



Department of Mining Engineering

BLACK DIAMONDS WV

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Murrays Establish Endowed Chairmanship in Mining Engineering

*Robert and Brenda Murray established
the Endowed Chairmanship of the
Mining Engineering Program at WVU.*



Robert and Brenda Murray of Cleveland, Ohio, contributed \$1 million to establish the Robert E. Murray Chairmanship in Mining Engineering at WVU. Christopher Bise, the Chair of the Department of Mining Engineering invited the Murrays, CEMR Dean Eugene Cilento, and WVU President James Clements, as well as the students, to the atrium area of the new Engineering Science Building to celebrate the endowment on September 11, 2009. Robert E. Murray is president of Murray Energy Corp., the largest privately owned coal mining company in the United States. A fourth-generation miner, Murray began supporting his family at the age of 16 after his father's paralysis from a mining accident. He worked for the North American Coal Corp. for 31 years before establishing Murray Energy. Although a graduate of Ohio State University, Murray sent his three sons to WVU, including Bob Jr. (BSEM '98), Jonathan (BSGEOL, '00), and Ryan (BSMINE '02), where they earned degrees in mining engineering and geology. They all work for Murray Energy. Bob and Brenda Murray are longtime friends and supporters of the Mining Engineering program at WVU.

The Murray's gift will be used to support research by faculty and students to improve methods for the extraction and use of our nation's fossil fuel resources. This gift will enable our students and faculty to conduct research aimed at maximize our nation's energy resources.

"The Department greatly appreciates the commitment of the Murrays for this gift to support our work," said Chairman Bise. The Murray's contribution is the largest Research Trust Fund (RTF) gift to date, and with state RTF match will bring the total endowment to \$2 million. The RTF, which matches private contributions dollar for dollar, was established by the state legislature to provide matching funds to private contributions supporting research initiatives in key areas, including energy.

Kitts Presents Fall 2009 Poundstone Lecture

"Coal Under Assault: Surviving an Anti-Coal Federal Administration"



On November 12, 2009, Gene Kitts, senior vice president – mining services for International Coal Group (ICG), presented the William Poundstone Lecture on "Coal Under Assault: Surviving an Anti-Coal Federal Administration."

Mr. Kitts received his B.S. in civil engineering from WVU in 1977. In his current position at ICG, he has management responsibilities for new projects, environmental compliance, safety, regulatory permitting, geology and exploration, information technology, and

operations support. Prior to joining ICG in 2005, Kitts' career included progressively advancing management positions with Massey Energy, Summit Engineering, and Arch Coal's Eastern Operations.

He began his lecture by acknowledging the great strides that the coal industry has made over the past two centuries with regard to safety, productivity, and environmental stewardship. Unfortunately, mining by its very nature involves impacts to the earth and that makes this industry an easy target for its opponents. Active surface mining operations, refuse disposal impoundments, coal ash disposal facilities, and other aspects of coal mining and consumption provide dramatic images for use against the industry. Kitts said that adding the belief among many that burning fossil fuels causes global climate change focuses even more attention on all forms of coal production, particularly surface mining. As a result, Appalachian coal mining has been under siege from such activist groups as the Sierra Club and the Rainforest Action Network. Further, the fact that the federal government is affecting the Appalachian operations by stalling or revoking valley fill permits through the EPA represents another dimension affecting the industry.

For example, he discussed how the EPA is now interpreting the Clean Water Act to mean that virtually no impacts to water quality are allowed by mining activities. Such impacts are measured by the presence or absence of highly sensitive aquatic insects, such as mayflies, downstream of mining activities. This new interpretation has resulted in stalled mine-permit reviews throughout Appalachia. He also provided a chronology of anti-coal decisions by the EPA over the past two years, which have threatened coal operations.

With regard to anti-mining public-relations campaigns, he provided information on the Sierra Club's "Beyond Coal" campaign which attacks all coal mining, coal consumption, and coal-ash disposal. Utilizing celebrity activists such as Robert F. Kennedy, Jr., the Natural Resources Defense Council is also attacking the coal industry with an emphasis on mountaintop mining. A Boone, North Carolina-based group called Appalachian Voices has

drafted and solicited support for state legislation that would ban the use of Appalachian coal in states such as North Carolina, South Carolina, Georgia, and Maryland.

So what is the coal industry doing to stand up to these attacks? Mr. Kitts stated that the industry is working hard to correct various charges and misinformation. Among the activities are:

- To work with national and state mining associations to educate and inform elected officials,
- To defend the industry's customer base,
- To participate in the FACES of Coal campaign and similar efforts, and
- To speak up and speak out wherever and whenever someone will listen.

On a more personal note, he summarized his personal efforts in support of these initiatives. For example, just since March, he has visited Washington, DC, seven times to attend meetings with the EPA, the White House Council on Environmental Quality, and Congressional representatives. He has also made a presentation entitled "EPA vs. Coal Mining" to numerous civic groups and associations and has provided a guest blog entitled "Why We Surface Mine" for the Charleston Gazette. His advice to the audience was to:

- Stay informed.
- Get involved and know your neighbors and your community so you can help educate them about mining.
- Speak up and let your concerns be heard through 1) Letters to the Editor, and 2) Letters and E-Mails to Congressional representatives and state elected officials.

Finally, in a message directed to the mining engineering students in the audience, Mr. Kitts' closing thoughts focused on the many positive aspects of a career in the coal-mining industry. He told them that they will face challenges that will test them, but they will also find many opportunities for fun. There will be opportunities for personal achievement; however engineering is, often, the **easy** part. In today's world, he said, "Simply securing the right to mine is becoming the greatest accomplishment!"



Eugene "Gene" Kitts, senior vice president of Mining Services at International Coal Group, receiving the Poundstone Lecture Series Award Plaque from Department Chairman Christopher Bise.

Best of Ground Control Lecture Session Launched

The Best of Ground Control Lecture Session was launched during the 2009 Annual SME Meeting and Exhibit in Denver, Colorado. The six best technical papers from the 2008 International Conference of Ground Control in Mine were selected by Paper Selection Committee members. The papers were selected based on technical originality, merit, and presentation quality. In keeping with the original vision of Dr. Syd Peng for the conference, a diverse grouping of selections were chosen, representing industry, academia, manufacturers, consultants, and government. Plans are to incorporate the Best of Ground Control Lecture Session into SME's annual meeting every year.



(From left to right) Michael Gauna (MSHA), Thomas Barczak (NOISH), Stephen Tadolini (MINOVA USA, Inc.), Dr. Syd S. Peng (WVU), Vincent Scovazzo (J. T. Boyd & Co.), Anthony Iannacchione (Univ. of Pittsburgh), Hamid Maleki (Maleki Technologies, Inc.) were selected for the Best of Ground Control Lecture Session at the 2009 Annual SME Meeting in Colorado.

Gadde Receives 2009 Woomer Award

Murali M. Gadde, a senior mining engineer in ground control with Peabody Energy, also a Ph.D. candidate in our Department's graduate program, received the 2009 J. W. Woomer Award at the 2009 Annual SME Meeting. The award was presented by the Coal and Energy Division of SME. The Woomer Award (formerly the Young Engineer Award) was established in 1976 to provide recognition to young engineers in the coal industry. After receiving the award, Mr.

Gadde was invited by the Pittsburgh Coal Mining Institute of America and SME-Pittsburgh Section as a keynote speaker at the student luncheon on October 22, 2009. His keynote speech title was, "Think Big, Plan Well, and Work Hard: Mantras for Professional Success." Murali completed his dissertation on November 12, 2009, and officially received his Ph.D. in mining engineering from WVU in December of 2009.



Fall Banquet

The Fall Banquet for the Mineral Resources Alumni Chapter (MRAC) was held on November 6, 2009. Several mining companies sponsored the tables for the banquet. We would like to express appreciation for those companies' support. Kristopher Lilly, vice president of Redbone Coal, is serving as president of MRAC for this year. A large number of students in mining and mining-civil dual majors participated in the event, in addition to many alumni from the northern part of West Virginia and the Pittsburgh area.

Hall Receives SME-Pittsburgh Section Grant Award



Logan Hall

Logan Hall received the 2009 Grant Award from the SME-Pittsburgh Section on October 22, 2009, at the Annual Meeting of PCMIA/SME-Pittsburgh. Hall is president of the WVU Student Chapter of the Society for Mining, Metallurgy and Exploration. He is strongly committed to the mining profession and has worked every summer in the coal industry. His summer experiences include working as an underground laborer and conducting surveying and engineering assignments at Cliffs Natural Resources - Pinnacle Complex in Pinesville, West Virginia. He also worked as a certified miner and did surveying and environmental work at Alpha Natural Resource - Brooks Run South. He is the recipient of a Promise Scholarship, a Mining Engineering Scholarship, and a Kids Chance Scholarship.

Eisenhauer and Patterson were Silver Award winners



Adam Patterson

David Eisenhauer and Adam Patterson were the Silver Award winners of the Senior Mine Design competition of PCMIA/SME. The photo on the left shows David Eisenhauer receiving the award plaque at the 2009 Annual Meeting of PCMIA/SME-Pittsburgh at Southpointe, Pennsylvania, on



David Eisenhauer

October 22, 2009. The picture on the right is of Adam Patterson. The purpose of the award is to serve as a tangible stimulus for excellence and reward for outstanding effort in the preparation of the senior design project.

Minerals for Kids at Annual Cheat Lake Gem Show

The 18th Annual Cheat Lake Gem, Mineral and Fossil Show was held at the West Virginia Geological and Economic Survey at Mont Chateau in Morgantown in September. Vendors provided gem, mineral and fossil displays, and geode cutting for area residents interested in natural gems and rocks. As an outreach program, the WVU Student Chapter of the Society for Mining, Metallurgy and Exploration (SME) was on hand with an informal display of a variety of daily household products made from minerals and fossils. The volunteers explained the mineral resources contained in those products to the children and adults alike. The volunteers from the SME Student Chapter included WVU students in mining and mining-civil engineering. The students

distributed "*Minerals for Kids*," an egg carton with 10 different mineral and fossil specimens and descriptions, free to children under 12.



Murray Receives John T. Boyd Memorial Young Engineer Award



Ryan M. Murray, vice president of operations for Murray Energy Corporation, received the 2009 John T. Boyd Memorial Young Engineer Award from PCMIA/SME-Pittsburgh on October 22, 2009. Ryan earned his B.S. degree in mining engineering from WVU in 2001.

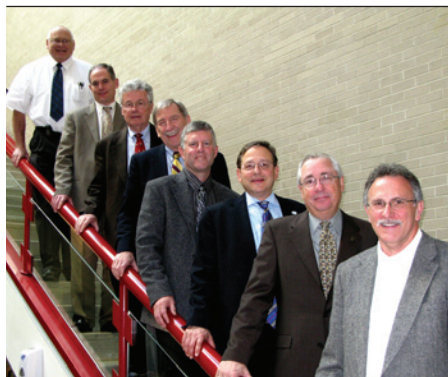
Murray Energy is the largest independent coal mining and sales company in the United States. Ryan has served as a vice president since November 2007. His responsibilities include the operational success of all eight active surface and underground mines within Murray Energy

Corporation. Ryan's previous responsibility was as a general manager and superintendent of the American Energy Corporation's Century Mine, a Murray Energy Corporation subsidiary and among the safest and most productive mines in the country.

Ryan has worked at numerous surface and underground coal mines in a variety of jobs, from an hourly laborer up to and including a mining engineer, production manager, superintendent and general Manager, and vice president. He has worked in mines in Pennsylvania, Ohio, West Virginia, Utah, Kentucky, and Illinois, and is a Certified Mine Foreman. Ryan was responsible for 6.8 million saleable tons, annually, and the health and safety of over 500 persons. Now, at 30, Ryan oversees operations employing over 3,200 employees with whom he is proud to work to achieve the overlying goal of productive, safe, and long-term mining operations. Ryan believes proper leadership, teamwork, and trust are the

key elements to the success of Murray Energy Corporation.

As a student in the Department, Ryan's capstone Senior Mine Design Project won first place in the Carlson Software National Mine Design Competition and Gold Award in the Pittsburgh Coal Mining Institute of America regional competition. Ryan remains very active in mine design and mine planning at all Murray Energy Corporation operations, and continues to work closely with his mentors at WVU on various mining engineering projects. Ryan also obtained his MBA in 2006 from the Fisher School of Business of The Ohio State University, while working full time. In 2009, Ryan was the recipient of the Calvin Kidd Fellowship Award awarded by the WVU Student Chapter of SME. He is also the recipient of the Old Timer's Award in mining; an organization established in 1938 for the betterment of mining in America. Recently, Ryan was asked to join the Board of Directors for the SME-Pittsburgh Section starting in 2010.



The Mining Engineering Visiting Committee met on Friday, November 13, 2009, for its 2009 Fall Meeting. The Committee fulfills an important role in the Department by providing feedback which ensures that our graduates have the skills they need to be successful in industry. At the meeting were: (left to right) Christopher Bise, department chair; James Laurita (BSEM '82), John Murphy (Visiting Committee chair); Stanley Suboleski, Jeff Kelley (BSEM '79), Michael Peelish (BSEM '83), Ronald Stovash, and Chuck Dunbar (BSEM '80).

Results of the 2009 ABET Accreditation Visit

BY CHRISTOPHER J. BISE, CHAIR, DEPARTMENT OF MINING ENGINEERING

As many of you know, the Department of Mining Engineering has been very busy, particularly during the past year, in preparation for the 2009 ABET Accreditation Visit. The ABET Team of Program Evaluators, visiting all of the programs in WVU's College of Engineering and Mineral Resources, were on campus from October 11 – 13, 2009. The evaluator assigned to the Mining Engineering program was Dr. Terril (Ted) E. Wilson of the Department of Mining and Geological Engineering from the University of Alaska in Fairbanks.

Prior to his campus visit, Dr. Wilson received our 426-page Self-Study Report which dealt with such issues as the Department's Program Educational Objectives, Program Criteria and Outcomes, Continuous Improvement, and

descriptions of the Curriculum, Faculty, and Facilities. During his visit, he reviewed numerous binders filled with student coursework, surveys of students, alumni, and employers, and minutes of Departmental and Visiting Committee Meetings.

I am happy to report that the visit was very successful. The results will not be made official until this coming summer, but we are very hopeful that we will receive a full, six-year renewal of our ABET accreditation. On behalf of the faculty, staff, and students of the Department of Mining Engineering, I would like to take this opportunity to thank our many alumni and friends who assisted us in this successful accreditation review process!



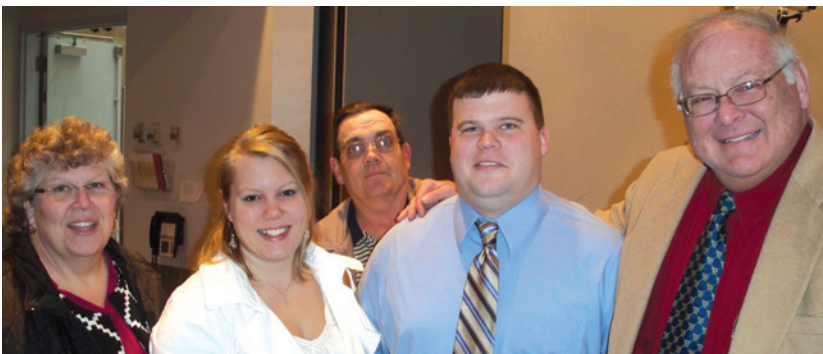
MSHA Academy Facilities Tour

Dr. Christopher Bise and the students in his MINE 471 class, Mine and Safety Management, visited the MSHA Academy in Beaver, West Virginia in October, along with visiting scholars. The participants toured the facilities and received training in mine ventilation, dust regulations, and current issues in mine safety and health. The students also obtained training materials from the Academy's wide selection. Thanks to the staff at the Academy for the warm welcome and excellent hospitality.



Robinson Run Coal Preparation Plant Visitation

The instructor and the 30 students from MINE 261, Engineering CAD, visited CONSOL Energy's Robinson Run Mine, coal preparation plant and refuse disposal site near Shinnston, West Virginia, on Monday, November 16, 2009. The coal preparation plant has 1750 TPH capacity with dense medium coal cleaning circuits. The tailings from the plant are pumped to a tailings impoundment for storage. The rocks from a rotary breaker, and coarse refuse rejected from the plant are disposed at the nearby hill. Coal refuse is treated and compacted with lime, top soil, and/or biomix such as agronomic soil, and then, hydro-seeded and revegetated to minimize acid generation, to prevent refuse fire and erosion, and to enhance slope stability. The WVU Department of Mining Engineering appreciates the arrangements made by Jimmy Brock, vice president of Northern West Virginia, and John Boyd, plant superintendent, for our visitation.



December 2009 Convocation Ceremony

At the December 2009 Convocation Ceremony, Gabriel Boggs received his B.S. degree in Mining Engineering. Right to left at the CEMR reception for December graduates and families, Christopher Bise, Department Chair, Gabriel Boggs, Jessica Boggs (Gabriel's wife), and Gabriel's parents.



A New Generation of Mining Engineer

Brenda Murray with her grandson, Evan Murray, the son of Ryan and Melanie Murray, at the dedication of the Murray Chairmanship in Mining Engineering at WVU.

Farewell to WVU and Mining Engineering

BY GREGORY BARCLAY, BSMINE '09



Upon discovering mining engineering my freshman year at WVU, I knew it was the major for me. During my four years of college, I have been exposed to many great experiences, opportunities, and people, most thanks to the Mining Engineering Department. The many SME trips I was able to attend taught me professional etiquette and instilled the need for lifelong learning in me. Summer internships in the mining industry were always readily available

throughout my college career and were invaluable to my learning, not to mention lucrative. Even in the current faltering economy, many full-time job offers were still made to graduating seniors. Above all else, mining engineering has exposed me to some of the best people I have ever met. I've networked with respected industry professionals, learned from renowned professors, and made lifelong friends.

I have sincerely enjoyed my time at WVU and it is sad to leave. However, I look forward to starting my career in the mining industry and know the skills I have learned have prepared me well to succeed. I would like to thank all my professors, friends, and industry professionals for their support, guidance, and encouragement. I wish good luck to all students in the Mining Engineering Department at WVU, present and future.

Thanks for Contributing to My Success

BY BRAD T. NELSON, BSMINE '09



Coming out of high school, I had no idea what to study at WVU. I spent my first two years as a general studies major. During this time, I enrolled in introductory courses in chemistry and mathematics. I quickly found that I not only enjoyed these classes, but was proficient in them. It was at this point engineering came to the forefront as a possible major.

I had always been interested in mining, coming from a family that had been in the industry for many years. After attending the mining engineering information session held by Dr. Heasley, I confirmed my decision to declare a major. As a resident of Maryland, I was

able to get in-state tuition and receive scholarships. Faculty members were very friendly and the department was not too large. I could quickly tell that this was the department for me.

Students in the mining engineering department receive personal one-on-one attention from professors. Looking back on my five years spent as an undergraduate, I cannot emphasize how valuable this was in allowing me to reach my upmost academic potential.

The friends I have made during my stint at WVU are some of the best people I have met - both peers and faculty. Small class sizes have allowed me to

get to know each of the students with whom I graduated. Although my time at WVU was short, the relationships and memories formed will last forever. My success as an undergraduate would not have been possible without the close-knit mining engineering department.

As I now embark on a new journey through graduate school, I know I have gained the skills necessary to continue to succeed. My thanks and appreciation goes out to all who have made this possible, especially my professors in the mining engineering department. They have enriched my life beyond the classroom.

Goodbye to Undergraduate Life

BY ADAM PATTERSON, BSMINE '09



During my time in the Mining Engineering Department at WVU, I was fortunate enough to make dozens of great friends while earning an education from some of the best professors in the country. As I leave this great University and begin my career in the mining industry, I can confidently

say that I have obtained the skills that I will need to succeed in the future. I would like to thank all of the mining engineering professors for everything that they have done for me over the last four years. I would also like to thank all of the industry professionals I have had the opportunity to be involved with.

Your support of our students through lectures, mine tours, and donations has gone a long way to enhance our educational experience. I wish all the students, professors, and the entire mining industry the best of luck in the future.

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Chair's Message

Greetings from Morgantown! Now that Fall Semester 2009 is over and Spring Semester is just beginning, I'd like to take a moment and summarize the many successful activities we have already had this academic year, as well as provide a glimpse of some plans we intend to initiate in the future.

The big news for this academic year is that we had a very successful visit by the Accreditation Board for Engineering and Technology (ABET) this past October. A summary of the visit is included in this issue; I, again, would like to thank all of our corporate friends, alumni, and students for their contributions to this significant effort.

In early September, the academic year began with a ceremony honoring Robert and Brenda Murray for contributing \$1 million to establish the Robert E. Murray Chairmanship in Mining Engineering. The Murray's gift will not only endow the position of Chair of the Department of Mining Engineering but, because of the \$1 million match from the West Virginia Research Trust Fund, will support research into developing safer, more efficient, and cost-effective ways to use fossil fuels. We greatly appreciate the Murrays' substantial and continued support of the Department's mission.

As you can see in this issue, our students attended numerous field trips and professional meetings in the fall, and we are looking forward to sending a contingent of 15 students to the SME Annual Meeting at the end of February.

We have welcomed two new faculty members this academic year. In Fall Semester, we welcomed back Dr. Brijes Mishra as an assistant professor of mining engineering. Brijes received his PhD from WVU a few years ago. At the start of the Spring Semester, we welcomed Dr. Vladislav Kecojcic

as an associate professor of mining engineering. Vlad is a surface-mining specialist who was on the faculty, previously, at Penn State. Our next issue of "Black Diamonds" will introduce both of our new faculty members to our alumni and friends.

The Spring Poundstone Lecture will take place on April 15 and will feature a lecture by Jerry Spindler at 5 p.m. An important note: We are changing the location of the Poundstone Lecture, and from now on, plan to hold it in WVU's new Erickson Alumni Center, with the dinner immediately following the lecture, also at the Erickson Center.

Also, I am pleased to announce that the Poundstone Lecturer next fall, on September 23, 2010, **will be** William Poundstone. Please circle that date on your calendars right now, and plan on attending to thank Bill for initiating this wonderful function.

Remember to stop by the Department when you get a chance to visit Morgantown. I wish each and every one of you a new year of health and happiness!

Christopher J. Bise



Dr. Christopher Bise