

BLACK GOLD WV

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Alumni Update Winter/Spring 2010

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Department of Petroleum and Natural Gas Engineering

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MESSAGE FROM THE CHAIR

With a multitude of energy challenges ahead of us, we walk confidently ahead with preparation and focus, looking forward to meeting these challenges. Serving as the chair of the Petroleum and Natural Gas Engineering (PNGE) Department is an honor, a privilege, and a gratifying experience. The Department continues to remain among the strongest in the country as we maintain a dedication to our students, faculty and others involved with the program.

I believe that natural gas will be the fuel of the future. I have been blessed with the opportunity to serve as Chair of the Department for several years now. I feel as though my work here fits so closely with my interests that it is almost like a hobby that I get paid to do. The students within our Department are like my children; I do anything and everything I can to help them in any way possible so that they can achieve the goals they set.

We have one of the strongest scholarship programs on the campus, that allows us to recruit quality students due to our high international standing. At the present time, we have graduate and undergraduate students from more than 15 countries. This international standing has drastically increased our enrollment in the PNGE Department over the past few years.

We continue to be grateful to our alumni and visiting committee for all that they do for the Department. Donations from companies and alumni help make this Department what it is today. We have also been receiving grants that will help fund the Ph.D. program and will build upon our current level of excellence. The visiting committee, the oil and gas industry, alumni and friends, and the Dean of the college, Gene Cilento, provide continued support and guidance each year, and we are immensely grateful.

Our Petroleum and Natural Gas Engineering Department has been meeting challenges with research that will open

the doors of tomorrow. With world-renowned faculty, we aggressively and carefully recruit students of high caliber so we can continue high-quality research. Our faculty remains involved in important service activities on and off campus, and with diversity, enthusiasm and dedication, they continue to build and strengthen our academic programs. As always, this allows us to foster the most important assets of our program, providing the industry with well-trained petroleum and natural gas engineers.

Our main role lies in continuing to develop and train a cadre of highly qualified petroleum and natural gas engineers, to manage the oil and gas industry of West Virginia, and the nation. We look forward to the future with a vision to maintain and strengthen our leadership in developing cutting-edge extraction technologies and outstanding education and research for our industry.

It is with a great deal of pleasure to let you know that our recent accreditation visit went extremely well. According to the preliminary report, we expect to be reaccruited for the maximum period of time (six years) by ABET. My many thanks and appreciation to our faculty, oil and gas industry, and visiting committee members who have supported in maintaining top-notch facilities and faculty through the years.

Sincerely,

Samuel Ameri,
Professor and Chair



DiPaolo: Making the Most of an Education

Calling upon his 30 years of experience, alumnus Jed DiPaolo gave our students great tips for success in a lecture entitled, "WV-You: Making the Most of an Education," which took place at the College on October 16, 2008. DiPaolo enlightened students on ways to find the best companies to fit their desires within their field of study, and told the story of his career in the oil and gas industry from its beginning to his present endeavors. He also shared photographs and humorous stories.

DiPaolo is a Philadelphia, Pennsylvania, native who began work with Halliburton in 1976 after graduating from WVU. He has held both operational and executive roles within the company over the years including Group Senior Vice



Jed and Nancy DiPaolo with Sam Ameri

President Global Business Development, North American Regional Vice President, and Far East Regional Vice President for Halliburton Energy Services. He is currently working as a consultant for Growth Capital Partners, is an independent producer in the oil and gas industry, and is also a director for a number of emerging private companies.

DiPaolo encouraged students to get involved with campus organizations as much as possible, and

to apply for internships during the summer. He added that these types of opportunities helped him move forward in his career over the years.

"This was an excellent presentation – especially for our students," said Chair Ameri after the presentation. DiPaolo held the students' attention throughout the lecture, leaving them with an excitement to move forward in their careers.

Saudi Aramco Students Shape WVU PNGE

There are currently an astounding 41 graduate and undergraduate students studying petroleum and natural gas engineering at WVU, thanks to the investment of Saudi Aramco. Each student is receiving either a full scholarship or fellowship.

We have found these students to be of high quality, with a strong background in engineering and an eagerness to learn. Their strong engineering background and eagerness to learn has boosted the caliber of education within the Department. The size of our incoming class of freshmen has

nearly doubled due to the students from Saudi Aramco.

In October 2008, the vice president and the manager of industrial relations from Saudi Aramco visited the WVU campus. The Saudi Aramco delegation met with WVU President C. Peter Magrath, the dean and associate dean of the College of Engineering and Mineral Resources, and, of course, with the Saudi Aramco students.

Chair Ameri gave the Saudi delegation a tour of the College and Department. "It was an honor to have the vice president of such a large company take time out of his busy schedule to come and visit WVU," said Ameri.

"Because of our strong international reputation, we have students attending the WVU PNGE Department from all over the world," added Ameri.

Saudi Aramco Company's representative meeting with the Dean and Associate Dean of CEMR.



From left to right: Abdulwahab Al Abbas, Senior V.P. Fahad Al Musa, Henryk Marcinkewics, Sam Ameri, Muzher Al Musabeh.



Petroleum Engineering Graduate Seminar, Spring 2009

Enrollment at All-Time High

The Department is proud this year to have achieved its highest student enrollment in the past twenty years. Because of our strong international reputation, we attract students from all over the world who are interested in getting an excellent education in the United States.

Our current diverse population of international students, particularly in the graduate programs, come from: the United Kingdom, Turkey, Iran, South

Korea, Vietnam, India, Pakistan, Saudi Aramco, Sudan, Nigeria, the Ivory Coast, Angola, Cameroon, Trinidad and Tobago, Venezuela, Colombia, United Arab Emirates, and Kuwait. While the majority of our students are American, the growing interest from international countries is immensely affecting the University in a positive way.

The average grade-point-average (GPA) of our graduating senior class in 2009 was well above

3.0. Graduate students must have at least a 3.0 to graduate from the master's and Ph.D. programs.

Chair Ameri said, "We are very proud of our students and the success that they have achieved. With high GPAs and high enrollment, the Department of Petroleum and Natural Gas Engineering clearly personifies the overall greatness of WVU."



Class of May 2008

IOGA 2010

The Independent Oil and Gas Association (IOGA) held its annual winter conference January 26 & 27 in Charleston, West Virginia, at the Marriott Hotel. Many industry members, along with several students and faculty from our Department attended this meeting.

The event began with speakers from Schlumberger and Baker Hughes who enlightened the crowd on Marcellus Shale. The short lectures were interesting as they explained the differences in the shale found most recently in W.Va., as compared with other shale content, such as that of Texas.

The first evening, Department Chair Sam Ameri invited all of the WVU attendees to dinner. This provided a relaxing atmosphere for students to interact with one another and with faculty.



L to R: Matt Osborne (Student Officer), Sam Ameri (PNGE Chair, SPE Chapter Advisor) and Abbas Belyadi (WVU SPE Student Chapter President).

The next day everyone participated in a variety of technical sessions that provided a great out-of-classroom learning experience for the students.

The IOGA Conference provided students with the opportunity to learn from leading professionals,

get to know their classmates and faculty, and prepare for entry into the industry.

Coalbed Methane Forum

The Pittsburgh Coalbed Methane (CBM) Forum was established in late 1985 by a group of interested individuals from industry, government, and academia. In 1993, the Forum became associated with the West Virginia University Petroleum and Natural Gas Engineering Department. WVU Professor Kashy Aminian took on the role of the coordinator, and currently still holds the position. A year later, the forum changed its name to the North American Coalbed Methane Forum, and in 1997, was incorporated as a non-profit corporation in West Virginia.

CBM has become a mainstream source of natural gas in the United States. Currently, CBM accounts for nine percent of the annual gas production, and nearly 12 percent of the total natural gas reserves in the United States. Unlike conventional gas reservoirs, coal is both the reservoir rock and the source rock for methane. Gas is present as an adsorbed layer on the internal surface of the coal, which has immense capacity for methane storage but virtually no permeability. The flow to production wells, however, takes place through the cleats or the natural fracture system, which store relatively small amounts of gas. These unique coal characteristics have resulted in classification of CBM as an "unconventional" gas resource.

The gas production from CBM reservoirs is projected to increase as less-developed basins such as the Northern Appalachian Basin are developed. The Northern Appalachian Basin, which is comprised mainly of large areas in West Virginia, Pennsylvania, and Ohio, is one of the basins in the U.S. with the most potential, and accounts for ten percent of U.S. CBM resources. However, CBM production has been limited in this basin. The technical problems and uncertainties causing the lag in development of CBM in the Northern Appalachian Basin need to be overcome for CBM to reach its true potential in the U.S. energy equation.

The forum holds bi-annual meetings in Morgantown and Pittsburgh to discuss information on coalbed methane research and technology between the public and private sectors. The participants in the forum exchange practical experience and present current information on technical, economic, legal, and environmental issues. Along with the meetings, there are annual short courses available to the forum participants, the most recent being "Fracturing Techniques" at the Spring 2008 Forum. In 2003, the North American CBM Forum established an endowment at the WVU Foundation to provide scholarships to students in Petroleum and Natural Gas Engineering.

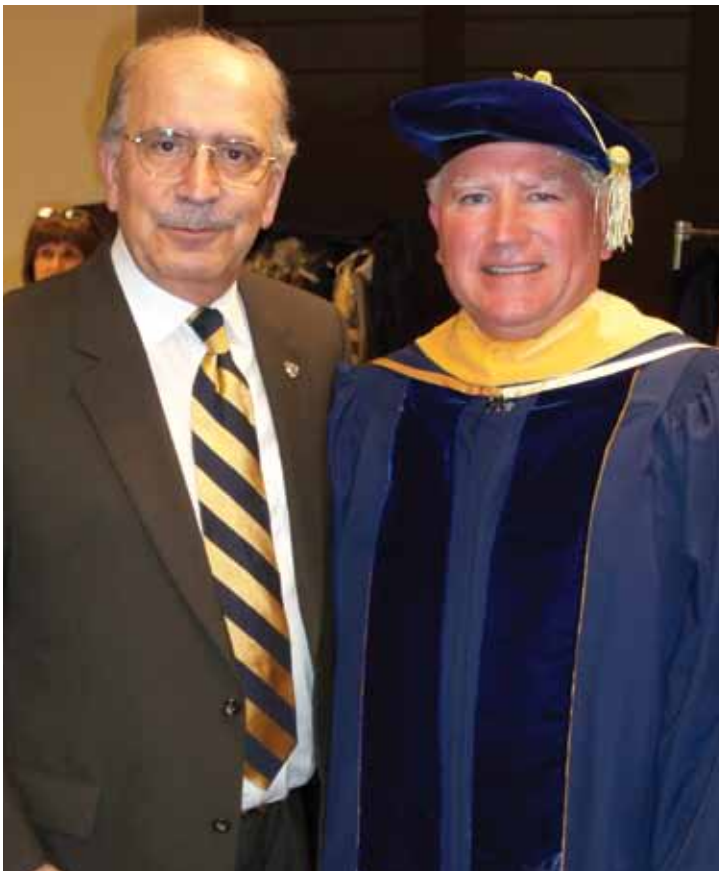


Kashy Aminian

Commencement 2009



The WVU College of Engineering and Mineral Resources held its annual commencement ceremony on May 16, 2009, at the WVU Coliseum. All 21 graduates from our Department received their diplomas, setting them on their path ahead. Special guest Ben Statler spoke during the ceremony, giving the students words of encouragement and commendation.



Chair Ameri (left) with Statler at the Commencement ceremony in May 2009.



Class of May 2009 with Chair Ameri.



Dr. Aminian, Faculty Marshall with class of May 2009.



The PNGE students and upperclassmen, answered questions from freshmen at the fall semester 2009 Engineer Fest.

Freshmen Engineer Fest Starts School Year Off With a Bang

The College of Engineering and Mineral Resources hosts an annual Engineer Fest for new freshmen in the College. This year's event took place in the National Research Center for Coal and Energy, where each specialization and student organization in the College offered a booth with resources for the students.

Bingo was the theme, as the students circled from one booth to the next collecting a stamp from each of the 24 organizations. Pizza and refreshments were served throughout the event. This event is a great way for freshmen general engineering majors to decide on a specific field of study, and possibly a future career.

Reinhart Speaks to SPE

John Reinhart gave an outstanding lecture to the WVU student chapter of the Society of Petroleum Engineers on April 3, 2009. The lecture was well received by students and faculty, providing an industry-wide overview of the four major U.S. shale plays: Marcellus (Pennsylvania, New York, West Virginia), Haynesville (Texas, Louisiana), Fayetteville (Arkansas), and Barnett (Texas). Drilling and completion operations were reviewed, as well as general reservoir, geological, and petrophysical property comparisons of the plays.

Reinhart has an extensive background within the industry, having served in positions including Asset Manager at Chesapeake, General Manager at Schlumberger, and Sergeant in the U.S. Army.

Professor Ameri said, "This was an outstanding seminar, very technical in nature, and our students learned a great deal. We hope Mr. Reinhart will consider coming to our campus for another lecture in the near future."

Reinhart has recently been appointed as the vice president of Chesapeake Energy. He is also a member of the advisory committee for the Department.



PNGE Soccer Team



A co-ed intramural soccer team was started in late summer 2008 by students within PNGE. With an immense amount of people within the school interested in the sport, Chair Ameri was approached with the idea of starting a soccer team in the PNGE Department. Chair Ameri quickly approved the idea and the department began providing funding for the team.

The team is one of nine in their league, and started with only a handful of students. They

have grown quickly and are picking up speed. The league is overseen by ProPerformance and the games are held at Mylan Park every Monday night at 7 p.m.

At the season's end, the team won three, lost five, and tied two games. Having one of the few teams that were actually co-ed, the Petroleum Engineering team did a good job playing in the tournament. After finishing up the season, the team is ecstatic to begin another season in the fall.

2009 Annual Recognition Banquet

The Department held its annual Recognition Banquet to honor students with excellent academic achievement, both at the graduate and undergraduate levels. The banquet, which was held at Lakeview Resort and Conference Center, on April 5, has become a part of the culture of the Department and was held in collaboration with the Mining Engineering Department.

Students who were recognized were given a plaque to symbolize their academic achievements. Students who received the awards ranged from undergraduate to doctoral level honors.

The leaders of the WVU Chapter of Society of Petroleum Engineers and the Society of Mining Engineers spoke, recounting of the year's events.

Every year one member of the faculty is also recognized for their accomplishments. Students from the Society of Petroleum Engineers are able to choose the faculty member they feel is deserving of the reward. This year's award went to Sam Ameri for his exceptional endeavors as a professor. Thank you, Chair Ameri, for all of your hard work!



Short Courses Offered by SPE

On Friday, February 20, 2009, there was a short course offered by WVU Society of Petroleum Engineers (SPE). This course, "Completion of Hydrocarbon Bearing Shale Reservoirs," given by George Waters of Schlumberger, was held in the new Erickson Alumni Center. This and other short courses are offered regularly throughout the year by SPE at a small cost to guests.

The course offered short sessions with a break and lunch. Some topics discussed included: Shale Key Characteristics, Petrophysical Analysis, Shale Geomechanics, Shale Completions, Horizontal Completions, and a session on Cementing, Perforating, Fracturing Fluids, and Additives.

George Waters of Schlumberger Oilfield Services is the North American reservoir Stimulation Domain Manager. His responsibilities include

hydraulic fracturing for the technical stimulation business.

A 1985 graduate of WVU PNGE, Waters holds a BS Degree in Petroleum Engineering. He has since acquired his Master's in Environmental Engineering from Oklahoma State University, and a MS Degree in Petroleum Engineering from Institut Francais du Petrole (IFP).

Since joining Dowell Schlumberger upon graduation from WVU in 1985, he has held numerous engineering assignments since 1992. His current focus has been on the completion and evaluation of shale reservoirs. He has made many industrial presentations on the stimulation of low permeability reservoirs and published multiple technical papers. He is the 2009 – 2010 SPE Distinguished Lecturer on Stimulation of Shale Reservoirs.



The Importance of SPE

With roughly 88,000 members globally, including managers, engineers, scientists, and academicians from more than 100 countries, the Society of Petroleum Engineers (SPE) has been dedicated to promoting the oil and gas industry for more than 50 years. About 50 percent of SPE members are in the United States. The WVU student chapter of SPE has approximately 40 members who meet on a regular basis.

The SPE Chapter plans and organizes functions, attends conferences, schedules short courses with speakers that are prominent in the field of

engineering, coordinates field trips, and organizes many other activities and projects. Recent speakers at SPE short courses have come from ChevronTexaco, BJ Services, and Halliburton Services, among others. These projects help to fulfill the core values and mission of SPE, which include excellence, professionalism, volunteerism, innovation, and social responsibility.

The chapter includes officers who are elected by the members. Those elected range in rank from undergraduate to graduate students.

Letter of Gratitude

Visiting Committee, November 2009 from left to right: Richard Smith, Charlie Burd, Sharon Flanery, James Ray, Rebekah Barnes, Sam Ameri, Richard Toothman, Ted Cranmer, Joe Timms, Michael Ellis and Christopher Akers. Not all members of the committee were available for the photo.



Photo taken in November 2009.

Chair Ameri and the students of the Department of Petroleum and Natural Gas Engineering would like to express their deepest gratitude to the Visiting Committee of the Department. Generous contributions from the members of this important committee have enabled us to purchase many important pieces of equipment to use in our educational programs. Graduate students' offices have also been upgraded with funds from the Committee, allowing a better work environment for the students.

We also would like to send a special thank you to Chesapeake Energy for their immense contributions to the Department. Chesapeake donated \$250,000 to Petroleum and Natural Gas Engineering.

Without private financial support from these and other individuals and corporations, our Department would not be where we are today. Our faculty and students could not be more appreciative and would like to extend a grand thank you to those who have been so kind this year and in years past. You keep our Department running smoothly and successfully!

Mineral Resources Alumni Reception

The WVU Mineral Resources Alumni held a reception prior to the WVU Homecoming game last fall, that was attended by many who have contributed to the field of petroleum engineering and to the success of our Department over the years, helping to make it what it is today.

Chair Ameri gave a presentation regarding the people who played a major role in promoting WVU, including those who impacted him in some way over the years. These people included Dean Furnich, who was the former Deputy Secretary of the Department of Energy; John Schroder, past president of U.S. Steel; Professor Larid, a previous advisor of Professor Ameri's; and current standout alumni from our Department, including: Sharon Flanery, a mineral lawyer and petroleum engineer; Rick Smith, an expert in the field of fracturing; Mike A. John, former senior vice-president of Chesapeake Energy.

"These individuals and many of our other graduates are also doing a great job internationally," said Ameri. "For example, Salam P. Salamy is an assistant vice president with Saudi Aramco Oil Company; Sharon Flanery works with Steptoe and Johnson; Chris Hopkins is president



Beverly, Sam & his wife, Betty and students from the department.

of data and consulting services with Schlumberger; Rick Smith is with Weatherford; and there are many others who have also done extremely well. It makes us very proud."

Alumni Highlight: Mark Spears

Throughout his career in Kansas, Oklahoma, Texas, and West Virginia, Mark Spears has remained a Mountaineer at heart. He graduated from high school in Charleston, W. Va., and headed to WVU for college. After spending time majoring in accounting and then civil engineering, he settled on petroleum engineering after Don Smith invited him and several of his high school buddies to an SPE presentation one night. From then on, he knew this was the industry for him.

Spears graduated with a bachelor of science degree in Petroleum Engineering in 1981 and headed to Oklahoma with Cities Service Oil and Gas (now Occidental Petroleum) to work as a drilling and completions engineer, drilling exploratory wells across the U.S. Mid-Continent. In 1987, he returned to West Virginia to build the Petroleum Engineering Technology program at Glenville State College. While there he completely restructured the program to meet the needs of the local oil and gas industry, increasing student enrollment by over 500%. It was there that he met his future wife, Lisa.

In 1990, Spears left GSC to pursue an MBA at the University of Texas at Austin. He then took a position as a financial analyst with a Houston-based independent power producer, evaluating the profitability of natural gas cogen projects. His passion for petroleum engineering led him to manage the company's procurement of natural gas reserves to act as a hedge to the fuel costs of operating the cogen plants. When that company was bought out in the late 1990s, Spears formed an independent oil and gas company focusing on the emerging roll that coalbed methane plays. The company developed an extension of the Drunkards Wash coalbed methane field in Utah and then sold the properties to Marathon Oil after proving up the reserves.

Spears then accepted an offer to return to the mountains of West Virginia with Energy Corporation of America, a large independent gas and oil company with significant assets in the Appalachian Basin. While at ECA, Spears has managed various aspects of oil and gas operations and development. After supervising drilling and completions on numerous wells in West Virginia, Kentucky, and Pennsylvania, he has held the dual roles of reservoir engineering manager and manager of development drilling teams for the past six years.

"ECA's major focus right now is on developing the company's Marcellus Shale acreage, both in Pennsylvania and in West Virginia," said Spears. "It's such an exciting play that has been right here under our noses for so long. Recent developments in horizontal drilling and hydraulic fracturing of shales have opened up a world of new opportunities in the Appalachian Basin. We as an industry still have significant challenges to overcome, but it's incredible to see the advances that have been made in a very short period of time."



Mark Spears

Spears recruits summer interns and full-time engineers at WVU and other Petroleum Engineering programs. "Recruiting has allowed me to keep in touch with the faculty at WVU and to get to know many of the bright young professionals we have coming into our industry."

Spears lives in Charleston with Lisa, his wife of 14 years and their 10-year old daughter, Sarah Beth. He serves as section chair of the Appalachian Petroleum Section of SPE and recently served as president of the Executive Committee for WVU's Mineral Resources Alumni Chapter. "MRAC provides a great opportunity to meet up with some of my old classmates, as well as get to know fellow alumni in the mining industry."

Timms Appointed President of NCEES

Leonard J. Timms, president and CEO of Dominion and a member of the Department's Visiting Committee, was recently appointed President Elect of the National Council of Examiners for Engineering and Surveyors (NCEES).

Timms has had an accomplished life and career. From assisting the routing of the Home Oil Pipeline across Canada to his position as president and chief executive officer of one of the largest pipeline companies in the United States, Timms has managed to stay grounded in his ideals.

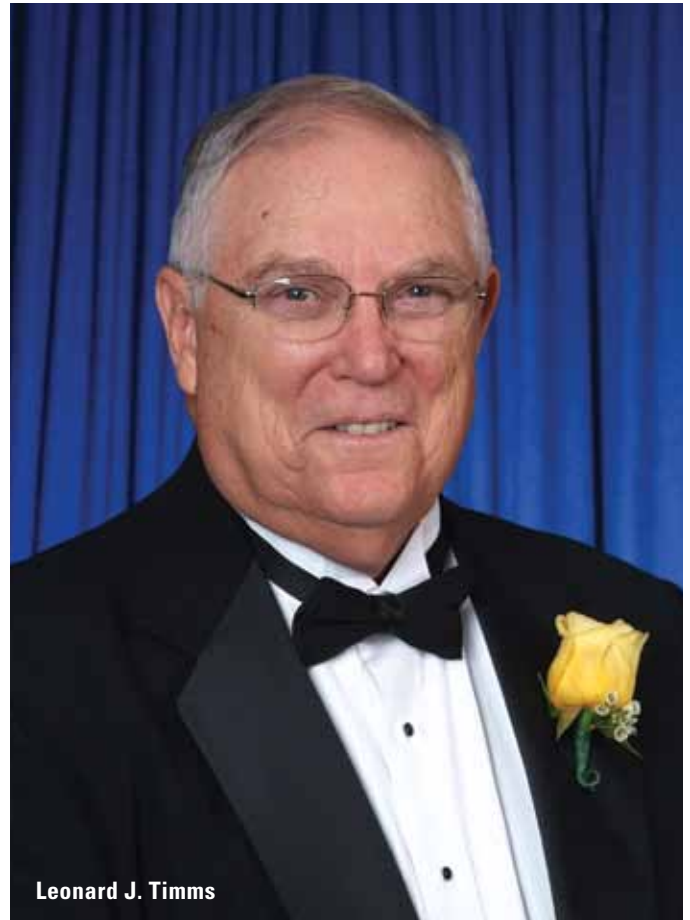
After completing his education at the Massachusetts Institute of Technology and earning a bachelor of science in civil engineering in 1958, Timms went on to finish another bachelor's degree in business management and economics in 1975 from Salem College.

As a Second Lieutenant in the U.S. Army in 1959, Timms was on active duty for the Corps of Engineers. Following that, he worked for Williams Brothers Company in Tulsa, Oklahoma, which is when he helped route the pipeline across Canada, in addition to helping design and construct a 500-mile LPG pipeline gathering system for the Mid-America Pipeline.

After a stint with Williams Brothers Company, Timms spent a few years at Northern Natural Gas Company before moving on to CNG Transmission Corporation (now Dominion), where he has been for 33 years, beginning as a Senior Engineer and rising steadily to his current position.

Timms has been a member of the West Virginia Board of Registration for Professional Engineers since 1998, and has remained Chair Emeritus on the Board of Trustees for Davis and Elkins College since 2007.

Timms has also served the public in many capacities, including two four-year terms as mayor of the City of Bridgeport and eight years on the State Board of Registration for Professional Engineers. He is serving as the president-elect of NCEES for the 2009-2010 term, and will serve as president from 2010-2011. He also serves as a board member for a number of corporations and nonprofit organizations.



Leonard J. Timms