

## **The East Georges Bank Basin, Offshore Nova Scotia: An Undrilled Basin with Significant Oil & Gas Potential**

Koning, Tako <sup>1</sup> (1) Public Relations, Tullow Oil, Luanda, Angola.

The East Georges Bank Basin is located offshore Nova Scotia on the southeastern Canadian continental shelf. The basin covers 10,000 square kilometers (2.5 million acres) and is one of the last undrilled basins in North America.

The geological understanding of this basin is based on 16,000 km of seismic data which was studied and interpreted in the 1980's by Texaco Canada's geoscientists. The first public presentation of the interpreted data was at a conference of the Canadian Society of Petroleum Geologists in 1988 in St. John's, Newfoundland and thereafter the geological and geophysical interpretations were presented at a number of oil industry conferences worldwide (San Diego, Calgary, Lagos, Rio de Janeiro). This presentation is a re-presentation of the 1988 and subsequent papers. In 1988, the government placed an oil activity moratorium on Georges Bank. No activity such as seismic surveying has taken place since that time. Therefore, although this presentation is based on old seismic data, it must be viewed as up-to-date since no new data has been acquired on the bank for over twenty years.

The overall Georges Bank Basin formed during the Triassic when the landmass of Pangea began separating along rift zones. A prominent Paleozoic basement high, the Yarmouth Arch, separated the East Georges Bank Basin from the West Georges Bank Basin, and had a dominant influence on sedimentation until Middle Jurassic. During the Middle Jurassic, major growth faulting and halokinesis commenced in the basin.

The structural and stratigraphic evolution of the East Georges Bank Basin has resulted in the development of a number of significant and economically attractive seismically-defined prospects. The Geological Survey of Canada (GSC) published in 1983 (Proctor et al) that the average hydrocarbon expectation of the basin was 168 x 10<sup>6</sup>m<sup>3</sup> barrels oil (1.0 billion barrels) and 150 x 10<sup>9</sup>m<sup>3</sup> natural gas (5.3 TCFG). The GSC's speculative estimate for the basin was 350 x 10<sup>6</sup>m<sup>3</sup> barrels of oil (2.1 billion barrels) and 307 x 10<sup>9</sup>m<sup>3</sup> gas (10.8 TCFG). The East Georges Bank Basin remains under the moratorium until 2012 at which time the moratorium may either be lifted or continued.