

USGS – GeoPRISMS Synergistic Opportunities: Offshore Atlantic Margin

Active USGS Programs:

**Extended
Continental Shelf
(ECS)**

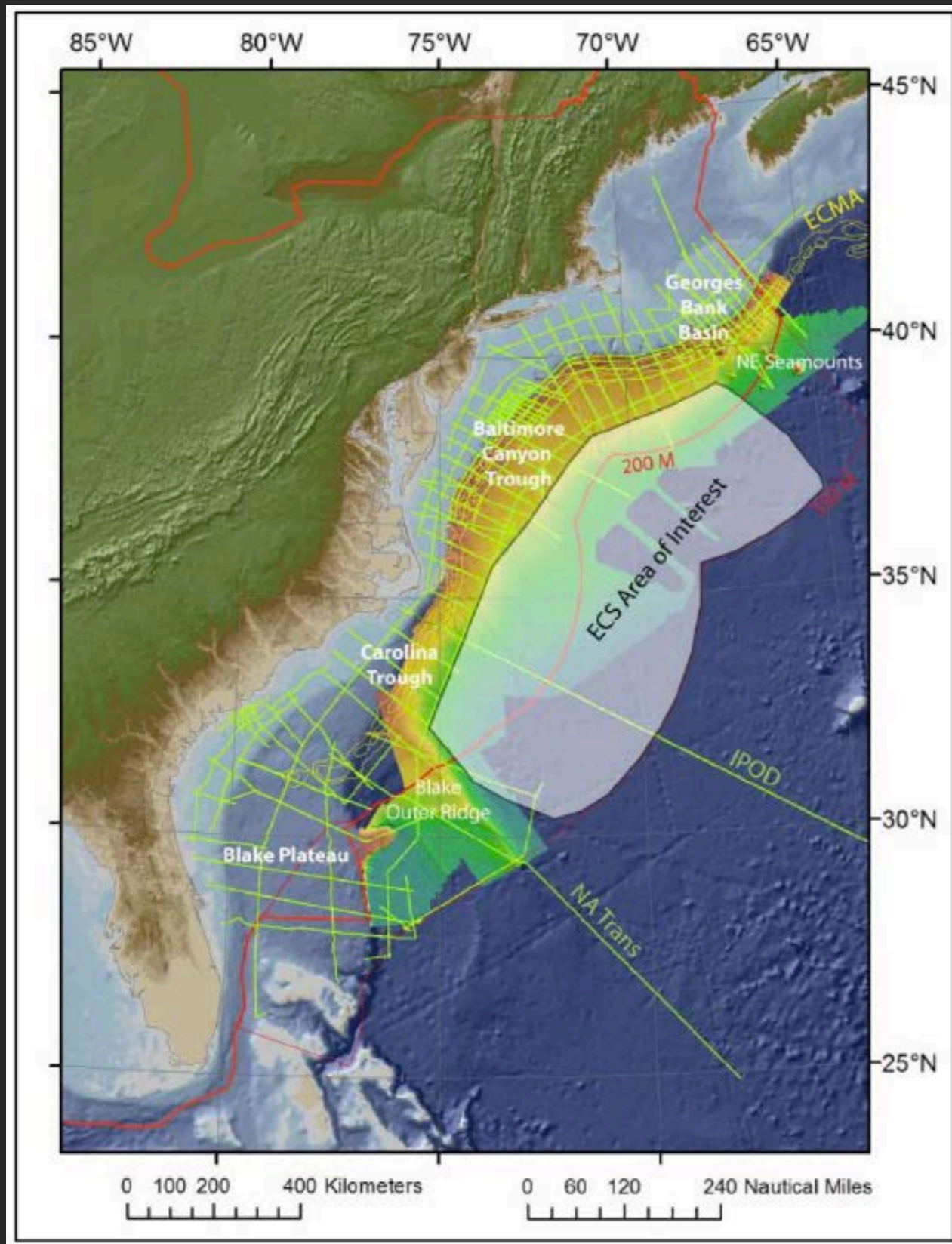
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Ginger Barth
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**Marine Geohazard
Assessment along the US
East Coast (NRC)**

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Extended Continental Shelf (ECS) Atlantic Program



Task: Acquire multibeam bathymetry (led by NOAA and UNH) and multichannel seismic reflection and refraction data (led by USGS)

(in concordance with Article 76 of the United Nations Convention on the Law of the Sea)

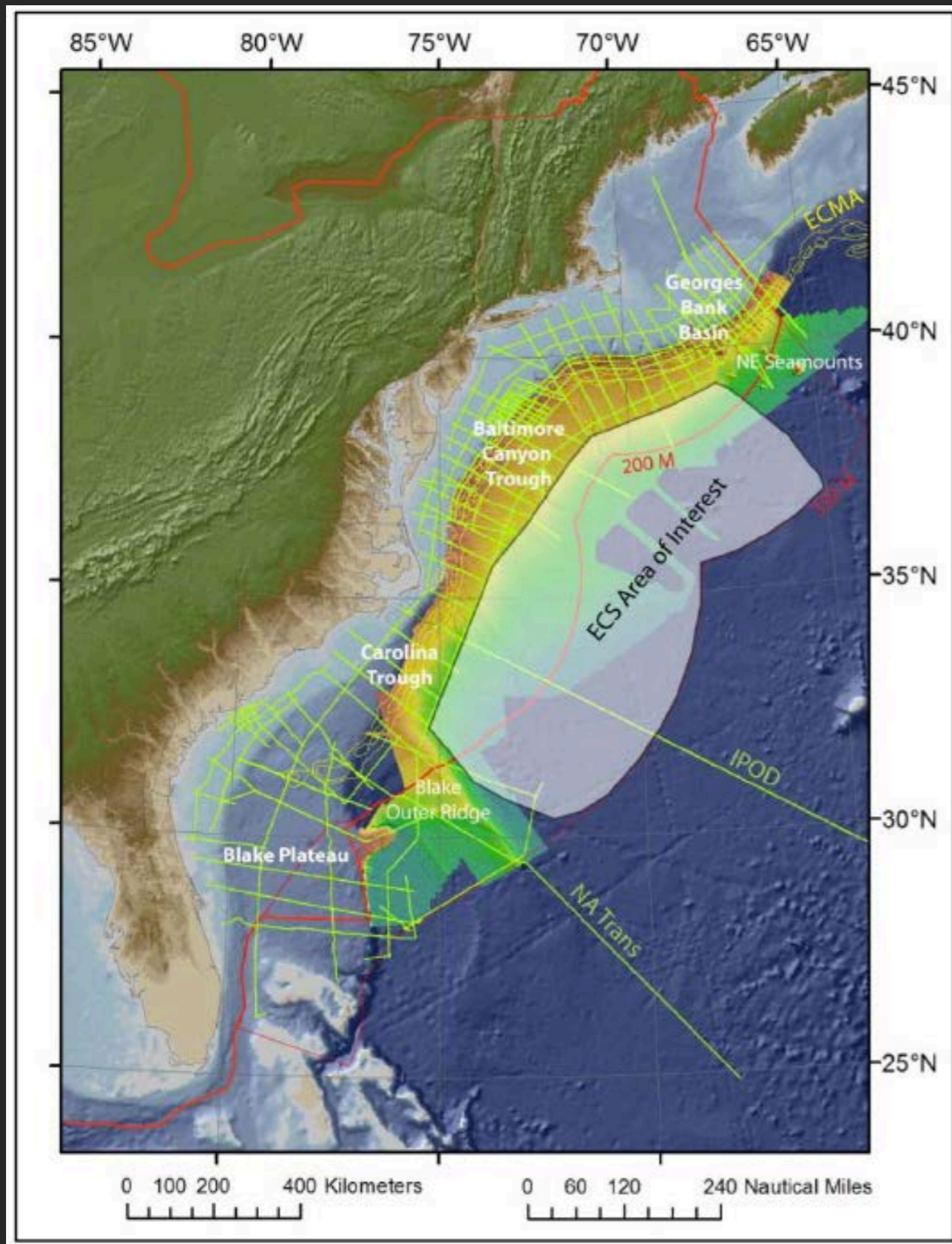
Seismic data will be used to map sediment thickness and study extent of down-slope sedimentary movement in order to define the outer limits of the U.S. ECS beyond 200 nmi (up to outer limit of 350 nm)

Primary target region:

Cape Cod to Cape Lookout
Particular focus on fracture zones
Regions to north and south are lower priority

(See handouts from Debbie Hutchinson and Ginger Barth)

Extended Continental Shelf (ECS) Atlantic Program



Tentative Schedule:

Survey in 2013 in line with the R/V Langseth plans to be in Atlantic

Data Release:

MCS:

All raw data available w/in 6-months of cruise
Preliminary processed MCS within 1-year
Final stacked, time-migrated MCS within 2-years

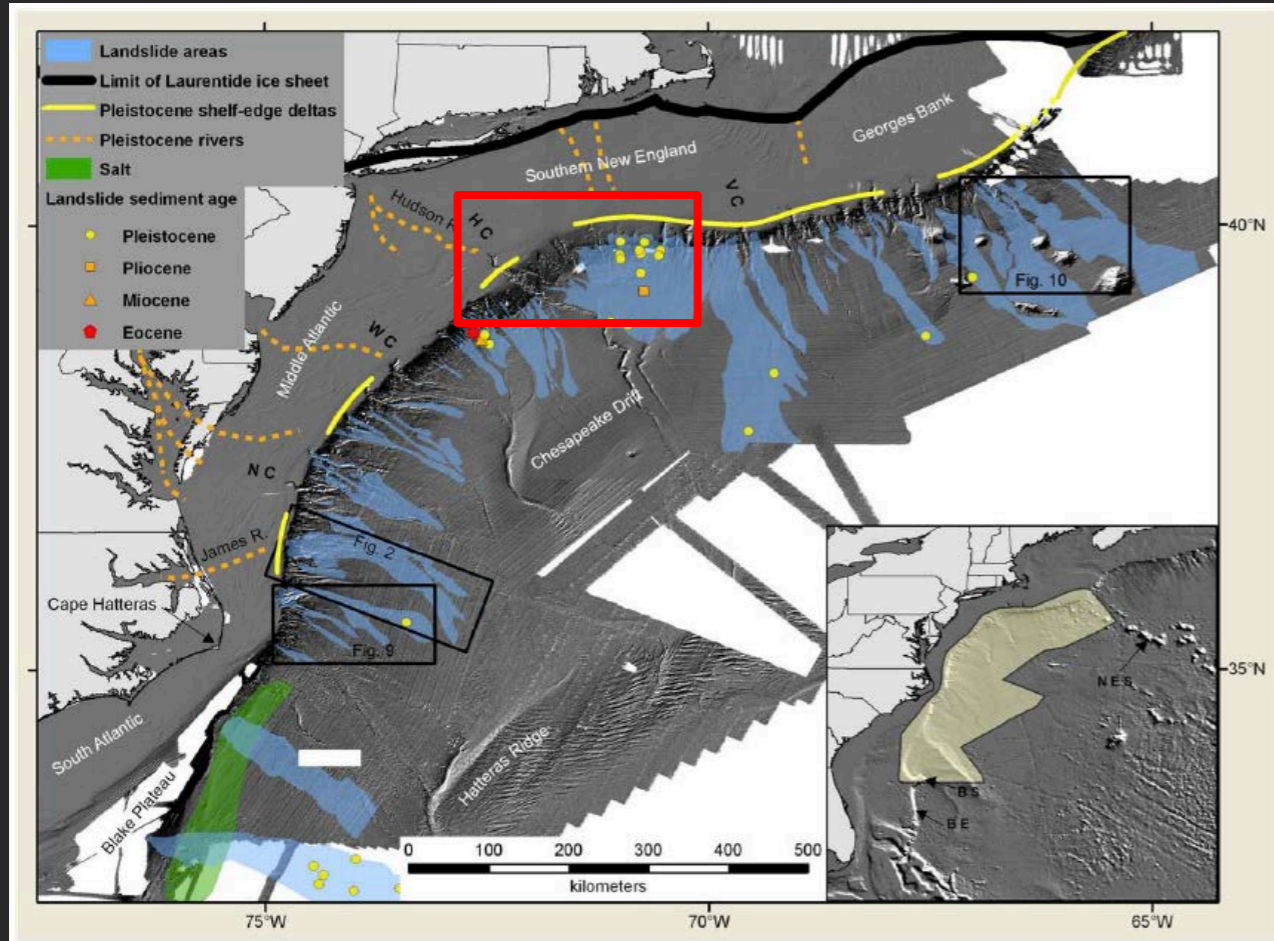
OBS:

Released within 2-years

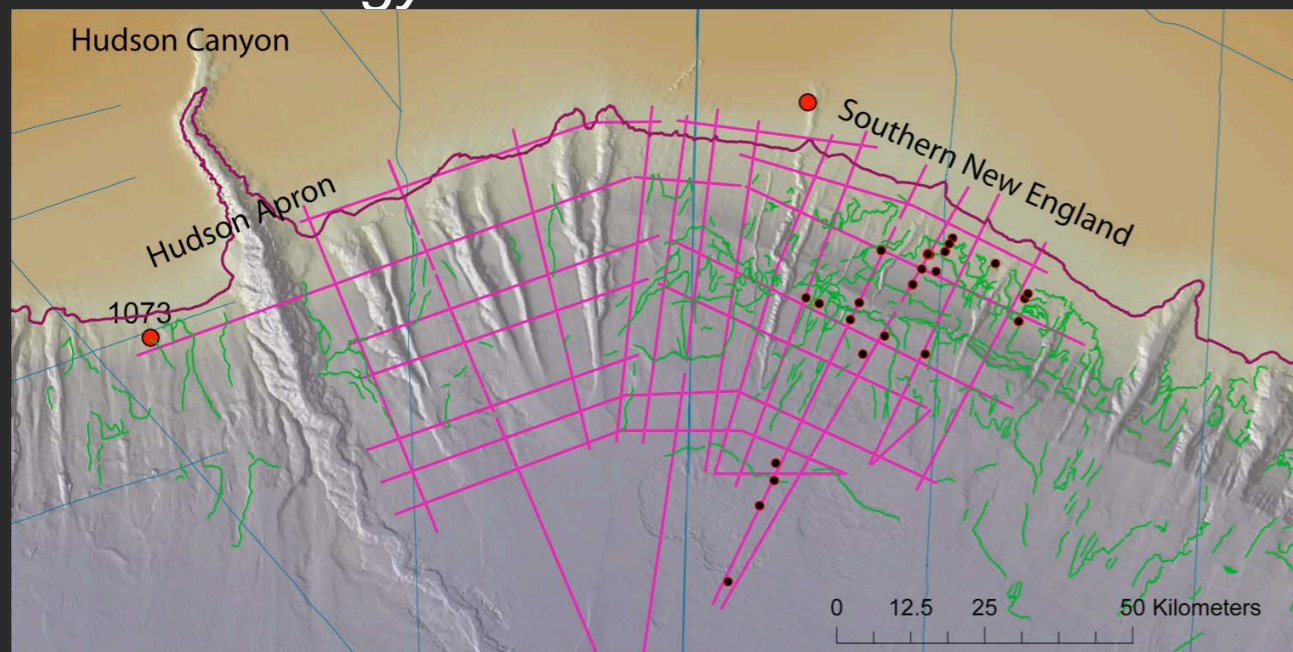
Potential Field (gravity and magnetics):

Released through NGDC as soon as practical

Marine Geohazard Assessment



See 2009 Volume in *Marine Geology*



Ongoing funding from US Nuclear Regulatory Commission and USGS

Examine submarine landslide potential and associated tsunami hazards to the US Eastern seaboard

Data Collection:

Bathymetry:

Multibeam bathymetry of the continental slope and rise (merged with ECS data)

MCS:

High-resolution MCS surveys of major slide regions to look at preconditioning factors

- Southern New England Slide Complex (2,000 km collected in 2010 and 2011)
- Carrituck slide (2012 tentative plans)

Sediment Cores:

Date the slides and constrain geotechnical properties of seafloor sediment

- Southern New England
- Carrituck (2012 tentative plans)

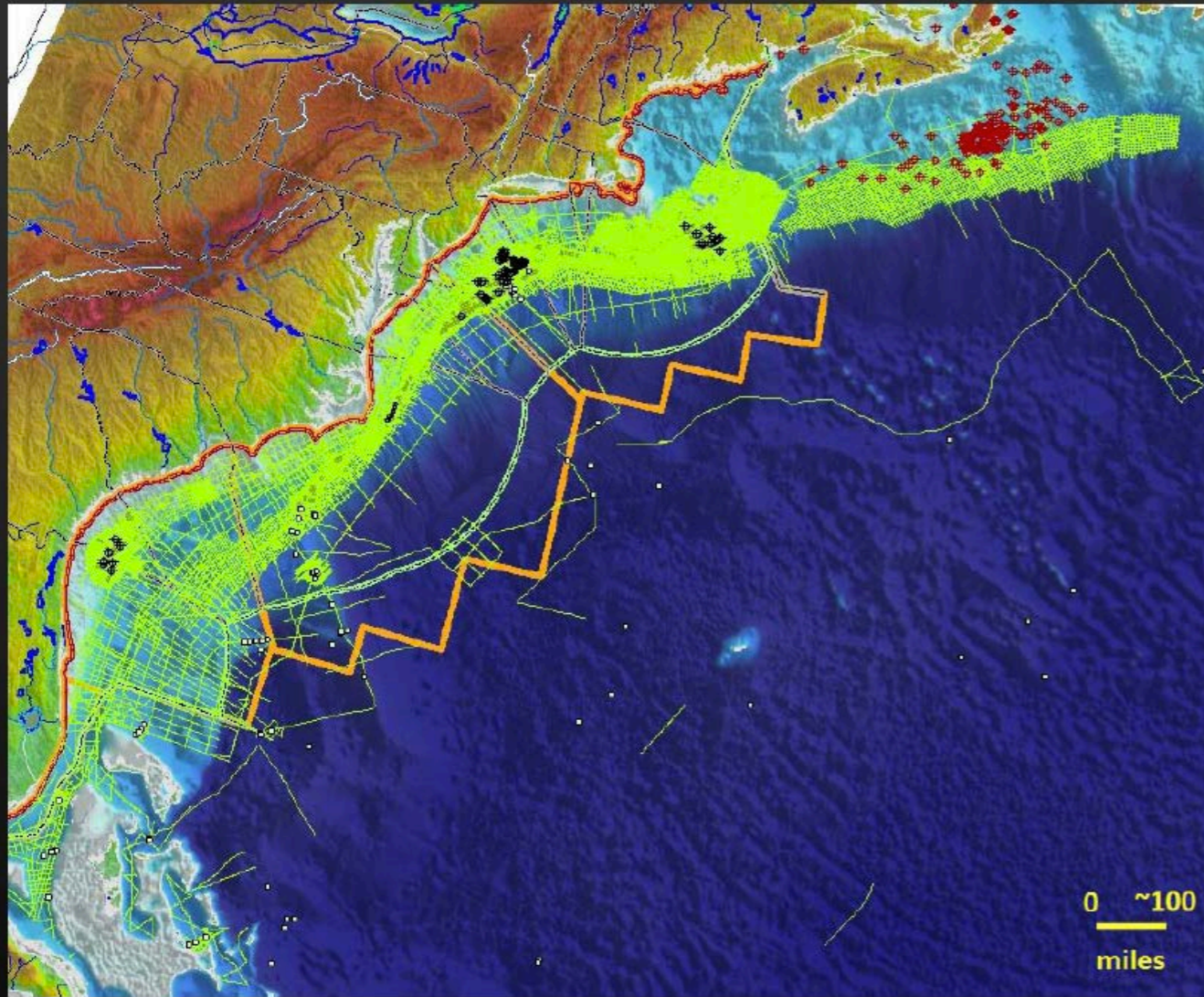
Marine Geohazard Assessment

Primary Message: USGS will continue to work here regardless of ECS funding with the focus being marine geohazard assessment

Overlapping scientific objectives and targets may allow us to leverage resources and expertise

USGS and NSF should coordinate projects aimed at hazard assessment

Brief Update on Existing Seismic Data



BOEM Seismic Archives:

Industry Reprocessing:
Fugro reprocessed all USGS legacy data through depth-converted, time migration.

Framework studies may be a low priority w/ existing coverage, but we need to look into acquiring reprocessed data