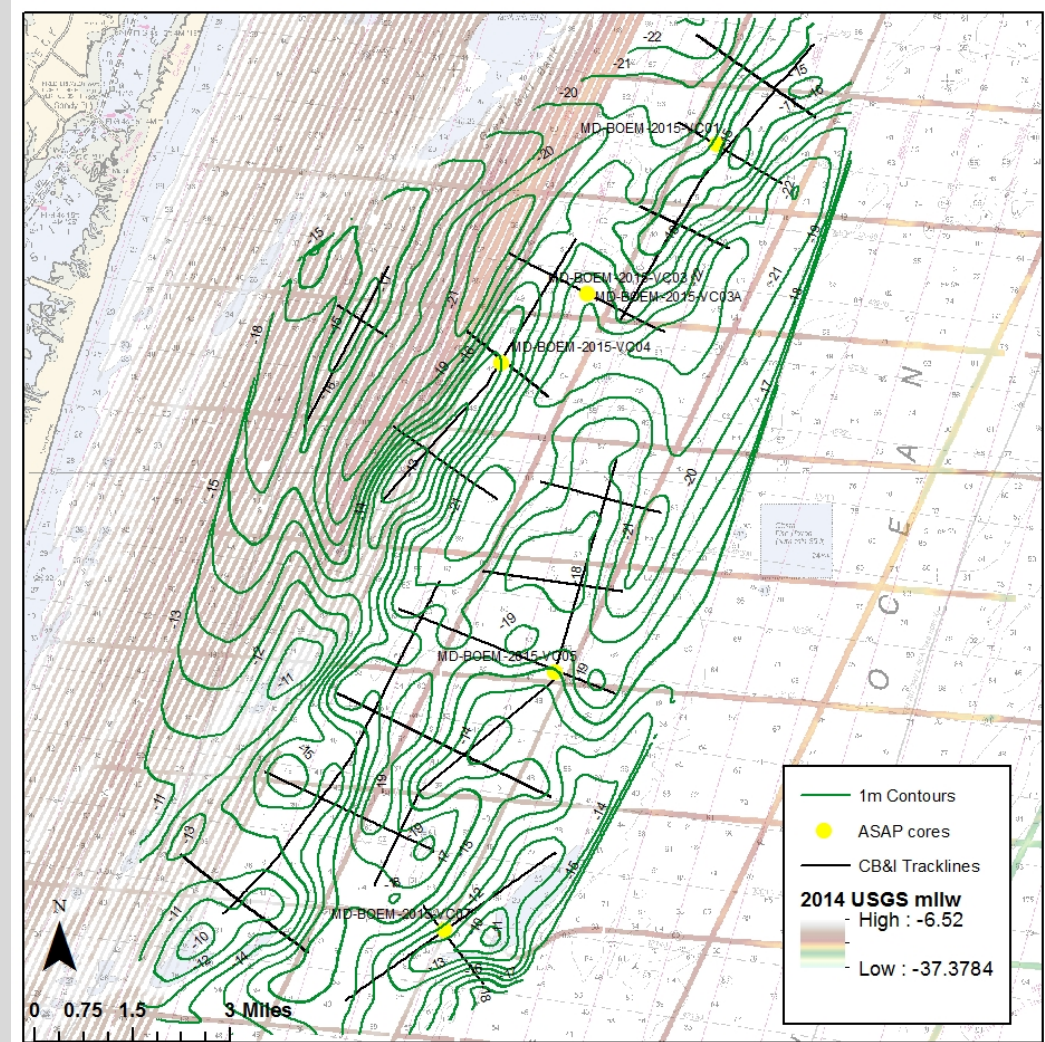


# Maryland Geological Survey

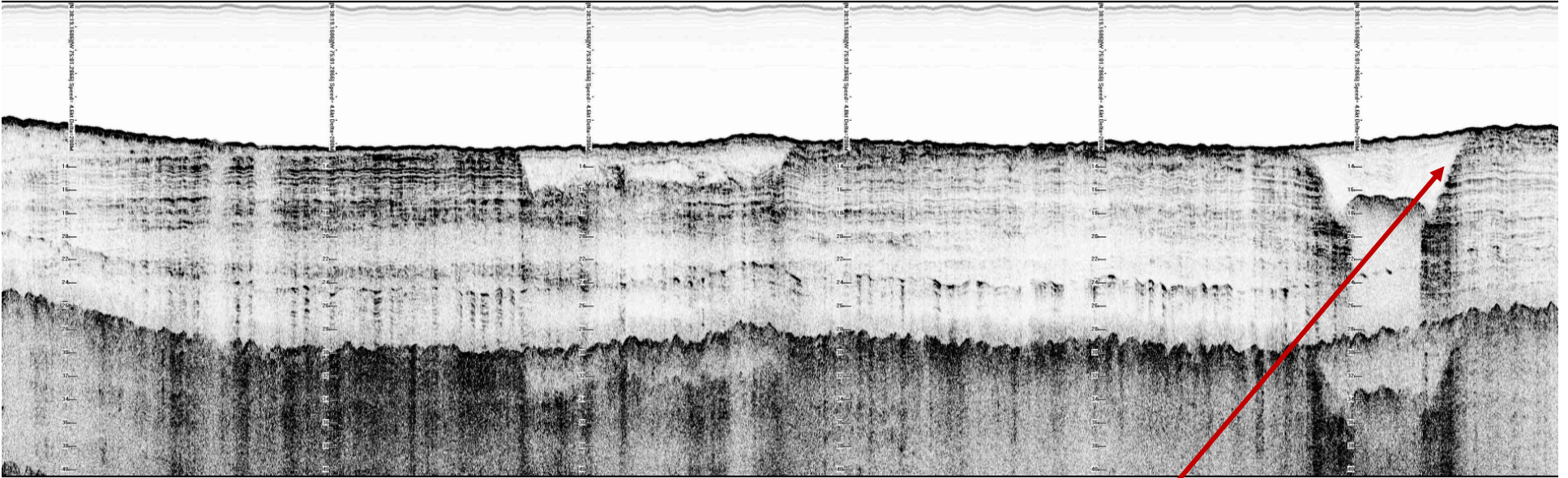
December 14, 2017  
Progress Update

# Refining Bathymetry

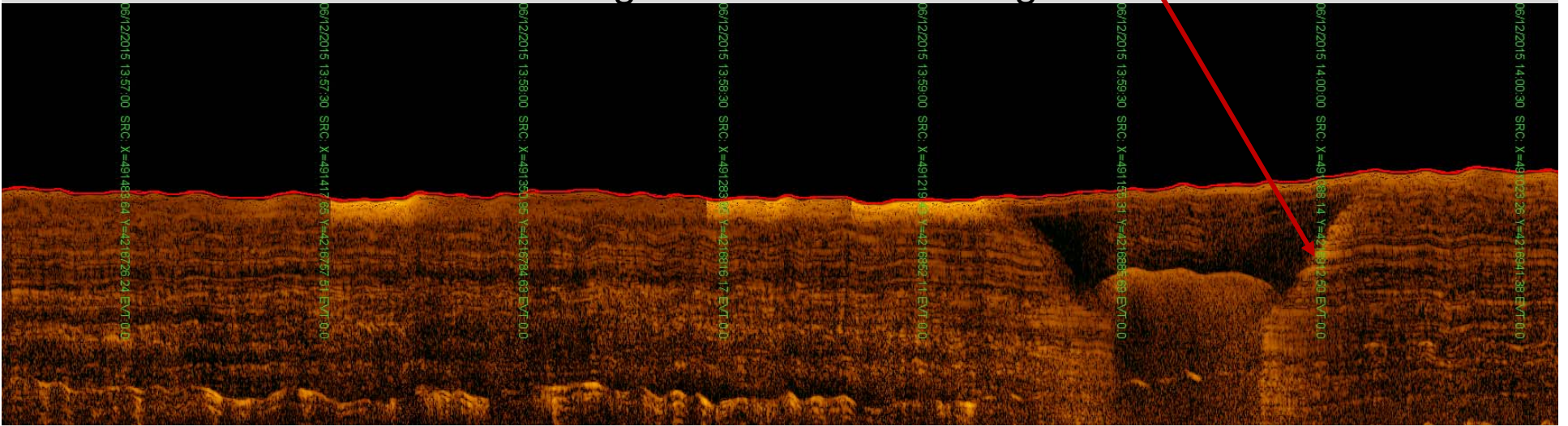
- Along-track ASAP swath bathymetry data from CB&I, adjusted to MLLW
- 2014 USGS Atlantic Coast survey data (MLLW)
- Combined dataset helps fill in the grid between tracklines
- More data points for interpolation



# Interpreting Seismics

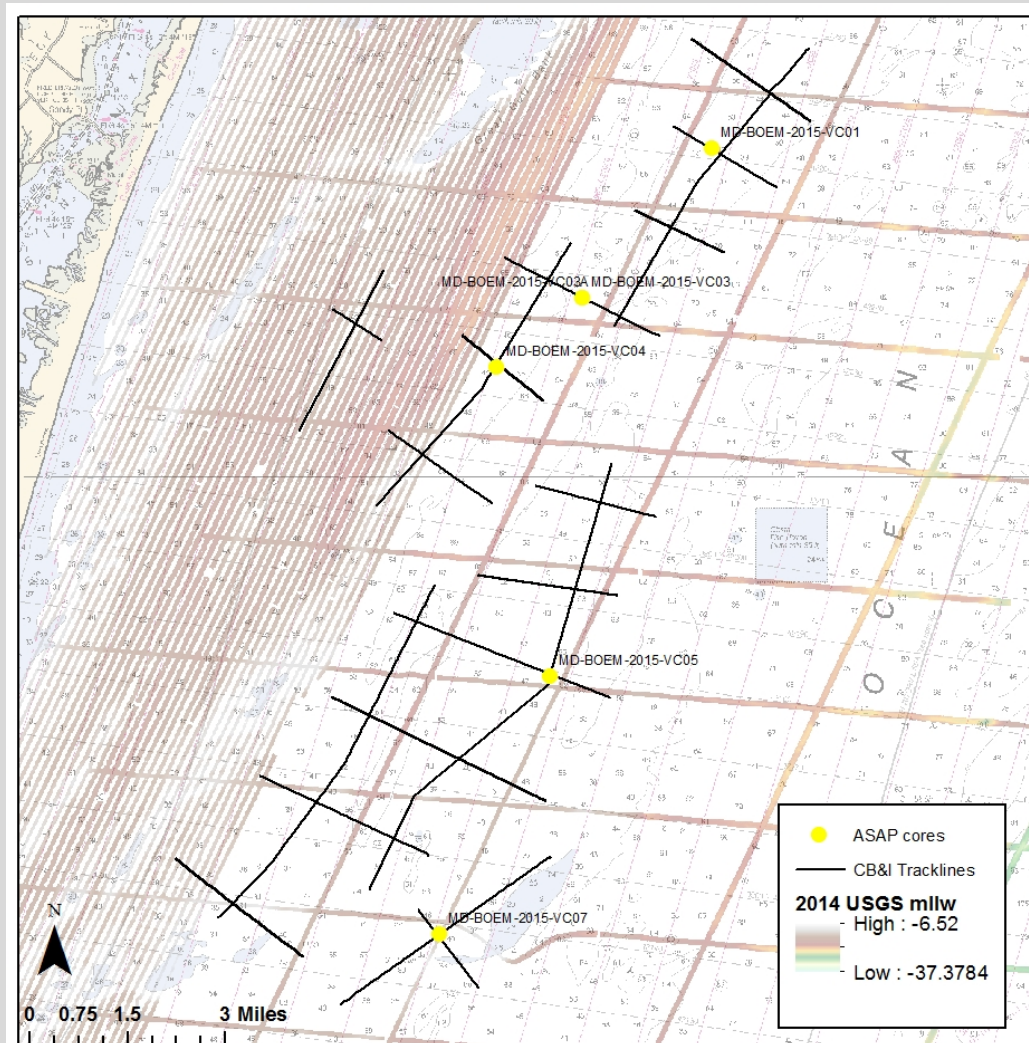
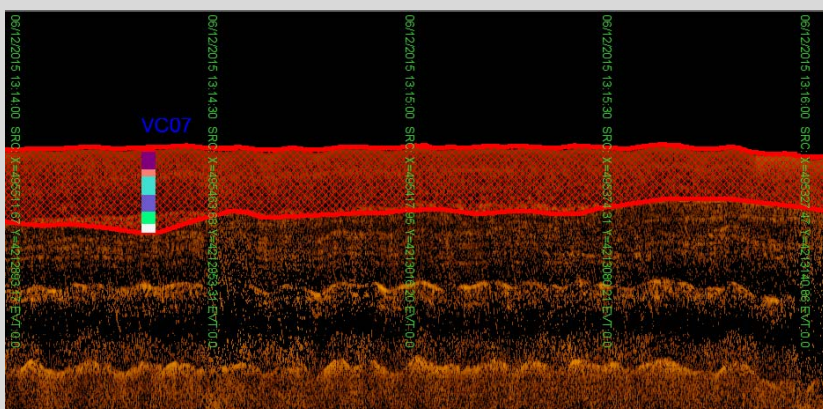


B&W image and SonarWiz5 digitizer



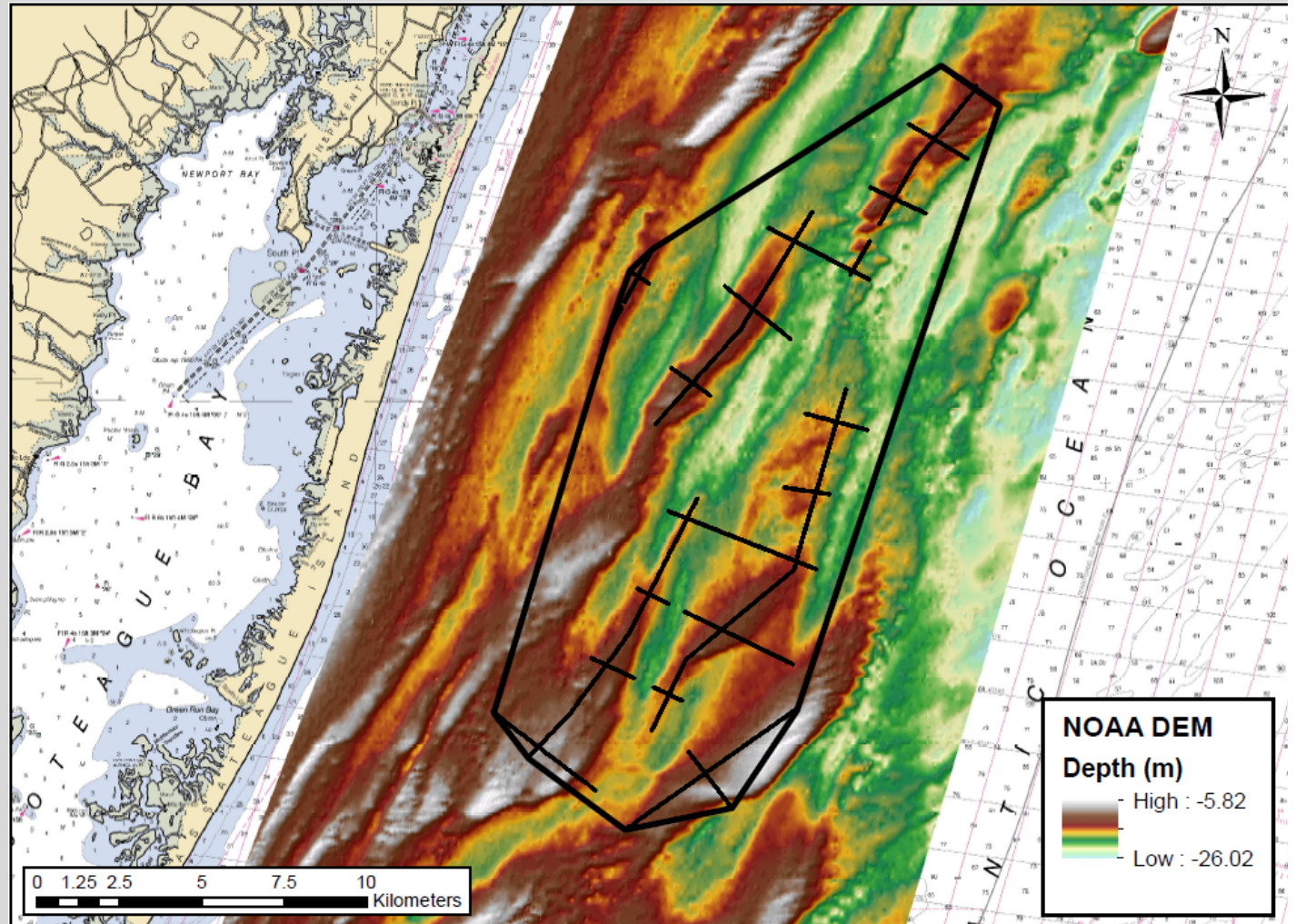
# Data Coverage

- ASAP study area ~9.5km offshore
- USGS 3km grid, CB&I line spacing avg 2-3km
- ~100km of seismic profiles & 5 vibracores for groundtruth



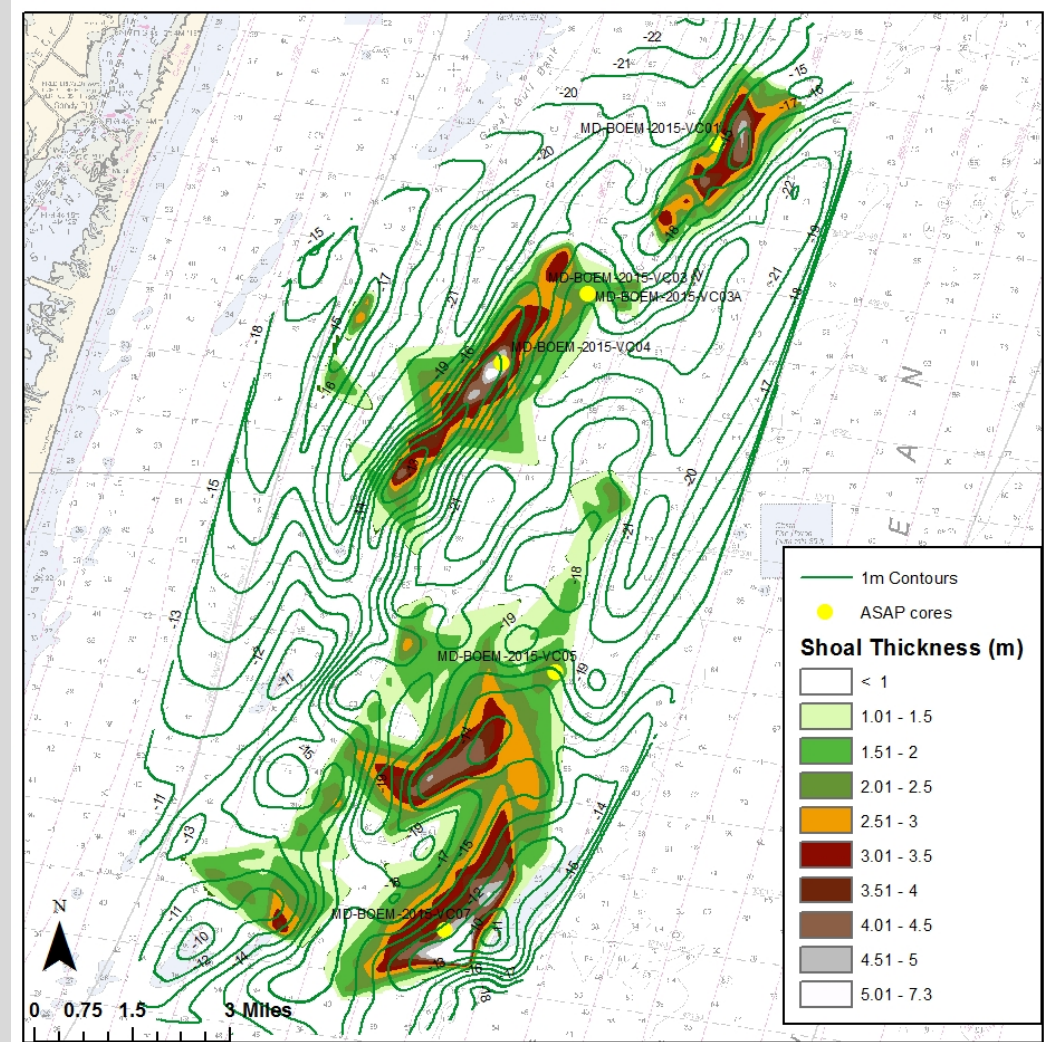
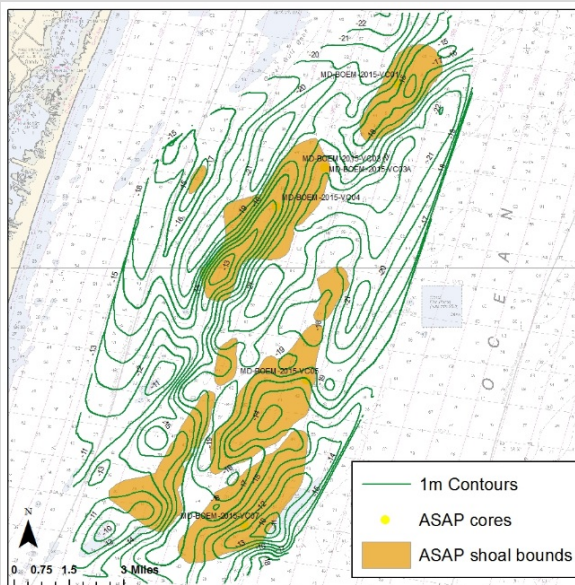
# Shoal Field

- Total field area: 184 million m<sup>2</sup>
- N-S extent spans 30 km (or ~45%) of MD coastline



# Sand Estimates and Shoal Bounds

- Difference b/w bathy & ravinement surface
- Smoothed & display limited to >1m
- Shoal bounds mapped to roughly linear >1m sand bodies



# Shoal Locations

## Shoal Field Statistics:

Mean thickness: 2.3 m

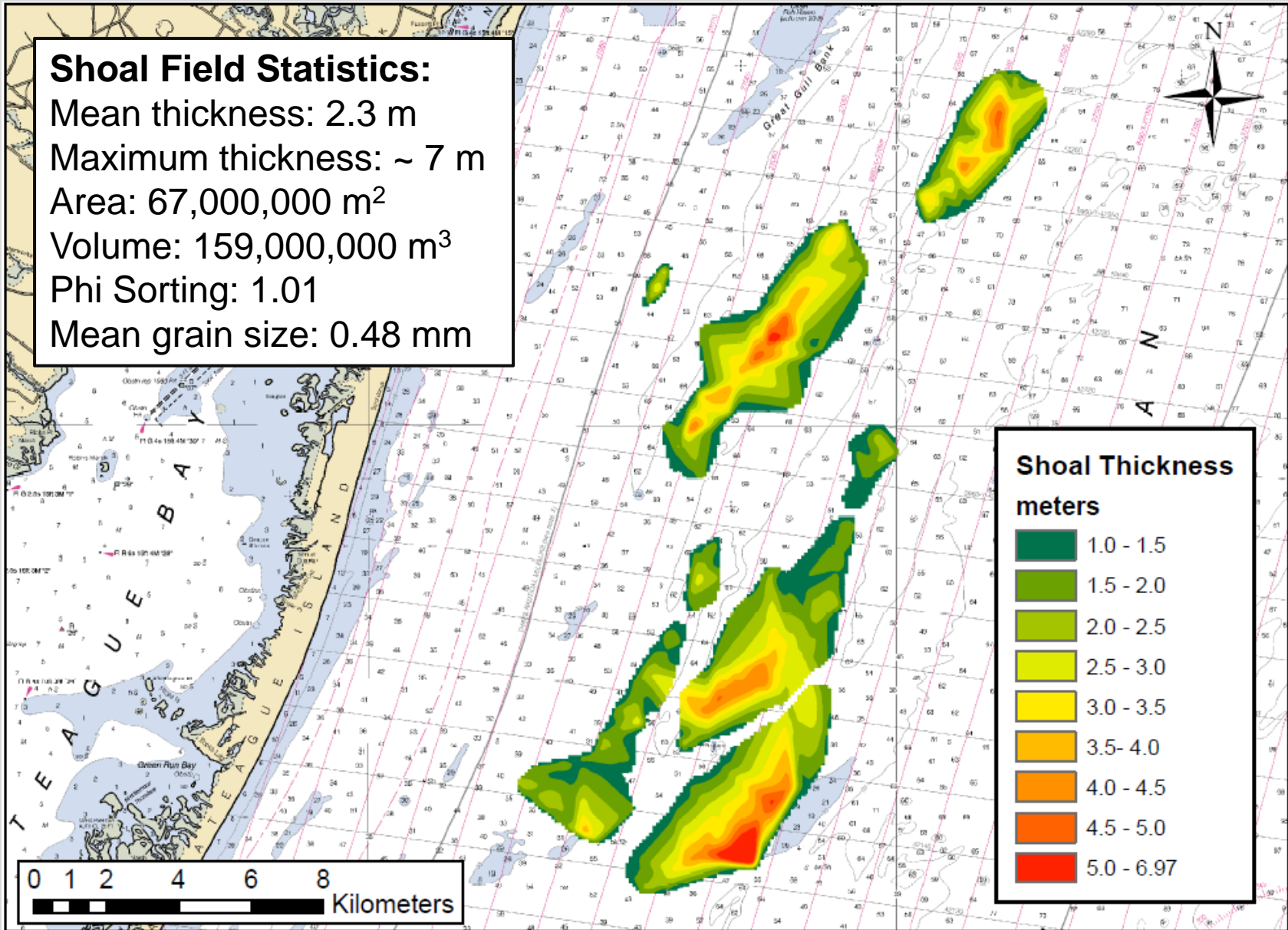
Maximum thickness: ~ 7 m

Area: 67,000,000 m<sup>2</sup>

Volume: 159,000,000 m<sup>3</sup>

Phi Sorting: 1.01

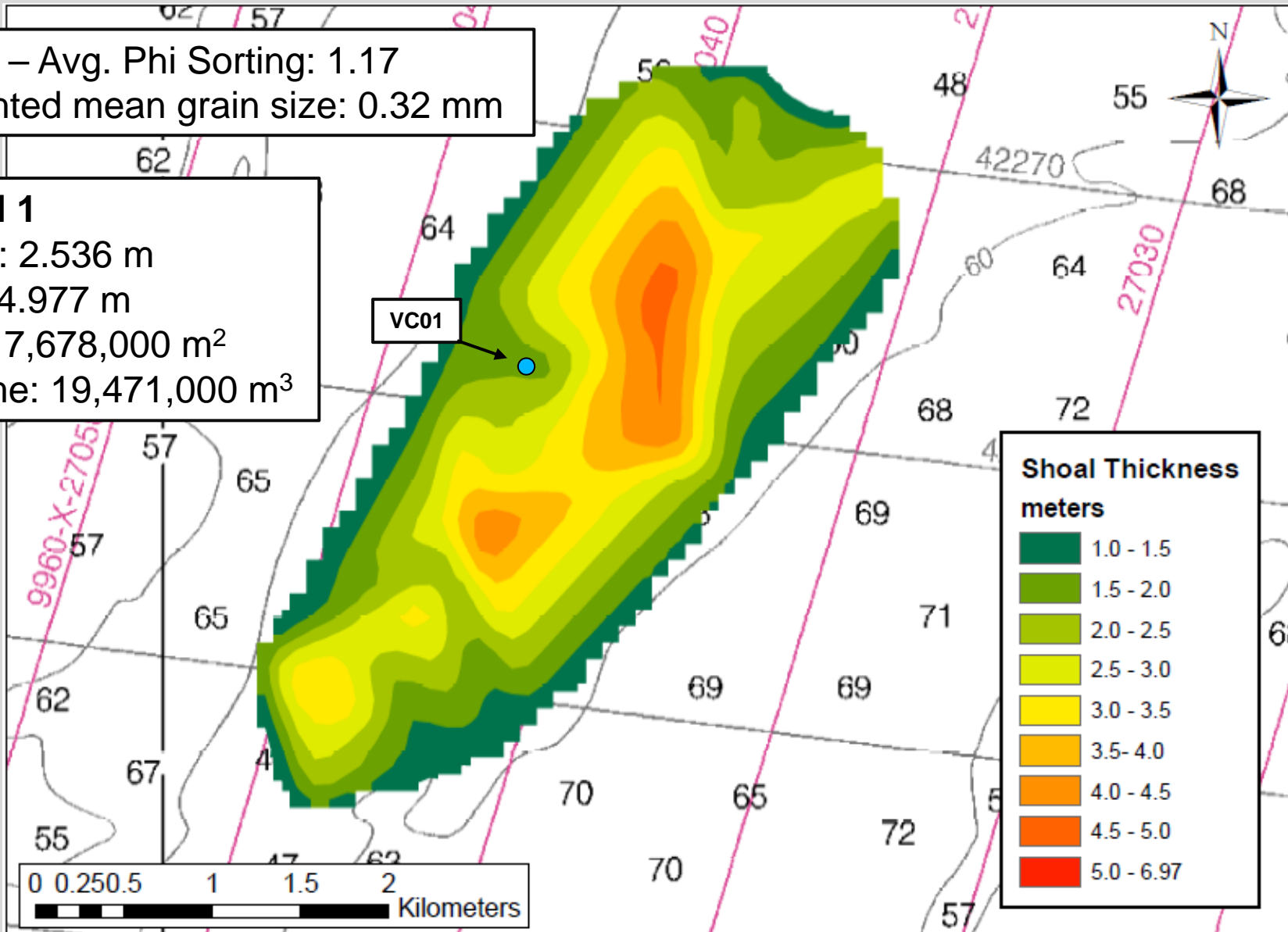
Mean grain size: 0.48 mm



# Shoal 1

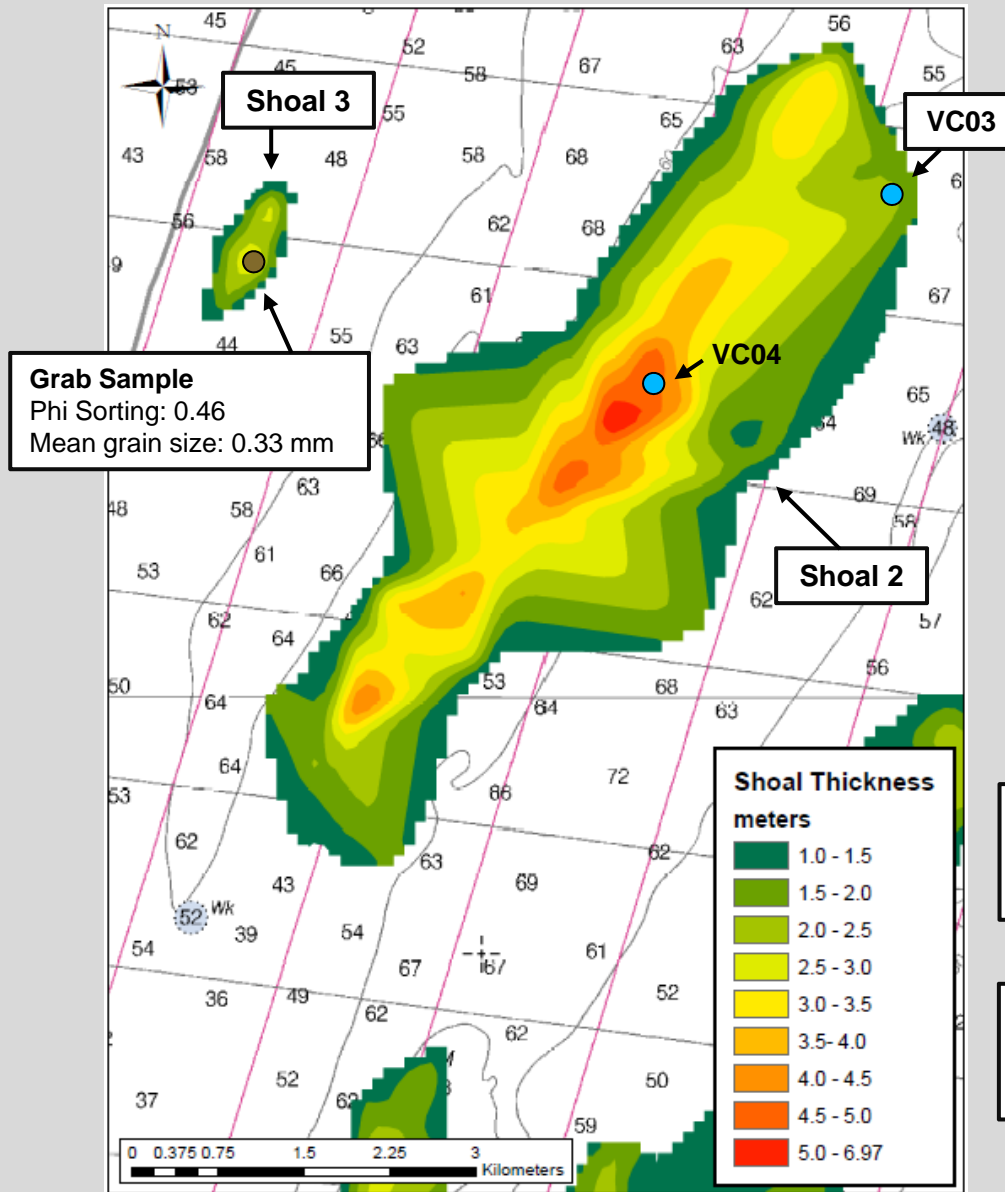
VC01 – Avg. Phi Sorting: 1.17  
Weighted mean grain size: 0.32 mm

**Shoal 1**  
Mean: 2.536 m  
Max: 4.977 m  
Area: 7,678,000 m<sup>2</sup>  
Volume: 19,471,000 m<sup>3</sup>





# Shoals 2 & 3



## Shoal 2

Mean: 2.40 m  
Max: 5.94 m  
Area: 16,670,000 m<sup>2</sup>  
Volume: 40,009,000 m<sup>3</sup>

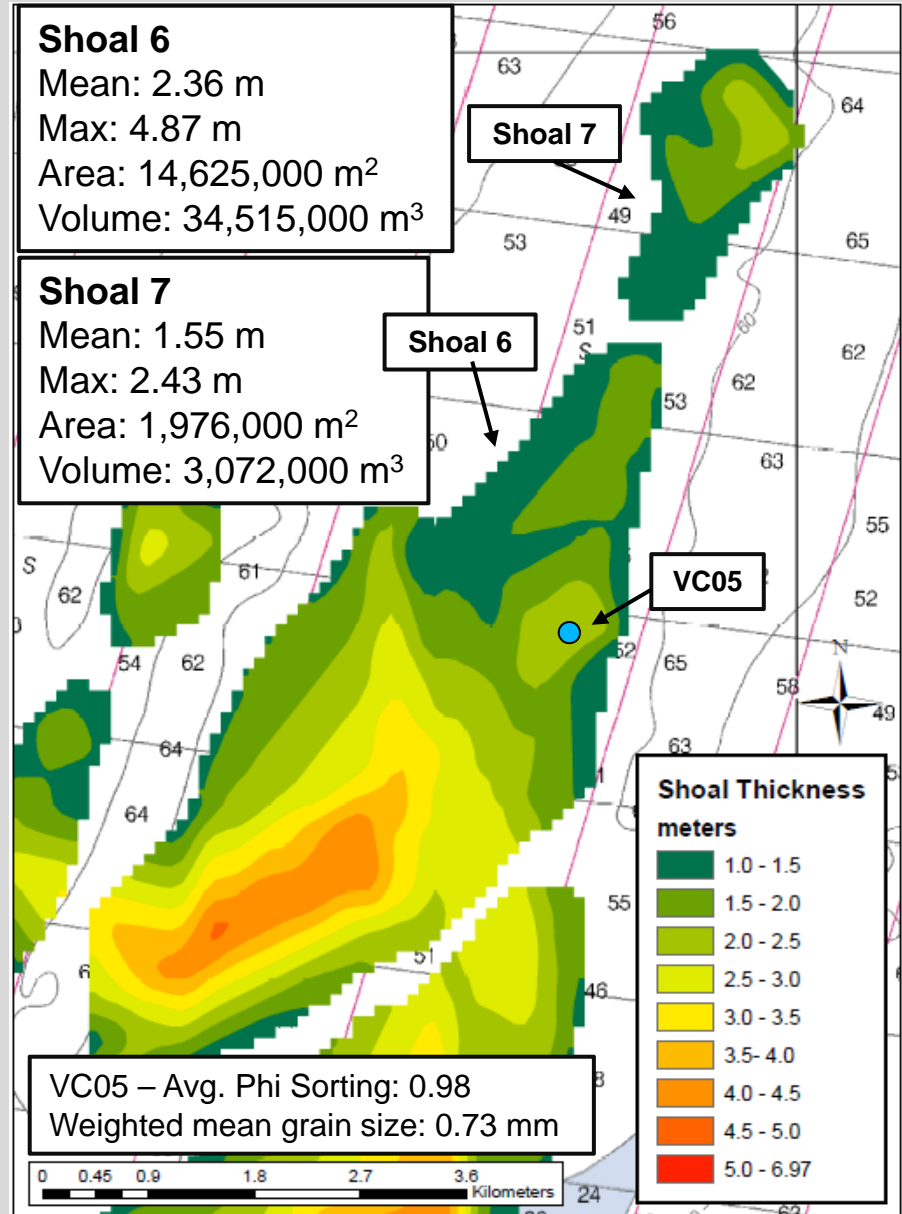
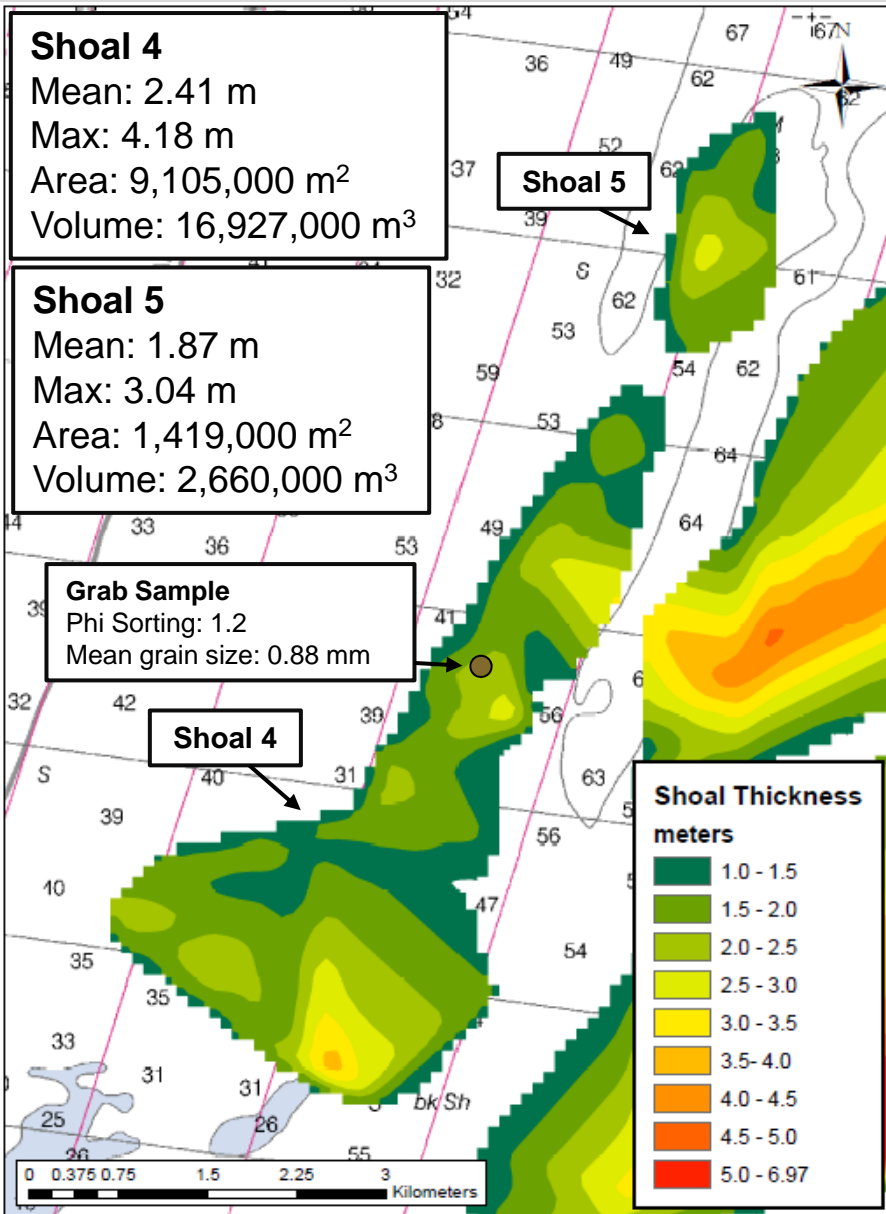
## Shoal 3

Mean: 2.41 m  
Max: 3.59 m  
Area: 383,000 m<sup>2</sup>  
Volume: 923,000 m<sup>3</sup>

VC03 – Avg. Phi Sorting: 1.00  
Weighted mean grain size: 0.36 mm

VC04 – Avg. Phi Sorting: 0.82  
Weighted mean grain size: 0.44 mm

# Shoals 4 - 7



# Shoal 8

