



Black Diamonds

From the
Department of Mining Engineering
COLLEGE OF ENGINEERING AND MINERAL RESOURCES
WEST VIRGINIA UNIVERSITY

MAJOR STORIES

- J. Zachwieja named Distinguished Engineering of Mines, presents Poundstone Lecture.
- Foundation Coal Contributes to Mining Engineering Program.
- Bill Raney Honored with Hope Award.
- Douglas Blackburn Receives MRAC Distinguished Alumnus Award.
- Bill Allen inducted into Florida Drinking Water Program's Hall of Fame.
- Visiting Committee reviewed Recruiting Initiatives.
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- SME Student Chapter activities and Awards.

Volume 5 Issue 2

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December 2005

John Zachwieja Named Distinguished EM, Presents Poundstone Lecture, 2005 *Buchanan Mine Fire*

John Zachwieja, Vice President of Central Appalachia Operations for Consol Energy, presented the Fall 2005 Poundstone Lecture on November 17th to a packed auditorium. John's lecture described the quick and effective treatment, response and recovery for the Buchanan Mine fire. It was entirely fitting that John Zachwieja from Consol participated in this lecture series that was originally established to honor a former Consol Executive Vice President of Engineering, William Poundstone. In the audience were many other Consol Energy employees



John Zachwieja, Vice President of Central Appalachia Operations, CONSOL Energy.

including the Chief Operating Officer, Pete Lilly, the former VP and current WV House of Delegates member, Eustice Frederick, along with Bart Hyita, Ron Stovash, Jimmy Brock and many others.

John Zachwieja started his mining career as an hourly employee at the age of 18, and has served his entire career with CONSOL. He earned an Associate degree from Bluefield State College followed by a BS in Engineering of Mines from West Virginia University in 1974.

(See Zachwieja, Page 2)

Foundation Coal Contributes to the Mining Engineering Program

Foundation Coal Corp., is a long time supporter of the undergraduate and graduate Mining Engineering Programs of WVU. Foundation Coal Corp., in Linthicum Heights, MD, has pledged to contribute \$35,000 per year for the next three years for the benefit of the Mining Engineering Department. The following letter explained the purposes of the financial support and contribution plan.

June 20, 2005

Dear Dr. Peng:

Foundation Coal Corporation, its predecessors and its affiliates, have had a long and

valuable relationship with the West Virginia University Department of Mining Engineering in the College of Engineering and Mineral Resources. We want to enhance that relationship through financial support for the mining engineering department. Foundation Coal is committed to contributing to the Department of Mining Engineering \$35,000 per year for the next three years.

Foundation Coal believes in large part that the future of the mining industry is dependent on the ability of mining engineering schools to produce quality engineers. Through its contribution

to the WVU Department of Mining Engineering, Foundation Coal wishes to advance the mining engineering department's efforts in recruiting and developing mining engineering students. It is the wishes of Foundation Coal that the contributions be used by the chair of the Department of Mining Engineering at his discretion to promote the recruitment and development of students into quality mining engineers.

Foundation Coal thanks the WVU Department of Mining Engineering for its dedication to the West Virginia University, the mining engineering students

and graduates, and the mining industry. Through the dedication of the Department of Mining Engineering professors, graduate students and staff, the long-standing reputation of the WVU Department of Mining Engineering is maintained in high regard.

Sincerely,

Michael R. Peelish
Senior Vice President
Safety & Human Resources
999 Corporate Boulevard
Suite 300
Linthicum Heights,
MD 21090-2227





Honoring Bill Raney with the Hope Award



William B. "Bill" Raney, President of West Virginia Coal Association was the recipient of the NMSS Hope Award given at the Dinner of Champions, from National Multiple Sclerosis Society (NMSS) in Charleston, WV, on September 21, 2005. NMSS honored and recognized Bill Raney for his civic and community services to the local service area. David Hardesty, President of WVU, Eugene Cilento and Royce Watts, Dean and Associate Dean of CEMR, and the Chair and Faculty of Mining Engineering participated in the event. The Dinner of Champions also raised funds for NMSS.

(Zachwieja from Page 1)

Throughout his career, John has held various jobs of increasing responsibility at different mines. By 1999, John became superintendent of the Shoemaker mine and then in 2001 he became responsible for all AEP mines acquired by Consol. Presently, John is Vice President of Central Appalachia Operations overseeing mining operations in Eastern Kentucky, Southwestern Virginia and Southern West Virginia.

Mr. Zachwieja's expertise

encompasses all facets of mining: safety, continuous miner and longwall production, ventilation, degasification, mainline and section coal haulage and transportation, cost control and budgeting.

John's presentation covered the details of the Buchanan mine fire that started on February 14, 2005. There have been various mine fires lately, but the Buchanan experience was uniquely different in the minimal amount of time that was needed to bring the mine back

to production. At Buchanan, the fire event started with a large bump at the 6 Right longwall. This bump apparently damaged ventilation stoppings, because the air flow at the face reversed, causing methane ignitions at the shearer drum and a large drop in the air pressure at the #8 vent shaft. The mine was quickly and safely evacuated, and the management initiated efforts to seal the mine and contain the fire. Within five shifts, all of the shafts were sealed, and monitoring and analysis of the fire began. Analysis of the mine gases showed that the fire was burning pretty strongly until the mine was sealed after which it calmed down quickly. By mid-March, the CO levels were dropping rapidly and by mid-April the CO levels were essentially zero, indicating that the fire was extinguished.

With the fire out, the fans were started on May 14, followed by mine rescue personnel entering the mine on May 23, 2005. The mine was quickly rehabilitated and on June 16, longwall production resumed. The outstanding commitment, planning and performance by mine management, mine rescue teams and maintenance personnel allowed the mine to be brought back into production in just four months.

This fantastic mine fire success story presented by John was very exciting and extremely informative for the numerous students, faculty and friends at the lecture. The lecture was very well received and generated numerous subsequent discussions, which continued at the following banquet.



John Zachwieja accepting Distinguished EM and Poundstone Lecture Series Crystal Plaque from MinE Department Chair, Dr. Syd Peng.

CNX COAL



Management team of CONSOL Energy attending the Lecture (Left to right): Bart Hyita, Bill Fertall, Lou Barletta, Pramod Thakur, Ron Stovash, John Zachwieja, Danny Quesenberry, Michael Onifer, Jimmy Brock, Spike Bane, Jack Richardson, Pete Lilly, Jack Holt.



Douglas Blackburn Named 2005 Outstanding Mineral Resources Alumni

Douglas Blackburn, BSEM '72, also holds an MBA from WV College of Graduate Studies, and a law degree from Harvard University. He debuted his career in the coal industry with A. T. Massey Energy. Later he joined Zeigler Coal Holding Co. as senior VP of Operations. In 1999 he was president of Asian American Coal Co., China. For the past 30 years, Mr. Blackburn has held numerous engineering and operation positions with many major coal mining companies in the U.S.



Douglas Blackburn (right) received the Award from Royce J. Watts, Secretary of MRAC at Erickson Alumni Center, Morgantown, WV, on September 23, 2005.

Alumni NEWS

- **Mike Amick (BSEM '82)** and engineering company. John resides in Indiana.
- **Robert J. Irey (BSEM '86)** established CLI Corporation as Chairman and CEO. The company has developed two super clean fuels and one lubricant additive that benefit fuel economy and emissions and wear.
- **Jeffrey M. Kukura (BSEM '87)**, previously Manager of Engineering at Cumberland Mine, Foundation Coal has been promoted to the position of Mine Manager. (See Alumni News, Page 5)
- **Gary Dubois (BSEM '76)** left Foundation Coal to join Target Drilling Inc as Manager of Engineering in Jefferson Hills, PA, in May 2005. Target Drilling specializes in longhole drilling.
- **John Gasper (BSEM '80, MSEM '82)** has been appointed as the leader of the North Region Mining Team, Arcadis, an international consultancy



Alumni participating in 2005 MRAC Banquet on September 23, 2005, at Erickson Alumni Center, Morgantown, WV, were (left to right): Jim Dean, Nancy Dorset, Christ Breckenridge, Daniel Devany, Bob Thomas, Douglas Blackburn, Bud Baldwin, Joe Larry, Justin Bushneck, Carrie Daugherty, Joe Zirkle, Rebecca Hardy, Christopher Lilly, Bill Wolf, Khaled Morsy, Qinghua Jin.

In Memoriam

Allen S. Pack Has Distinguished Career In Coal, 1931-2005



Allen S. Pack, 74, of Charleston died at his home on November 16, 2005. Allen a native of Bramwell, W.Va., attended Greenbrier Military School, and Allen earned a BS

in Business Administration from WVU in 1952. Upon graduation from WVU, Allen entered the Marine Corps and was honorably discharged with the rank of Captain. Being a third-generation coal miner, Allen began his distinguished career with Buckeye Coal Company. He was also employed with Island Creek Coal Company and Cannelton Holding, where he was President and CEO and retired as Chairman of the Board. Allen was also past chairman and director of West Virginia Coal Association; Bituminous Coal Association; National Coal Association; Kanawha Coal Operators Association; and was elected to the West Virginia

Charles "Chuck" Zabrosky, VP, Pennsylvania Services, RAG/Foundation Coal, 1950-2005



Coal Hall of Fame. He served on the Visiting Committee of COMER in the 1980s. His two sons, David, BSEM '82, and Scott, BSEM '83 are both graduates of Mining Engineering, WVU.

Charles E. ("Chuck") Zabrosky (MSEM, '91) died of cancer on September 15, 2005. He was 55. Chuck began his long and exceptional career with Foundation Coal and its predecessor companies in 1978. During his nearly 30 years of service, he served in numerous roles, ranging from his first position as Assistant Mine Foreman at the Cumberland Mine to Vice President of Pennsylvania Services Corporation. Chuck was a strong supporter of WVU MinE's graduate program. He initiated and continuously supported the longwall shield support and surface subsidence research that brought WVU world renown in these two areas. He served on the Department Visiting Committee from 1997 to 2003. He will be deeply missed.

William Allen Inducted into Florida Drinking Water Program's Hall of Fame

William D. Allen (BSEM '56) started his professional engineering career with USX Corporation in Pennsylvania as a project and industrial engineer. In 1986 he retired from USX Corporation after completing a successful 30 year professional engineering career. At that point, when many of us would be content to retire to Florida's paradise and enjoy the good life, Bill chose to start a new professional engineering career. He took the reigns of Florida DEP's South District Drinking Water Program in 1989. Two year later, he joined the Lee County Health Department to lead its Environmental Engineering Division into the future. One of his first accomplishments was to develop and implement a cooperative agreement with DEP to become an approved delegated health department to implement the



Safe Drinking Water Act. As the Director of the Environmental Engineering Division of the Lee County Health Department, Bill created much of the County's unique safe drinking water infrastructure that is still in practice today. In January 2002, Bill retired from 11 years of outstanding services to Florida. On July 7, 2005 he was inducted into the Drinking Water Program's Hall of Fame to formally recognize his quality service, professionalism and dedication to the citizens of Florida.

Dual Profession in Mining and Mechanical Engineering

by Donald Wieb
BSEM '49 & MSEM '58

I enrolled at WVU for the summer session of 1946. My first 2-1/2 years as an undergraduate were a most rewarding experience under the guidance of Professors Charles T. Holland and Dean Gerald R. Spindler in the School of Mines. For my final three undergraduate semesters I was employed as a part time Teaching Fellow in the Engineering Mechanics Department (ME).

My first job was with Pittsburgh Consolidation Coal Co. in Morgantown, WV. After a short time with Consol I spent the next 12 years of my career with the Joy Manufacturing Co. of Pittsburgh, PA, where I began as research and development engineer involved with continuous coal mining machinery development. Two years later, I



was promoted to Manager of Joy New Product Development. In 1951 I took a two-year leave of absence from Joy to teach as an Assistant Professor at the WVU School of Mines, returning to Joy in 1953.

I received a Master's Degree from WVU School of Mines in 1958. In 1963, I left Joy for Westinghouse Electric Co. as Manager of Engineering Mechanics in their nuclear rocket propulsion program. In 1965 I moved to VP of Research and Engineering at the A. Stucki Co. of Pittsburgh, PA, a railcar component and equipment manufacturer, where I retired. Since then I have been consulting in various engineering disciplines.

My relationship with WVU has been both enriching and rewarding to me during my entire professional career. I always had access to faculty members for consulting services as well as laboratory facilities for contract research programs. I was gratified in being asked to serve on the School of Mines Visiting Committee (1958-1964), and the MAE Advisory Committee (1982-1992). I was honored as a fellow by ASME. In 1991 I was elected to the MAE Academy of Distinguished Alumni (honorary), WVU.



Get a MinE sticker;
put it on your hardhat.

by Carrie Daugherty
BSMinE '00

Mining Engineer Becomes Lawyer in A Mining Related Field



I am now working as an associate attorney at the law firm of Bowles Rice McDavid Graff & Love, LLP, at one of our offices located in the Hampton Center here in Morgantown. I took the Bar Exam in August 2005. I found out I passed in September, and I was sworn as a member of the Bar on October 6, 2005 by the West Virginia Supreme Court. I have been prac-

ticing real estate law, and specifically mineral law. I conduct title searches to determine mineral ownership and prepare legal documents for the various stages of a mining operation, including permitting documents, options to purchase, occupancy agreements, deeds, etc. I have also enjoyed conducting closings and talking with individuals involving real estate transactions.

My experience as an undergraduate student in the Mining Engineering Department at West Virginia University has been very helpful. I have had many opportunities to apply my knowledge of mining engineering to the legal issues involved in developing and conducting a

mining operation. I look at maps and plats on a daily basis, and I have found my understanding of surveying to be very helpful, as well as the knowledge I gained from the underground mining, longwall mining courses and Mine Design. Most of all, I think my engineering background taught me to pay attention to detail, which is very important in the practice of law. Mining engineering has provided a strong foundation for the beginning of my career. I am very thankful for the experiences and opportunities that the Mining Engineering Department provided, and I am looking forward to becoming professionally involved with the mining industry in the future.

by Doug Fala
BSMinE '99

PE Licensure—A Valuable Asset to Both Employee and Employers

When I left Morgantown six years ago with my diploma and FE (Fundamental of Engineering) certification in hand, I can remember thinking to myself – I only have one more exam to take in my life. The test that I was pondering in my head was the Principles and Practice of Engineering Exam for Professional Engineer's (PE) Registration. Now that I passed the final test that I planned on taking last fall (2004), I would like to enlighten future mining engineering professionals on my experience preparing to take the PE exam and why I feel PE licensure is worth the effort.

Preparing for the PE Examination is a lengthy process. The first hurdle to overcome is passing the FE exam. Try to accomplish this before you graduate or shortly thereafter—the sooner

the better. I strongly recommend attending the review courses for general engineering that CEMR offers each year prior to the FE exam. Next, keep track of the work that you have done and the projects that you are involved in once your post-graduate job begins. The application for the PE exam is quite tedious and requires a detailed list of projects that you have been involved in during the required four years working under the supervision of a registered professional engineer.

Once the time comes to take the PE exam, seek and follow advice from colleagues who have successfully passed the exam. When you are studying for the exam, cover a broad range of topics. Don't waste valuable study time memorizing equations, standards, or con-



version factors; just know where these are in your reference books that you carry into the exam. Last but not least, attend the review course for the mining engineering PE exam.

So far in my career I can recall numerous times that various permits, maps, and plans were required to be signed by a qualified professional engineer in order to keep the operation

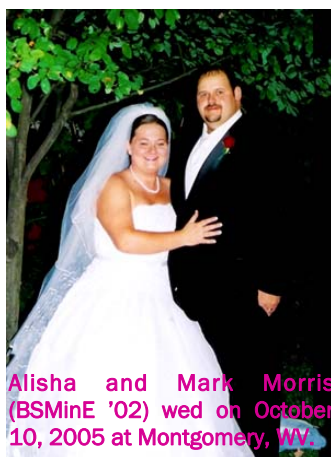
where I work running smoothly. Recently, our operation was putting a small mine into production that was to begin at the drift openings of a long ago idled mine. The project nearly came to a grinding halt until a map of the abandoned mine was verified and signed by a professional engineer. Having a professional engineer on staff and working on the project got the new mine into production on schedule and got the project completed as planned.

Having a PE license is a benefit in a number of respects. Licensure makes an engineer a more valuable asset to their employer. The added value of professional registration often results in greater financial gains and an improved possibility for advancement within many organizations.

(Alumni News from Page 3)

- **Bradley C. Lewis (BSEM, '78)** joined ICG ADDCAR Systems, LLC as director of marketing and sales launching its Narrow Bench Highwall Mining system.
 - **Mark Morris (BSMinE '02)** is a mining engineer for Marfork Coal Co mining complex, which consists of 7 mines and 10 mining units. He was married to Alisha Sizemore on September 10, 2005.
 - **Randy McMillon (BSEM '79)** left Riverton Coal to join Alpha Natural Resources as President of Brook Run Coal Co in Beckley, WV. He operates 7 underground mines, one surface mine, and 4 coal preparation plants.
 - **R. B. Mechling, Jr. (BSEM, '56)** is president of Fayette Engineering Co. in Uniontown, PA. We met him accidentally when he dropped in
- (See Alumni News, Page 9)

Congratulations! We wish you a very happy life together.



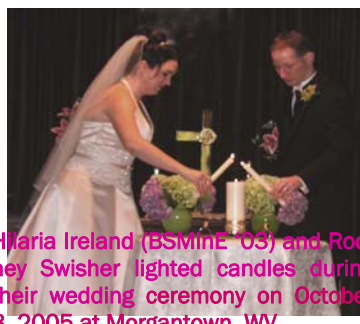
Alisha and Mark Morris (BSMinE '02) wed on October 10, 2005 at Montgomery, WV.



Rebecca Hardy (BSMinE '03) sang at the Swisher's Wedding Ceremony.



The wedding ceremony of Joni and Jim Turner (BSMinE '97) was at the St. Nicholas Orthodox Church, Barton, OH, on July 9, 2005.



Hilaria Ireland (BSMinE '03) and Rodney Swisher lighted candles during their wedding ceremony on October 8, 2005 at Morgantown, WV.

Making A Gift to the MinE Department

Thinking of making a gift to benefit our Department in your will, living trust, IRA, or other manner? If so, the proper wording is very important to ensure that your gift works out the way you intended.

Have your attorney include a provision directed **"to the West Virginia University Foundation, Inc. (i.d. #55-6017181) to benefit the Department of Mining Engineering in the College of Engineering and Mineral Resources."** Your gift provision can provide for the creation of an opportunity fund, a faculty development fund, a **scholarship** — whatever you choose. It will help us in an important way to further our educational, research and service mission.

If you would like further assistance with your gift plans, call Bob Bragg, CEMR at (304) 293-4821 Ext 2240, or Syd Peng, Department Chair at (304) 293-7680 Ext 3301.

My Grand-Slam Hit — Mining Engineering

by Joseph Zirkle
BSMinE '04

Dad had begun my preparation for engineering during baseball season. Instead of pitching he suggested that a field position would force me to learn to make calculated decisions I would need as an engineer. I took that challenge and hit a record number of home runs too.

The summer after high school, I visited WVU's engineering school. As Nancy Ireland handed Dad a visitor's parking permit, she glanced at me and said, "If you declare Mining Engineering, you will get a \$2000 scholarship automatically." We met with Dr. Syd Peng who answered all of our questions, and the journey had begun.

After successfully navigating through my freshman year, I was the proud owner of a high-powered propane potato gun and a lot of useful knowledge from freshman engineering class. One of my scholarship sponsors, Mr. James Morris, encouraged me to put my education to work by joining Consol Energy's internship program. Dr. Peng made one telephone call, and Consol Energy's Robinson Run Mine employed me by late afternoon. Robinson Run Mine gave me two things: hands-on experience to take to school and confidence that I did choose the right major. I loved the constantly changing environment and day-to-day challenges in the mine.

Familiarity with underground mining helped in my daily studies. I became an active member of the Student Chapter of SME. This organization helped me to gain more information at the industry level through various tours and traveling to meetings across the country. I have visited many mines and made

numerous friends within the industry. I have experienced more opportunities in my college career than many people could hope for, such as the ski trip in Denver, MinExpo in Las Vegas and touring the Morton Salt mine under Lake Erie.

During my junior year, I realized that I had become a "jack of all trades" because becoming a mining engineer involved civil, electrical, environmental, mechanical, and safety engineering as well as geology and economics. All disciplines came together senior year when I conducted an underground coal mine feasibility report which earned second place awards in both the Carlson Mine Design Competition and the PCMIA/SME Mine Design Contest.



Joseph Zirkle accepted the \$500 Award from Steve Richards, Carlson Software.

I can state with confidence that WVU and Consol have given me the proper training to make a lasting career in mining. I will always appreciate receiving the Old Timer's Award along with the other forms of recognition. I currently am working toward my Masters degree in Mining Engineering, WVU.

Baseball is the only sport in which the defense gets to have control of the ball. I feel that engineering is a profession that can seize control and direction of the mining industry. The way I see it, choosing Mining Engineering was my greatest grand-slam of all.

Students Receives Mine Design Awards and Grant Award



Joseph Zirkle received mine design award from John Murphy while his advisors, Dan Alexander and Dr. Keith Heasley,



Dr. Wahab Khair, and Bryan Schwalm, MinE Senior, WVU, received the Grant Award from SME-Pittsburgh Section.

In PCMIA and SME-Pittsburgh Section Joint Meeting at South Pointe, PA, Joseph Zirkle won the second place awards from Carlson Software and PCMIA/SME-Pittsburgh Section for his senior mine design project, and Bryan Schwalm received a scholarship-Grant Award. The Joint Meeting also featured the Work Force for the Future panel chaired by Dan Alexander.



WV Coal Association donates to Singleton Scholarship



Dr. Eugene Cilento, Dean of CEMR, Dr. Syd Peng, Chair of Mining Engineering, and Royce Watts, Associate Dean of CEMR, WVU, receiving the Singleton Scholarship from Randy Hansford (far left), chairman of WV Coal Association at the Friend of Coal Dinner on September 30, 2005 at Waterfront-Radisson, Morgantown, WV.

Randy Hansford, Board Chair of WVCA

Randy Hansford, president of Riverton Coal Production, Inc., was elected board chairman of the West Virginia Coal Association. In his duties with the Foundation Coal subsidiary, Randy oversees three production complexes in WV and one in KY. Mr. Hansford was born and grew up in a small coal camp and has lived his whole life in southern WV. He has spent 31 years in the coal industry.

Joseph W. Leonard, III, Coal Preparation Pioneer, Educator, and Former Dean

by Felicia Peng, Ph.D.
Associate Professor

Joseph W. Leonard III is well known in coal preparation. He is the chief editor for the book *Coal Preparation* for 1956, 1979 and 1999 editions published by the Society of Mining, Metallurgy and Exploration, Inc. (SME). *Coal Preparation* continues to be the definitive source for information on plant design and operations worldwide. Mr. Leonard contributed greatly to advancing the state-of-the-art of coal processing technology, and to the education of mining engineers who serve as leaders in the industry today.

Joe was born and raised in Pottsville, PA. He is a fifth generation miner. Joe received a BS in Mining Engineering in 1953, and an MS in Mineral Processing Engineering in 1958 from Penn State. In 1961, Joe joined the faculty of the School of Mines, and was the founding Director of Coal Research Bureau, West Virginia University. Under his direction, numerous coal processing and mining related topical areas had been studied and papers pub-

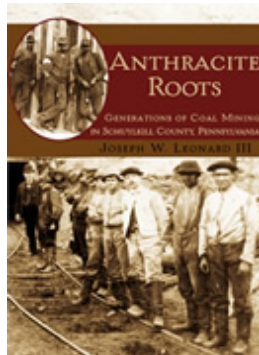
lished. Mr. Leonard was the former Dean of College of Mineral and Energy Resource (COMER) from 1978 to 1981. He was appointed as the William N. Poundstone Distinguished Research Professor in 1982.

From 1982 to 1986, Mr. Leonard chaired the Mining Engineering Department and was the founding Executive Director of the Mining Foundation at the University of Kentucky.

He was an innovator and held a total of 26 U.S. and foreign patents. Joe's favorite activity was educating students and practitioners about coal processing and mining related subjects throughout his career. His contributions to the profession have also been well recognized by several awards and honors from SME and AIME, including the Percy



Mr. and Mrs. Joseph W. Leonard III standing in front of the Joseph W. Leonard IV Memorial Scholarship Plaque displayed at the Atrium, Mineral Resources Building, Evansdale Campus, WVU.



Nichols Award, Erskine Ramsey Medal of AIME, Howard N. Evenson Award and the appointment as a Distinguished Member of SME.

Joe's most recent book, *ANTHRACITE ROOTS: Generations of Coal Mining in Schuylkill County, Pennsylvania* was released in June, 2005. He recalled the unforgiving conditions that his forebears

endured in the mines. He also wrote of the compassion that permeated mining communities in the face of these hardships. *Anthracite Roots* is a testament to the unsung heroes of America's coal mines and the work they did to power this great nation.

Northern WV Coal Prep Society Raised Funds for Joseph W. Leonard, IV Memorial Scholarships

This past summer, the members of Northern West Virginia Coal Preparation Society (NWVCPS) sponsored a sporting clay shoot and dinner activity at Dilliner, PA to raise funds for the scholarship. The net proceeds of the activity, \$2,000, was donated to the Joseph W. Leonard IV Memorial Scholarship administrated by the Mining Engineering program, WVU. Joseph Leonard IV held two WVU degrees, BSEM '78 and MSEM '79. He lost his life in a 1986 mine accident at Loveridge Mine, WV. He was assistant coal preparation engineer at CONSOL NWV Division at the time of his death. Many friends of SME Central Appala-

chian Section (SMECAS), NWVCPS, and the Leonards have contributed to the Memorial Scholarship. The Department of Mining Engineering sincerely thanks the Leonards, SMECAS and NWVCPS for their contribution to the Scholarship Fund for mining engineering students.

The NWVCPS promotes the knowledge, experiences and technologies of coal preparation. The members of the Society meet once a month in Morgantown, WV. The members consist of coal preparation plant operators, vendors and educators. The Society's website is <http://www.NWVCP.com/>

Fall '05 Visiting Committee Met to Review Recruiting Initiative



Attending the Visiting Committee Meeting were (left to right): Jeff Wilson, James River Coal; John Murphy (Chair), University of Pittsburgh; Jeff Kelley, ICG; Stanley Suboleski, Federal Health & Safety Review Commission; Jim Laurita, Mepco Inc.; Gary Halstead, Peabody Energy; James Corsaro, Penn Virginia Resources and Syd Peng, WVU.

by Cade Mason
MinE '05

Mining Engineer is My Goal

I first discovered an interest in engineering during the seventh grade while enrolled in an industrial arts class at Beckley Junior High. I made it all the way to eleventh grade always wondering which degree field would best suit my interests. One of our guidance counselors at Woodrow Wilson High School suggested I attend a recruiting seminar by Dr. Syd Peng, WVU Dept of Mining Engineering. I was electrified by what I heard. This specialty seemed to be exactly the one I wanted. I saw an engineering field where I would use elements of mechanical, civil, environmental, electrical, industrial, geotechnical, computer, and even some chemical engineering. There was even a scholarship program. In my eyes, nothing else could be better.

Through the rest of my high



school years, I told everyone about my mining engineering plans. Most responses were less than encouraging. People would often tell me that I was going into a "dying industry" or that it is "too dangerous" and then proceed to tell me how much better off I would be in another engineering department. This did not discourage me, though, and I kept right on trucking.

Once I made it to WVU, the scholarships really helped make the bills easier on my parents.

The mining program in combination with the Student Chapter of the Society for Mining and Metallurgy & Exploration was a really tightly knit group and made the educational experience much more enjoyable. We had frequent guest speakers giving presentations on different facets of the mining industry. I always enjoyed hearing the real world experiences tied in with classroom lectures. It can be difficult to associate classroom experi-

ence to actual situations. The co-op and internship program also had a big impact on making connections between my education and industry practices.

In all, I would not trade my education in the Mining Engineering program for any other bachelor's degree in the world. I have many terrific memories of my experiences at West Virginia University. I made many lifelong friends there, and I hope to see them often, as I begin my career with Marshal Miller Associates in Charleston, WV.

Massey Energy, Progress Coal CO. Surface Mine Operations Tour



A group of students and faculty received a warm welcome from Tom Michael, President, Philip Beaddow (BSEM '81), Vice-President and Superintendent, and Qayyum Rizwan (MSMinE '03), at Massey Energy's Progress Coal in Boone County on April 8, 2005. Mr. Michael went over the surface mining operation plans and explained how to translate mine plans into operation activity, meet quality, acquire permits, and budget costs. The group then went out to observe highwall miner set-up and the contour strip mining operation using large shovels, trucks and hy-

draulic excavators. The products from Upper Big Branch and Twilight surface mines and one high-wall miner are transported via an underground conveyor to the preparation plant at Elk Run Resource Group for processing and rail shipment. After the mine tour the group attended the Kanawha Valley Coal Association and Charleston Coal Mining Institute Joint meeting in Charleston, WV.

The Mining Engineering Dept. at WVU thanks Massey Energy's Progress Coal for hosting the tour and for Calvin Kidd of Continental Conveyor and Equipment Co. for sponsoring student tours for many years.



Mining Engineering in Southern West Virginia, WVU and WVUTech Partnership on BSCE-MinE Degree Programs

4+1 Double Degree Program: 4 years at WVU Institute of Technology in Montgomery to earn a Civil Engineering B.S. Degree, plus 1 year at WVU in Morgantown to earn a Mining Engineering B.S. degree.

2+2 Single Degree Program: 2 years at WVU Institute of Tech in Montgomery, and then transfer to WVU in Morgantown for additional 2 years to earn a Mining Engineering B.S. degree.

Both programs began in Fall 2005. The following courses are being offered at WVU Tech:

- 1) Surface Mining Systems, Spring Semester.
- 2) Underground Mining System, Fall Semester.

For more information contact:

Steven Leftwich, Chair
Civil Engineering, WVU Tech
(304)442-3367
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steve.leftwich@mail.wvu.edu

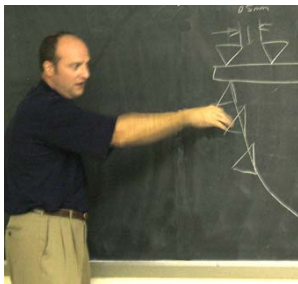
Syd S. Peng, Chair
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(304) 293-7680
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Scott Pack: From Mining to Marketing for SMESC Seminar

We were pleased to have A. Scott Pack, Jr., Vice President – Sales & Marketing from Foundation Coal Co. for a SME Student Chapter Meeting. He presented a seminar on “Mine to Market from a Sales Perspective” on September 29, 2005. He has 20 years of coal production, trade and sales experience. Mr. Pack’s speech drew a large audience. We appreciated Scott’s presentation covering an in-depth analysis of coal transportation, coal quality and marketing business functions.



Marvin Woodie Speaks about Vibrating Screen Applications



Marvin Woodie, Vice-President of Field Operations, Conn-Weld Industries, Inc., Bluefield, WV, was SMESC speaker on October 28, 2005. His presentation was “Vibrating Screens,” which is a work horse in the process plants and other industries.



Michael Necessary (BSMinE '02), Jackie Toombs (BSMinE '05), Doug Fala (BSMinE '99), Phillip Worley (BSEM, '81) at work with Eastern Associated Coal, Harris Mine, Wharton, WV.

(Alumni News from Page 5)

- to ask for directions at the 24th International Ground Control Conference in August 2005, Lakeview Conference Center, Morgantown, WV.
- **Mark K. Quinn (BSEM '83)** is a mining engineering revenue agent with IRS, Atlanta, GA.
- **Joshua Rockwell (BSMinE '99)** is now a mining engineer with OSM (Office of Surface Mining and Reclamation Enforcement) in Washington, DC.
- **Dan Stickel (BSEM '81)** was appointed president of King-Coal and Maple Coal Mining Complex, Coal International PLC (a London-based corporation) in southern West Virginia.
- **Chris Vass (BSMinE '01)** left Florida Rock to join North American Coal in Longview, TX, as a mine planning engineer.
- **Bo Yu (PhDMinE '05)** is a mining engineer with Agapito Associates, Inc. in Grand Junction, CO.

Anything to Escape Class: Students See Core Drill at Blacksville Mine

The Mining Exploration & Valuation class met Sheldon Murphy, CONSOL Energy Geologist at a Blacksville No. 3 mine exploration core drilling site near Pine Bank, Greene County, PA, on November 10th 2005. The L. J. Hughes drilling crew had just pulled the Pittsburgh seam core barrel as we hiked to the drill site. It was a muddy, cold November afternoon. Sheldon explained that the driller gets paid by the foot and guarantees 95% core recovery or they re-drill the hole.

The students saw coal, shale, sandstone and limestone sedi-

mentary rocks in the continuous core laid out in wood troughs for inspection. Sheldon measured the core, recorded fractures, color and mineral changes and bagged samples for later laboratory analysis. As soon as they could arrange it, an electric logging truck would measure the rock properties over the length of the hole to verify all dimensions. Surveyors locate the collar in the mine coordinate system so the data can be incorporated into the geologic model for the future Blacksville 3 mine. Overall the students learn a lot by seeing what we talk about in the classroom.



Mining Engineers Make Progress Possible: Pure and Simple

Debrah Miller, J. D.
Director of Planned Giving
WVU Foundation, Inc

Improvements in our everyday life are traceable, time and again, to the work of mining engineers. Those who want to assure that such improvements will continue in the future can choose a special way to strengthen the mining engineering educational program at WVU.

Including a gift provision in your will or revocable trust is an easy way to accomplish this all-important future support. The wording of

“to the West Virginia University Foundation, Inc. for the benefit of the Department of Mining Engineering, the College of Engineering & Mineral Resources (i.d. #55-6017181),” works well for this purpose.

Your gift can provide opportunity funds, a professorship, or a scholarship to help with the Department’s greatest needs. You’ll know that you’re encouraging further progress through your support – and that’s quite a legacy!

Wahab Khair, Ph.D.
Professor

Design for Continuous Miner Cutting Tool and Head to Optimize Energy Consumption and Dust Generation

Continuous miners have been a part of the success of longwall mining systems in the United States. Due to its versatility it is used for both mine development and production. With high variability of strata conditions in U.S., the head and bits of the continuous miner are easily affected by mining conditions. This results in frequent change of bits during operations. This not only increases the operating cost but also affects the progress of mine development, more fines/dust generation, and finally the overall production. In order to eliminate these problems, research and development on this area has been conducted in our laboratory for some time to optimize the cutting process, and finally has been able to come up with solutions.



Dr. A. Wahab Khair at his office with newly developed continuous miner cutting tool and head model.

The recent work includes: 1) Newly designed cutting bits which have been tested and verified showing significant improvements in cutting characteristics in the laboratory. Extensive field tests

are planned to be carried out soon in actual coal production. 2) Newly designed cutting drum that has been tested by numerical modeling, is scheduled to undergo extensive laboratory tests for proving its efficacy. 3) Numerical study of the continuous miner's drum cutting efficiency: A model for studying the performance of continuous miner has been developed. In this model the variation of bit and drum geometry, drum bits arrangement, lacing and variation of operating parameters can be varied to optimize the cutting process in terms of dust generation, energy consumption and longevity of the cutting tool.

Testing of newly developed cutting bits using the continuous miner cutter head simulator.



Foundation Coal and C-Grant Shores Elec. Gen. Station Trips: Great Fun and Educational Too

On Friday, Sept. 16th, eight students and professors Heasley, S. Peng and F. Peng visited the corporate headquarters of Foundation Coal Co. in Lithicum Heights, Maryland. Scott Pack, VP of Sales and Marketing, graciously hosted the event. At the headquarters, Mike Peelish, Senior VP of Safety and Human Resources, along with Nathan Tracanna, manager of employee development, explained that Foundation Coal was the fifth largest coal company in the U.S., with 68 million tons of production, 2800 employees and significant operations spread throughout the country. Also, of much interest to the students, Mike detailed Foundation's management trainee program for new hires, and stated that the company needed seven new engineers a year for the next five years. During the presentation,

James Roberts, CEO of Foundation Coal, stopped by and welcomed the students, and personally encouraged them to make their careers in the coal industry.

The headquarters tour was followed by a tour of the local Grant Shores power plant owned by Constellation Energy.



Attending Oriole Baseball game are (left to right): Scott Pack, Bryan Schwalm, Michael Mullins, Thomas Appel, Ted Klemetti, Dr. Keith Heasley, Jonathan Gordon, Lucas O'Neal, Joseph Zirkle, and Michael Peelish (standing).

This power plant generates 1300 Megawatts of electricity using 3.5 million tons of coal. The WVU mining group was shown around the turbines, boiler and through the control room.

After the power plant tour, Foundation Coal hosted dinner at Baltimore's inner harbor and took the group to an Orioles game at

Camden Yard. Unfortunately the home team did not win, but many peanuts and nachos were consumed and all had an excellent time. Thank You, Foundation Coal!

Calendar of Events

August 2-4 24th International Conference on Ground Control in Mining, Morgantown, WV.

September 17-18 GEM Show at Mont Chateau, Morgantown, WV.

Sept 23 Mineral Resources Alumni Banquet, Erickson Alumni Center, Morgantown, WV.

Oct 13-14 SME Pittsburgh/PCMA Joint Meeting, South Pointe, PA.

Oct 20-22 WVCMI/SME CAS Joint Meeting, The Greenbrier, White Sulphur Springs, WV.

Nov 11 MinE students visited CONSOL Enlow Fork Mine.

Nov 17 William Poundstone Lecture and Distinguished Engineer of Mines Award, Mineral Resources Building, Morgantown, WV.

Nov 18 MinE Visiting Committee Meeting.

Surface Structures Can Be Protected From Longwall Subsidence

'... if you know how'

by Yi Luo, Ph.D., P.E.
Research Associate Professor

Longwall mining is a very safe and productive mining method but induces immediate surface subsidence. This often affects surface structures. Mining companies are spending more time and money in dealing with mining subsidence issues in populated suburban areas. It is important for mining companies to control subsidence costs and to maintain good public relations.

Drs. Yi Luo and Syd S. Peng have been working with a number of mining companies on their longwall subsidence issues. They used a systematic approach that includes predicting ground subsidence, assessing the potential effects on the surface structures, and designing a mitigation plan that greatly reduces the severity of structure damage.

The success of subsidence mitigation depends heavily on the accuracy of subsidence prediction and experience gained over the years. Luo & Peng have carried out an extensive subsidence monitoring program to study every aspect

of the subsidence process associated with longwall mining. Based on this subsidence data, they developed the **Comprehensive and Integrated Subsidence Prediction Model (CISPM)**. Compared to other available subsidence prediction programs, CISPM has better accuracy in predicting final subsidence, and provides a unique feature for predicting the time-dependent subsidence process

that is vitally important in assessing and mitigating subsidence influences.

While monitoring surface movement, structural response to subsidence was measured. These measures are used to develop proper methods to protect the structures. Using these extensive field and theoretical studies, Luo & Peng have derived critical deformation indices for the assessment of

the subsidence influence on surface structures.

Today they apply these techniques to estimate the potential and severity of subsidence influences on a structure. A suite of subsidence mitigation measures such as the tension cable, compensation trench, ground slotting and plane-fitting methods were developed and have been successfully used to protect more than 200 surface structures including residential houses, commercial buildings, railroads, overland conveyors, water and gas pipelines, power transmission and telecommunication towers, etc.

The success of this systematic approach has been demonstrated by reduced time, cost and number of legal cases resulting from handling longwall subsidence influences. The Mining Engineering Department would like to thank the managers and engineers of Foundation Coal, Consol and American Energy for providing the opportunities and help in carrying out these studies.



The longwall subsidence influences on this 250-ft long, 60-ft wide and 30-ft tall industrial building were successfully mitigated with a number of innovative methods. The longwall mining operation was conducted about 300 ft below this building. The business inside the building was not interrupted by the subsidence event.

One More Time, WVU Mining Engineering and Stolar Team Received the 43rd R&D 100 Award by R & D Magazine



(From left to right): Dr. Yi Luo (WVU), Igor Bausov (Stolar), Jerry Jones (Stolar), Dr. Larry Stolarczyk (President, Stolar), Michael Mosser (DOE, BSEM '72), Michael Canty (DOE), Dr. Felicia Peng (WVU), Dr. Syd Peng (WVU), and Daniel Gibson (Stolar) at the Navy Pier, Chicago, IL on October 21, 2005. This is the 2nd consecutive year that MinE in partnership with Stolar won the honor.

by Murali Gadde
MSMinE '04

"I Came To WVU for the Best Ground Control in Mining Program in the World"

It was 10th of February 2002. I was on a tour of a mine. I am very serious and diligent at my work. But that day was different. I was very anxious to finish my work as quickly as possible. I had e-mailed Dr. Syd Peng about my graduate admission to WVU for Fall 2002 under his supervision. As soon as I returned from the mine visit, I headed straight to check my e-mail. There was the reply from Dr. Peng accepting my candidacy. I was very delighted and felt on top of the world for a good reason. Dr. Peng is a role model in ground control research. The prospect of working with him meant a lot to me.

But then there were some other reasons for my choice too. Being a ground control consultant and researcher for about six years in India, it was only natural for me to choose the top ground control school in the world for my Master degree and Ph.D. WVU mining Department has the best faculty among the United States coal mining schools. I knew Drs. K. A. Heasley, A. W. Khair and Y. Luo through their published

works, and was always impressed by the depth of their research. Working with such an outstanding group of researchers is a reason why I thought



WVU admission a coveted prize.

Another attraction of WVU mining engineering program was the annual International Conference on Ground Control in Mining (ICGCM) that is organized under its auspices since 1981. The benefits that a mining engineer can gain from this conference are numerous. ICGCM gave me an opportunity to meet and exchange ideas with some of my favorite researchers like Chris Mark, Winton Gale and several others. ICGCM is a good place where

one can build "contacts" and lay foundations for his future career. This is more so for international students, who generally do not have a track record in this country. If realized fully, I firmly believe the potential benefits of this single aspect alone may change a "prospective student" to become a "current student" of the Mining Engineering Program, WVU.

My choice of the WVU mining program was a conscious one and did not happen by accident or chance. My staying at WVU for about three years proved my decision worthwhile. In addition to gratifying research and professional experiences, the rich cultural diversity brought in by students from different parts of the world with different socioeconomic backgrounds also enriched my outlook on other aspects of life.

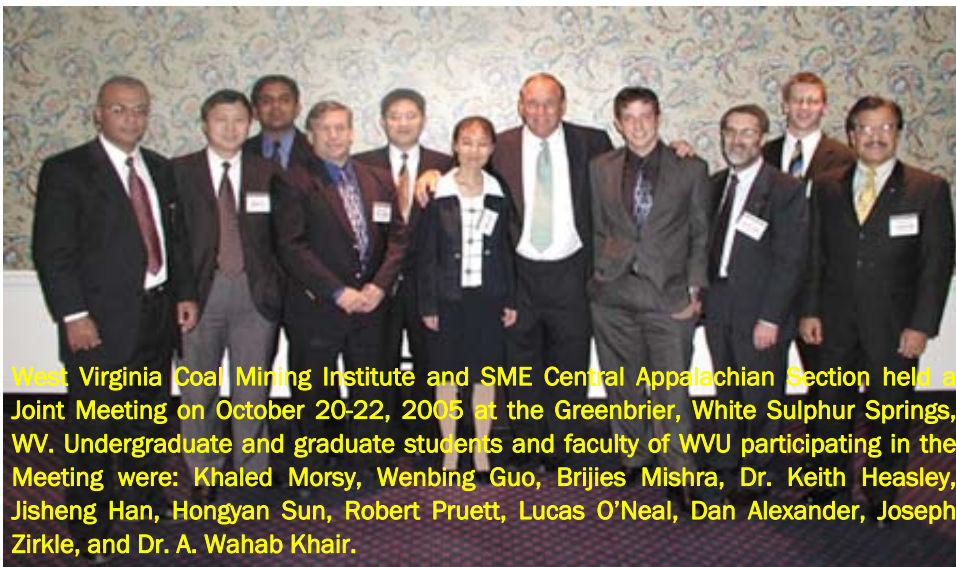
Currently, I am a senior ground control engineer with Peabody Energy in St. Louis, MO. Working for the world's largest private sector coal company is an honor and a challenge. I find myself extremely

busy helping our field engineers. As I strive to excel at my work, the knowledge I gained from my *alma mater* will certainly play a vital role in this endeavor. I feel proud to be a Mountaineer and thank all at the Mining Engineering Department for letting me be a part of it.

COAL'05
QUALITY
OCTOBER 19-20, 2005
HUNTINGTON, WEST VIRGINIA

The 2005 Coal Quality Show was held in Huntington, WV, on October 19-20, 2005. The undergraduate and graduate students in MinE Mineral Processing class participated in the show. It was sponsored by Mining Media and included paper presentation sessions and exhibit show related to coal quality. The students, Joe Zirkle, Hongyan Sun and Lucas O'Neal, attended the show. They enjoyed the good exposure to the advanced technology for coal quality control and future coal market. The MinE Department would like to thank Steve Fiscor, Editor-in-Chief, Mining Media, for providing the complimentary registrations for WVU students.

WVCMi and SMECAS Joint Meeting at the Greenbrier



West Virginia Coal Mining Institute and SME Central Appalachian Section held a Joint Meeting on October 20-22, 2005 at the Greenbrier, White Sulphur Springs, WV. Undergraduate and graduate students and faculty of WVU participating in the Meeting were: Khaled Morsy, Wenbing Guo, Brijies Mishra, Dr. Keith Heasley, Jisheng Han, Hongyan Sun, Robert Pruett, Lucas O'Neal, Dan Alexander, Joseph Zirkle, and Dr. A. Wahab Khair.

THE BLUEFIELD COAL SHOW

"A Coal Show For Coal People"



The Bluefield Coal Show was held September 14-16, 2005. Michael Moten, Samantha Stahle, and Dr. Syd Peng attended the Show, and met Shelley Shalvis (BSMinE '00).

Record Attendance at the 24th International Conference on Ground Control in Mining

The 24th International Conference on Ground Control in Mining was held in Morgantown, West Virginia, on August 2-4, 2005. The Conference, cosponsored by West Virginia University, West Virginia Coal Association, National Institute for Occupational Safety and Health, and the Mine Safety and Health Administration, has been held annually since 1981. The purpose of the Conference is to bring together the international mining community including industry, labor, academia, manufacturers and government to present new ideas and technologies for improving ground control in mining and to provide a forum for discussion. The 24th Conference was attended by 251 ground control specialists representing 11 different countries. Attendees from the United States included representatives from 21 different states.

The keynote address "Like



**Keynote Speaker:
Peter Lilly, CONSOL.**

Déjà Vu All Over Again" was delivered by Mr. Pete Lilly, Chief Operating Officer, CONSOL Energy, Inc. Mr. Lilly pointed out that coal still lacks influence and support due in large part to poor public attitude toward coal. He also said a safe mine is a productive mine and all should seek to instill safety as a core value in every person working in the mine, strive to build a special relationship among safety, productivity and the workplace. He went on to illustrate how important tech-

nology is in CONSOL's being the largest underground coal producer. He also said what lies ahead is the challenge of environment and changing geology in all coal basins.

Following the keynote address, 42 presentations and 10 poster papers were delivered over the next 3 days. The major themes of the 24th Conference included longwall mining, multiple seam mining, pillar extraction, subsidence, numerical modeling and roof bolting tech-

nology. Roof bolting technology led the way at the Conference with 13 presentations and 2 poster papers. Several new technologies were introduced including Hilti's self-drilling OneStep roof bolt, MARGIS (roof geology mapping system using roof bolter signature), stability mapping system that combines AutoCAD SurvCADD and LAMODEL, etc. A conference proceedings is available from Dr. Syd Peng, West Virginia University, Morgantown, WV.



Program in Session



Time for Picnic. Who wants a hat?

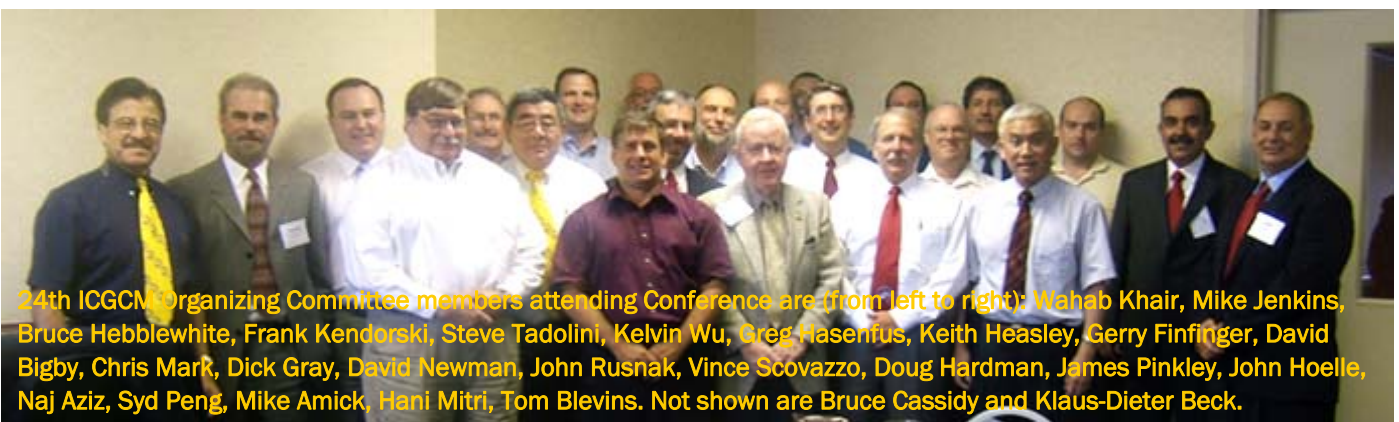
The 25th ICGCM Plans: Plans have already been initiated for the 25th International Conference on Ground Control in Mining and a special program is being prepared in celebration of the silver anniversary of the Conference. Next year's Conference will be held in Morgantown, WV, at the Lakeview Scanticon Resort and Conference Center on August 1-3, 2006. Invited papers, with retrospective views of the past

25 years on important topics, will be delivered at the Conference. A banquet will also be held and a number of honor awards will be presented. Abstracts for next year's (25th) Conference, can be sent by January 13, 2006, to:

Dr. Syd Peng, Department of Mining Engineering, West Virginia University, Morgantown, WV, Phone: 304-293-7680, Fax: 304-293-5708.

Syd.Peng@mail.wvu.edu

<http://www.mine.cemr.wvu.edu/>



24th ICGCM Organizing Committee members attending Conference are (from left to right): Wahab Khair, Mike Jenkins, Bruce Hebblewhite, Frank Kendorski, Steve Tadolini, Kelvin Wu, Greg Hasenfus, Keith Heasley, Gerry Finfinger, David Bigby, Chris Mark, Dick Gray, David Newman, John Rusnak, Vince Scovazzo, Doug Hardman, James Pinkley, John Hoelle, Naj Aziz, Syd Peng, Mike Amick, Hani Mitri, Tom Blevins. Not shown are Bruce Cassidy and Klaus-Dieter Beck.

Visiting Scholar from the Capital of Thirteen Dynasties, China

by **Qingxiang Huang, Ph.D.**
Associate Dean & Professor
XUST

I am a visiting scholar from Xian University of Science and Technology (XUST), Xian City, Shannxi Province, China for one-year visitation here. Xian is an ancient city where the world renowned Terra Cotta Soldiers are located. It was also the capitals for 13 different dynasties for over 1,000 years.

I have been Associate Dean, School of Energy & Resources, XUST, responsible for graduate studies and research programs since 2002. The School has



three departments: mining, safety, and mine and building ventilation. There are 65 faculty, 900 undergraduate, and 300 graduate students. The School is well recognized in China for its programs in mine fire control, ground control and

physical modeling. The majority of the research projects are funded by National Natural Science Foundation of China and mining companies. The Chinese coal mines face many ground control problems, such as surface protection over shallow mines, caving control in thick coal seams, mechanized mining in steep seams, etc. The most urgent task in the Chinese coal mining industry is to minimize the mining effect on the surface, and im-

prove mine safety because fires and gas/dust explosions kill thousands of miners every year.

The Department of Mining Engineering at WVU is well known in the world. I adopted *Coal Mine Ground Control* by Dr. Syd Peng as my class textbook. I also know very well about Dr. Luo's surface subsidence work. My primary research areas are ground control in shallow mines, soft rock roadway support, rock mechanics, physical simulation modeling. I came here to learn and exchange ideas in ground control and surface subsidence. Additionally, I want to learn more about the education system in the U.S.

Field Trip to CONSOL Enlow Fork Underground Mine, and Bailey Coal Preparation Plant



On November 11, the SME Student Chapter visited the CONSOL Energy Inc. Enlow Fork Mine near West Finley, PA. The group of 23 consisted of three professors, two international visiting scholars, and 18 graduate and undergraduate students. The tour started at 8 A.M. and finished at 4 P.M. The tour consisted of briefings by upper management, including Albert Aloia, Senior Vice President Operations and Dave Hudson, Vice President, PA Operations. The underground tour of the longwall and gateroad development section was conducted by Mr. Chuck Shaynak, Enlow Fork Mine Superintendent, Dan Price and Rich Kidd, coordinators, Training and Development. The mineral processing and refuse disposal sites were visited with Mr. Dan Yanchak, General

Manager, Processing and Brian Kelly (photo far right), Bailey Plant Superintendent.

The whole tour was arranged by Mark Hrutkay, Director of Human Resources. The Mining Engineering Department would like to express their appreciation for the time and effort that CONSOL management devoted to our visit and to making our tour a memorable one!

Blacksville No. 2 Mine Coal Preparation Plant and Material Handling Facilities Visited



MinE 261 class visited CONSOL Blacksville No. 2 Mine located near Wana, WV, at the state line of PA and WV Monday, October 31, 2005. Roland Smith (far left), the Plant Superintendent, and Fran

Nickler (2nd from far right), Safety Supervisor gave safety training as soon as the students arrived at the Mine. Afterward Roland led the students to the plant to explain the flow of coal from

(See Blacksville No. 2, Page 15)



MinE Students Held Third Annual Minerals for Kids Booth

Each child who listens to the mining engineering students talking about minerals and coal receives a free mineral kit containing ten minerals. Special packets of mineral information, posters and lesson plans are also made available to teachers. The WVU Student Chapter of Society for Mining, Metallurgy & Exploration (SME) has put on the Minerals for Kids activities for West Virginia kids as a public service project since 2003.



Children entering the booth got to handle mineral specimens and see some of the things made from the same minerals. Mining engineering students described how we use coal and minerals every day. In about 5 minutes the kids and their parents move through the booth and collect their free mineral kit. Along with the mineral and coal stories they hear, we know they gain a better appreciation of the importance of

coal and minerals, and power generation from coal in their lives. Many kids have stories of their own about rocks and mining that they are eager to share with us. And adults also enjoy learning about coal and minerals.

The **WVG&ES Gem, Mineral, & Fossil Show** is sponsored each year in the fall by Sunset Minerals at the Cheat Lake, Mont Chateau Offices of the WV Geologic & Economic Survey. Twenty-four students and faculty volunteers from the Department of Mining Engineering staffed the Minerals for Kids booth Saturday and Sunday, September 17-18, 2005. This year Morgan Sears and Brijes Mishra organized the activity. Other volunteers were Allison Sears, Thomas Appel, Kevin Brockett, Joel Helbig, Patrick Pelley, Joshua Pigza, Matthew Ruckle, Matthew Vance, Luke Morton, Michael Moten, Lucas O'Neal, Bryan Schwalm, Sami Stahle, Brandon Williamson, Nancy Dorset, Jisheng Han, Jun Lu, Joseph Zirkle, Felicia Peng, Syd Peng and Dan Alexander.



Potential Freshman Seminar and High School Student Visitation Day

Freshman Seminars:

This fall, Dr. Heasley was able to make a 15-minute presentation on Mining Engineering to all of the 600+ engineering freshmen in orientation class (Engr 199). This brief presentation was then followed by two 1-hour evening informational seminars on mining engineering. At the seminars, Dr. Heasley explained many of the details of a career in mining

engineering while some 45 freshmen enjoyed pizza and pop. All of the attending freshmen received mining T-shirts and a number of door prizes were awarded, including two personal data assistants (PDAs).

Visitation Day:

On November 3, 2005, the Mining Engineering Department (See Visitation Day, Page 16)

(Blacksville No. 2 from Page 14) the plant feed conveyor, to separators, and dewatering units, and plant control room with computers and camera monitoring.

The students also saw the ROM vertical skip & hoist system, crushing plant, raw coal storage pile and silos, conveyors, and the train load-out system.

The Mine uses the longwall mining method to extract the Pittsburgh No. 8 seam coal

producing about 6.4 million tons annually. The 2,000 tph plant produces clean coal with 13,100 Btu/lb heating value. CONSOL is developing a new mine, Blacksville 3 (see Page 9). The coal from the new mine will also be processed at Blacksville Coal Prep Plant.

The Mining Engineering Department would like to thank CONSOL engineers for their time and efforts to guide us through the Plant and surface material handling facilities.

Freshmen Tour Laurel Aggregate Limestone Quarry



On Wednesday December 7, 2005, Laurel Aggregates hosted the Mining Engineering Department tour of their limestone quarry. The WVU group consisted of 9 engineering freshmen investigating a career in mining, 10 sophomore mining engineering students, and 4 mining engineering professors. Bill Kerns, the superintendent of the quarry, gave a short safety orientation and then served as tour guide of the crushing plant and quarry operation. At the plant site, the students observed the primary and secondary crushers and

screens, and all of the numerous sized products that are produced at the 1.5 million tpy operation. In the quarry, the students were definitely impressed with the 400 ft high highwall, and the large front-end loader and 100-ton trucks.

Also, the students visited the automated control room for the primary 60-inch jaw crusher. At the end of the tour, Bill reminded the students that "if it can't be grown, then it must be mined" and encouraged the freshmen to pursue a mining engineering major by expounding on the (See Quarry, Page 16)

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Alumni and Friends

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Everything starts with mining!

WE'RE ON THE WEB!
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(Quarry from Page 15)

exciting and dynamic opportunities, and high demand for new engineers in the mining profession.

(Visitation Day from Page 15)

opened its laboratory doors to approximately 30 interested high school students and their parents. The first demonstration was in the senior design laboratory, where the WVU Mining Engineering program was introduced and a typical senior design project presented. The next demonstration was in the rock mechanics laboratory where the students witnessed a uni-axial compression test of a sandstone specimen, and listened to the rock cracking as

the stress-strain curve was being displayed in real time on the system monitor. The third lab demonstration was in the coal preparation laboratory where the students observed a flotation column separating the fine coal particles from the fine refuse material. During the demonstration, the physics of the fine bubbles preferentially attaching to the coal particles but not the refuse was explained. The final demonstration was in the mine safety lab where Radio Imaging (RIM) technology was explained. All of these demonstrations were well received by the freshmen and their parents, and opened many eyes to the diverse and rewarding nature of Mining Engineering.

Chair's Message

Dear Alumni and Friends:

The December 2005 graduates consisted of one BS, two MS and two PhD. Three found jobs with the coal industry, one returned to his government research post, and one continued her study. Ten coal mining companies held campus interviews this semester.

With the add-on funding approved in the 2005 WV state legislative session, we are now searching for two positions: the chair and a faculty member specializing in mine ventilation. Our target date is to fill these two positions for the next academic year. When the new chair comes on board, I will step down to return to teaching and research.

The 24th International Conference on Ground Control in Mining held in August 2005 hit a record high attendance (see page 13). It is a gratifying experience that the Conference continues to grow and draws professionals from all coal producing states and other coal

production countries. The 25th Conference is scheduled for August 1-3, 2006. Since it is the silver anniversary, special events are being planned to celebrate it.

Freshman recruiting remains our top priority. There seems to be an increasing interest in mining engineering among the freshmen this year. For the first time we arranged a surface mine tour for uncommitted freshmen to enhance their understanding of mining operations (see page 15).

We have established two joint programs with the WVU Institute of Technology in Montgomery, WV (see page 8). In order to implement the programs we began to offer a mining engineering course in Montgomery this Fall Semester, and will continue to do so every semester.

