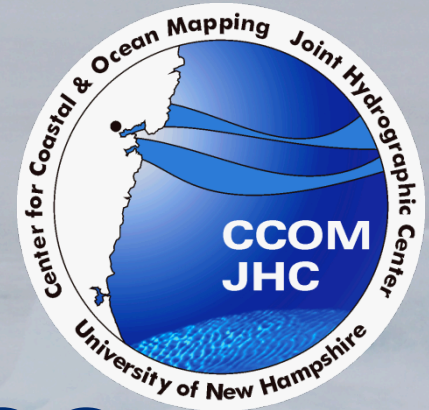


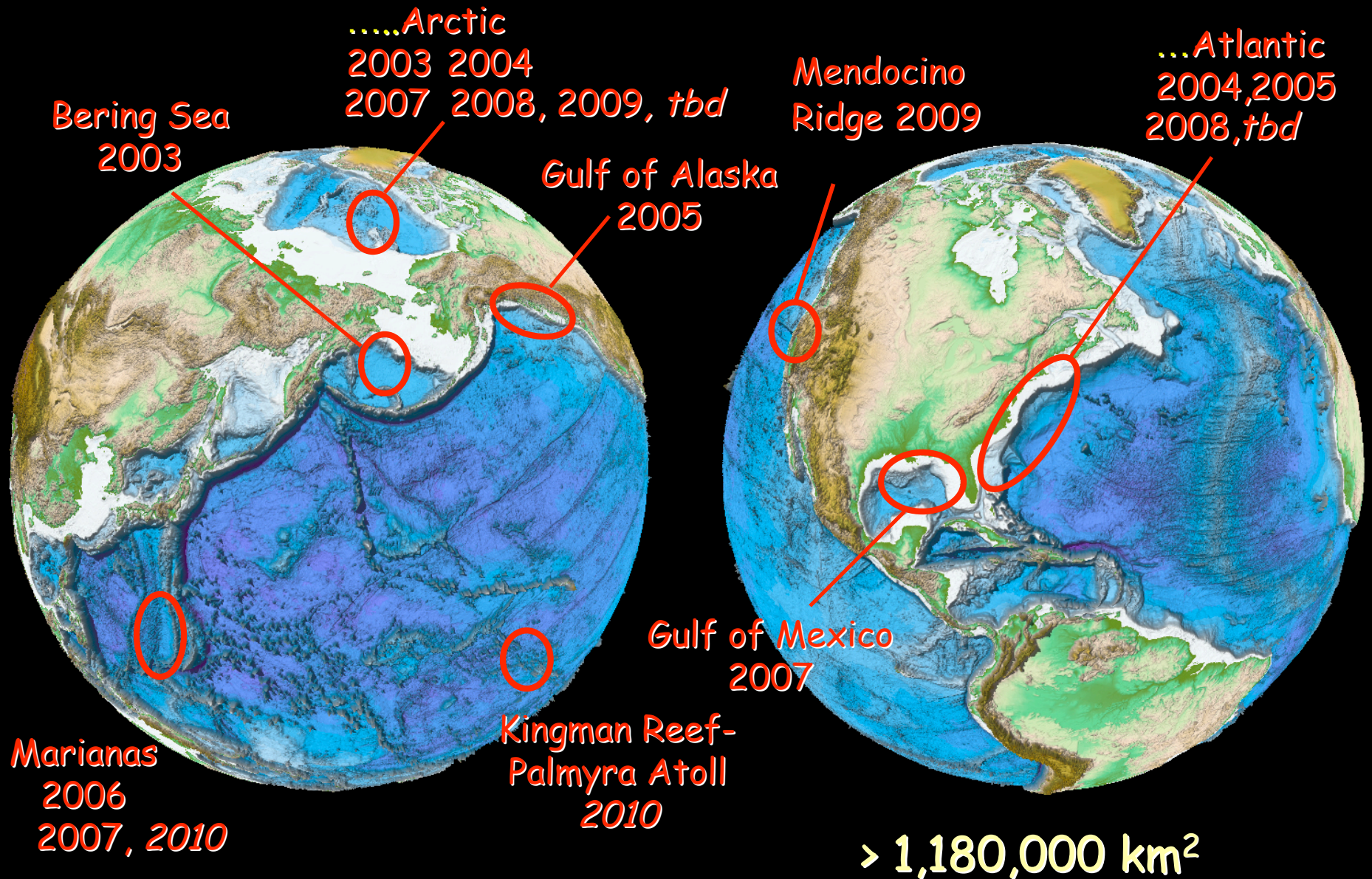


Healy Arctic UNCLOS Mapping Update

Andy Armstrong
AICC

December 2009

UNH CCOM-JHC U.S. Law-of-the-Sea Bathymetric Mapping to Date



Arctic Cruise 2009

Two-icebreaker seismic
U.S. Geological Survey-Hutchinson
NR Canada-Moser
Healy Bathymetry
UNH-Mayer
NOAA-Armstrong

Priority to seismic profiling with
Canada



HEALY 09-05

Start: 4 Aug. 2009 -- Barrow, Alaska

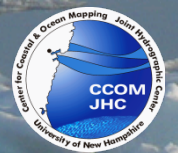
End: 16 Sept.2009 -- Barrow, Alaska

Total Track Length – 5175 nm (9585 km)

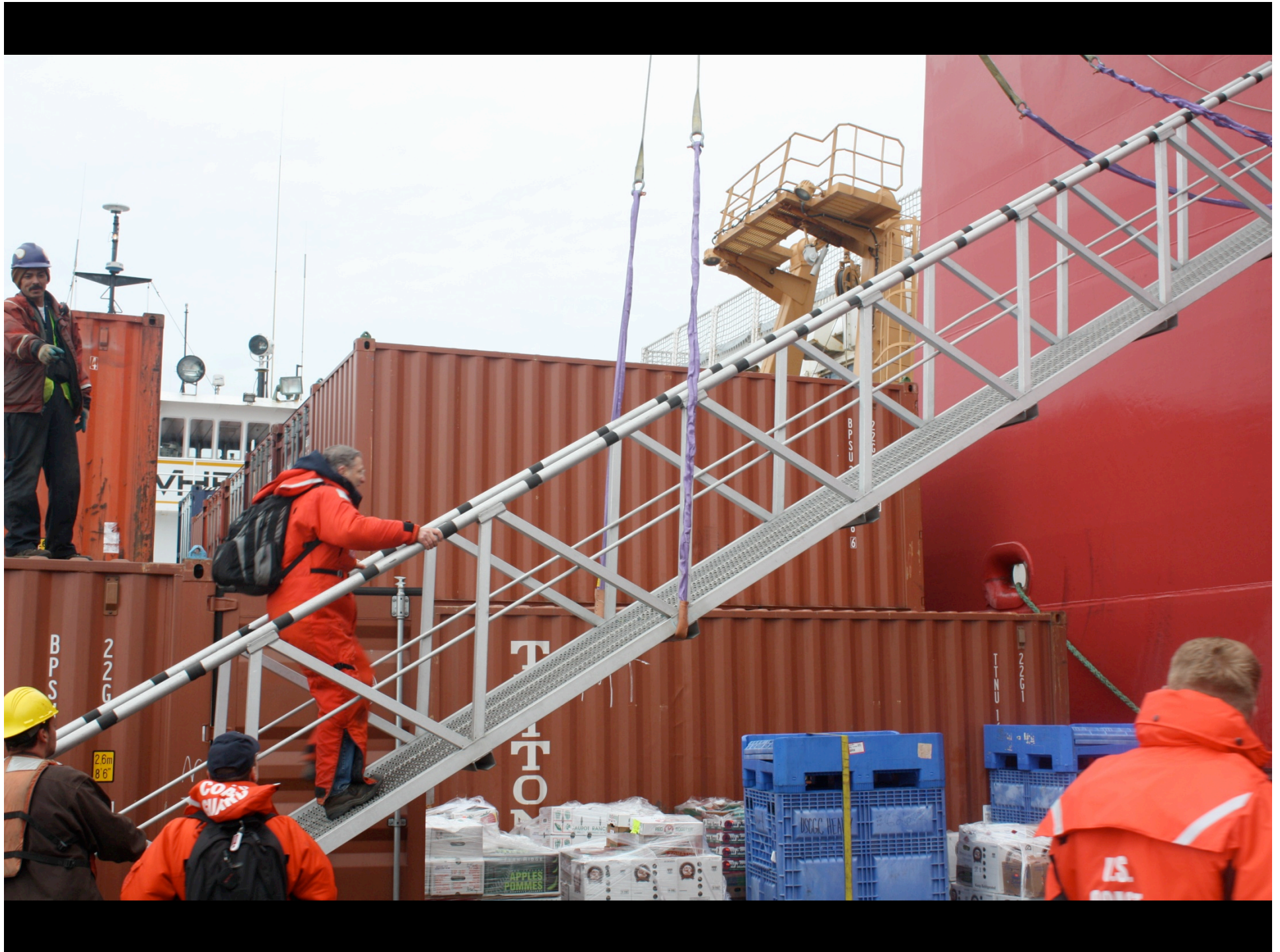
Average Speed for survey – 4 kts

Science Party:

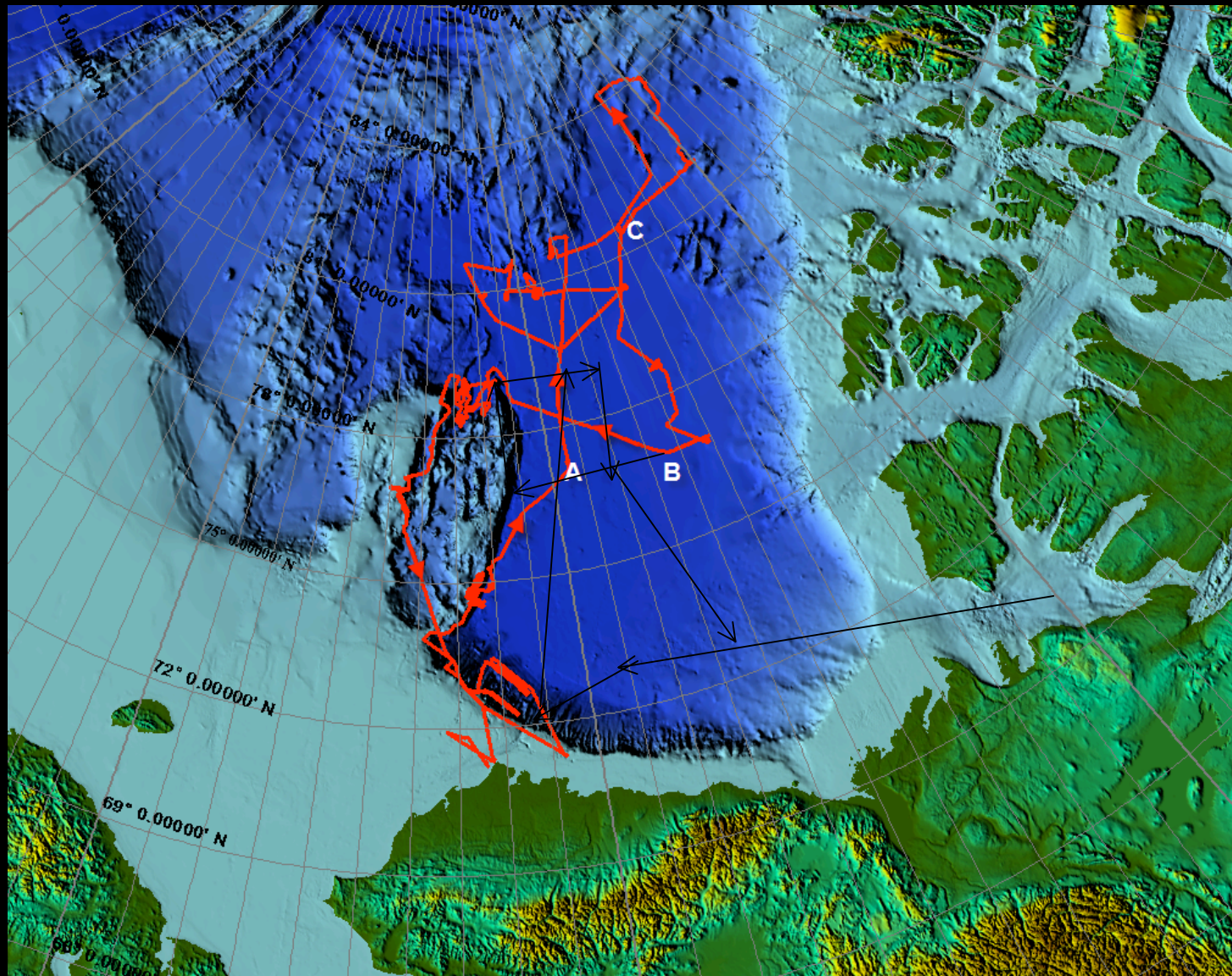
UNH-8 (Including 1 JHOD); State Dept.-1; NGDC-1;
Stanford-1; UMich-1; NIC-4; USGS-1; UCSD-2; USN-2,
Vermont School of Law, 2 School teachers, MMO,
Community Observer







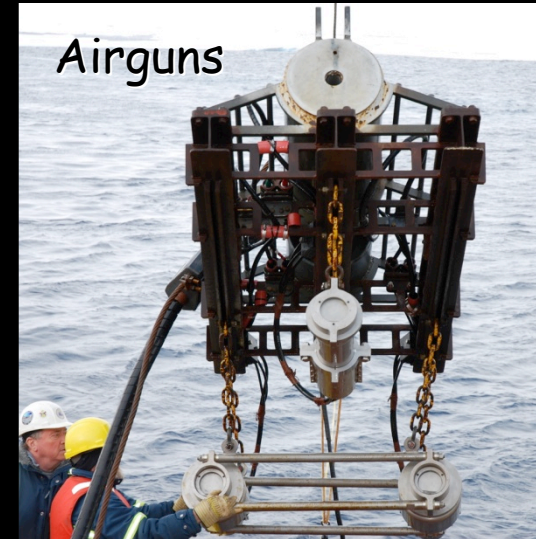
HEALY 0905



Louis S. Ste. Laurent



Compressor



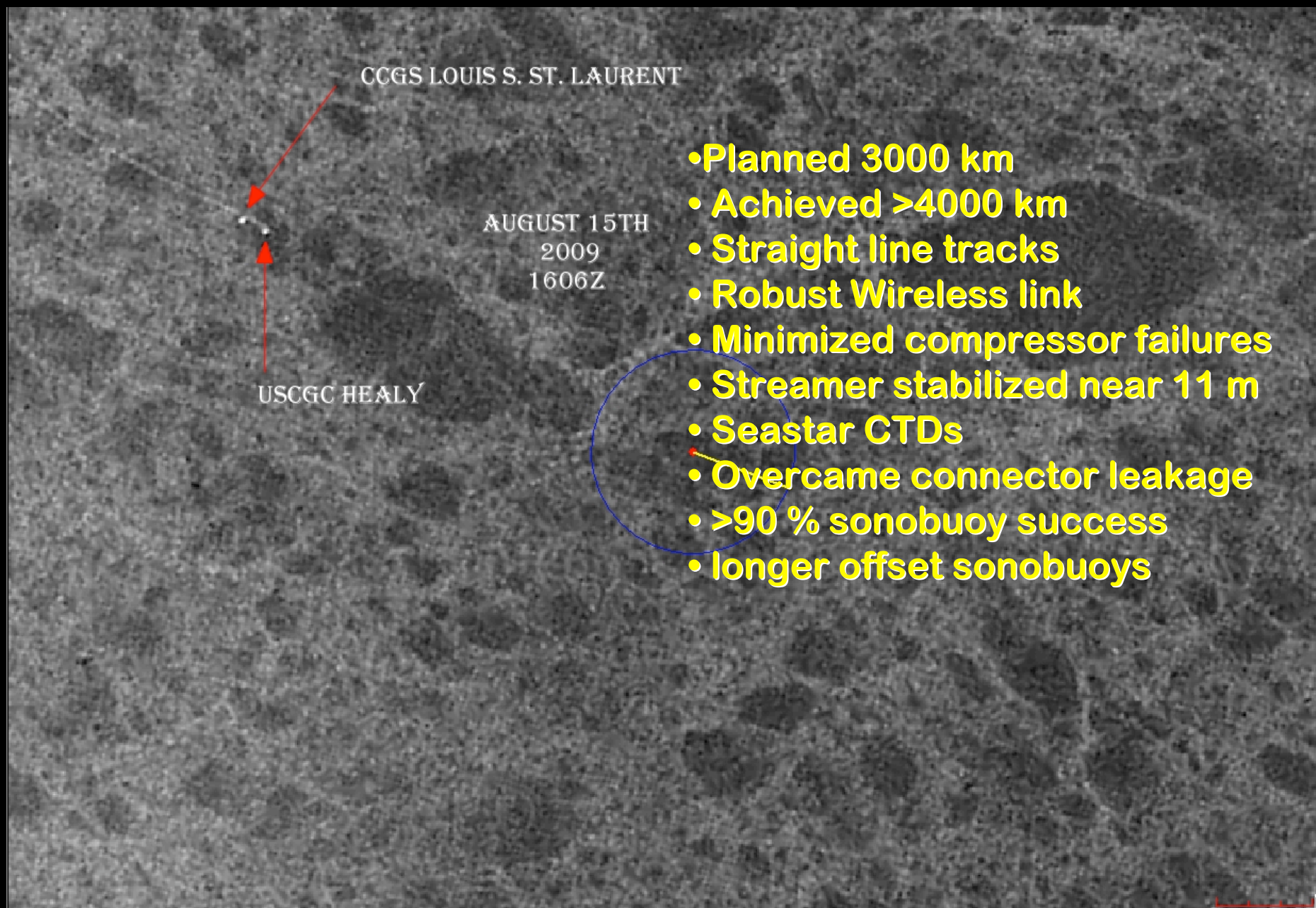
Airguns



Streamer



Technical Achievements

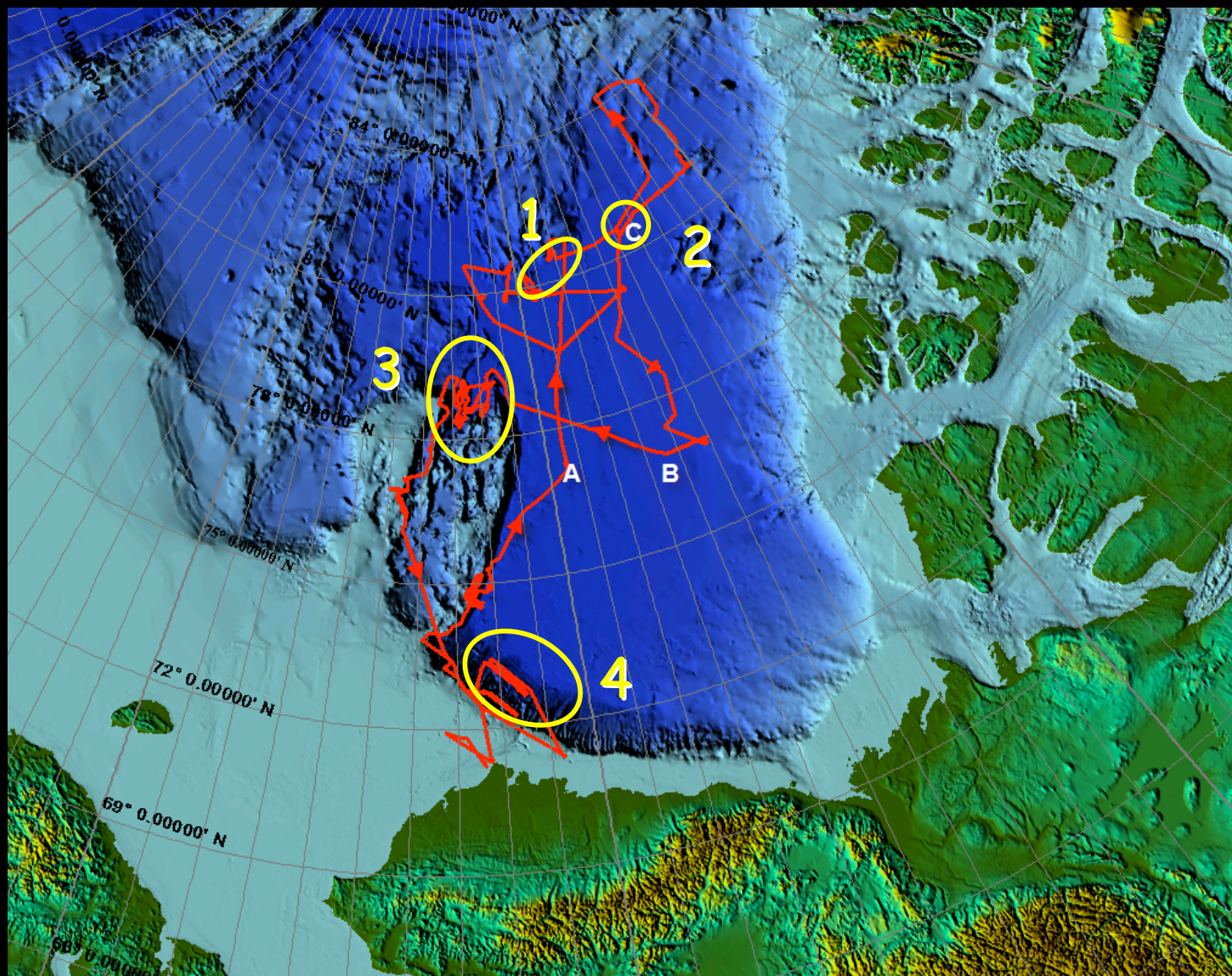


Science Successes

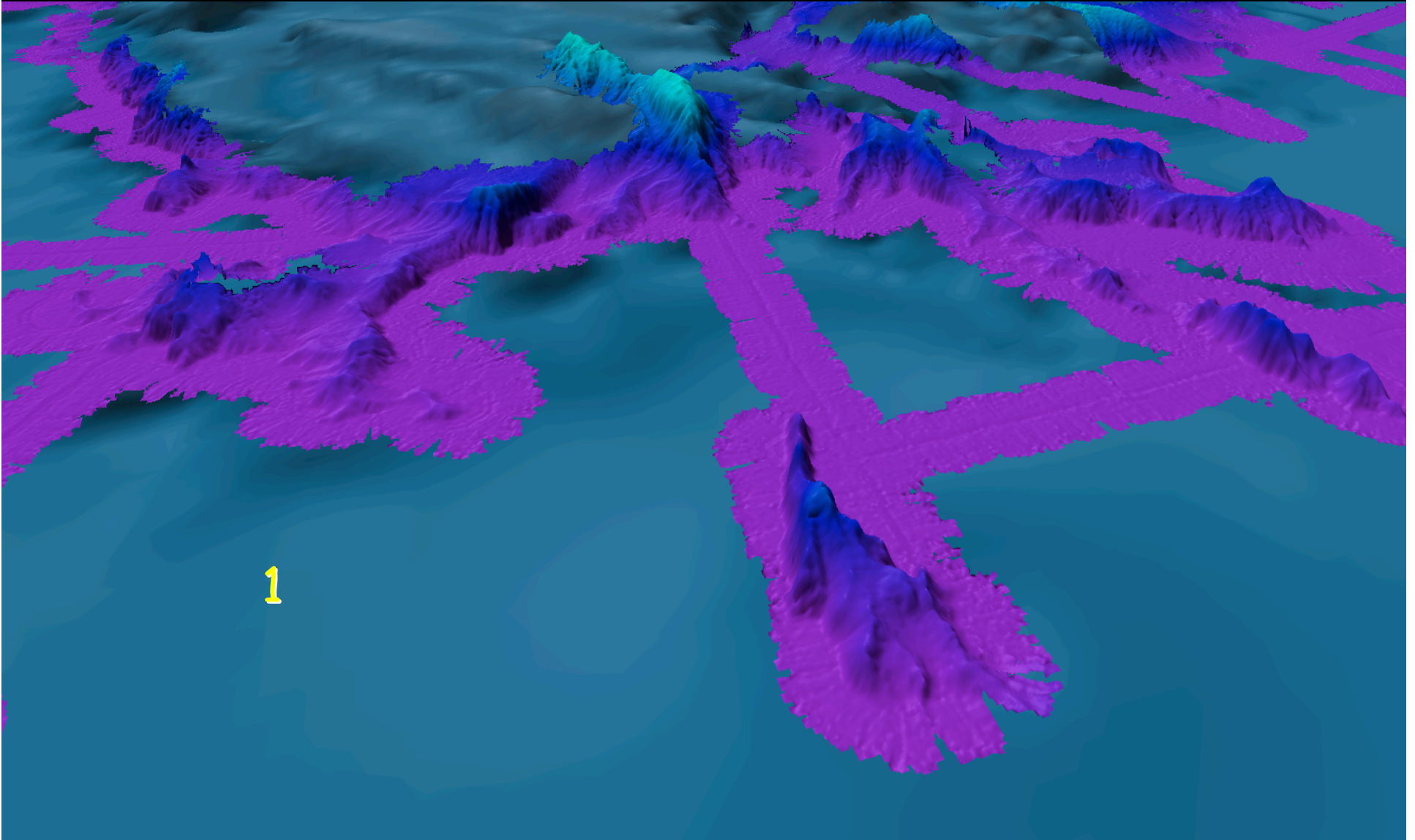
- Remarkable imaging of changes in basement morphology and geometry
- Stratigraphic relations to show relative timing of Alpha Ridge formation
- Unusually quiescent basin tectonically
- Adds to crossings of enigmatic CB Gravity Anomaly – associated with a basin/graben rather than a sea floor spreading center
- With sonobuoys an unequaled data set for imaging the ocean-continent boundary in the Canada Basin
- Many indicators of subbasement reflections
- Imaged numerous volcanic edifices
- Imaged over 2008 dredge site #1
- Adds multiple tie lines for relating results from 2007, 2008, and 2009 surveys.



HEALY 0905



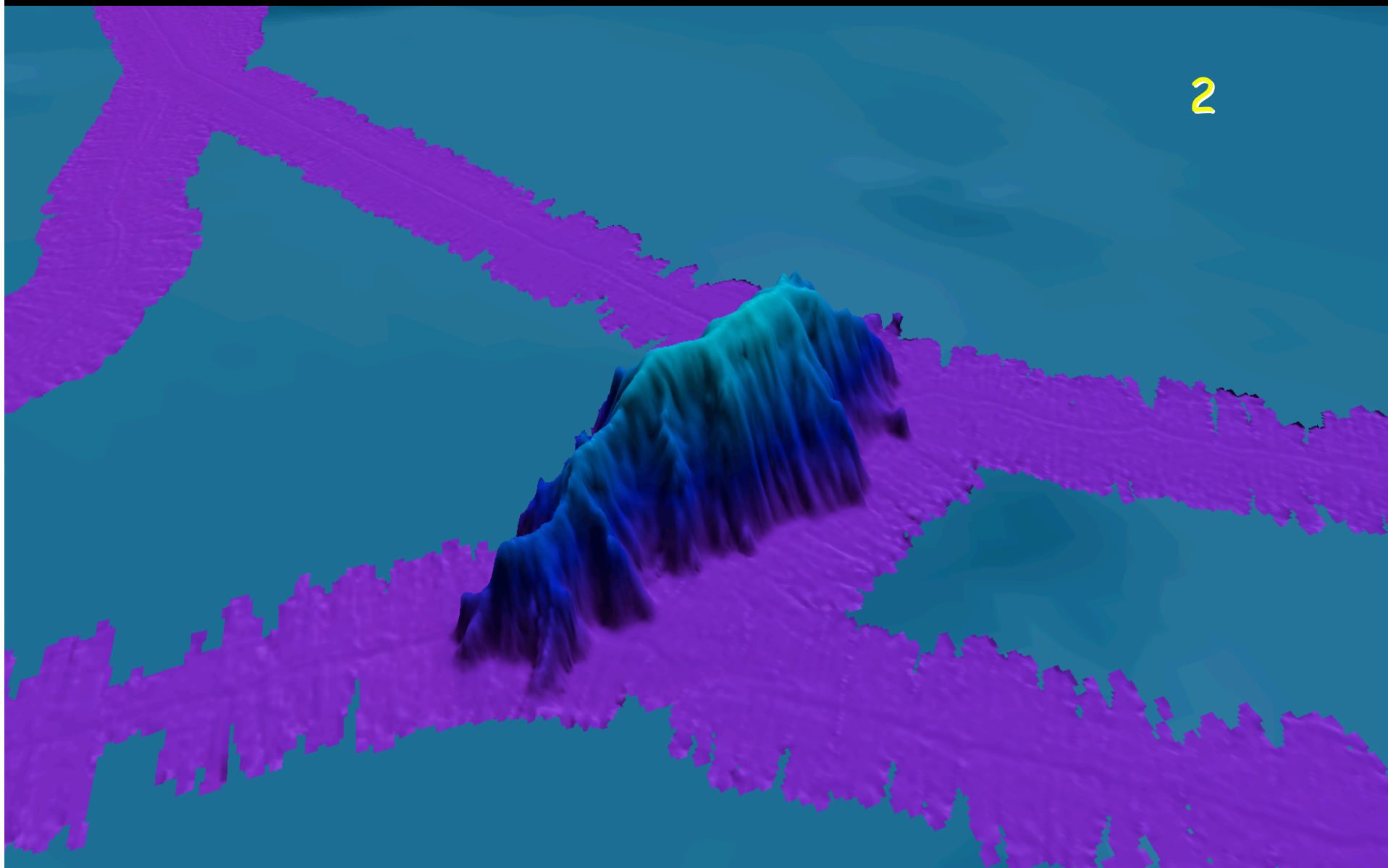
HEALY 0905 FoS Surveys



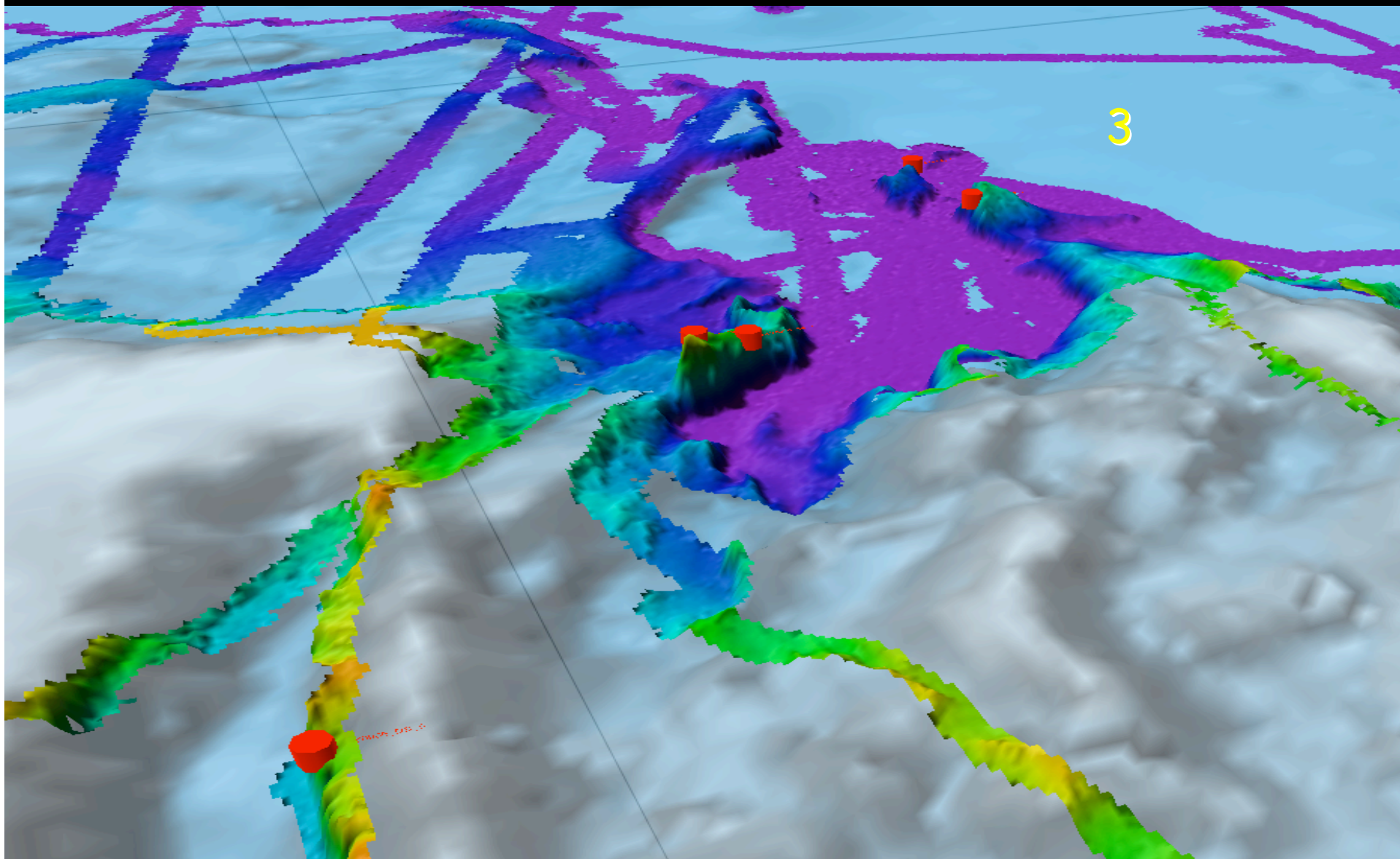
1

New Seamount

2



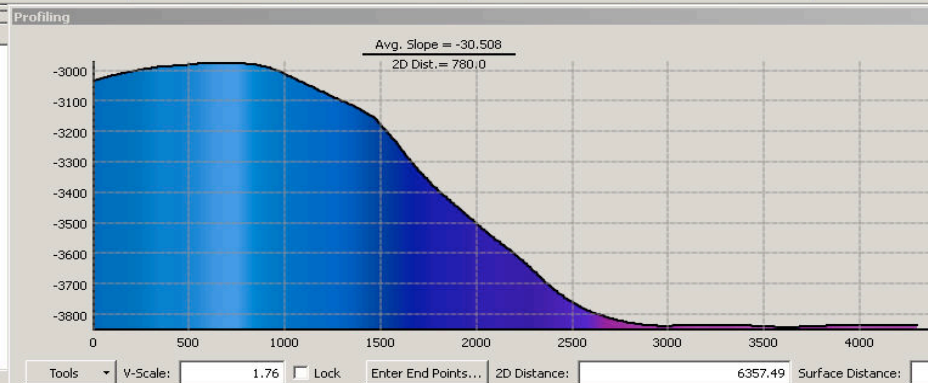
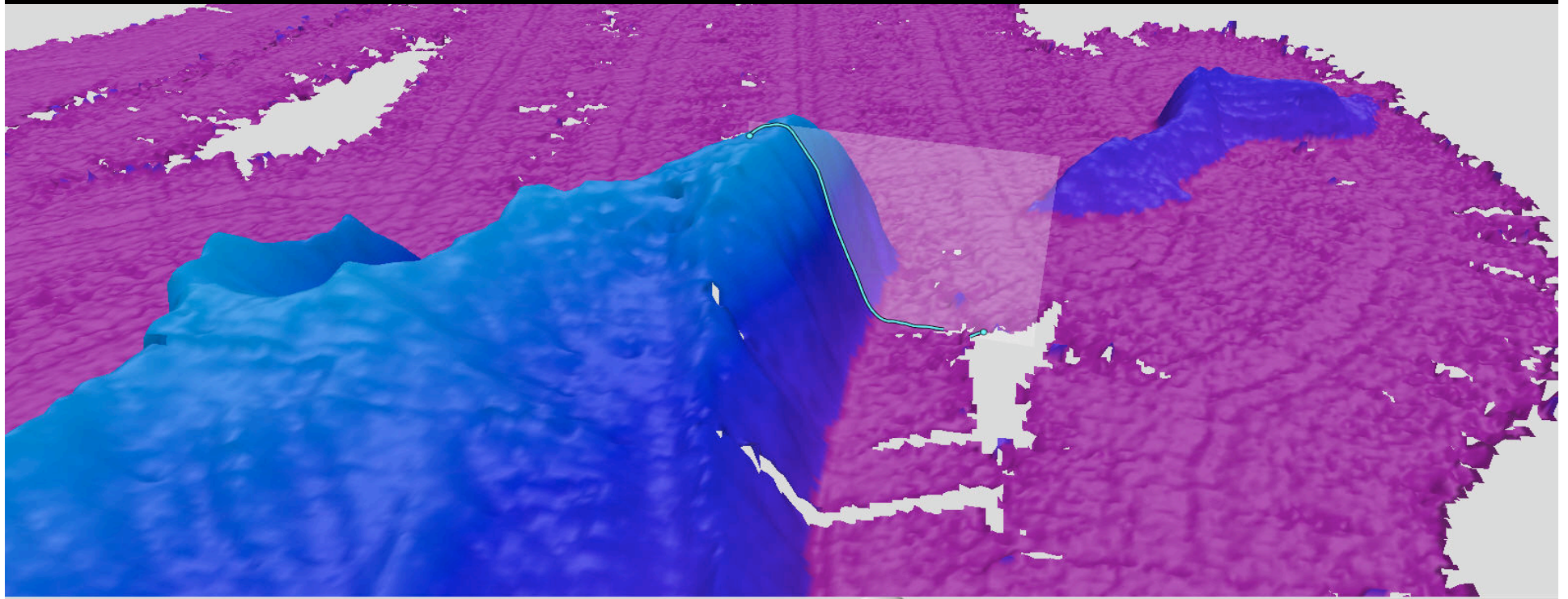
Healy 0905 Dredge Sites



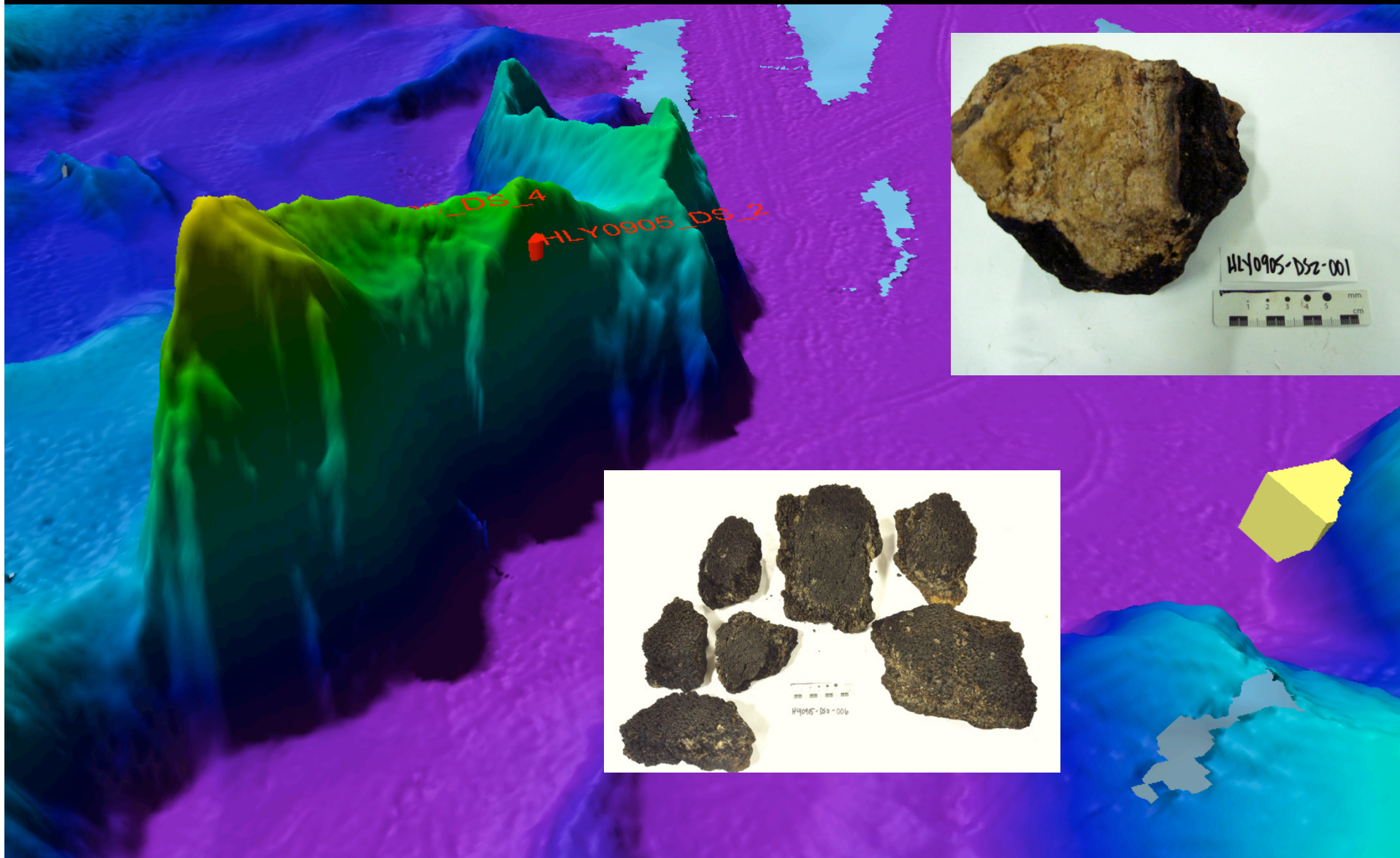
Dumping the Dredge



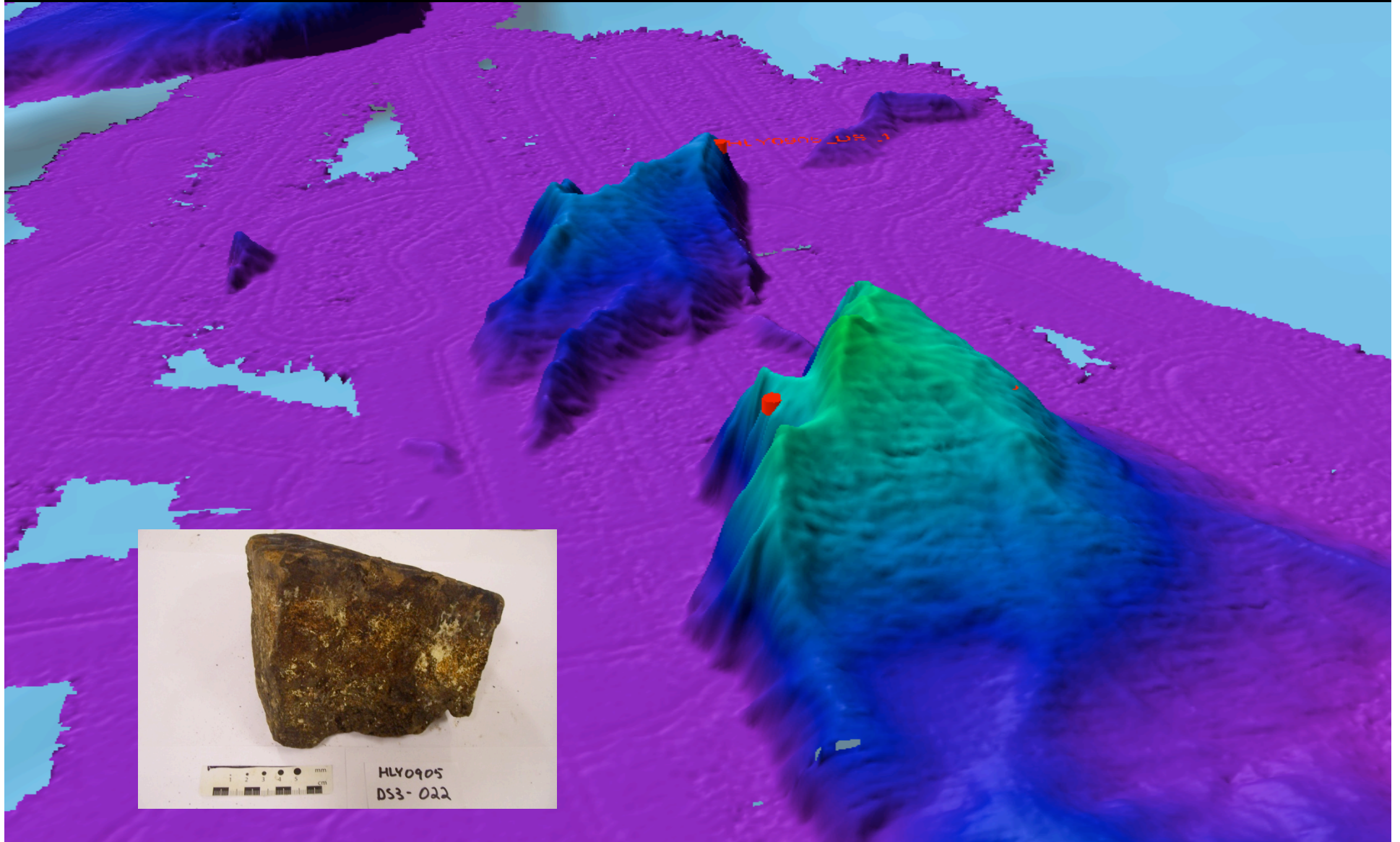
Dredge Site 1



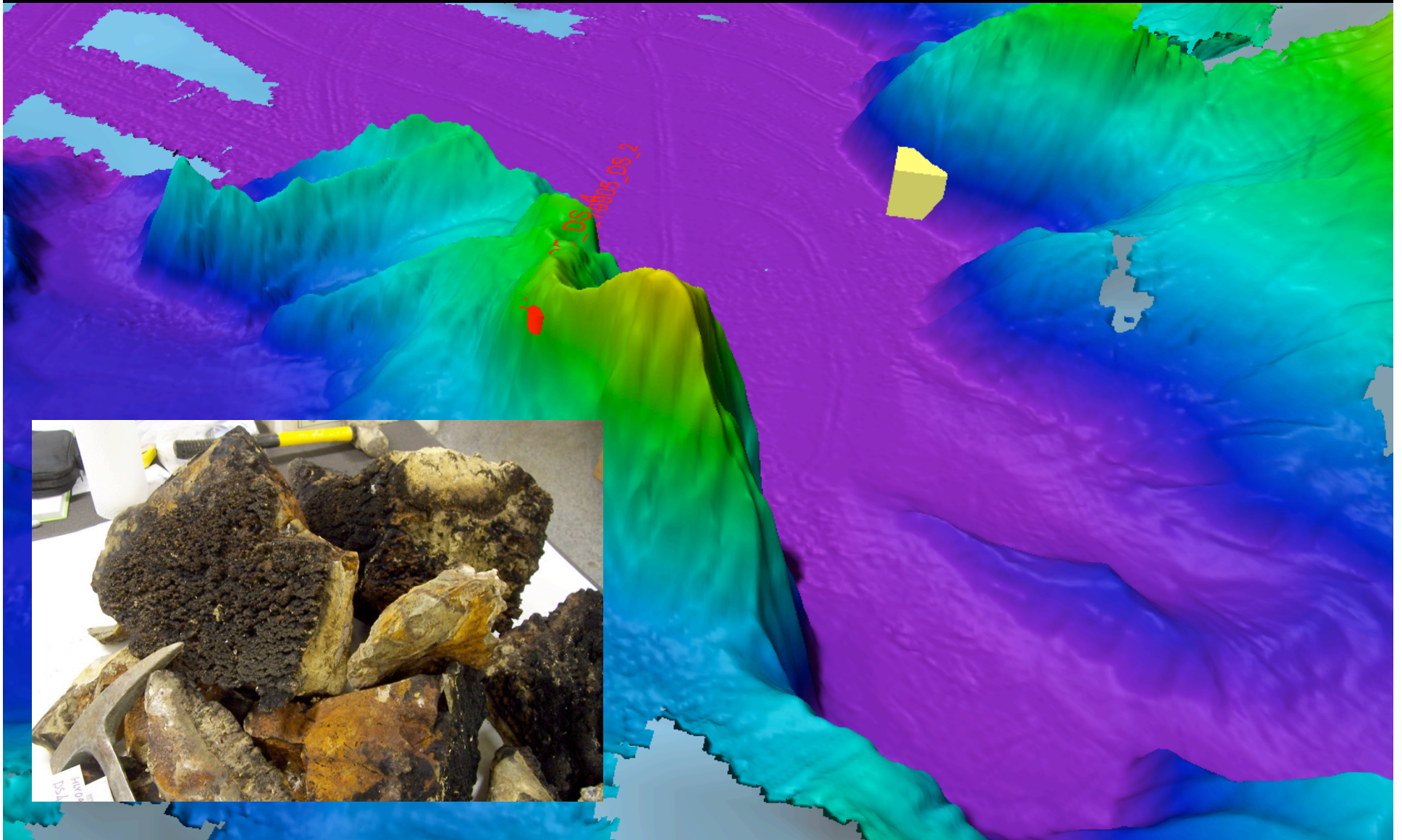
Dredge Site 2



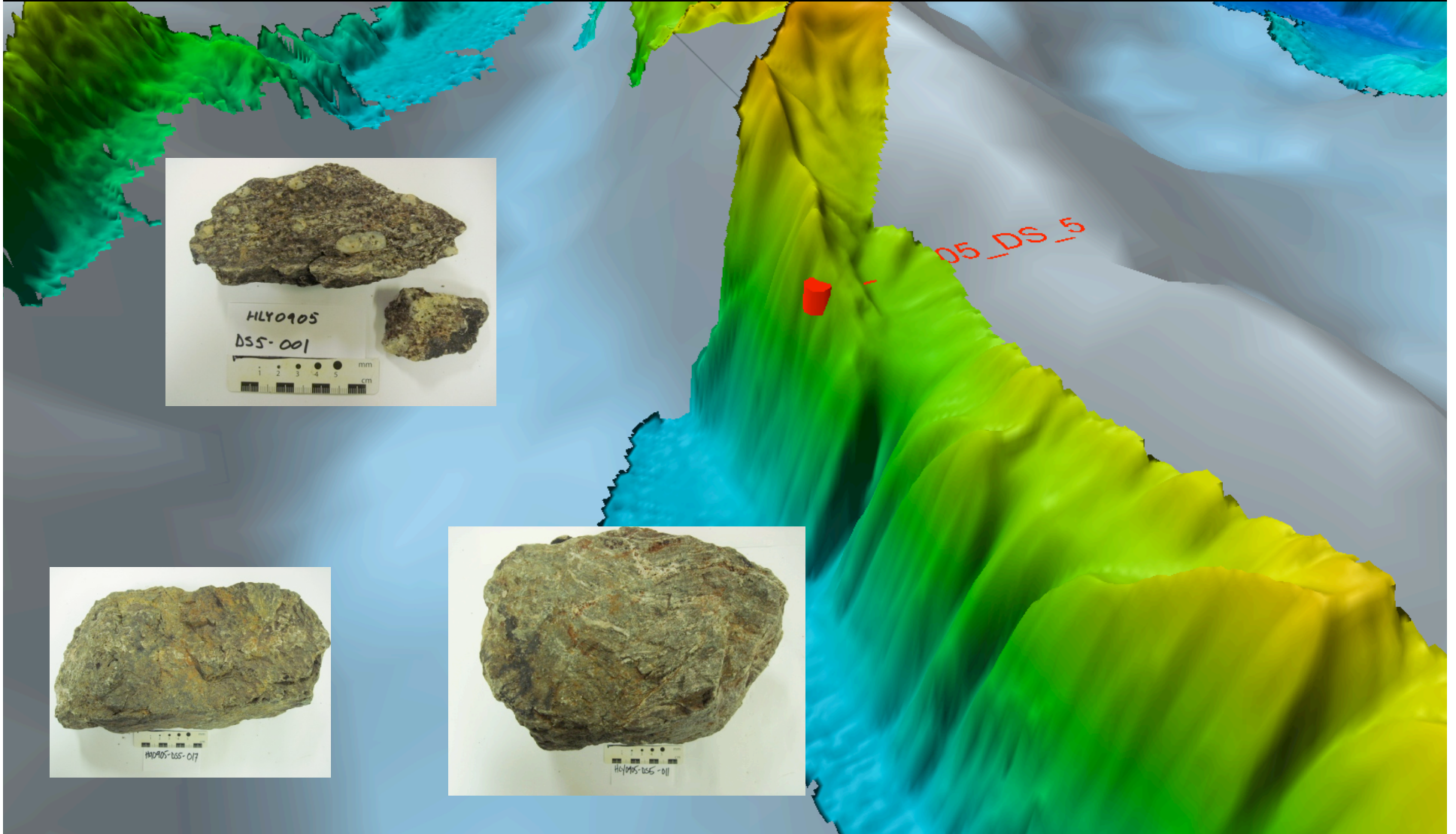
Dredge Site 3



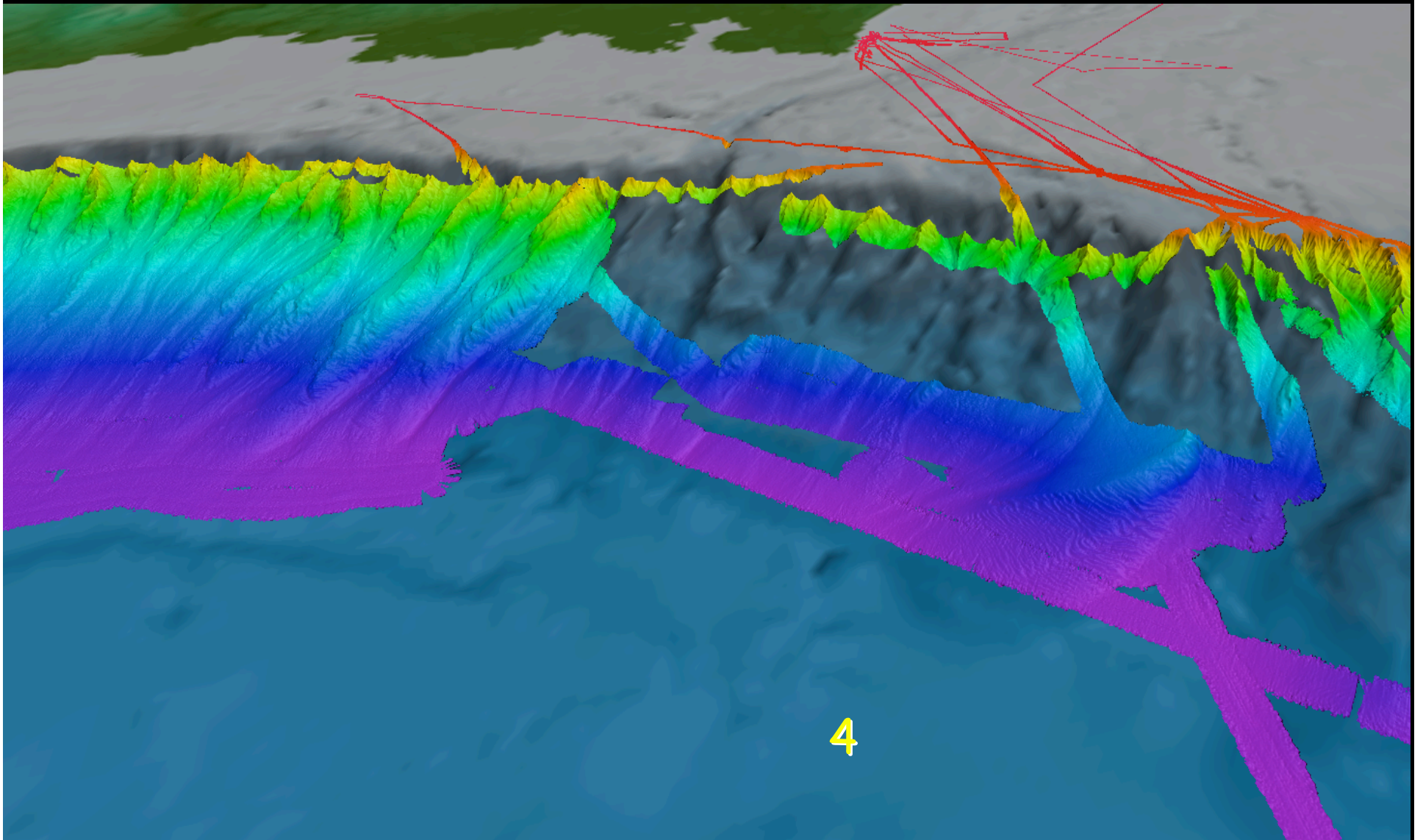
Dredge Site 4



Dredge Site 5



Barrow Margin FoS



Center for Coastal & Ocean Mapping Joint Hydrographic Center

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Law of the Sea Mapping Program

Atlantic

Arctic

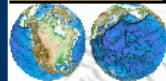
Bering Sea

Gulf of AK

Gulf of Mexico

Marianas

Mendocino



Data



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Instructions

1. Click on a link below to download a data file to your desktop.
2. Uncompress the file. The files are compressed with WinZip 8.0.
3. The uncompression will result in a new file/s of the selected format.
4. Each zipped file also contains it's associated metadata

Atlantic Margin

2008 KNOX17RR

ascii_data		esri_data		ivs_data		Hover for image
Atlantic_CentralSouth_ASCII_bathy.zip	META	Atlantic_CentralSouth_ESRI_bathy.zip	META	Atlantic_CentralSouth_SD_bathy.zip	META	VIEW
Atlantic_CentralSouth_ASCII_mos.zip	META	Atlantic_CentralSouth_ESRI_mos.zip	META	Atlantic_CentralSouth_SD_mos.zip	META	VIEW
Atlantic_East_ASCII_bathy.zip	META	Atlantic_East_ESRI_bathy.zip	META	Atlantic_East_SD_bathy.zip	META	VIEW
Atlantic_East_ASCII_mos.zip	META	Atlantic_East_ESRI_mos.zip	META	Atlantic_East_SD_mos.zip	META	VIEW

2005 PF05

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Atlantic_Farsouth_ASCII_mos.zip	META	Atlantic_FarSouth_ESRI_mos.zip	META	Atlantic_FarSouth_SD_mos.zip	META	VIEW

Cruise Reports, Data, and Images available at:
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Teachers at Sea



Scripps HARP



U.S. Navy Glider



National Ice Center Beacon





Questions?