Our department has actively joined in with the university’s administration in finding new ways to bring more services to the state. We have been able to substantially expand our reach by entering into a joint agreement with the Southern West Virginia Community and Technical College in forming a “2+2 program” for mining engineering. This arrangement allows a student to obtain an Associate Degree at SWVCTC in mining technology in two years, and then be able to transfer the credits to the main campus where he can finish a Bachelor’s Degree in Mining Engineering in our department in another two years.

Frequently students in rural areas of the state cannot afford to come to Morgantown as resident students. Also, some students need to do some college study before they are comfortable moving away from home to a strange campus. This program will be a big aid to these students. It also brings us more exposure in our coal fields.

Early Supporter of United States Longwall Research

Barry Dangerfield, the Mining Department’s newest Distinguished Engineer of Mines

Barry was in fine form on April 24. It isn’t easy to hold the attention of a group of professionals and professors who have become entirely too familiar with public talks, much less to hold the attention of students who have just sat through a day’s worth of classes and are staring down the barrel at finals week. Barry Dangerfield held them all rapt as he explained just exactly how important engineers are to the mining industry.

Of far more valuable is a better word. Since one of the first things he said was that they can be worth $685 per minute. That is how much income is lost each and every minute that his operations aren’t mining coal. “When that longwall goes down, that engineer becomes the most valuable member of my team,” said Dangerfield.

The last words in his talk were directed at the students: “Don’t take the Dean for granted, Dr. Peng, or any of the other professors here. I need you to be the best you can be.”

Nothing illustrates points better than examples, and Dangerfield had plenty for all engineering specialties.

One of his first examples was when he decided to save the company money by lowering a 38-ton mining machine down a shaft in one piece instead of disassembling it on the top and rebuilding it on the bottom.

He rented the services of a 100-ton crane, set up, hoisted the miner over the shaft, and then — just touching the lowering mechanism sent the miner into a free-fall that the operator had to stop by shifting into reverse and standing on the brakes. After his engineers did the calculations that the crane owner should have done, they determined the crane wasn’t large enough. At this point, the crane operator said to Dangerfield, “I’m sure glad I took out that $1,000,000 insurance policy! You boys in the morning.” And he left. (They saved the day by bringing in a second rig.)

Another story involved a multi-million dollar complaint from a French coal customer involving plastic in the coal. (Those of us that have been underground know where those drinking bottles go.) Dangerfield said that “...even though I couldn’t speak French, I could tell right away that they weren’t happy.”

(Continued on page 2)
Alumni News

- Jeff Bitzer (BSEM, 78) formerly General Manager of the Cumberland River Pardee Complex has been transferred to Catenary Coal Complex, Arch Coal as General Manager.
- Richard M. Whiting (BSEM, 76) has been elected to the Board of Directors of Penn Virginia Resources GP LLC.
- Jim Bunn (BSEM, 75) was elected Chairman of the West Virginia Coal Association 2003.
- John Hill (BSEM 77) was transferred to Willow Lake Mine, Arclar Coal, Harrisburg, IL as General Mine Manager. Arclar Coal is a joint venture between Peabody Energy and Black Beauty Coal.
- David Brafford (BSEM 81) was promoted to General Manager, Progress Energy Inc. Kite, KY in charge of its coal mining opera-

Obituary
Donald M. Bondurant 1921 — 2003

We are saddened by the passing of Don Bondurant, Professor Emeritus of the Department of Mining Engineering. Mr. Bondurant retired as Associate Professor in 1986. A veteran of WWII, he received his Bachelor’s Degree from Ohio State, and then his Master’s from WVU School of Mines. He taught a large number of the mining professionals now working in the industry. We will all remember him and miss his kind smile and gentle manner.

Calendar of Events
Fall, 2003
Aug 5-7 International Conference on Ground Control in Mining, Morgantown, WV
Oct 10 MRAC Banquet, Erickson Alumni Center, Morgantown, WV.
Oct 16-18 WVCMI/SME CAS Joint Meeting, Meadowlands, PA.
Nov 13 William Poundstone Lecture and Distinguished Engineer of Mines Award, Mineral Resources Building, Morgantown, WV.
Nov 14 Mining Engineering Department Visiting Committee Meeting, Morgantown, WV.

How About a Nice Shirt to Go With That Mining Diploma?

We have some nice golf shirts available. We sold them at the Annual SME Meeting, and they were so popular we decided to offer them to our alumni. Shirts are $30.00, hats are $10.00, plus $5.00 S&H (modeled by Vicky Rousseau, Dean’s Assistant). If these are popular, we may also start to offer other items, such as paperweights, sweatshirts, neckties — or maybe even something suggested by you! Let us know what you think, as well as what you would like to see.

Class of 2003 at the Commencement on May 18, 2003

MinE class of 2003 consists of 16 graduates including the largest class of PhD graduates of five since its inception in 1979. From left to right are: Khaled Morsy Mohamed, PhD; Quanzhong Gu, PhD; Yunqing Zhang, PhD; Hilaria Ireland, BS; Steve Tadolini, PhD; Rebecca Hardy, BS; Gerry Finfinger, PhD; Nancy Dorset, MS; Qinghua Jin, MS; Daniel Curry, BS; Rizwan Qayyum, MS; Bradley Zimmerman, BS; Zhengxing Gu, MS; Xinchao Wei, MS. Not shown in the picture are Mark Morris, BS and Paul McGee, BS.

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An experienced corporate Barry Dangerfield standing in front of a younger, less experienced superintendent.

(Continued from page 1) be the customer’s fault: They had changed their use of the product without informing the supplier. (An example of process engineering.) And more—he illustrated crises solved by electrical engineers, chemical engineers, industrial engineers, and, most importantly, mining engineers who have professional exposure in all of these fields. In short he illustrated a point those of us with mining experience have always said: If you don’t want to be bored, a mine is a good place to work. It is too bad there’s not more room for this column, but you can read his entire speech on our web site.

Thanks, Barry
Married Students—To Each Other, That Is!

Classes, study, exams, papers—it’s a hectic life. But now let’s double that, and in addition add babysitting, day care, diapers, bedtime stories, and splitting the household duties. That’s what these four have chosen to do. All four are doctoral students in the Department of Mining Engineering.

Bo Yu and his wife Hua Zhao come from Beijing where they studied at the University of Science and Technology. Bo received Bachelor’s and Master’s degrees in mining there, while Hua received Bachelor’s and Master’s degrees in mechanical engineering. Bo expects to finish his doctorate next year and write his dissertation on the simulation of vibration from continuous miner bit impacts on rock. Hua is doubling up, studying for doctorate in mechanical engineering as well as a Master’s in mining engineering, and expects to finish in 2005. Her mechanical engineering topic is to simulate welding deformation due to residual stresses, and she is still considering what her mining topic will be.

Khaled Morsy and his wife Asmaa Yassien come from Egypt and also have multiple degrees. Khaled has both Bachelor’s and Master’s degrees in mining from Suez Canal University. Asmaa earned a Bachelor’s degree in civil engineering at Ain-Shams University in Cairo and a Master’s in geological engineering from Suez Canal University. Khaled’s focus is on the analysis of longwall yield pillar stability, and Asmaa is creating a numerical simulation for fully grouted roof bolts.

Four people, five degrees. But while most married students have a spouse who can assume home responsibilities while they study, these four must split those duties as well. Khaled and Asmaa have three sons—ages 7, 5, and 18 months—and Bo and Hua have two daughters—ages 4 and 13 months. These would be busy households by any standards. Bo and Hua now rely on day-care, while Khaled and Asmaa have a baby sitter and have an advantage in that two of their children are old enough to go to school. And remember: they are doing this on student’s stipends. When asked about what they like to do with their spare time, the universal response was, “What spare time?” Khaled and Asmaa do find time on occasion to take the family fishing (but I suspect a file or two may accompany them).

All of them feel very fortunate to have been able to come to West Virginia University and Morgantown in general, and to the Department of Mining Engineering in particular. All four think that the graduate program here is possibly the strongest in the world for coal mining research. Also, there is agreement that Dr. Peng’s team approach teaches group management. The university is large enough that each international segment has a community of similar backgrounds and beliefs to be involved in (although not large enough to provide their own schools).

When pressed to comment on frustrations or difficulties, the answer was, “Work! Too much! Every weekend, every minute!” Additionally the Visa process, out of our control, can cause initial difficulties when spouse arrive on different types of Visas, as did Bo and Hua, which was difficult and time-consuming for them to straighten out.

All-in-all, they find Morgantown to be a comfortable place to live and study, and as for the work, they know that it is their future and their children’s futures that they are building.

Ventilation Students Visit NIOSH Research Mine

Where do you take students to encounter real-life ventilation measurement conditions when the University doesn’t own a real or artificial mine? How about a research mine built for just such reasons? It is harder and harder to do such things in operating mines where these activities tie up a foreman, may slow production, and can even represent a liability to an operating company. The Mining Department is fortunate in having three research mines in the area operated by NIOSH. One mine is at Lake Lynn, a very large limestone mine that Dr. Khair has used for years to teach surveying. The other two are actually a single mine at the NIOSH Pittsburgh Research Laboratory in Bruceton, PA, that has been divided into two by bulkheads: the research mine that is used for all types of in-mine experimentation, and the research mine which is used for testing explosives. In the 1920’s, it was also used to test tunnel ventilation methods for the Pennsylvania Turnpike tunnels.

This year’s ventilation class was able to use the research mine to practice measurement methods in something nearer to a real situation than our ventilation laboratory permits, thanks to the assistance of Paul Stefko, mine superintendent, and Jack Teatino, mine foreman, who came in on Saturday to host us. Thanks, guys!
Banquets Highlight Department Activities and Personal Achievements

One of the things that MRAC does is to ensure that the minerals departments have plenty of opportunity to get together. This year’s Alumni Banquet was held at the Erickson Alumni Center. The September 2002 banquet was exceptionally well attended; we couldn’t fit everyone into a single photo, so the one to the right is just a sampling of who was there. It is an enjoyable event, and it is always scheduled for a Friday evening (hint, hint!), so plan on joining us next time.

Each spring semester we hold an awards banquet jointly with the Department of Petroleum and Natural Gas Engineering. This is always greatly anticipated by the students and their parents. It always includes a large number of alumni who have carved a path in industry, and who enjoy supporting the students and, so to speak, launch them into their new careers. If you think this is an overstatement, just look at the smile on Dr. Dahl’s face (far right). The parents especially seem to enjoy the chance to talk with professors about their child’s academic career and to interact with industry leaders to better understand the career that was chosen (surprisingly, many of our students come from non-mining families). And remember — you are invited to this one also.

Rafting Again — And Look Who’s in Front!

April’s high-water provided the students and faculty with a second opportunity to go white-water rafting in the Cheat River again. This is sure to become an annual event, perhaps even a tradition. After all, how many university departments can boast of having an experienced, professional white-water guide as a professor?

Water is still very cold in West Virginia at the end of Spring semester and wet-suits or dry-suits are in order. But the thrill is obvious. Even the guide in the back of the raft, who might be excused for feeling bored with the job, shows evidence of the thrill of white water.

After the trip everybody went to Dr. Heasley’s place in the country for a picnic where they could dry off, warm up, fill up, and rehash the thrills of the day. By the way, Dr. Heasley’s multi-acre place is on the banks of the Big Sandy River, a popular white water kayaking river in its own right. Is it possible that influenced his purchase decision?
Salt Mine Visited

One Friday in April Dr. Heasley took seven students to Morton Salt’s Fairport Mine near Cleveland, Ohio. The salt mine operates 2000 feet below Lake Erie and mines about 1.2 million tons of road salt a year. The mine is a room and pillar design with rooms 40 foot wide and 20 ft high. The mine uses a cutting machine (similar to the old coal kerf-cutters) and then drills and blasts using a jumbo and ANFO. The blasted salt is then hauled to a section belt feeder with diesel Load-Haul-Dump units. Everyone enjoyed seeing a much different mine than the coal mines with which they are familiar. The thought of Lake Erie up overhead was also frequently on their minds!

SME Annual Meeting: Always a Student Hit

The assembled Department of Mining Engineering contingent in SME Annual Meeting, Cincinnati, OH.

How convenient! A SME Annual meeting within an easy drive of WVU! This enabled us to take a larger contingent of undergraduate and graduate students than usual to the meeting. It also meant that we would have the manpower to set up a Mining Department booth at the exhibit. This trip is always important to faculty and students alike. It is an opportunity for networking, for meeting with old acquaintances, and for catching up on the latest technology and products. It also opens the opportunities for educational side-trips, such as that to Cincinnati Machine.

Students Visit Cincinnati Machine

On the Thursday after the SME Annual Meeting in Cincinnati, 9 students and 2 professors visited the Cincinnati Mine Machinery Co., a manufacturer of mining bit blocks, cutter bar chains, conveyor chains and flights, and many other mining machine parts. The company has about $12M in sales per year and employs 40 people, of which 28 work in the shop. We were able to observe several generations of machining tools, from older manually operated single piece, single operation machines to the newest automated machines that can machine 24 conveyor chain links simultaneously, performing 9 different operations on each piece. Also, we visited their sister company, Queen City Steel Treating Co., a heat treating facility. Here we observed the heat treating process for numerous parts for the automobile and mining industries.

Our hosts explain the uses and importance of various mining equipment parts, as well as the surprisingly fine machining tolerances. Afterwards, Drs. Khair and Heasley present them with Department hats and shirts (now available to alumni; see page 2).
Alumni Emeritus Club Luncheon

Department Chair Peng joined members of the Emeritus Club for lunch in the Erickson Alumni Center on May 2. Emeritus Club Members present from Mining Engineering included: Richard Lee, ‘47; Kenneth Robison, ‘48; William Hensley, ‘53; Roy Mosser, ‘50; and Emeritus Professors Dr. Jay Kelly and Dr. Y. J. Wang.

Get into the Act:

- You know more alumni news than we do! Has a colleague been promoted? Had grandchildren or (gasp!) great-grandchildren? Made an interesting trip to a location of mining interest, such as D. Eyer’s visit to the Westray Disaster Monument? Let us know so we can let everyone else know.
- Department phone: 304 / 293-7680; Karen x3304, Syd x3301
- Department e-mail: Karen.Centofanti@mail.wvu.edu
- Department FAX: 304 / 293 - 5708

(Continued from page 8)

(Continued from page 2) People are always interested in hearing about colleagues and classmates. We hope you will take time to write us about the recent professional news of your fellow classmates and make it the most important news column in the coal industry.

Syd S. Peng

An Editor’s Farewell:

This is also an Assistant Professor’s farewell. It’s time for me to move on; I am feeling the press of other things that need to be done. It has been an interesting stay, and I count the formation and development of this newsletter one of my more enjoyable accomplishments. The accomplishment I take most pride in, however, is the four teaching awards given me by the students, and the success I have already been able to see achieved by some of my former students in industry. And as if leaving weren’t hard enough already, as I was writing this column one of this year’s graduates brought in a crystal globe on a stand inscribed to “... a great professor, mentor, and friend.” Several students participated in getting this for me. I knew before I came here that I wanted to teach, but I somewhat surprised myself by how much I actually enjoyed it and how I enjoyed the give-and-take with the students.

However, the truth is that academic careers in a University are formed of more than teaching responsibilities, and I feel the press of accomplishing some things that do not fall within the formal definition of “professorial duties.” So I will follow other paths, primarily writing.

I have used this picture before, but it is a favorite of mine and it seems appropriate to close this chapter with. It is my wife of 35 years, Sarah, sharing my career, my hopes, and my dreams with me.

Lloyd

Continental Conveyor, MSHA, and Kanawha Eagle Host Student Visit

WVU Student Chapter of the SME conducted a field trip to the Kanawha Eagle Coal Companies’ underground coal mine in the Eagle seam south of Charleston, WV on April 4th, 2003. This field trip was part of the annual Continental Conveyor & Equipment Company’s activities in support of the WVU Mining Engineering students.

The previous day, Calvin Kidd and Rick Allen of Continental met 14 students for a tour of the Mine Safety & Health Administration Academy in Beckley, WV. That evening the Kanawha Valley Mining Institute invited the students to attend their monthly dinner and hear Coach Bob Pruitt of Marshall University say how essential the coal industry is to West Virginia and the nation; and how he would love to play WVU before he retires. We did catch him wearing a WVU mining shirt. Since the students all dressed in the dark blue Mining emblem polo shirts we looked like a cohesive group.

We met Bob Ellis (EM 1988), VP Operations, Kanawha Eagle Coal Companies, at the newly renovated mine portal. After a brief tour of the property, we changed into mine clothes and dropped 550 feet to the Eagle coal seam workings. The seam averages 48” to 60” thick, but mining height is nearly 6 feet. Additional roof rock and some floor are mined for equipment clearance. We traveled about 4 miles through underground entries on battery jeeps that run on rails. The students divided into two groups to see different mining sections.

At this mine the coal is cut using continuous miners and hauled to a belt conveyor system by shuttle cars. Roof bolters support the rock overhead with 5 to 8 foot long steel bolts. Four hundred feet of new entry is mined every working shift. This is a full extraction mine, meaning that entries are driven on advance and pillars are removed on retreat. Just as in longwalling, the roof is allowed to collapse as the men and equipment retreat from the area. About 2 million tons of coal is projected to be mined by 145 employees this year.

The people on the trip are shown from left to right Becky Hardy, Sami Stahl, Mike Mullins, Rick Allen (Continental), Andy Wilt, Derrick Kiblinger, Justin Bushneck, Brad Zimmerman, Bob Ellis (Kanawha Eagle), Kris Lilly, Kevin Rakes, Calvin Kidd (Continental), Michael Moten, Greg Boyce, Christian Warfield, Len Roman, Matt Jordan and Dr. A. W. Khair (Dan Alexander not shown).
Rebecca Hardy Receives High Academic Honor
One of Just 30 WVU Seniors Named as WVU Top Scholar for 2003

Rebecca J. Hardy is an unusual student. The unusual part is not only that Becky is completing a double major in Mining Engineering and Voice Music but that she is now one of just 30 WVU Foundation Outstanding Seniors.

We met Dr. Perry, her voice professor at the WVU Honors Convocation where the 30 Outstanding Seniors were honored by the WVU Foundation one Friday night in April. At the end of the ceremony during the singing of the Alma Mater by a Quartet, we could hear (from the back of the Mountaineer Ballroom) Becky's alto voice singing along - seems like it just comes naturally to her; but we all know it takes hours of dedication. That dedication is no different than it is in her mining engineering major: She did not get to the top of the class by waiting for opportunity to find her — she worked hard.

Ms. Hardy received the award certificate in front of a large audience including her parents, her main squeeze DH (who got a hair cut just for this event), and one of her high school teachers who kept faith she would do well. Each year 30 WVU seniors at most receive this award and are invited to sign this ledger.

What is up next for Becky? She will begin working for the NIOSH Safety Research Laboratory in Bruceton, PA, in the area of noise control and simultaneously pursue a graduate degree in mining engineering under the guidance of Dr. Keith Heasley.

Good things do happen to good people. And Becky has already shown that she is well up to the task of pursuing simultaneous goals.

Faculty CERB Research Reports

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 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, College of Engineering and Mineral Resources (or Department Chair) at (304) 293-4821 Ext 2240.

And thanks for thinking of helping the Department!
Dear Alumni and Friends:

In the academic year 2002-2003, WVU’s mining engineering produced 16 graduates: 6 BS, 5 MS and 5 PhD. Among the 6 BS graduates, four are working for coal companies in WV, one is continuing on for a Master’s degree and one went to work in the sand and gravel industry. One remarkable accomplishment this year was Rebecca Hardy’s being selected as one of the 30 WVU Foundation Outstanding Seniors for the entire university (story on page 7). Also, we had the largest graduating class of Doctoral students since the program’s beginning in 1979 (see page 2). Among the 5 PhD graduates, two are NIOSH employees, two are staying to continue their research, and one is returning to his home country. This semester the faculty spent considerable time on ABET preparation for September 2003 ABET visit.

Dr. Kelvin Wu, an adjunct professor in our department is Chief of MSHA’s Mine Waste and Geotechnical Engineering Division who actually has a major role to play in the technical decision for the QueCreek Miners rescue project last July. Freshman recruiting remains our major effort. We continue to give recruiting seminars at high schools around the state.

This semester we signed an articulation agreement with WV Southern Community and Technical College in Logan for a 2 + 2 program. This program will enable qualified high school seniors to complete an associate degree at Southern and continue on to complete a BS in Mining Engineering at WVU.

The 2003 SME Annual Meeting was held in Cincinnati, OH. Since it was closer, we decided to make a good showing. For the first time we set up an exhibit booth and we organized a party of 26 faculty and students to attend the annual event. The exhibit designed by Drs. Y. Luo and F. Peng was very well-received (story page 5). The undergraduate student body received substantial donations by selling department polo shirts. The MRAC (Mineral Resources Alumni Chapter) reception was attended by more than 120 alumni, friends, faculty and students.

Barry Dangerfield was selected as the Spring 2003 Poundstone lecture speaker and he was presented the Distinguished Engineer of Mines Award (story page 1). I remember when I started my longwall mining research in the late seventies, he was the longwall coordinator for CONSOL’s Four States Mine near Mannington, WV. Through his assistance we began with longwall shield monitoring to improve the shield design at Four States. Today, WVU’s longwall mining research is known all over the world!

Beginning with this issue, we have started a new (Continued on page 6)