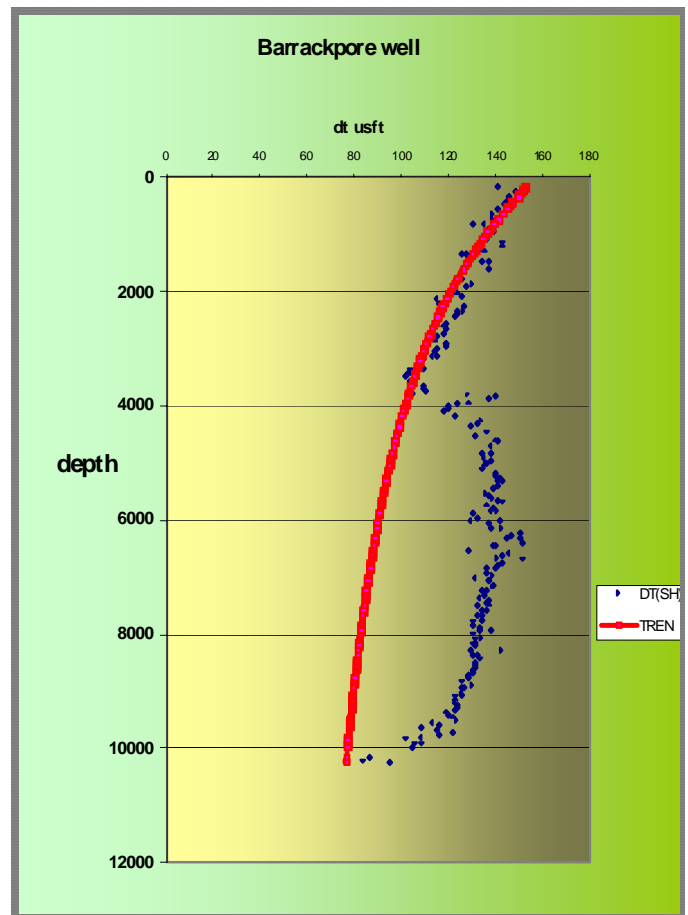


OVERPRESSURE AND LATE NEOGENE SEQUENCE -STRATIGRAPHY : EVIDENCE FOR COMPACTION DISEQUILIBRIUM IN THE SOUTHERN BASIN, TRINIDAD.

JOHN E. KEENS-DUMAS
EXPLORATION & JOINT VENTURES
GEOLOGICAL SERVICES LABORATORY
PETROLEUM COMPANY OF TRINIDAD & TOBAGO LTD.
POINTE-A-PIERRE, TRINIDAD

ABSTRACT

Sequence stratigraphy of the Southern Basin, Trinidad, is being applied towards a better understanding of the depositional history of the Pliocene and younger deltaic sediments. Abnormally high pressures are identified from the evaluation of acoustic transit time and density data. Pressure regimes are discernible and vary within the stratigraphic sequence. The top of the overpressure zones generally occur within the Lowstand System Tract (LST) and are mainly caused by compaction disequilibrium resulting from high sedimentation rate of the Prograding Complex of the Lowstand System Tract (LST) and the overlying Highstand-deposits. These highstand-deposits are more permeable and show moderate overpressure to normally pressured profiles. Overpressure zones coincide with changes in the palaeobathymetry and are associated with undercompaction of sediments in a rapidly subsiding basin.



Prepared for submission to GSTT/SPE Conference
2000
2000-01-11