

TU Petroleum Engineering Newsletter

August 2004

We will begin our Fall Semester on August 23rd. We have been working hard to enroll quality students in our program. Once the semester starts, we will be able to provide you with some information regarding the results of our effort.

August is also the month of announcements of SPE awards. I am happy to report that our faculty and alumni have done well in receiving many awards from SPE. Prof J.J. Azar, and two of our alumni, Priyambodo Mulyosudirjo and Hemanta Mukherjee became Distinguished Members of SPE. Dr. Ralph Veatch won the Distinguished Service Award. Mr. George King won the Production Engineering and Facilities Award. Congratulations to all of them.

I would also like to announce the two research awards received by one of our faculty – Dr. Holden Zhang and his co-workers. Both these research initiatives are sponsored by ChevronTexaco. The first award is titled: “Droplet Dynamics in Multiphase Flow.” The purpose of this project is to understand droplet dynamics in multiphase flows. This is very important to many flow assurance and separation issues. Knowledge of droplet dynamics provides the basis of predicting pressure drops, holdups, droplet sizes and distributions, slurry hydrate, and separation processes. The scope of this seed project is a state-of-the-art study of droplet dynamics followed by a feasibility study of using CFD to simulate droplet impact on a liquid film. The total budget for one year project is \$ 42,000. The second project is titled: “Measurements of 3-D Multiphase Flow Structures Using NMR.” The objective of this project is to investigate the feasibility of using Nuclear Magnetic Resonance (NMR) for measurements of three-dimensional droplet/bubble size and distribution, interfacial structure, phase fraction and velocity profile in multiphase flow. The application of NMR techniques is well established in medicine, chemistry and physics. NMR has proven to be a powerful non-invasive tool for measurements and imaging in an opaque system. The scope of this project includes a state-of-the-art review of the NMR techniques and an assessment of its applicability to measurements of 3-D multiphase flow structures in petroleum systems. The budget for this project for one year is \$ 37,000. Success in securing the funding for both these projects demonstrates TU’s prominence in multiphase flow research. Congratulations Holden!

Now on to the alumnus of the month...

Alumni of the Month

This month’s alumnus, George King, holds the unique distinction of being a student and a teacher at the University of Tulsa. He received his BS in Chemical Engineering and MS in Petroleum Engineering from the University of Tulsa. While working for Amoco Production Company in Tulsa, he also taught the Well Completions course for our undergraduates for several years as an adjunct professor. Presently, George King is a Distinguished Advisor with the BP organization. He has 33 years oilfield experience since starting with Amoco in 1971. His technical background includes basic research on

acids, asphaltenes, perforating cleanup and sand control, as well as applications work on coiled tubing, perforating, formation damage, and well repair operations. Current activities include mentoring, teaching, field reviews, problem well analysis, intervention designs and problem consulting. Technical accomplishments include 51 technical papers, a book on completions and workovers, the Amoco Chairman's Award for technology from Amoco in 1997, Distinguished Lecturer for the SPE during 1985-86, Lecturer in the SPE Short Course series in 1999, and recipient of the SPE Production and Operations Award for 2004. For more on George King, please visit :

http://www.pe.utulsa.edu/people/alum_mon_aug_04.html

Keep sending me your comments, suggestions and criticisms.

Mohan