Thursday, June 16, 2005

Petroleum Club • 800 Bell (downtown)
Social 11:30 a.m., Lunch 11:45 a.m.

Cost: $30 for members and affiliates pre-registered by 12 noon Tuesday 14th June (No-shows will be billed.). $35 for non-members, guests, and walk-ups.

Make reservations by telephone (713-651-1639), Fax (713-951-9659), Web-site (www.sipes-houston.org), or e-mail (bkspee@aol.com) to B. K. Starbuck-Buongiorno by 12 noon Tuesday before the meeting.

SIPES
Luncheon Meeting

*by **Dr. Christine Ehlig-Economides***
University of Houston

The Role of Oil and Gas in the Future of Transportation

Essentially the only fuel used for transportation is oil, and the amount of oil imported from foreign sources is currently more than 80% of the amount of oil consumed in transportation in the US. While the established trend of growth in jobs in the US is about 3 million per year, over the last 3 decades disruptions in oil supply have interrupted this trend and account for perhaps as many as 45 million jobs that were not created. Continued dependence on geopolitically unreliable supplies of transportation energy is unacceptable. The problem is aggravated by the accelerated demand from Asian countries, especially China and India.

Already substitutes are emerging. Hybrid vehicles can reduce by a half the oil consumed per mile in cities. Lighter vehicles made from composite materials instead of steel can reduce oil consumption even more. Compressed natural gas could be an alternative to oil without significant change to the internal combustion engine. There is talk of a hydrogen economy. What about biofuels instead of oil? Can transportation be electrified? What will be the impact on oil demand if transportation needs are satisfied by a mix of fuels instead of only oil? What will be the implications for hydrocarbons if global climate change is convincingly linked to CO2 emissions?

This talk explores these questions and how they may impact the demand for oil and gas in the future. ■

Biographical Sketch

Dr. Christine Ehlig-Economides is internationally recognized for expertise in reservoir engineering, pressure transient analysis, integrated reservoir characterization, complex well design, and production enhancement. She holds the Albert B. Stevens Endowed Chair in the Department of Petroleum Engineering at Texas A&M University. She is currently working to introduce degree programs in Energy Engineering at Texas A&M University. She has also recently become director of the Center for Energy, Environment, and Transportation Innovation (CEETI) in the Crisman Institute.

She was graduated with a BA degree from Rice University (1971, Math-Science), an MS degree from the University of Kansas (1977, Chemical Engineering), and a PhD degree from Stanford University (1979, Petroleum Engineering).

During a three year professorship at the University of Alaska she introduced the B.S. and M.S. degree programs in Petroleum Engineering and served as head of that department. She then joined Flopetrol Johnston Schlumberger in Melun, France and after serving in various positions for 20 years returned to academia as a full professor of Chemical Engineering at the University of Houston, where she has served as Director of the Petroleum Engineering Program as an Adjunct Professor since January 2000. She has since been appointed to the Albert B. Stevens Endowed Chair in Petroleum Engineering at Texas A&M University. Dr. Ehlig-Economides has received numerous awards from the Society of Petroleum Engineers and was elected to the National Academy of Engineering in 2003. She has published more than 50 papers, has authored 2 patents, and has lectured or consulted in more than 30 countries.

Her professional service includes: Executive Editor of the Society of Petroleum Engineers Formation Evaluation journal 1995-96; SPE Distinguished Lecture 1997-98; and numerous posts as chairman or member of SPE committees and task forces. She is currently participating in the SPE Long Range Planning and co-chairing a steering committee for a Middle East Colloquium in Petroleum Engineering Education.