Reflections of Donald W. Clayton

It is always a pleasure to return to Louisiana State University. Driving through campus brings back many fond memories. My first extended stay at LSU was as a delegate to Pelican Boys State. I wanted an engineering degree from this university, but even the thought was intimidating. It was something to work for.

Gloria and I were married our junior year at LSU. Our senior year the Fighting Tigers were National Champions and the odyssey of this 1959 Petroleum Engineer was about to begin.

The courses were hard, the standards were high, and just when you began to feel confident that you might indeed graduate, the rules of the game changed. Professors Craft, Hawkins, and Holden had an innovative thinking session and decided they could improve the quality of our education by giving mandatory three-hour night exams in all major petroleum engineering courses. We, the students, called this cruel and unusual punishment. The same three professors decided that for an engineer to graduate he must pass a course in which the answers to the problems had to be graded on an "all right" or "all wrong" basis. We also thought this was cruel and unusual punishment because in the fifties, no computers or calculators were allowed in the classroom. We had to make our calculations on the side rule.

These professors were preparing us for the real world, but we would not understand their reasoning until some time after we graduated and started our careers.

In 1959, I graduated with my coveted engineering degree and was certain that the majority of courses required by the College of Engineering would never be needed or used. My thought process was seriously flawed. Here are just a few examples.

As a product of LSU's College of Engineering, I had developed a reasonable level of expertise in drilling, producing and processing hydrocarbons. What I didn't realize was that my mechanical engineering shop courses allowed me to design

and build a $157 part on a lathe in Bogota that would keep our $128,000 per day drilling operation in the Choco jungle from shutting down.

My electrical engineering background allowed me to install a complicated weather station in the Indian Ocean that would give sufficient warning so we could shut down our drilling operations before the severe storms moved through. This system improved the safety of our operations. One hundred miles offshore of Cape Town, South Africa, in five hundred feet of water, while making minor repairs to equipment on the ocean floor, our diving bell got tangled up in the blowout preventer stack. To this day, I am convinced that without knowledge of hydraulics, strength of materials and dynamics, my career path would have been modified significantly.

Dean Fenn encouraged us to do things differently and hopefully better. Previous industry wisdom dictated that the wells should be drilled straight. Applying the same engineering and science fundamentals in a different manner, we are now able to drill some well bores horizontally, increasing productivity and efficiency.

The teaching of reservoir engineering fundamentals by Professors Craft, Hawkins, and Holden was impeccable. We were fortunate to be students at the same time the book was being written.

In the San Juan Basin of New Mexico, 17,000 wells were drilled through the non-commercial Fruitland Coal Reservoir. In 1986, engineers using the Craft-Hawkins reservoir engineering fundamentals developed new technology that allowed commercial quantities of methane to be produced from the coal seam reservoirs. The San Juan Basin currently produces more than 1500 million cubic feet per day of coal seam gas. Coal seam degasification supplies approximately five percent of the natural gas required by the United States.

Economics was not one of my favorite subjects. These fundamentals resurfaced some twenty-five years after graduation allowing me as President CEO to understand a balance sheet and communicate with the financial communities throughout the world.

Today, LSU's College of Engineering is still teaching and graduating engineers who will meet the future challenges of the next century. They came to this university as students, but will leave with developed minds that have been trained to design, build and operate the projects that will make the world a better place in which to live. One day they, too, will look back and be forever indebted to Louisiana State University. Sometime after graduation they will begin to appreciate what Dean McLaughlin, and Drs. Avent, Bassiouni, Cundy, Keys, Marshak, Pike and all the innovative professors have given them… "AN OPPORTUNITY TO LIVE THE AMERICAN DREAM."