

## Exploration Trends within the Scotian Basin, Offshore Nova Scotia

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### ABSTRACT

The Scotian Basin, covering an area of in excess of 50,000 square miles, offshore Nova Scotia Canada, is arguably one of the hottest exploration areas in the world. Since Mobil Oil drilled the first well on Sable Island in 1967, over 160 wells exploration, delineation and development wells have been drilled within the basin. All economic hydrocarbon discoveries, to date, are concentrated within the Sable Subbasin and include significant gas, modest condensate and minor oil reserves. Currently, Sable Offshore Energy Incorporated is producing natural gas at rates close to 500 mmcf/d from three fields within the Sable Subbasin.

Exploration, and the resulting discoveries, have historically focused on hydro pressured rollover anticlines and deep seated geopressed prospects within the clastic rich Mesozoic section that in places exceeds 12,000 metres of sediment fill. Recent exploration activity by PanCanadian along the lightly explored Jurassic-aged Abenaki carbonate bank has produced the first significant new discovery in twenty years.

In addition to the Jurassic carbonate trend, the last three years have seen significant landsale activity along the length and breadth of the present day Scotian Shelf continental slope in water depths ranging from 200 to 3,000 metres. Unproven play types within the Scotian Salt Basin are primarily salt-related structural\stratigraphic traps within the Jurra-Cretaceous and stratigraphic traps within the Tertiary. Reservoirs within the deepwater will consist of subaqueous channels, channel levees, submarine fans and turbidites associated with eustatic lowstand systems.

Recent licensing rounds have produced a flurry of exploration activity over the majority of the Scotian Basin, within both proven and unproven petroleum systems, and will be enhanced by newly acquired 2D and 3D seismic acquisition and the start of drilling the largest prospects. Reserve potential on many of the deepwater prospects appears significantly larger than the minimum economic threshold, suggesting an exciting future for exploration offshore Nova Scotia.