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3-D vs. 2-D Drilling Results, Is There Still a Question?

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Abstract

During 1991 and 1992, an aggressive drilling program in the South Texas Lower Wilcox trend was undertaken by Mobil and its partners which has provided a unique opportunity to compare results of locations selected from like vintages of 3–D and 2–D seismic data. Sixty–nine wells were drilled over this two year period, 32 based on 3-D seismic data and 37 on the 2–D seismic data. The 3–D data set consisted of a 1991 vintage 33 square mile seismic survey. The 2–D seismic included 1991 and 1992 vintage data plus reprocessed 1986 vintage data. The results of the 69 wells drilled based on these two data sets show an improvement from a sound 70% success ratio for the 2–D data locations to a much improved 84% success ratio for the 3–D data locations. The results demonstrate the added value 3–D seismic had on the bottom line for a project within a relatively low risk producing trend.

Biographical Sketches

Patricia B. Jeffers

Patricia B. Jeffers is a Staff Geophysicist with Mobil Oil, the company with whom she has worked since 1981. She graduated from Colorado School of Mines in 1980 with a B.S. degree in Geophysical Engineering.

Thomas A. Juranek

Thomas A. Juranek is a Senior Staff Reservoir Engineer for Mobil Oil. He has worked as an operations engineer for Mobil in Luling, Corpus Christi, and Houston. Tom received a B.S. in Petroleum Engineering from Texas A&M University in 1982.

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Michael R. Poffenberger is a Senior Production Geologist for Mobil Oil. Since 1985, Mike has worked on projects from the Ark–La–Tex region to South Texas. He received a B.S. degree in Geology from Louisiana Tech University in 1983 and an M.S. degree in 1986 from the same institution.