

## **Structurally Controlled Stratigraphic Traps within the HGOR Area, Palo Seco, Southern Basin, Trinidad**

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### **Abstract**

The High Gas Oil Ratio (HGOR) area encompasses approximately 120 wells from both the Palo Seco and Central Los Bajos Fields. It was so nicknamed based on the uniquely high proportion of gas to oil recovered. The HGOR Area was developed between the 1960s and late 1980s, after which all drilling activity within the area ceased. During the 1990s, several EOR projects were undertaken with some success, however, they were discontinued based on some economic and technical difficulties encountered during the late 1990s and were not reactivated since.

The HGOR Area produces oil and gas from predominantly the Pliocene Forest and Morne L'Enfer formations. The Pliocene Top Cruse marker was penetrated at quite shallow depths in some wells and although they were not always tested; the underlying Upper Cruse sands of the Pliocene Cruse formation revealed a significant resistive response.

Based on this, a geological study of the Cruse formation (with special focus on the Upper Cruse sands) was undertaken using all available well data, and hydrocarbon maps were generated and analyzed. The results reveal that the traditional ideas of strike-slip tectonics may be easily challenged, as a compressional regime featuring thrust mechanics appears to dominate along the Los Bajos Fault System.