

Fifty Year Old Frio/Vicksburg Cage Ranch Field in Brooks County, Texas is Rejuvenated with 3-D

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Suema Exploration, undertook a 3-D seismic shoot in 1994 over the apparently depleted 50-year-old Frio/Vicksburg Cage Ranch Field in central Brooks County, Texas. This 3-D survey has rejuvenated the field subsequent to the 1995-96 drilling of six wells with eight completions in both normal pressure Frio sands and abnormal pressure Vicksburg sands.

Cage Ranch Field, discovered in 1947 by Shell, had produced 99 billion cubic feet (BCF) of gas and 850 thousand barrels of condensate (MBC) from 36 wells in 64 completions. By 1994, production was less than one million cubic feet of gas per day and 16 barrels of condensate a day.

The 3-D interpretation identified three major differences in

our pre- and post-drill maps. The first was that there was no roll, or west dip downthrown to the Vicksburg flexure on the west at the Middle Frio. Suema then drilled the highest Frio wells to date in the field. Secondly, the crest of the underlying Vicksburg structure was not coincident with the overlying Frio structure, but was over a mile south. This enabled us to make the first commercial Loma Blanca Sand Vicksburg age completion in the field, with the 710-1 well completed for 4.6 million cubic feet of gas per day (MMCFD) and 175 barrels of condensate per day (BCPD). Thirdly, a major arcuate, down-to-the-south embayment Vicksburg age fault was identified on the southeast flank of Cage Ranch enabling us to drill the discovery well for Hook Field.