

## **AVENTURA RANCH FIELD: A CLASSIC STRATIGRAPHIC TRAP - JAMES LIME - VAN ZANDT COUNTY, TEXAS**

**Al Jones and John T. Palmer**  
Palmer Petroleum, Inc., Shreveport, LA

### **ABSTRACT**

Aventura Ranch Field, found September 10, 1990, is the most recent significant James Lime discovery in the East Texas Basin. Current estimates indicate recoverable reserves of 20 BCF of gas and 1.5 million barrels of condensate. The field represents a classic stratigraphic trap, formed by a facies change from downdip porous and permeable grainstones, terminating updip into carbonate mudstones, wackestones and unrelated grainstones.

The James Lime formation consists of poorly-sorted, low porosity lime wackestone/mudstones, and well-sorted reservoir lime grainstones. The reservoir consists of two facies: (1) skeletal grainstones, and (2) oolitic grainstones. The skeletal grainstones are interpreted as deposits adjacent to the James Lime reef core. The oolitic grainstones were deposited as high energy shoals or bars in shallow, agitated water possibly paralleling the skeletal grainstones adjacent to the reef. Both interparticle and intraparticle porosity is present in the grainstone facies. Microporosity is also evident and is responsible for suppression of most of the induction log resistivity throughout the field. Resistivity as low as 1.5 ohms is found to be hydrocarbon productive.

Subsequent to the development of the Fairway Field, a large James Lime stratigraphic trap had been sought after for many years, resulting in only the minor discovery of N. Athens Field. Several dry holes had been drilled amazingly close to the current productive area. Perseverance and persistence finally paid off with the discovery of Aventura Ranch Field. Currently the field is producing six million cubic feet of gas and 425 barrels of condensate a day.