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**“Caribbean Exploration – Planning for the Future”**

**ABSTRACT**

**NEW INSIGHTS INTO THE STRATIGRAPHY AND STRUCTURE OF THE AREA SOUTH  
OF THE LOS BAJOS FAULT IN THE VICINITY OF THE SOUTHERN RANGE, TRINIDAD**

**Neil Payne, Walter Cukavac, *Trincan Oil Ltd*, Barry Carr-Brown, John Frampton and  
Anthony King, *BioSTRATIGRAPHIC Associates Ltd***

Exploration drilling in the Morne Diablo - South Quarry area has confirmed the presence of Forest and possibly Lower Morne L'Enfer formations at surface on the crest of the Southern Range Anticline immediately west of the Los Bajos Fault. The Lower Cruse, previously documented as the dominant outcropping formation in this area, is encountered only in the basal sections of some of the wells. Biostratigraphic evidence is supported by 3D seismic mapping that shows the northern flank of the Southern Range extending westwards from the Morne Diablo field across the Los Bajos Fault with little lateral offset of deeper horizons. The first major right-lateral displacement of the anticline is interpreted to lie approximately 2 miles west of the Los Bajos along a fault system associated with the eastern edge of the South Quarry field. The inter-lying area is severely faulted and contains collapsed, rotated and locally thrust features. This structural complexity was identified and documented in older field maps and accompanying reports that have not been published. These reports also contain references to the difficulties in distinguishing Cruse and Forest depositional cycles in this part of Trinidad.

These stratigraphic and structural findings have significantly upgraded the exploration potential of the Morne Diablo-South Quarry acreage by increasing both reservoir and trap potential along the Southern Range Anticline. They also indicate that the Kugler 1:100,000 map in this area, which now appears to be somewhat interpreted and highly simplified, should be used with caution.