Occupational Safety and Health degree program, directed by Program Manager Dr. Roger Jensen. The ABET governing body will decide on accreditation July 2013.
- As an exercise in civic engagement and as an initiative of the American Democracy Project, Highlands College held a straw poll among its students featuring the major races including the US Presidential election, Montana's US Senate Election, Montana's US House election and the Governor race.
- Highland College students and other volunteers joined with Senator Jon Tester to celebrate the completion of nine homes near Center Street in uptown Butte, constructed in partnership with Habitat for Humanity of Southwest Montana.
- Highlands College of Montana Tech has installed a poster exhibit entitled "Choosing to Participate" from the Smithsonian Institution in its Tech Gallery South exhibition space. The purpose of the exhibit is to encourage dialogue, engagement, respect and participation to create positive social change.
- Highlands College Automotive Instructor, Jerry Stewart, helped NAPA Autotech win the prestigious National Excellence in Training Award for 2012 from the Automotive Training Management Council (ATMC) for its training class "Volumetric Efficiency with Pressure Wave Forms". Jerry and a colleague, Neil Quort, developed the curriculum.
- A group of Civil Engineering Technology students from Highlands College are assisting the City of Boulder to determine how much usable space is available in the city's cemetery. The City of Boulder Cemetery was established in 1889.
- Highlands College of Montana Tech has received a \$35,000 grant as part of the Perkins Rural Reserve Grant for Special Populations coordinated by Montana's Office of the Commissioner of Higher Education. The grant will fund automobile wellness checks for senior citizens, single mothers and students. The first of four Auto Wellness Checks occurred on October 24th.
- Highlands College welcomed student families as well as the public at its Halloween Open House entitled "Spooktacular Trick or Treating."
- Highlands College is preparing to open a Veterans' relaxation and study area, decked out with comfortable furniture, computers and study space.
- Lineman Students from Highlands College are preparing to travel to Saunders County, Montana to assist in the replacement of the Saunders County Plains-Paradise T.V. District line, powering PBS service to the region.
- Cfwp.org has been awarded an MSP grant from the Office of Public Instruction. Rayelynn Connole, curriculum coordinator, and Dr. Ken Miller of MSU-Billings will co-PI the three-year project, totaling over \$1 million, which will provide professional development for teachers regarding the Next Generation Science Standards and Framework for K-12 Science Education.
- Cfwp Director Matt Vincent and Butte Historian Ellen Crain have been awarded an Indian Education for All Museum and School Collaborative grant to collect oral histories and place names for areas of Silver Bow Creek and along the Clark Fork River.
- Mike Stickney, Montana Bureau of Mines and Geology Earthquake Studies Director, was invited to present a talk at the 2012 annual meeting of the Association of Environmental and Engineering Geologists on September 20, 2012 in Salt Lake City, Utah. Mike spoke on '*Earthquake hypocenter depths and their relationship to regional geology*' in a symposium addressing earthquake hazards in the Basin and Range Province.
- John Wheaton, Montana Bureau of Mines and Geology hydrogeologist and Ground Water Investigations Program Leader, addressed the Montana Building Industry Association board meeting on October 5, 2012. John introduced the Bureau and the Investigations Program. His presentation focused on stream depletion by groundwater development.
- John Metesh, Montana Bureau of Mines and Geology Director and State Geologist, addressed the opening plenary session of the annual meeting of the Montana Section of the American Water Resources Association, at Fairmont on October 11, 2012.
- Julie Ahern Butler, MBMG Hydrogeologist with the Ground Water Investigations Program, made an oral presentation on '*Boulder River Valley Groundwater Investigation: Designing the Groundwater Flow Model*' to the Montana Section American Water Resources Association annual meeting. Hydrogeologist Kevin Chandler spoke about '*Stream-loss Recharge to the Madison Aquifer in Central Montana*'. Nick Tucci, hydrogeologist with the Environmental Hydrology section of the MBMG, spoke about '*An Examination of the Northern Summit Valley Organic Silt Paleosol, Butte, Montana*'. Todd

Myse, hydrogeologist with the Ground Water Investigations Program, presented a talk entitled 'Canal Seepage Loss in the Lower Beaverhead River Basin'. Dan Blythe, hydrogeologist with the MBMG Ground Water Assessment Program, presented a poster entitled 'Hydrogeologic Framework of Carbon and Stillwater counties'. Hydrogeologist James Madison presented a poster discussing the '*Potentiometric surface of the Madison Group in part of Cascade County, Montana*'. Hydrogeologist Camela Carstarphen and John LaFave, Ground Water Assessment Program Leader, coauthored a poster titled '*Recharge patterns in the upper Madison Valley aquifers, Madison Valley, Montana*'.

- John Anderson, Montana Tech Student and Montana Bureau of Mines and Geology Ground Water Investigations student researcher, presented a poster titled '*Characterizing the Role of Subsurface Flow to the Upper Boulder River, Jefferson County, Montana*.' Shawn Kuzara, MBMG hydrogeologist, presented a poster discussing '*Results from a Ten Year Study of an Off-Channel Infiltration Pond, Coal Creek Study Site, Ucross, Wyoming*'. Jon Reiten, MBMG hydrogeologist coauthored a presentation with Joanna Thamke, U.S. Geological Survey hydrologist on '*Development and Water Needs in the Williston Basin, Montana and North Dakota*'.
- John Wheaton and John Lafave, MBMG Ground Water Investigations and Assessment Program leaders, provided programmatic updates to the Montana Ground Water Assessment Steering Committee (2-15-1523 MCA) on October 12, 2012.
- John LaFave, MBMG Ground Water Assessment Program Leader, gave a presentation to the Clark Fork River Basin Task Force titled '*Groundwater Data to Inform the Clark Fork Management Plan*', in Missoula, Montana, on October 23, 2012.
- On October 24, 2012 John LaFave, Montana Bureau of Mines and Geology Ground Water Assessment Program Leader, and Dan Blythe, hydrogeologist, met with the Shields Valley Water User's Association in Wilsal, Montana, regarding the upcoming Park/Sweet Grass groundwater characterization project. The group discussed baseline water-quality monitoring relative to potential hydrocarbon development.
- Dr. Jerry Downey, the GoldCorp Professor of the Metallurgical & Materials Engineering Department, is co-organizer for the High Temperature Electrochemistry Symposium, which will be held in conjunction with the 2013 TMS Annual Meeting in San Antonio, Texas (March 3-7, 2013). Dr. Downey has been invited to chair the Plenary Session.
- Dr. Courtney Young, Dept Head and Lewis S. Prater Professor of Metallurgical & Materials Engineering, has accepted an invitation from Gecamin to co-chair and co-organize the Hydroprocess 2013 Conference in Santiago, Chile, July 10-12. In this position, he will present a plenary paper, recruit other papers for presentation and review them for publishing in the corresponding proceedings.
- Dr. Hsin-Hsiung Huang, the Anaconda Professor of Metallurgical & Materials Engineering, has accepted an offer to visit Akita University in Japan in late January/early February 2013 to give some lectures on StabCal, the program that he has developed for the past 30 years for calculating speciation diagrams based on thermodynamics. As requested, his lectures will be limited to Rare Metals and will include but not be limited to the Rare Earth Elements.
- Dr. Jack L. Skinner, Assistant Professor of General Engineering, is the senior author on a paper published by Applied Physics Letters entitled, "*Fabrication of a large, ordered, three-dimensional nanocup array*," Vol. 101, pp. 081109, August 2012. This work describes a highly-manufacturable process for creating optical surfaces with an engineered color response for applications including microscale optical cloaking technology and enhanced photovoltaic energy conversion.
- Dr. Jack L. Skinner had two papers accepted for presentation at SAMPE Tech, Charleston, SC, November 2012. These papers are entitled, "*A novel method for homogenous dispersion of multi-walled carbon nano-tubes onto prepreg composite materials*," and "*Thermal cycling effects and governing mechanisms of a carbon nanotube latex nanocomposite film*." This work covers both the fabrication and aging of emerging nanoscale-enhanced composites.
- Dr. Jack L. Skinner's paper was accepted for presentation at the Society of Engineering Science Annual Meeting, Atlanta, CA, October 2012. "*Detection of aerospace chemical penetrants in glass fiber reinforced composites*" discusses the use of electrical impedance tomography as a means of detecting and quantifying composite material damage with electrical current measurements.
- Montana Tech students Valerie Shendo-Jack (undergraduate) and Martin Lorenzo (graduate) are attending the AISES conference in Anchorage Alaska from November 1-3 under the sponsorship of the Sloan Foundation and accompanied by Beverly Hartline, Vice Chancellor for Research and Dean of the

Graduate School. The three will participate in the AISES activities and several special meetings and activities associated with the Sloan Indigenous Graduate Program.

- VCR and Graduate School Dean Beverly Hartline represented Montana Tech as one of 13 delegates from North American (US and Canadian) universities attending an invitation-only workshop co-organized by the German Center for Research and Innovation and the German Academic Exchange Service. The workshop addressed the topic of Transatlantic Cooperation in Graduate Education and Research (especially with Germany). The workshop featured presentations and discussions of various models and mechanisms for cooperative, joint, or dual degree graduate programs, campus-to-campus partnerships, and possible sources of funding for these efforts. It was held October 25-27 at the German House near the United Nations in New York City. Other American universities represented included Cornell, Wisconsin-Madison, California-Berkeley, Northwestern, Florida Atlantic, and Tennessee-Knoxville.
- Dr. Kaleb Scarberry, Montana Bureau of Mines and Geology, was interviewed by Missoula's KPAX television. Dr. Scarberry discussed rare earth elements, what they are used for, who leading world producers are, and what the potential might be for reserves in Montana. The interview aired on October 31, 2012.