

Two New Stratigraphic Field Discoveries in a Mature Area of Jefferson Parish, Louisiana

Dorothy E. Ballentine and Thomas S. Martinsen

Burlington Resources, Inc., 400 N. Sam Houston Parkway E., Houston, Texas 77060

In 1997, The Louisiana Land & Exploration Company (now Burlington Resources) and Ocean Energy formed an area of mutual interest in the "Little Lake" area of southeastern Louisiana. The area encompasses four older, well-developed fields and generally had been thought to be "picked-over," receiving little exploratory interest from the industry.

The partnership acquired Geco-Prakla's new 3-D survey in the area, and in two locations observed high-amplitude reflectors on the seismic. In both cases, the events were located on regional dip, in synclines between fields.

Detailed geological interpretation combined with seismic modeling and AVO analysis convinced the partnership that the events could be hydrocarbon indicators and plans were made to drill two wells.

In April 1999, the Burlington Resources' LL&E Fee #1 well was drilled to a depth of 13,700 ft. It encountered gas pay in the Middle Miocene *Textularia W* zone TP1 sand.

In July 1999, a second well was to a depth of 13,100 ft to test a separate anomaly five miles to the northwest. This well encountered 84 feet of gas pay in a high permeability, normally-pressured *Textularia W* zone sand.

Both wells encountered the sands as predicted and both produced gas and/or condensate. The strength of the seismic amplitude varies across the reservoirs, giving a mottled appearance and suggesting that the reservoir is discontinuous in thickness and/or permeability. Understanding the nature of these variations will be the key to optimally developing the fields.