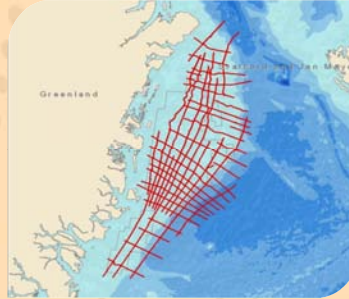


# Northeast GreenlandSPAN

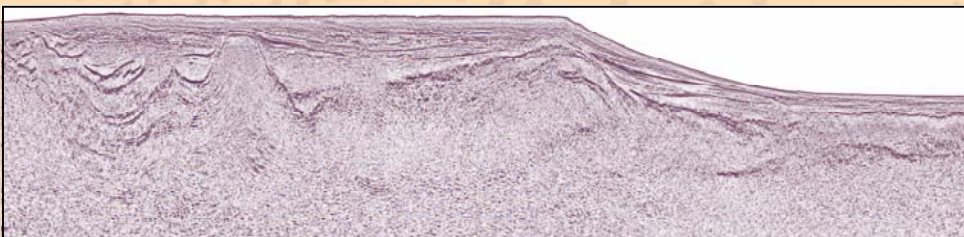
## PROGRAM OVERVIEW

Phases I and II of Northeast GreenlandSPAN™ are the latest addition to ION's BasinSPANS™ seismic data programs located in the Arctic region. Designed and acquired by ION's GeoVentures group, the NE GreenlandSPAN program collectively consist of approximately 12,000 km and is depth imaged by GX Technology (GXT). The surveys cover the East Greenland Rift Basins Province with long offset 2D seismic data, specifically the north and south Danmarkshavn Basins, the Thetis Basin and the northern part of the Northeast Greenland Volcanic Province. A 2008 USGS report placed reserve estimates for areas covered by the NE GreenlandSPAN survey in the range of 8.9 BB of oil, 86.1 TCF of gas and 8.1 BB of natural gas liquids.



## PROGRAM OBJECTIVES

- To deliver an accurate and more comprehensive understanding of the geologic structure of the Greater East Greenland Rift Basins Province
- To provide a regional 2D seismic framework that spans the area from the North and South Danmarkshavn Basins to the Northeast Greenland Volcanic Province and eastward into the Thetis Basin
- To provide sufficient aperture and illumination when combined with the appropriate imaging tools to reveal how the complex basin tectonics are controlling the potential petroleum system including:
  - Extensional structures and stratigraphic traps in submarine fan complexes of the North Danmarkshavn Basin, South Danmarkshavn Basin and Northeast Greenland Volcanic Province
  - Tertiary age inversion structures present along the western edge of the South Danmarkshavn Basin
  - Horst block structures separating the Danmarkshavn Basins from the Thetis Basin



Northeast GreenlandSPAN Data

## About BasinSPANS™

ION's BasinSPANS (SPANS) are geologically inspired, basin-scale seismic data programs acquired and depth-imaged by ION's unmatched GX Technology experts using the most advanced geological and geophysical processing tools available. They provide upstream companies with the ability to evaluate the geologic evolution, deep basin architecture and depositional and structural histories of entire petroleum systems in a region.

Unlike conventional multi-client seismic surveys, BasinSPANS are custom designed in collaboration with ION's GeoVentures group, regional experts and the O&G companies. Once the program objectives are agreed upon, ION serves as project manager and applies the best survey design, acquisition and processing technologies with a proprietary mindset that adds value and achieves exceptional results. Such in-depth data and the associated interpretation tools greatly assists asset managers with portfolio management and provides significant risk mitigation as they develop exploration and appraisal programs with greater confidence.

ION owns one of the most up-to-date seismic data libraries in the industry, consisting of 2D, 3D and full-wave (multicomponent) data from around the world.

## KEY COMPONENTS

- Program design and layout are driven by known geology and client input to provide a consistent seismic regional framework that ties into existing seismic lines
- 18 sec records, 8,000 m cable
- Specially designed acquisition technique to record underneath expected ice
- Integrated geologic and geophysical interpretation
- Improved understanding of key geologic features, placing them in a basin-wide context

## DELIVERABLES, WITH FULL PARTICIPATION, INCLUDE

- Raw navigation merged shot gathers (SEGY)
- Final Kirchhoff PSDM and PSTM stacks (SEGY)
- Final PSDM depth-interval velocity model (SEGY)
- Final PSTM velocity model (SEGY)
- Gravity and magnetics data
- Final navigation
- Structural and stratigraphic interpretations (faults and horizons)
- Final acquisition, processing and interpretation reports



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### Corporate Office

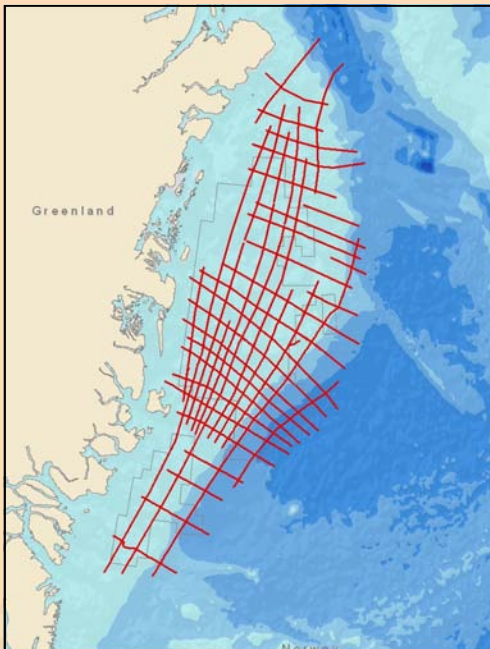
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Northeast GreenlandSPAN  
Survey, Phases 1 and 2