

Different data type – the chart is just  
one product of many

ROPME 2015 – Abu Dhabi, UAE

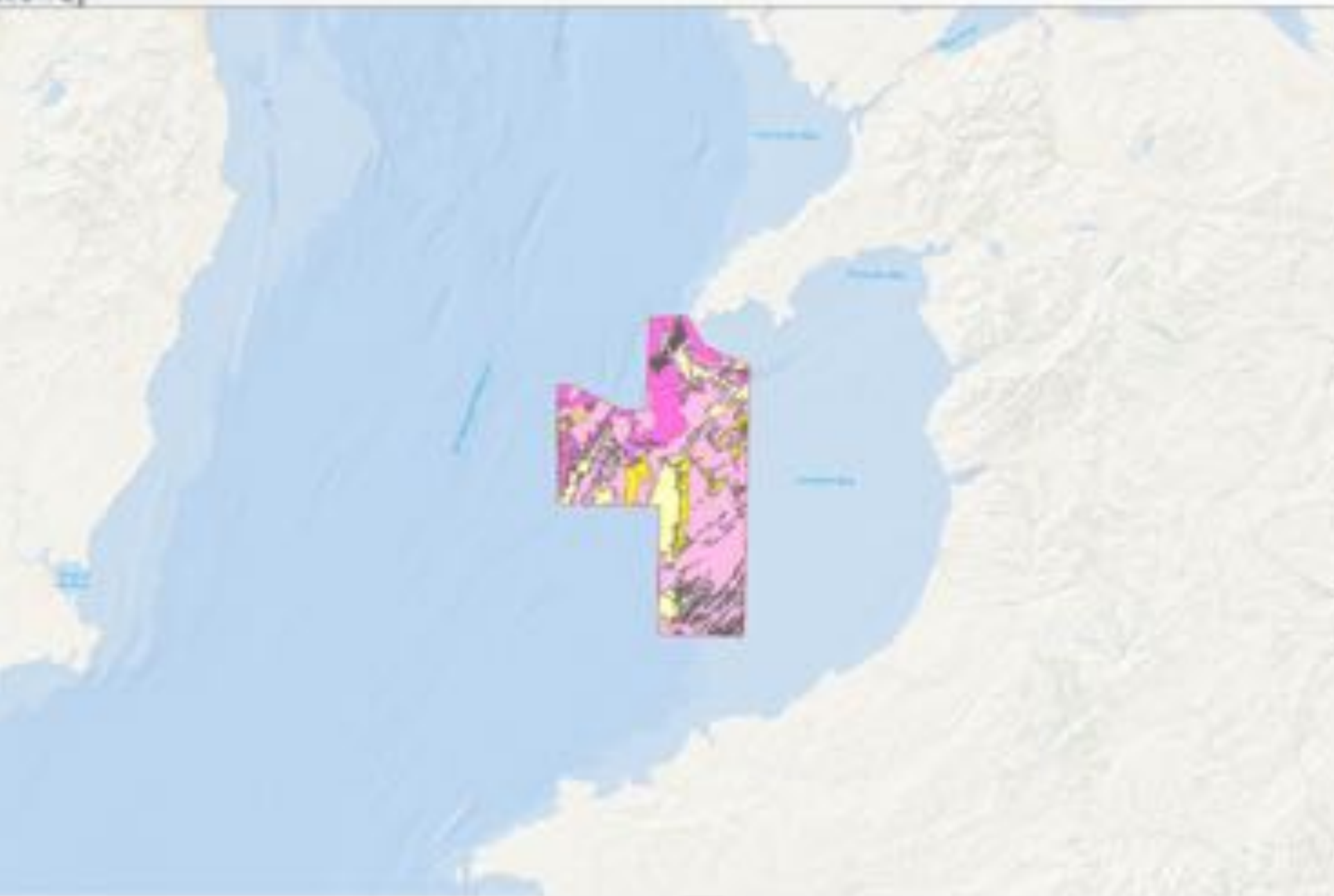
**Duncan Mallace**  
**[dmallace@qps.nl](mailto:dmallace@qps.nl)**

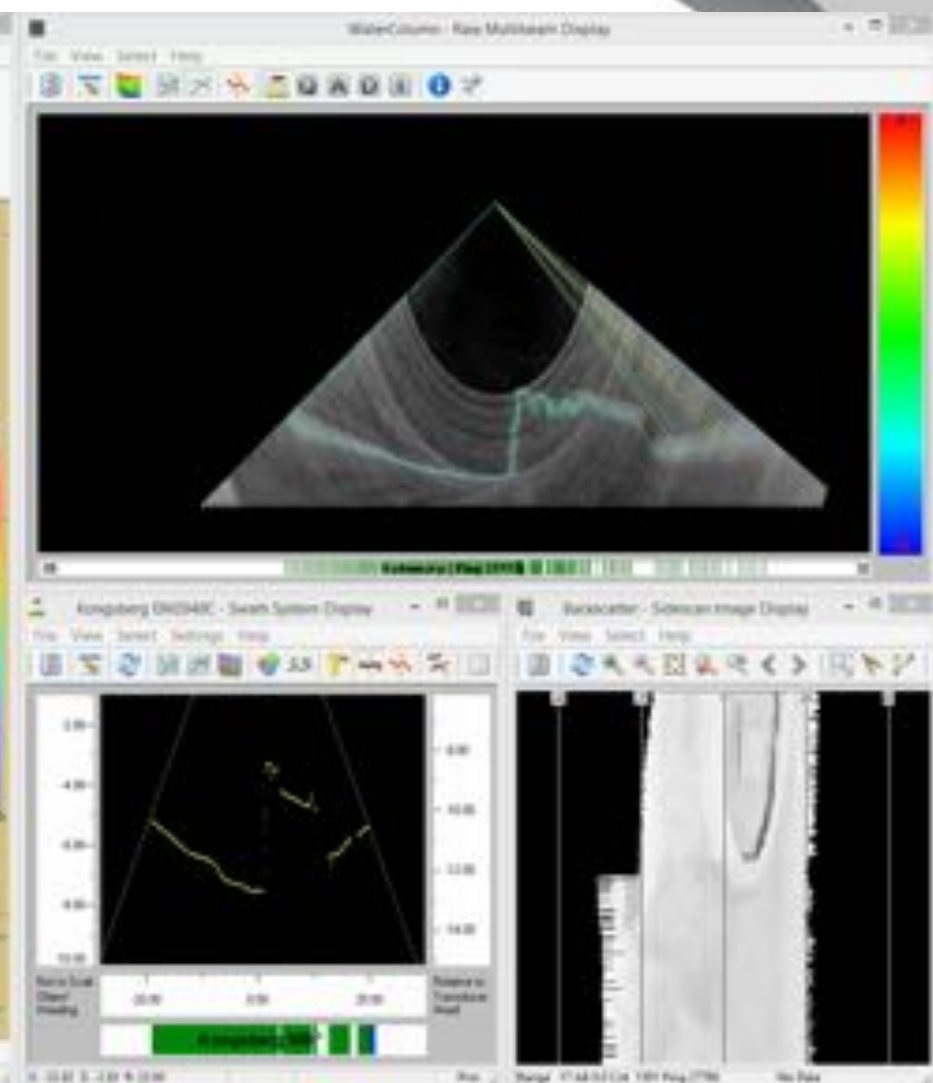
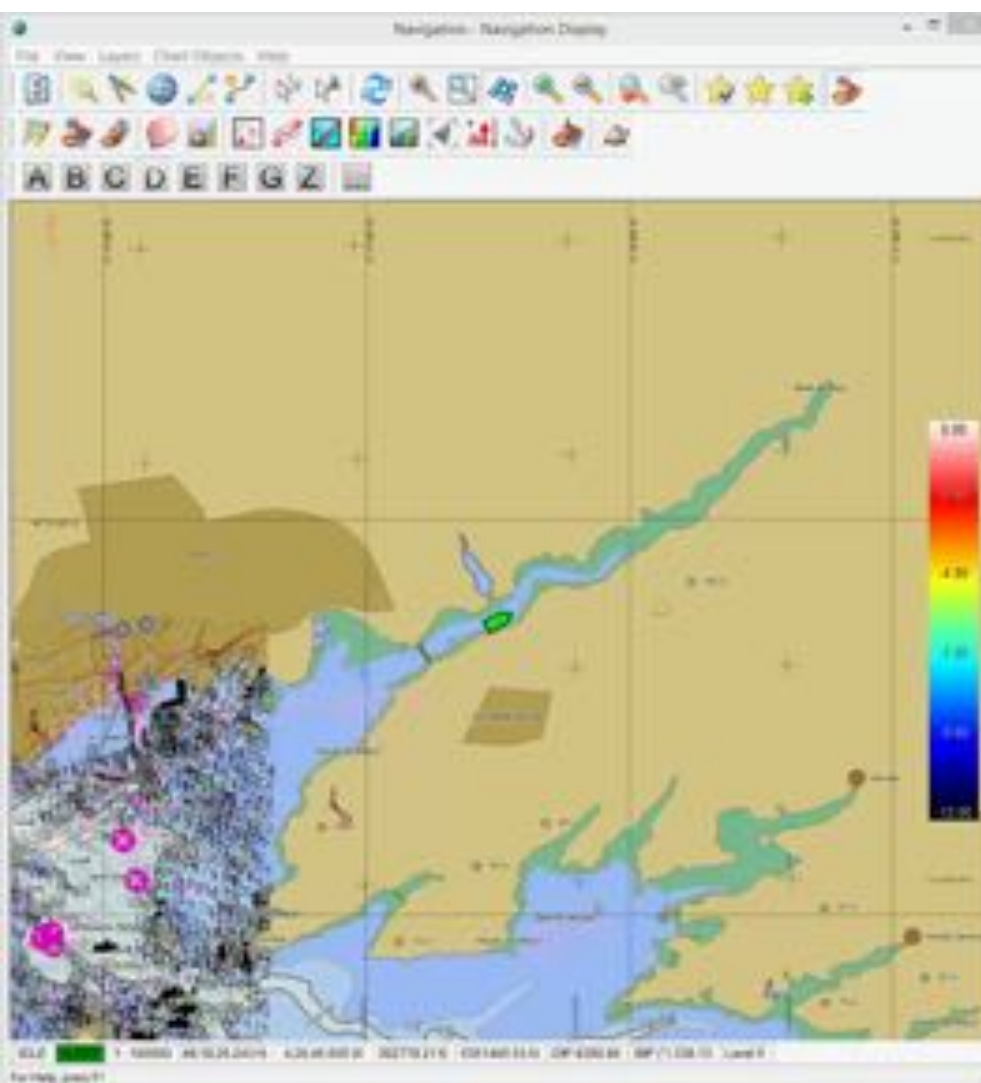
What data are we dealing with  
because it is not just bathymetry any  
more?





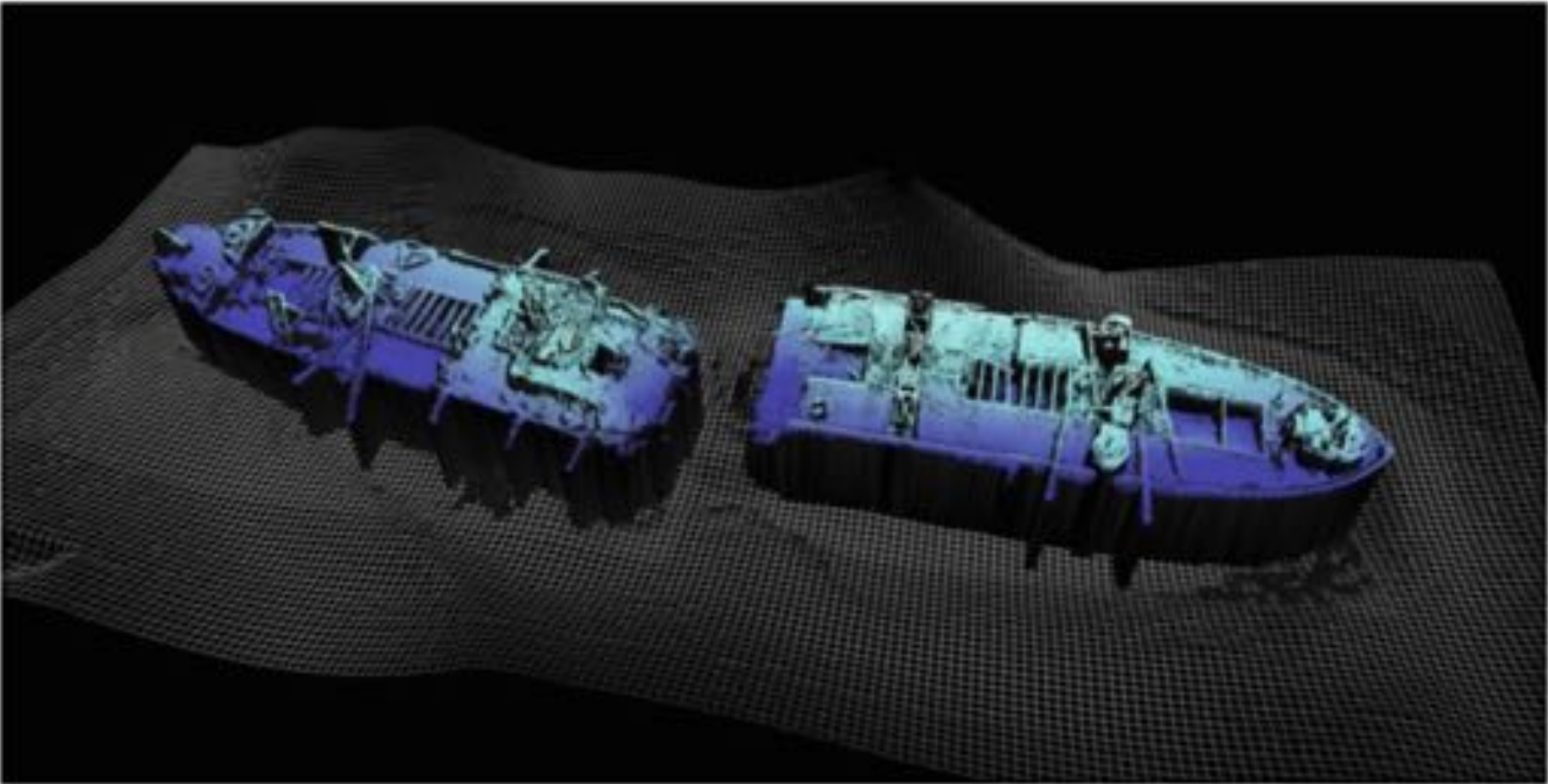
Film courtesy of MMT [www.mmt.se](http://www.mmt.se)



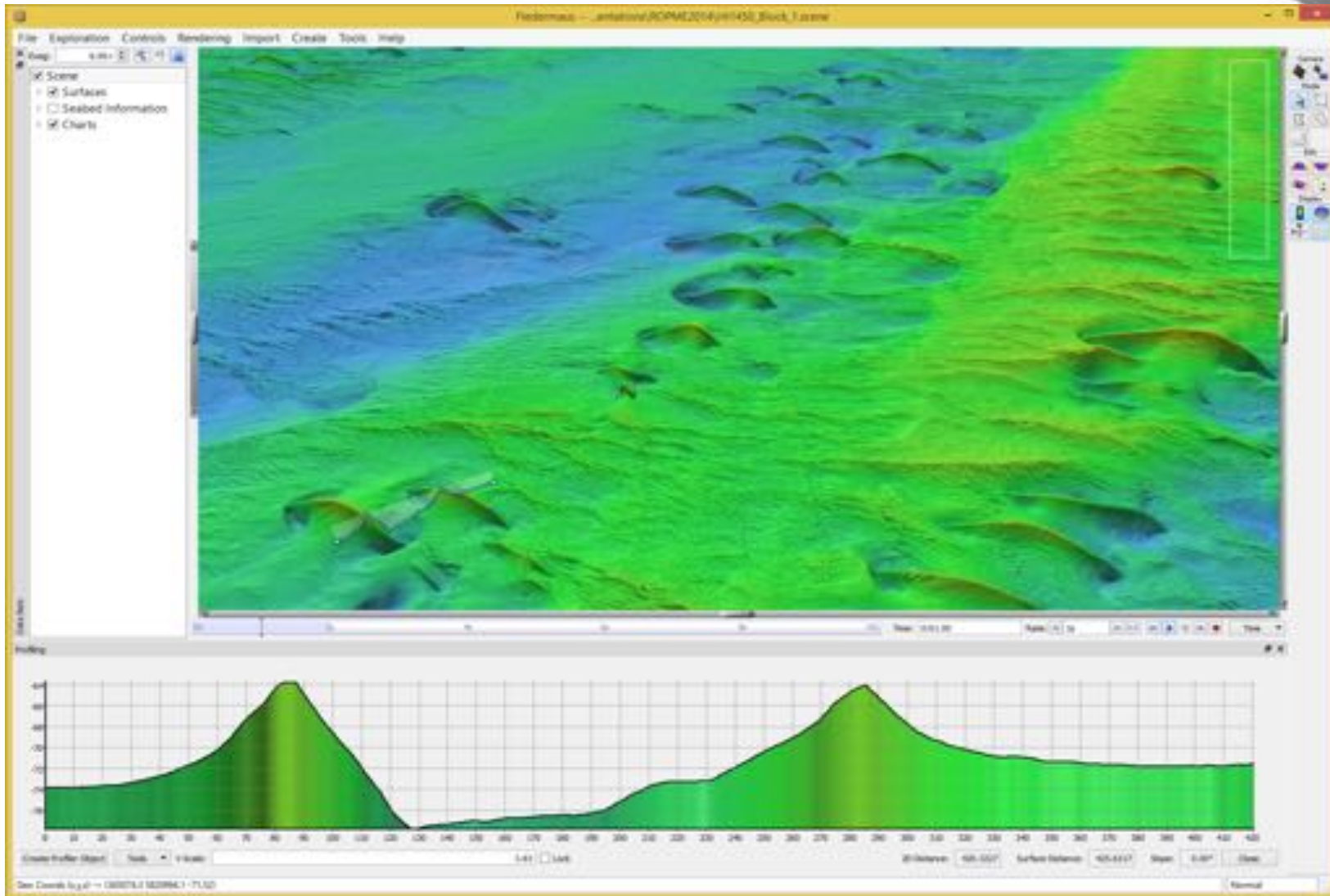




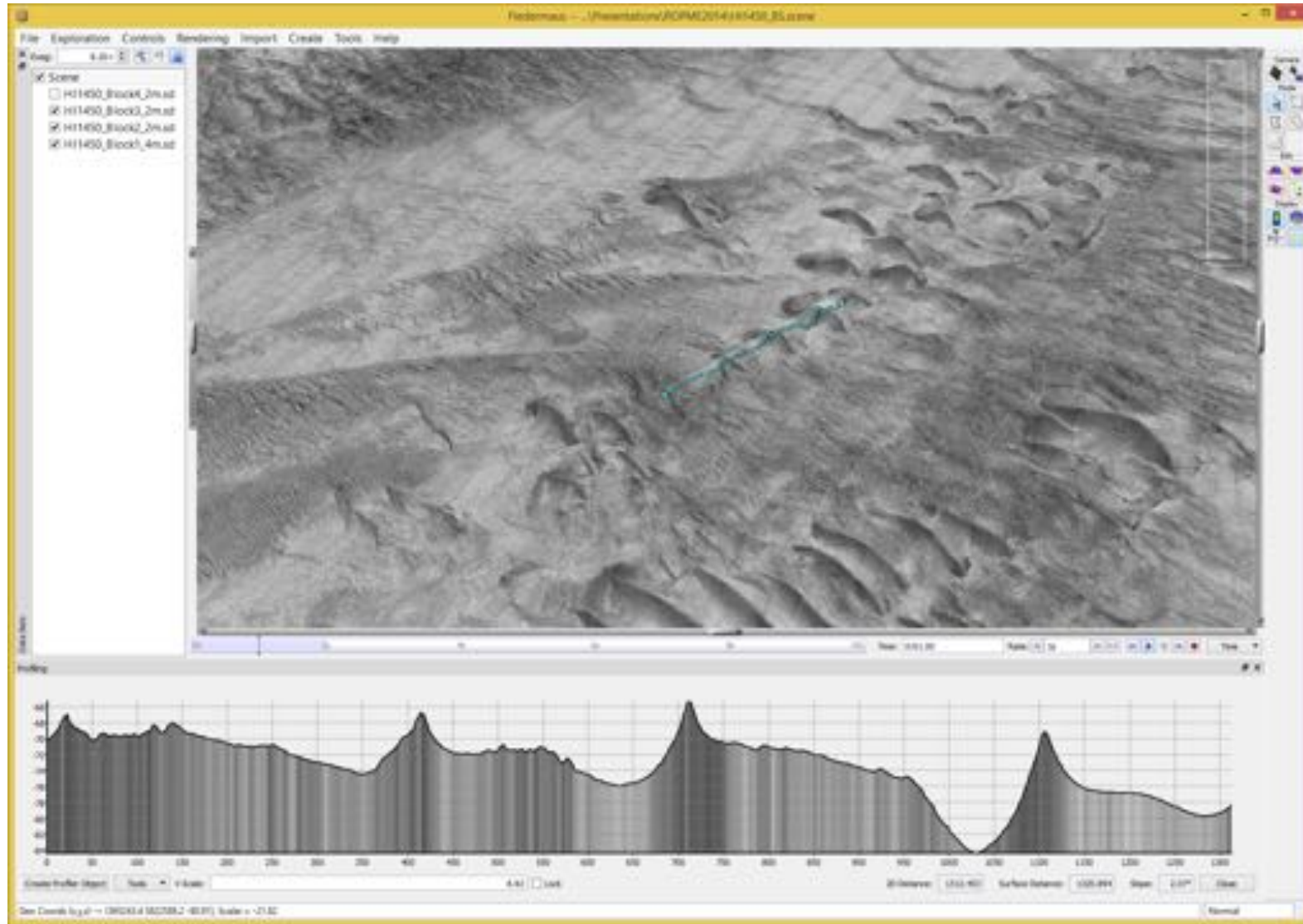
# Hydrographic Modalities: Bathymetry



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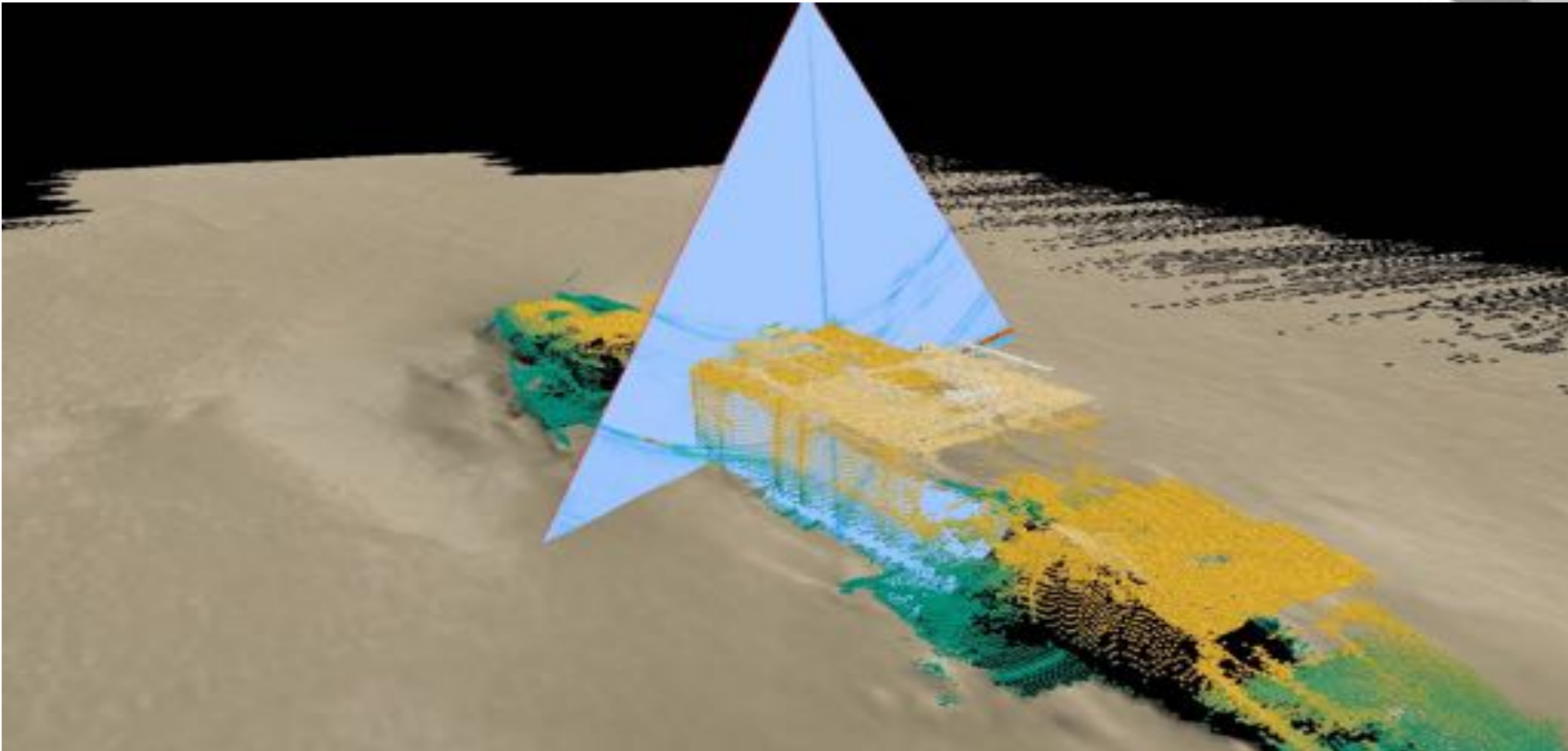


# Hydrographic Modalities: Backscatter

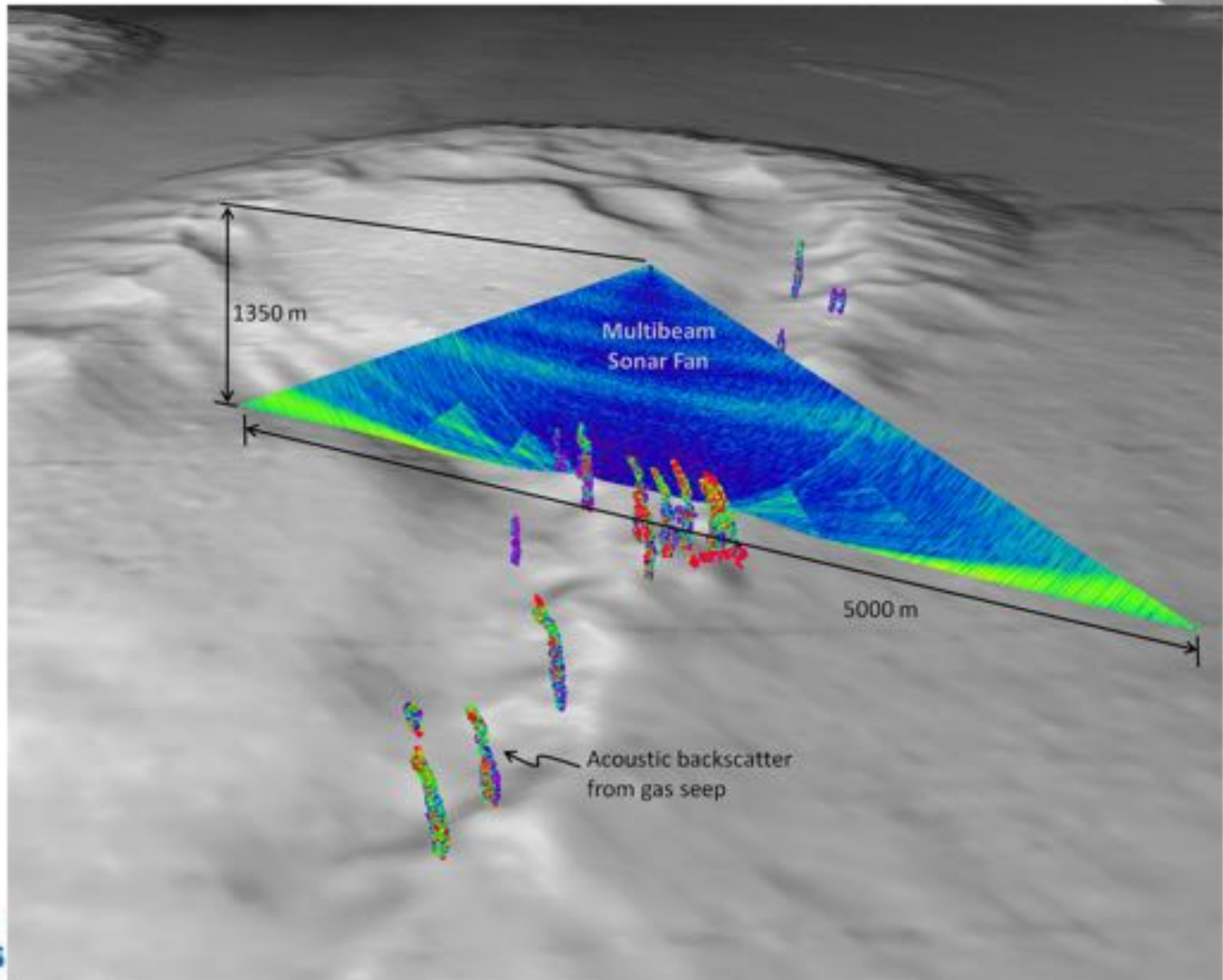




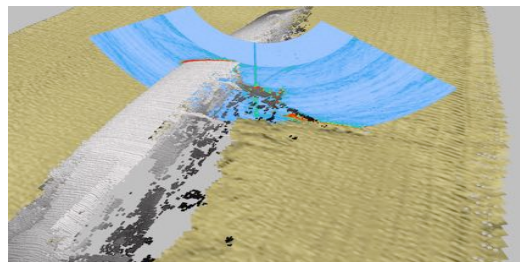
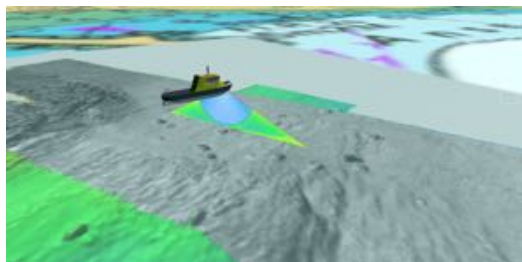
# Hydrographic Modalities: Water Column



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# QPS-ESRI seamless workflow:



Who is collecting marine data and who  
are they collecting it for



Type of Survey	Who collects	Client
Hydrographic Survey	<ul style="list-style-type: none"> <li>• Navies</li> <li>• Commercial survey companies</li> <li>• Port authorities</li> </ul>	<ul style="list-style-type: none"> <li>• Hydrographic Office or Government Transport department</li> <li>• Regional departments</li> <li>• Port authorities</li> </ul>
Habitat Surveys	<ul style="list-style-type: none"> <li>• National Geological &amp; Environmental organisations</li> <li>• Commercial survey companies</li> </ul>	<ul style="list-style-type: none"> <li>• Government</li> <li>• Wind &amp; Tidal energy companies</li> <li>• Oil &amp; Gas Companies</li> </ul>
Geophysical Surveys	<ul style="list-style-type: none"> <li>• National Geological Survey</li> <li>• Commercial survey companies</li> </ul>	<ul style="list-style-type: none"> <li>• Oil &amp; Gas companies</li> <li>• Wind &amp; Tidal energy companies</li> <li>• Power and telecoms cable companies</li> </ul>





# What Products are delivered



Type of Survey	Deliverables
Hydrographic Survey	<ul style="list-style-type: none"> <li>• Full density soundings</li> <li>• Digital terrain models</li> <li>• Seabed interpretation map</li> <li>• Sediment samples</li> <li>• Sechi Disk measurements</li> <li>• Tidal observations</li> <li>• Sound Velocity observations</li> <li>• GIS data</li> <li>• Full Survey Report</li> </ul>
Habitat Surveys	<ul style="list-style-type: none"> <li>• ESRI ArcMarine Data Model</li> <li>• Bathymetry digital terrain models</li> <li>• Backscatter mosaics</li> <li>• Seabed interpretation map</li> <li>• Sediment samples</li> <li>• Slope and rugosity maps</li> <li>• Video and/or still images</li> <li>• Species models and maps</li> <li>• Full Survey Report</li> </ul>

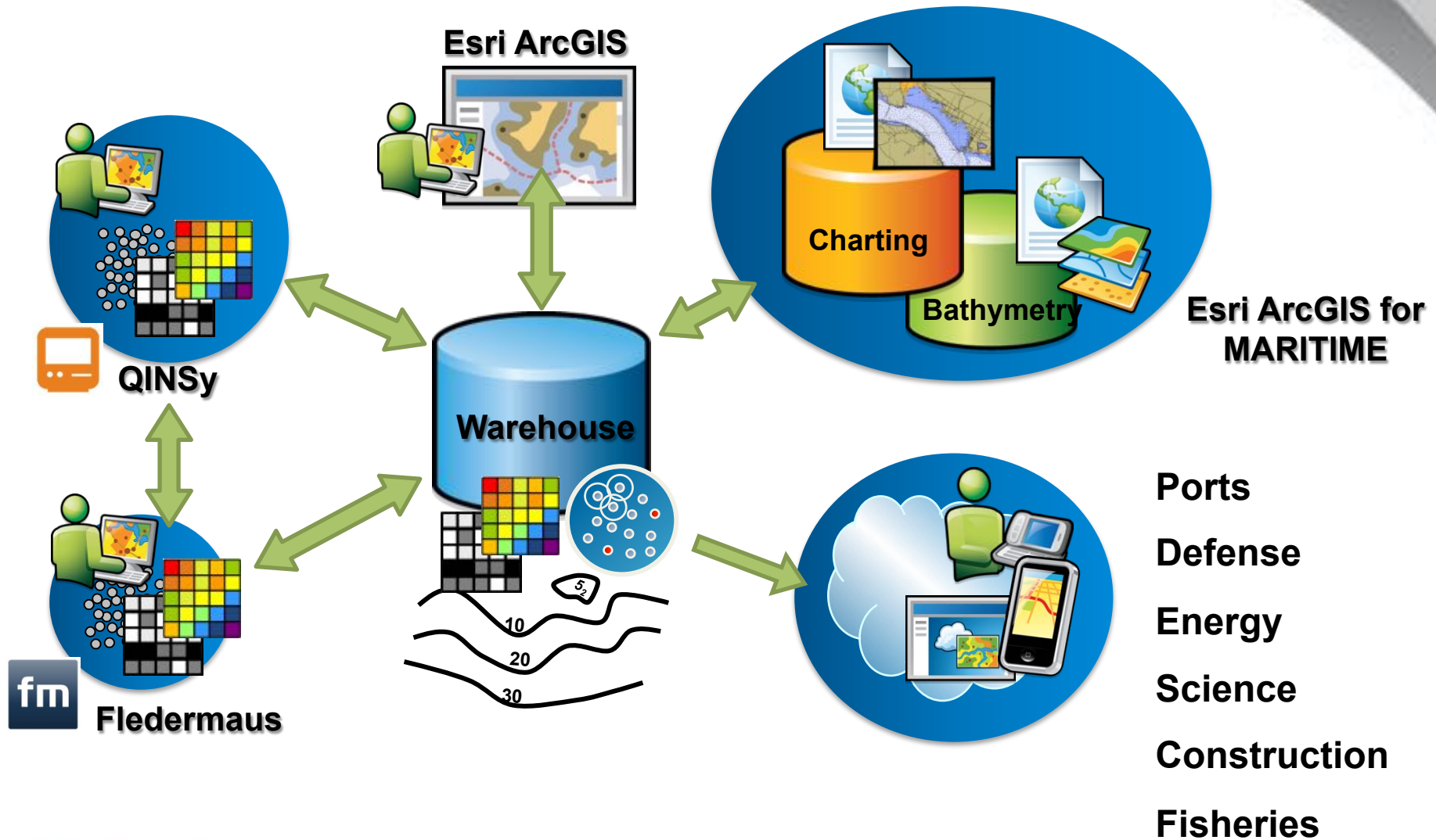
Type of Survey	Deliverables
Geophysical Surveys	<ul style="list-style-type: none"><li>• ESRI Seabed Survey Data Model</li><li>• Bathymetry digital terrain models</li><li>• Backscatter mosaics</li><li>• Geological Maps and models</li><li>• Seabed interpretation</li><li>• Sediment samples</li><li>• CAD Files</li><li>• Full Survey Report</li></ul>

# How to share this data

- **Memorandum of Understanding (MOU)** with other government organisations
- **Make it a condition of a license/permit request**
- **GIS** - it is delivered or used in every type of survey
  - Import/Export using the ArcMarine data model or specify a custom one.
- **Web Portal**



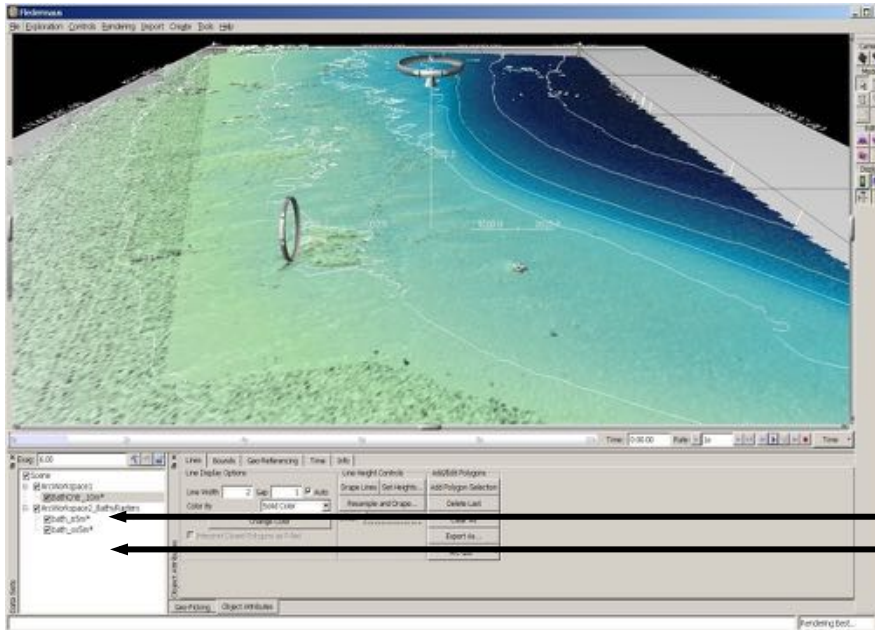
# QINSy-Fledermaus-ArcGIS:





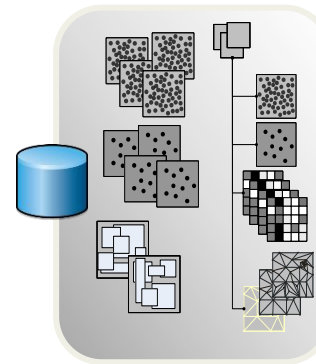
# Arc Workspace Implementation:

Fledermaus Workspace data object:



- Folder
- File (GDB)
- Personal (MDB)
- Spatial Database Engine (SDE)

## Geodatabase



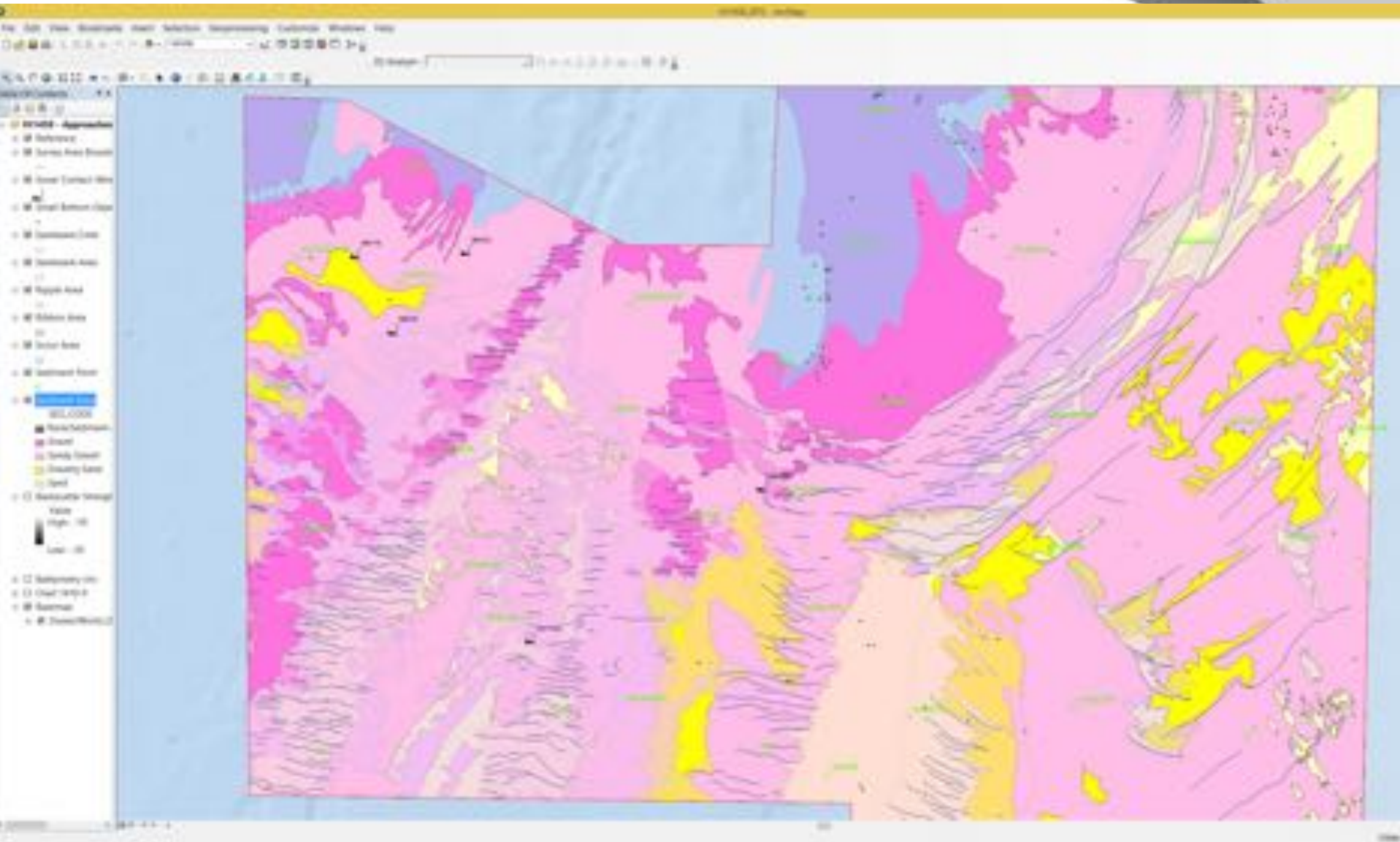
## Data Model

- *BIS*
- *SSDM*
- *ArcMarine*
- *Nautical*

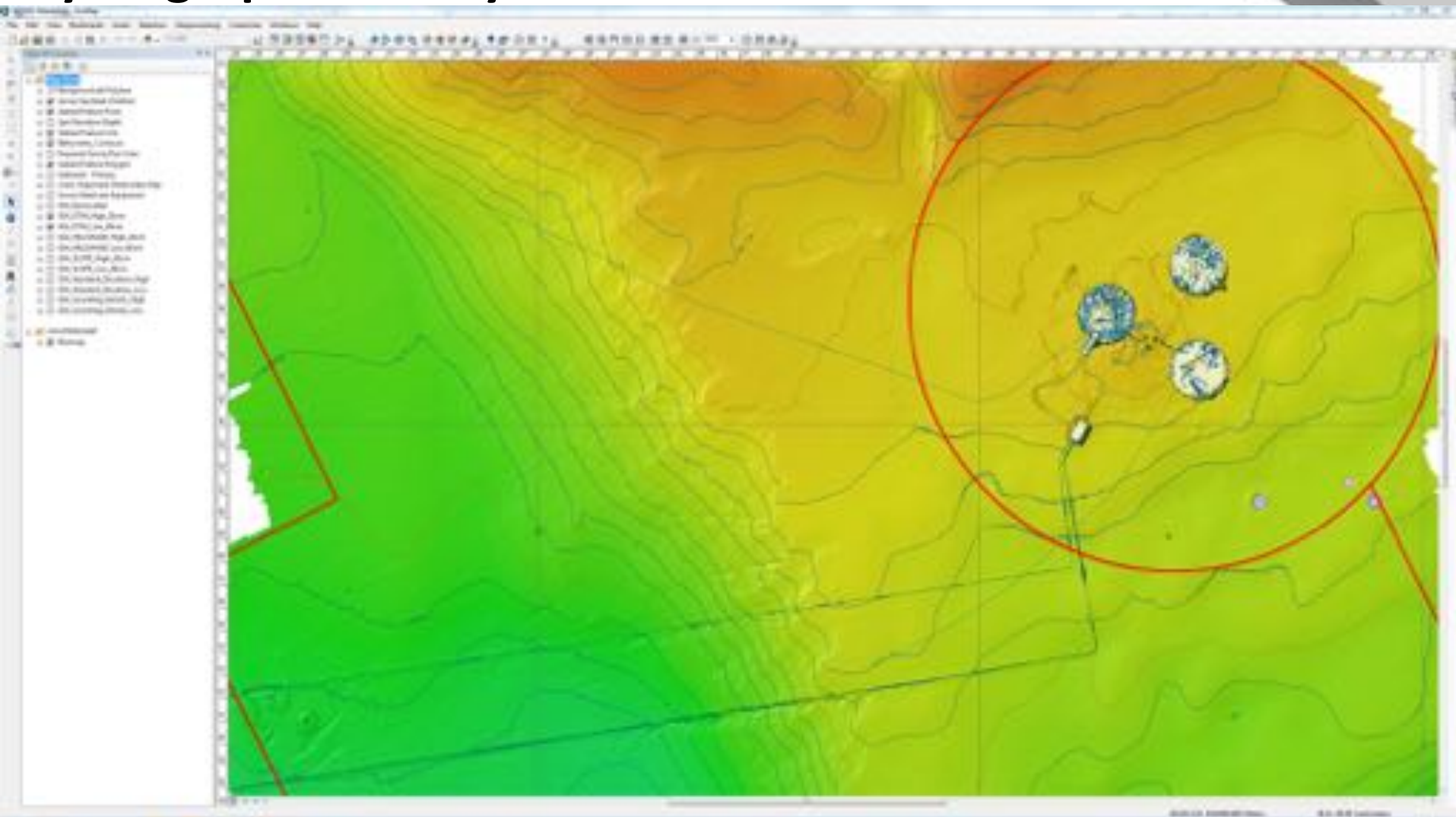
- Rasters (e.g., bathymetry, mosaics)
- Vectors (coastlines, sediments samples, etc.)



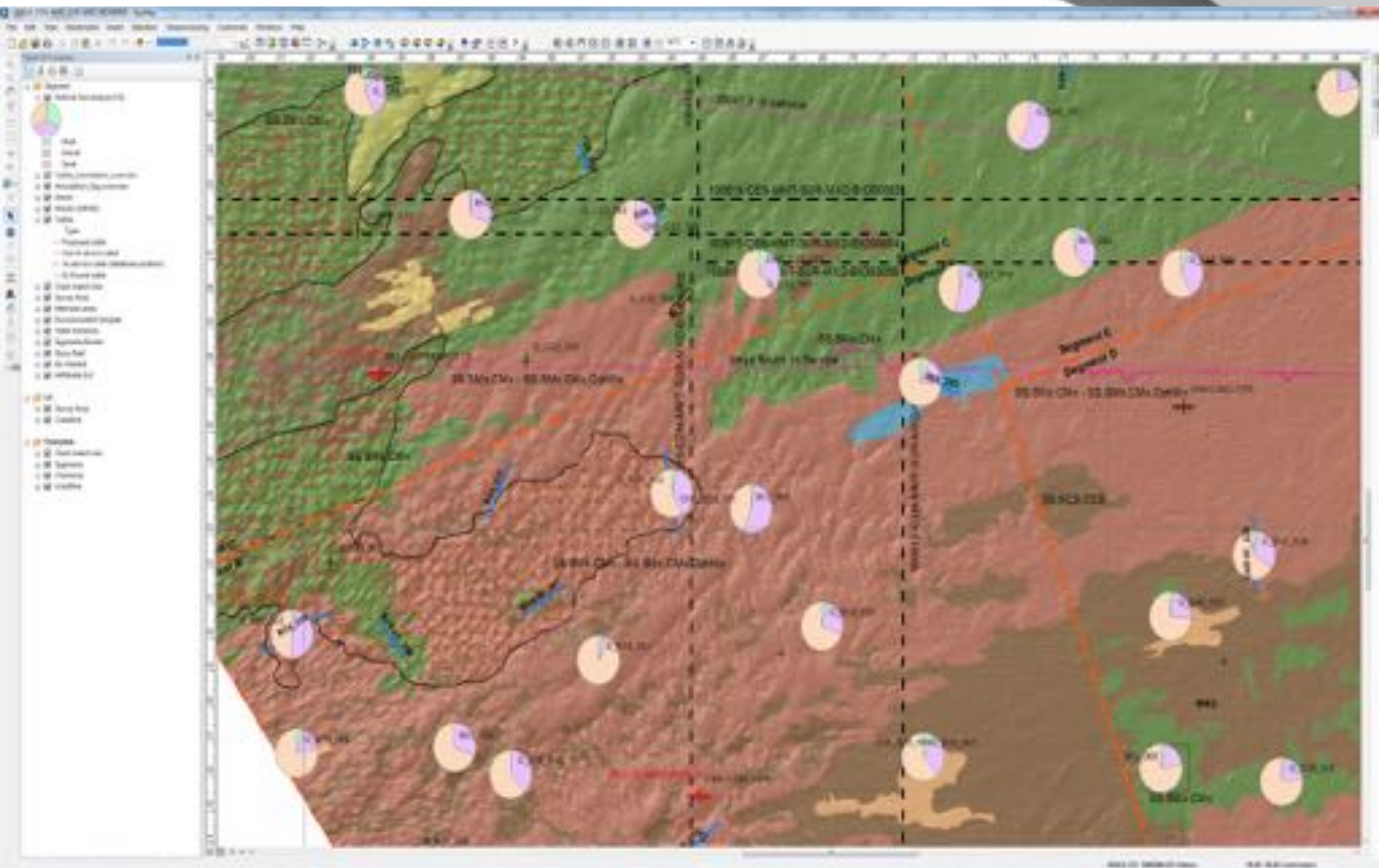
## Texture Sheet from recent Hydro survey



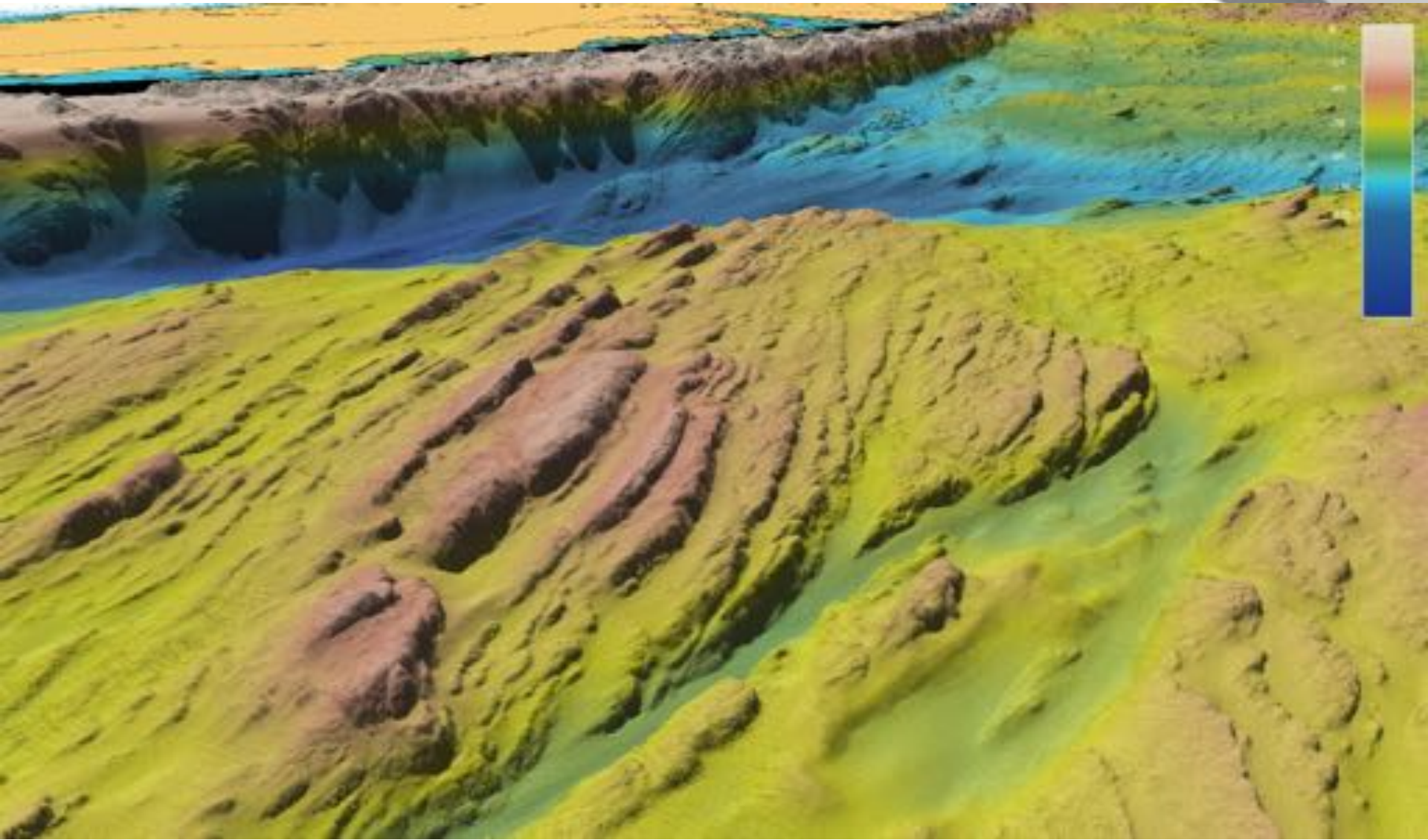
# Examples of bathy data from non-hydrographic surveys



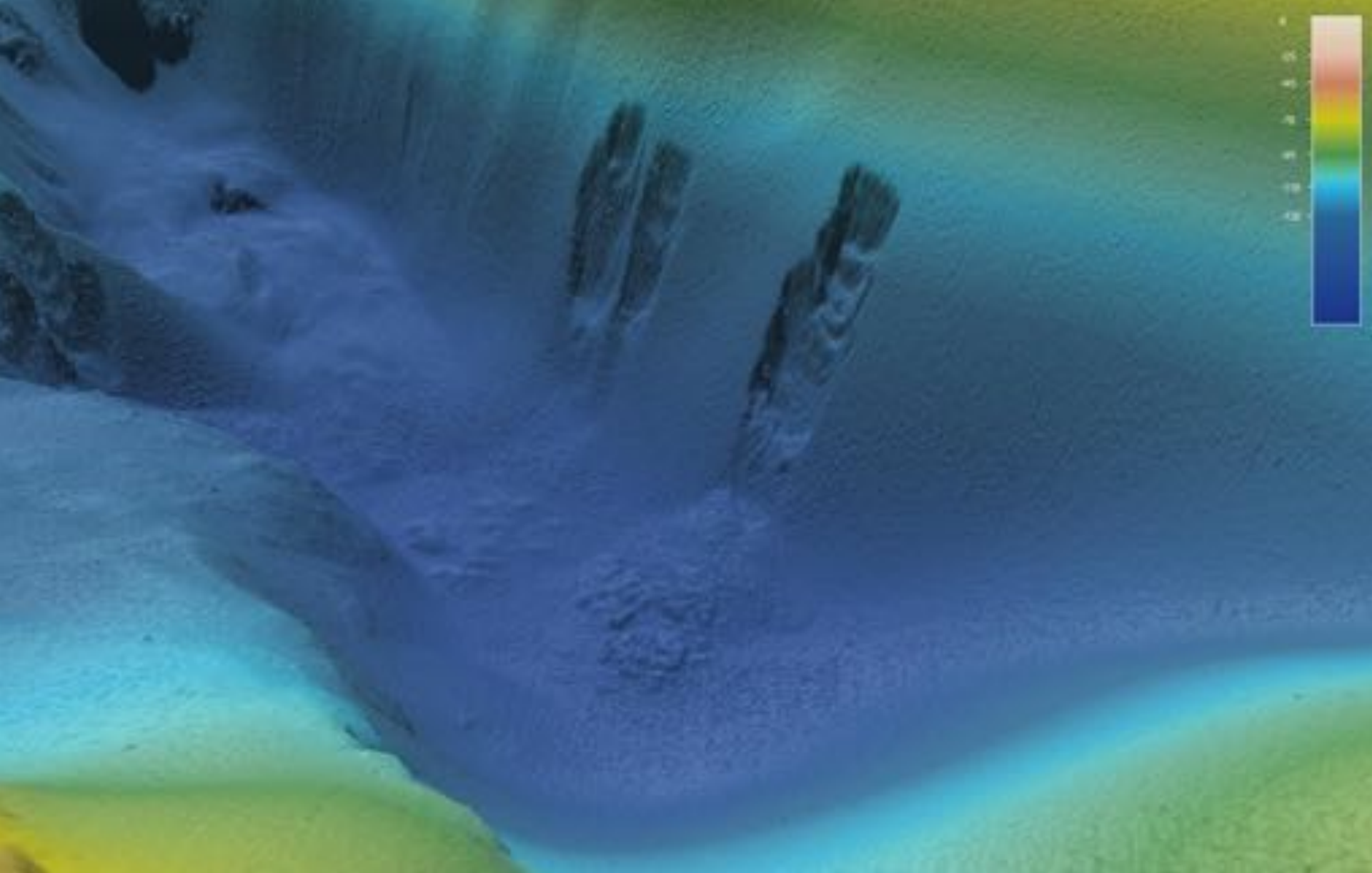




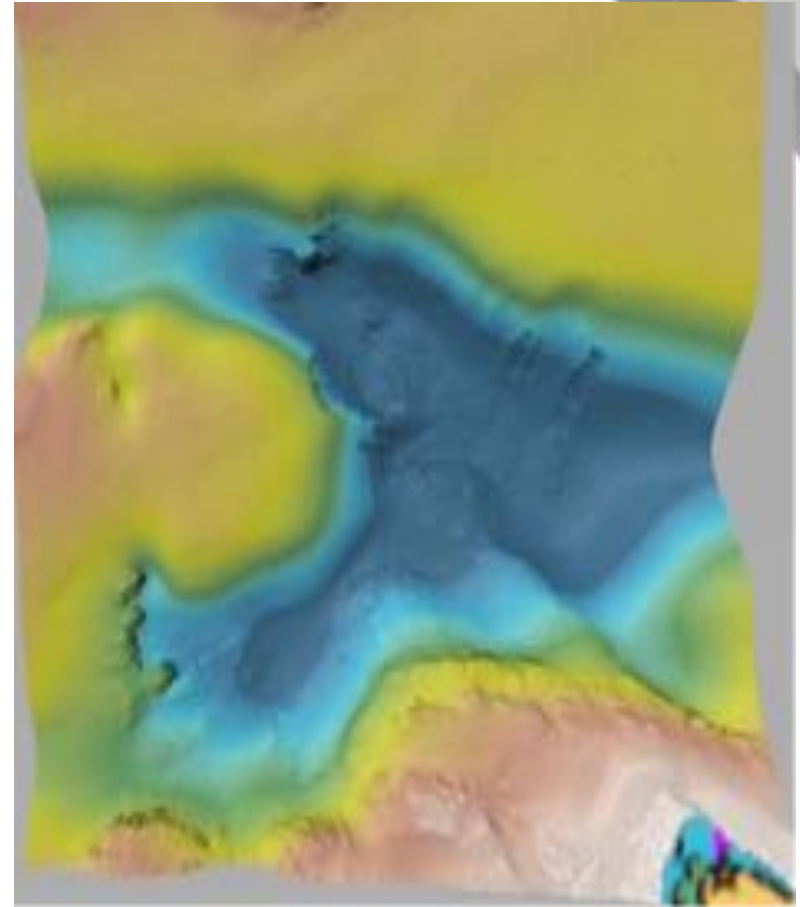
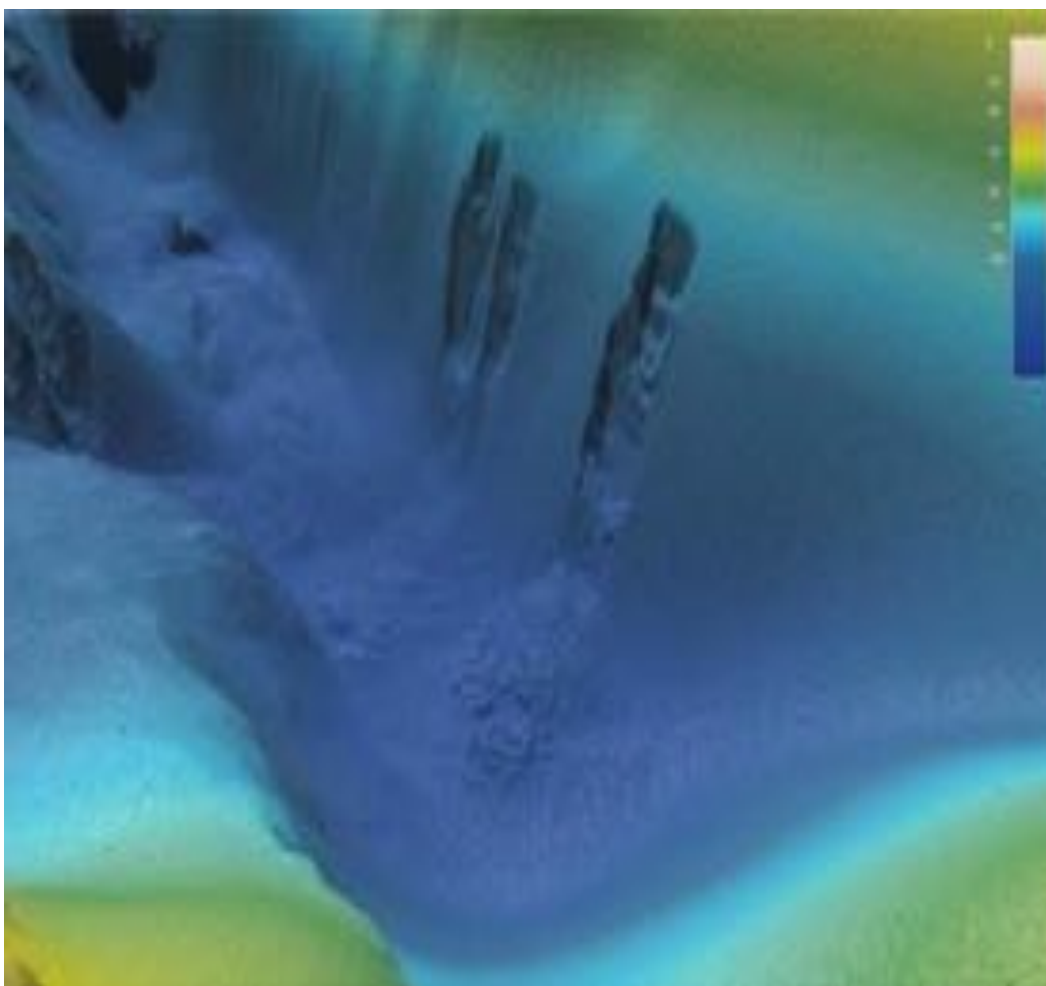
# Data from a Hydro survey used by others



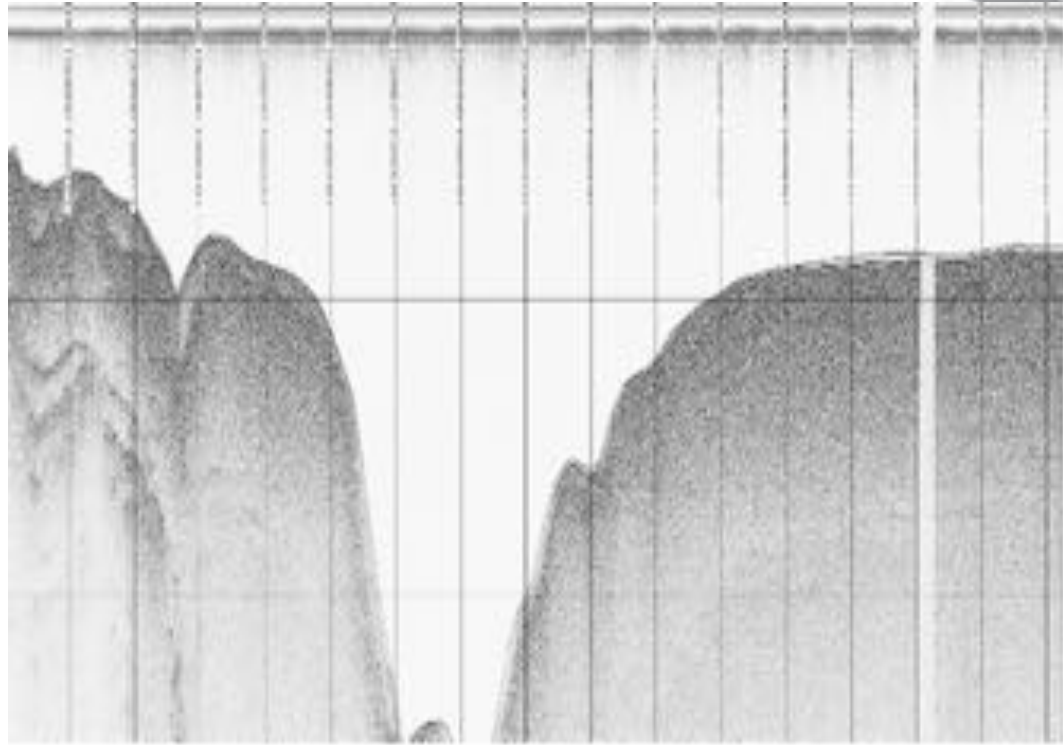
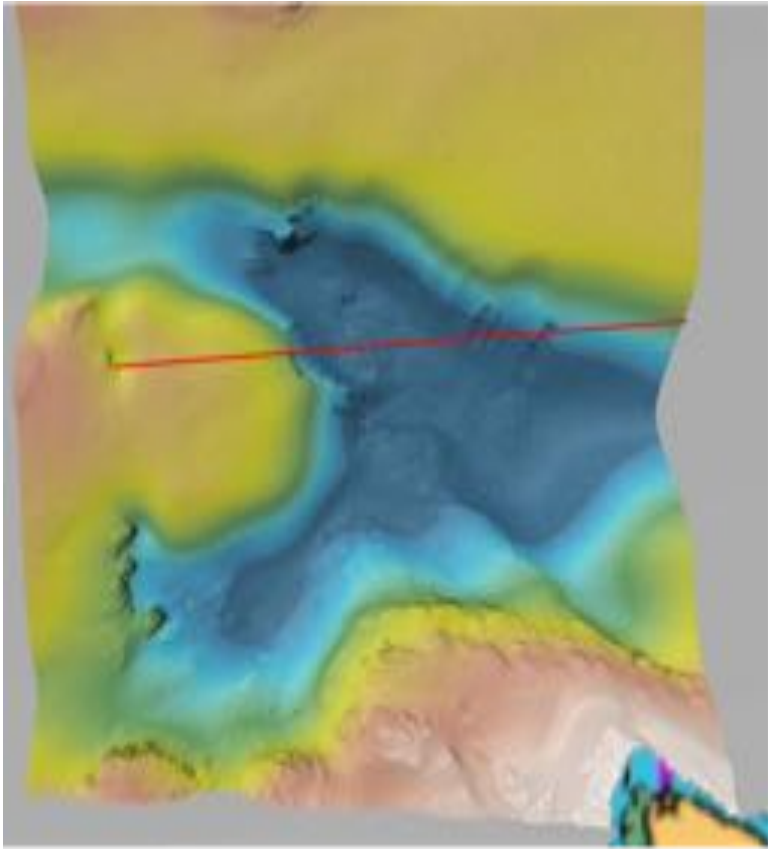




# UK PLC Marine MOU coming together



# UK PLC Marine MOU coming together



BGS data courtesy of David Long

**BGS Boomer Survey in July 2013 - Fully saturated with gas**





Thank You!  
[www.qps.nl](http://www.qps.nl)

