

# SPE UNIVERSITY OF UTAH STUDENT CHAPTER

Volume 1 / Issue 4

## UPCOMING EVENTS

**End of the year BBQ  
The University of Utah-  
SPE student chapter**  
**Time:** April 27<sup>th</sup>, 2016  
3:30-5:30 pm  
**Place:** East Lawn of MEB  
(South Entrance)  
**Please RSVP to**  
**universityofutah@spemai**  
**l.org**

## INDUSTRY PROFESSIONAL SPOTLIGHT



### *Biographical Sketch*

*Mr. John Baza, Director of the State of Utah's  
Division of Oil, Gas and Mining*

After obtaining BS (1978) and MS (1979) degrees in Petroleum Engineering from Stanford University. John Baza began his career as a staff engineer for Phillips Geothermal Company (a division of Phillips 66 Petroleum Company) based in Salt Lake City. He spent time working on geothermal development projects in southern Utah, Nevada, and California. In 1982, he joined Amoco Production Company in Casper, Wyoming where he gained experience as a petroleum production engineer in the oilfields of central Wyoming.

He began his work in the government sector in May 1984 in the State of Utah's Division of Oil, Gas, and Mining (DOGM) as the organization's sole petroleum engineer. This gave him a valuable overview of all of the oil and gas activities within the state of Utah; however, he felt compelled to return to the private sector and joined Flying J Oil and Gas Company, based in North Salt Lake, in September 1990. There, he had responsibilities related to all aspects of petroleum engineering (drilling, production, reservoir analysis, and facilities) for projects in the Uinta Basin of Utah, and Flying J properties in Wyoming, North Dakota, and Montana.

In 1996 and '97 he spent time as an independent development engineer for a small oil and gas venture capital startup and with TerraTek, a Salt Lake City research firm. He returned to his previous position as a Petroleum Engineer with the Utah DOGM in March 1997 and advanced to Associate Director for the Oil and Gas Program. In May 2005, he became the Director of DOGM, where he currently is employed. Mr. Baza credits the success he has had in his career to the diversity of his work experience, a desire to be of service to his fellow man, building and maintaining relationships, and the love and support of his wife and family.

Below are questions and answers from an interview with Mr. Baza.

**What goals would you like to accomplish in your career of directorship for the Department of Natural Resources, Division of Oil, Gas and Mining?** I am committed to the three-part objectives of DOGM: Foster and encourage responsible development of Utah's petroleum and mineral resources, protect the public health and safety from adverse impacts of development, and preserve the environment as much as possible. I am also desirous to educate the public on the value of energy and mineral development in sustaining the quality of life that they currently enjoy and that future generations can enjoy.

**How have Enhanced Oil and Gas Recovery Methods affected the oil and gas industry?** "Enhanced recovery methods" is a broad term that can cover a lot of technical ground. When I graduated from the university, enhanced recovery

meant either augmenting the natural pressure drive mechanisms within reservoirs or using chemical processes to break the bonds between hydrocarbon and formation interfaces. These methodologies allowed for far more oil and gas to be produced in the latter half of the 20th Century than would have otherwise been achieved through primary recovery. It also created a generation of scientists in the U.S. who became experts at squeezing hydrocarbons from stubborn reservoirs and formations.

But, the early 2000s became a time for innovation in directional drilling and hydraulic fracturing to combine into a new enhanced recovery method that has focused on hydrocarbon recovery from source rock formations. This “shale revolution” has put the U.S. back to being a player in the world game of oil and gas development – so much so that other nations and OPEC have reacted by removing production limits that were meant to keep global commodity prices at higher levels. As oil prices have dramatically reduced in recent months, the entire U.S. industry has become a victim of its own success. However, the upside to this scenario is that the U.S. is still a technology leader that has established strong expertise in getting product out of the ground – and this will bode well for future fossil energy development.

**What additional support is needed to increase public awareness and acceptance of natural resources and energies?** I believe that all of us who understand the science and economics of global energy production and supply/demand relationships need to be more vocal about the realities of a fossil energy future. Our quality of life is heavily dependent on abundant and affordable supplies of energy, and there is no “magic bullet” that eliminates fossil energy from our future and sustains (or for many people simply creates) an acceptable quality of life. Sometimes it is too easy to remain silent when energy debates occur, and we must have the courage to speak knowledgeably and credibly about energy when the opportunities present themselves.

**How has the drop in oil prices affected energy related projects?** Clearly, the private sector is redistributing its capital investment to areas of highest returns and profitability. Oil and gas related private sector funding will not totally evaporate, but only those projects with reasonable returns on investment will continue during this low-priced period. The consequences will prove difficult in the following ways: Economically – communities and service sector organizations will suffer as the revenue stream from oil and gas development remains at low levels. Personnel – people will move to areas where they can remain employed. These movements will occur physically as unemployed persons relocate to areas where they can find jobs, and they will also move to other professions outside of traditional oil and gas employment. Resources – production declines are already steepening where drilling activity has been curtailed. Utah is a victim of such a circumstance as statewide oil and gas declines have doubled in the past year.

**What outlook do you envisage for the oil and gas industry regarding the current low price of oil and, what is the impact of that on careers for petroleum students?** As I have heard many financial experts say, “Oil and gas prices will return to high levels someday, we just don’t know when.” There will be a lull in traditional oil and gas activity for the next several years, but there is still a need to maintain a competitive edge in knowledge and expertise in both basic and advanced oil and gas development skills. Rather than re-tool into other fields, students should capitalize on their learned skillsets and adapt to available opportunities. For example, there are still plenty of jobs in oil sands research and development both for in-situ recovery and reclaiming previous development. Geothermal energy extraction is closely tied to conventional oil and gas operations in that many processes and technologies are similar. And there is always the need to improve operational efficiencies and economic recovery such that projects that are not affordable today will become so in the future.

**Are there any words of advice you would like to leave for students studying petroleum engineering?** This slowdown in the U.S. oil and gas industry may afford opportunities to postpone one’s entry into traditional employment. If a Master’s degree was your ultimate goal, you may want to consider applying for a PhD program to further your education during the downtime. Also, I recommend putting your education to use in innovative ways. You have become an electronic generation, and I believe that there are entrepreneurial ways to synthesize your knowledge of cyberspace into the extractive industries that are not yet being considered.

## CHAPTER EVENT SUMMARY

### CAREER FOR U IN THE OIL&GAS INDUSTRY- MARCH 10, 2016

On March 10th, 2016, we held an informational panel discussion on how degrees in engineering disciplines can apply to the oil & gas industry. Five prominent speakers –representing the Chemical Engineering, Civil Engineering, Computer Engineering, Geology and Geophysics, and Mechanical Engineering departments - gave short presentations and advice on how to apply the knowledge learned during your time at the U to the oil and gas industry. The speakers were Dr. Terry Ring, professor of Chemical Engineering and Adjunct professor in Material Science and Engineering and Metallurgical Engineering; Dr. Greg Jones, Computer Engineer, Assistant Vice President of Research for the University of Utah, and Associate Director of Scientific Computing and Imaging Institute; Dr. Raymond Levey, Geologist, Director of Energy & Geoscience Institute, Certified Petroleum Geologist & Licensed Geologist – Texas & Utah; Sidney Green, Mechanical Engineer, Founder and President/CEO, Enhanced Production, Inc., Research Professor in Mechanical Engineering Dept., and Founder and previous President, TerraTek Inc.; and Dr. Trevor Irons, Civil Engineer, Research Faculty in Civil and Environmental Engineering, and Research Scientist at Energy & Geoscience Institute. The event was well attended by students and faculty members from various engineering departments. Students in attendance said they most enjoyed the close interactions with speakers and were enlightened with a good general knowledge of the industry and where they would find career opportunities for themselves. We are grateful to our speakers, and are proud of our members who participated and learned at our educational event.



### NEXT EVENT: END-OF-THE YEAR BBQ

**Time:** 3:30-5:30 pm, April 27<sup>th</sup>, 2016

Sign up for an SPE student membership (free) and receive a free polo-shirt! (New members only)

**Place:** East Lawn of MEB (South Entrance)

**Please RSVP to:**

[universityofutah@spemail.org](mailto:universityofutah@spemail.org)



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