

GUEST EDITORIAL

What Will the Oil and Gas Industry Do This Time?

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From 1972 to 1982, the enrollment in petroleum engineering departments in the United States increased substantially. We are currently seeing a similar increase in enrollment in petroleum engineering schools. **Fig. 1** shows the total US petroleum engineering enrollment from 1972 to 2009. The enrollment peaked at just over 12,000 total students. In 1972, there were 1,362 undergraduate students in US universities. By 1983, the number had increased to 11,014. By comparison, in 2003, there were 1,673 undergraduates, and by the start of the fall semester 2008, the number of undergraduates had increased to 4,199. As can be seen in **Fig. 2**, the growth trend in undergraduate student enrollment from 2003 to 2009 is similar to the growth trend from 1972 to 1978.

The Department of Petroleum Engineering at Texas A&M University in 2003 only graduated 35 students with BS degrees and 46 students with MS or PhD degrees. In 2004, the oil and gas industry asked all the departments of petroleum engineering in the US to increase enrollment and graduates, and the universities have responded to that request. This year, the Department of Petroleum Engineering at Texas A&M will graduate more than 100 students with BS degrees and more than 50 with graduate degrees.

Now the oil and gas industry must do its part and hire these graduate engineers. Such a request seems almost silly if one has been reading all the articles during the past few years about the shortage of engineers in the oil and gas industry, and attending all the panel sessions at all the meetings to discuss what the industry needs to do to fill the age gap that exists in most companies, especially US domestic companies that do not hire an international work force. However, with the current economic downturn and the unexplainable increase and decrease in oil prices from a high of USD 147/bbl to the current price of around USD 40/bbl, some students are starting to ask questions about their job prospects and their career choice in general.

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Holditch served as SPE President during 2002 and is an Honorary Member and Distinguished Member of SPE. He has earned numerous SPE awards, including the Anthony B. Lucas Award, Lester C. Uren Award, and Distinguished Service Award for Petroleum Engineering Faculty. He earned BS, MS, and PhD degrees in petroleum engineering from Texas A&M.

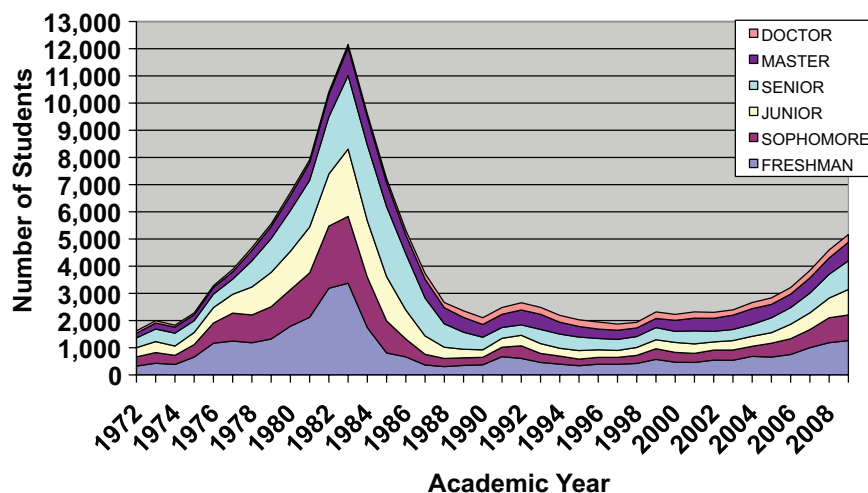


Fig. 1—Total US petroleum engineering enrollment from 1972–2009.

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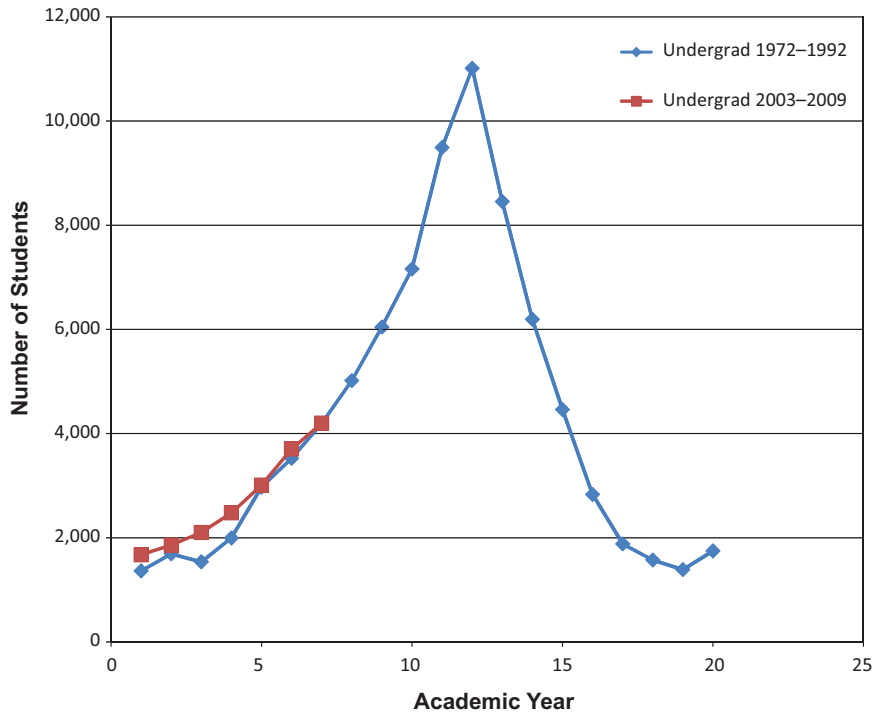


Fig. 2—Comparison of growth trend in undergraduate student enrollment.

In response, I have told the petroleum engineering students at Texas A&M, “Do not worry. The industry learned its lesson in the 1980s when they did not hire many engineers for a decade and they are paying for it now. Surely, they will not repeat that mistake again.” So far, as I have shared my comments with industry recruiters, the ones who have responded to me have assured me that indeed they plan to continue hiring new engineering graduates from universities, even if they have to pull back spending in other areas. I take them at their word, but I have not done any sort of scientific poll to see if these sentiments are universal.

The oil and gas industry should also realize that the universities have very large freshmen, sophomore, and junior classes. Many of those students are looking for internships during the summer months. These summer jobs are important for a number of reasons. First, most of the students need the money. Second, a successful internship convinces the students that they have made the right career choice and they come back to school ready to work even harder to get their degrees. Finally, it gives industry a chance to evaluate our students and many interns receive

permanent job offers on the basis of their performance. In addition, if the internship is structured properly, the student can perform a project that can lead to substantial profits or increased efficiency for the company.

The heads of all the departments of petroleum engineering are working overtime to increase enrollment, find new faculty, improve curriculum, and turn out more of the graduate engineers that industry has been asking us to do for the past 5 years. Now it is time for the industry to do its part by continuing to support departments of petroleum engineering and continuing to hire both our graduates and our students looking for internships.

We have heard for most of this decade the cry of “The Great Crew Change” and the dire dilemma the oil and gas companies will be in during the next 5–10 years as many of their current engineers reach retirement age. The problem was caused by the lack of hiring in the 1980s and early 1990s. The question now is, “What will the oil and gas industry do this time?” Will the industry repeat the mistakes of the past or will it continue to hire our graduate engineers? We need to know soon.

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