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Reserves from Unconventional Reservoirs

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Abstract:

Growing shortages of conventional hydrocarbons deliverable at rates markets require has increased the importance of unconventional sources of hydrocarbons in recent years. These unconventional sources include tight-gas, coalbed methane, heavy oil, and shale- gas reservoirs, and also include gas hydrates. While there have been substantial advances in technology in recently, significant challenges remain, including resource assessment, techniques to determine reserves, and reservoir management issues (e.g., well spacing, role of horizontal wells, effects of various completion practices). This lecture will address the role and importance of unconventional resources, status of critical technologies required to assess and develop these resources, and major research needs of the industry. Some of the research that industry considers most important near-term has begun in the recently activated Center for Unconventional Resources in Texas A&M University's Crisman Institute for Reservoir Management. Important research findings at A&M and elsewhere will be included in the lecture as they become available.

Biography:

Dr. W. John Lee is Director of the Center for Unconventional Resources in Texas A&M University's Crisman Institute for Reservoir Management. He currently serves on the Peer Review Board of OilExec International, Ltd, and is a continuing education lecturer for SPE and for NExT. After receiving B.Ch.E., M.S., and Ph.D. degrees from Georgia Tech, Dr. Lee worked for the Reservoir Studies Division of Exxon Production Research Company from 1962 to 1968. His work focused on simulator reservoir studies of major Exxon reservoirs. Later he joined and eventually headed Exxon Company, U.S.A.'s, major fields study group, where he supervised integrated field studies of Exxon's largest domestic reservoirs. In 1975-76, he was Chief Reservoir Engineer for Exxon's Houston District. He joined Texas A&M University in 1977 and currently holds the Peterson Chair in Petroleum Engineering. He joined S. A. Holditch & Associates, Inc. in 1980 and retired as Executive Vice President in 1999. He is the author of three textbooks published by SPE, *Well Testing*, *Gas Reservoir Engineering*, and *Pressure Transient Testing*. He is a past member of the Board of Directors of SPE, and an Honorary Member of SPE and AIME. Dr. Lee was also elected to the National Academy of Engineering in 1993 and to Georgia Tech's first class of its Academy of Distinguished Engineering Alumni in 1994. He has received numerous awards from SPE, including the SPE Distinguished Faculty Achievement Award in 1982, the Reservoir Engineering Award in1986, the John Franklin Carll Award in 1995, the Lucas Medal in 2003, and the DeGolyer Distinguished Service Medal in 2004.