

# Hydrographic Surveying on the Jákup Sverri

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Faroese Hydrographic Office



umhvørvisstovan  
faroese environment agency

# Faroese Hydrographic Office

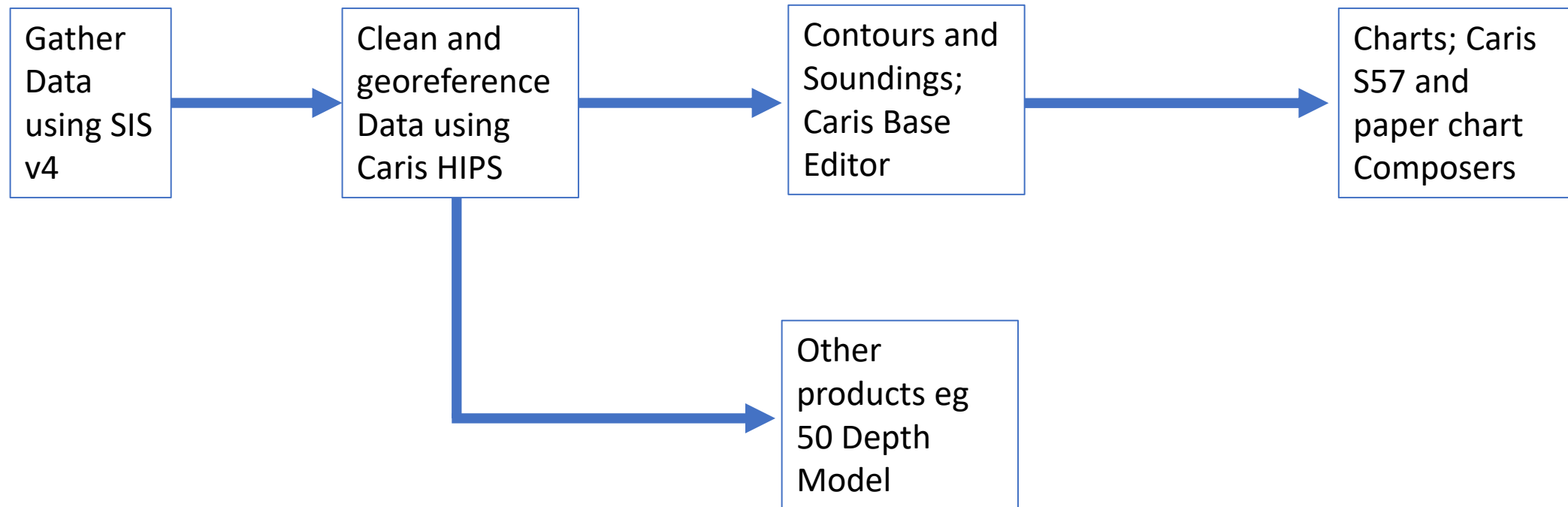
- Activities taken over from Denmark, Geodatastyrelsen, April 2020
- Hydrographic Office based in the Faroese Environment Agency
- Gather and manage the depth data, various sources incl international research ships
- Lots of deep waters
- Produce and Update official paper charts and electronic charts (ENC) as well as other products
- Responsible for the administration of any survey requests in the Faroese waters
- Safe navigation and passage in Faroese waters
- Provide data to other organisations
- Landsverk gather and process Multibeam data in the ports and harbours.

# Jákup Sverri

- “low noise” vessel, good for multibeam
- Lots of technology, including:
  - Kongsberg EM712 MBES. 140° swath angle. Depths of up to 3600m.  
Seafloor Information System v4
  - TOPAS PS18 sub bottom profiler, penetration of 200m
  - RTK GNSS cm accuracy
  - Precise attitude sensors, Kongsberg MGC-R3, Seapath 380-R3
  - Clean electricity source.



# Workflow

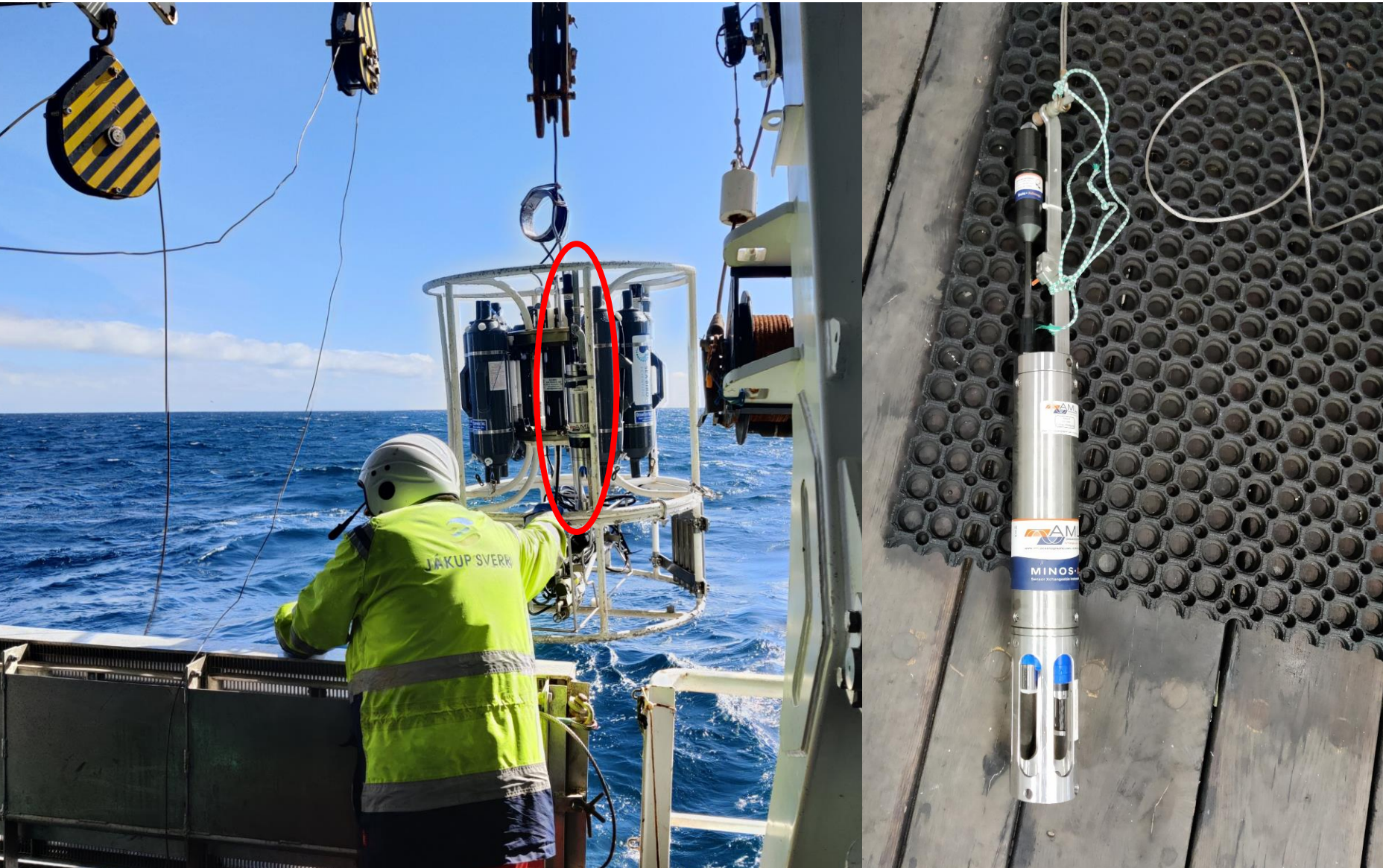








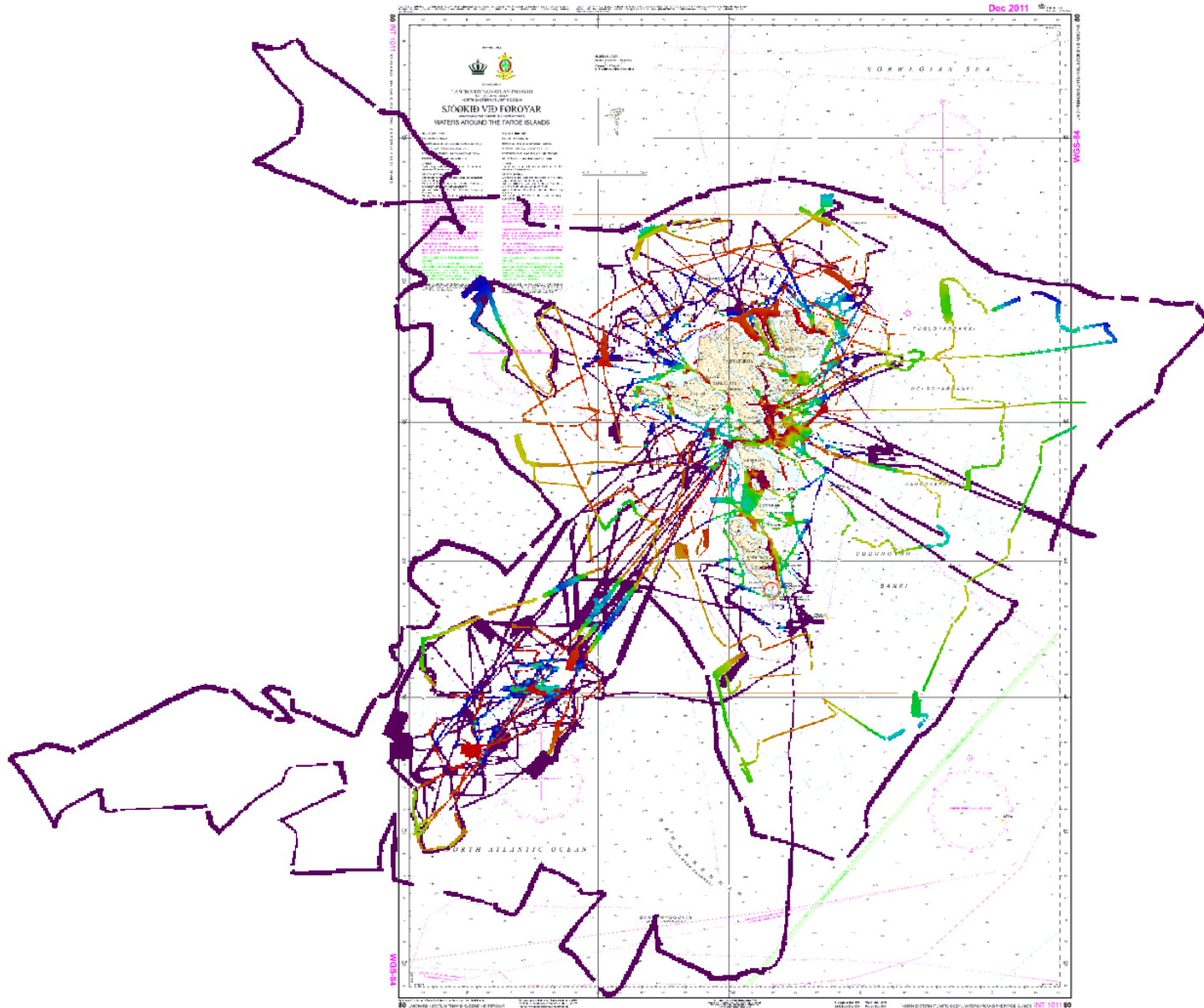
# Sound Velocity Profile











Extent of the Jákup Sverri MBES data to date.

We piggyback on HavStovan's tours

We gather passage line data during the day and conduct proper systematic surveys at night

Limited as to where we can survey

This year we plan to attend 12 weeks of tours, gathering data 24/7



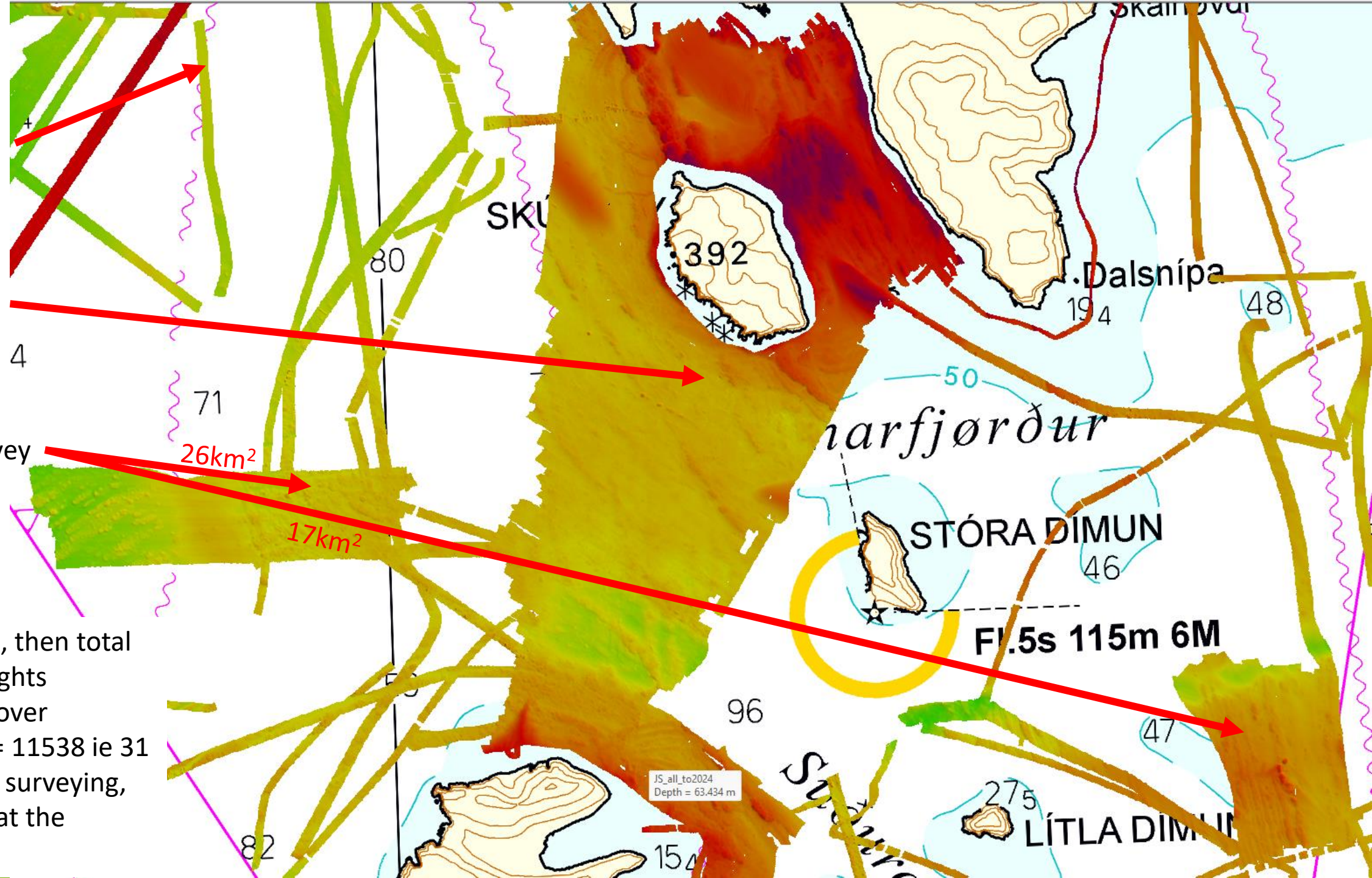


Passage Lines

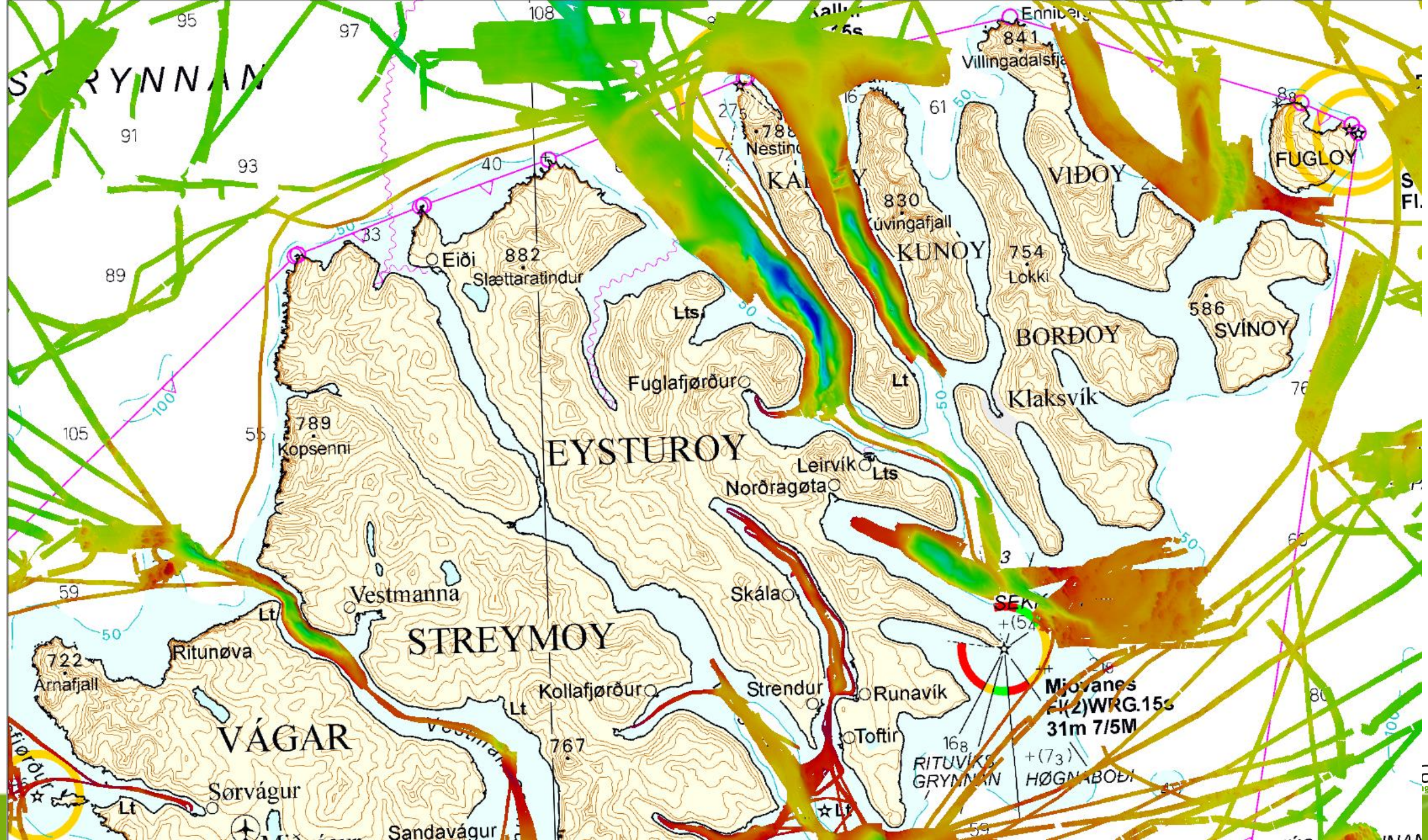
Tunnel Survey

Typical Size of  
Night-time survey  
(10 hours)

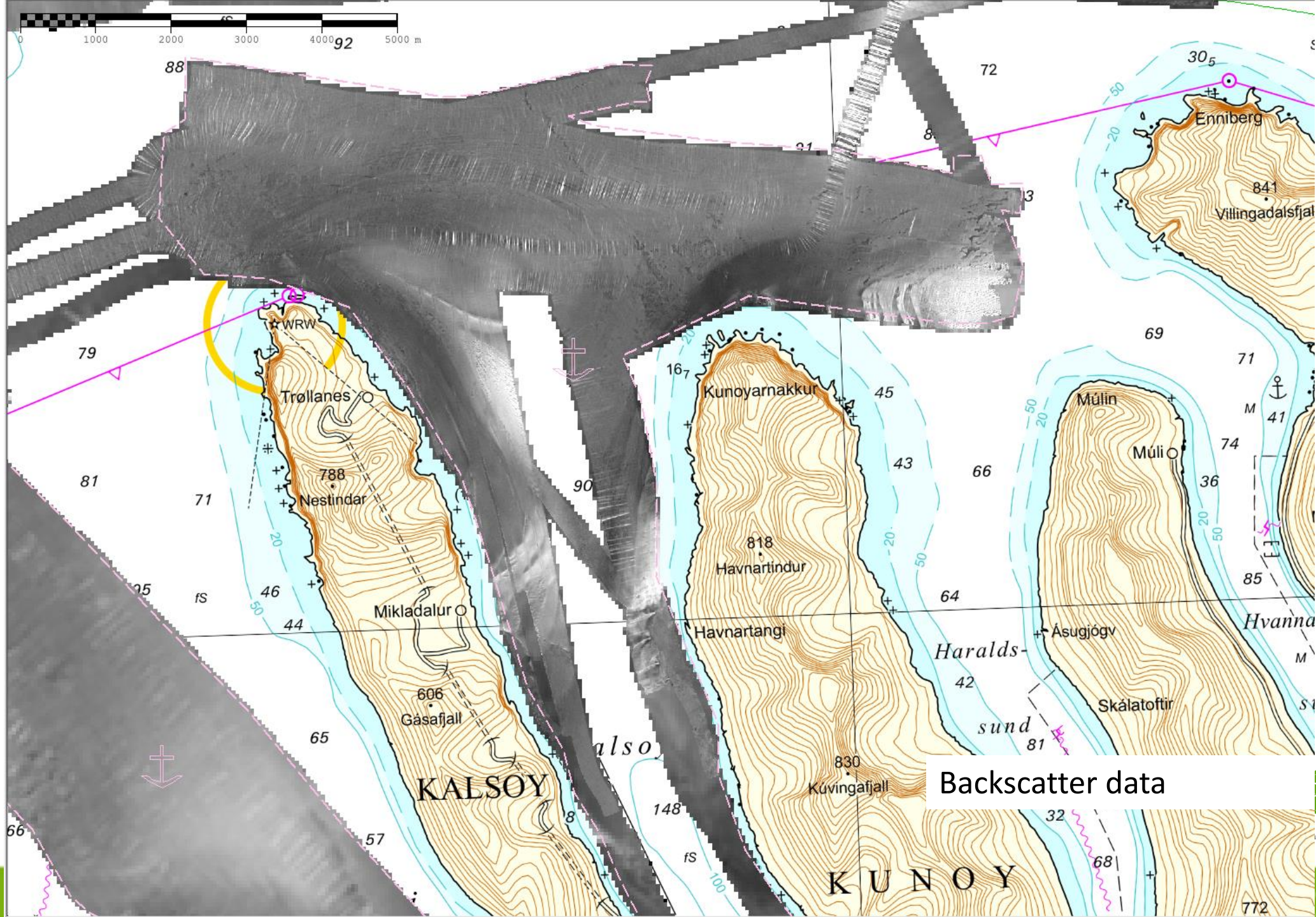
Taking  $26\text{km}^2$ , then total  
number of nights  
required to cover  
 $300000\text{km}^2 = 11538$  ie 31  
years of solid surveying,  
or 138 years at the  
current rate.











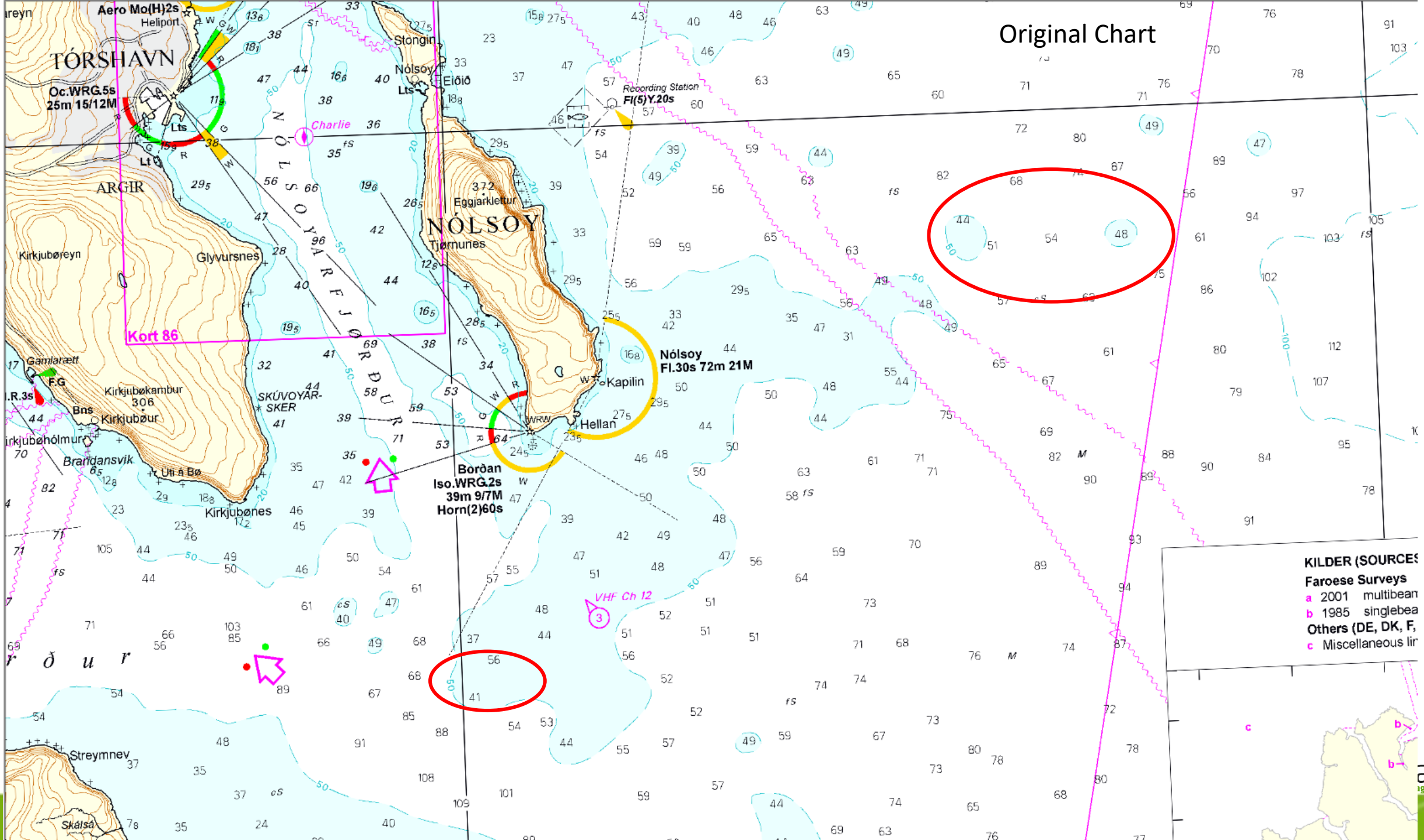
Backscatter data



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# Original Chart



## KILDER (SOURCES)

### Farøese Surveys

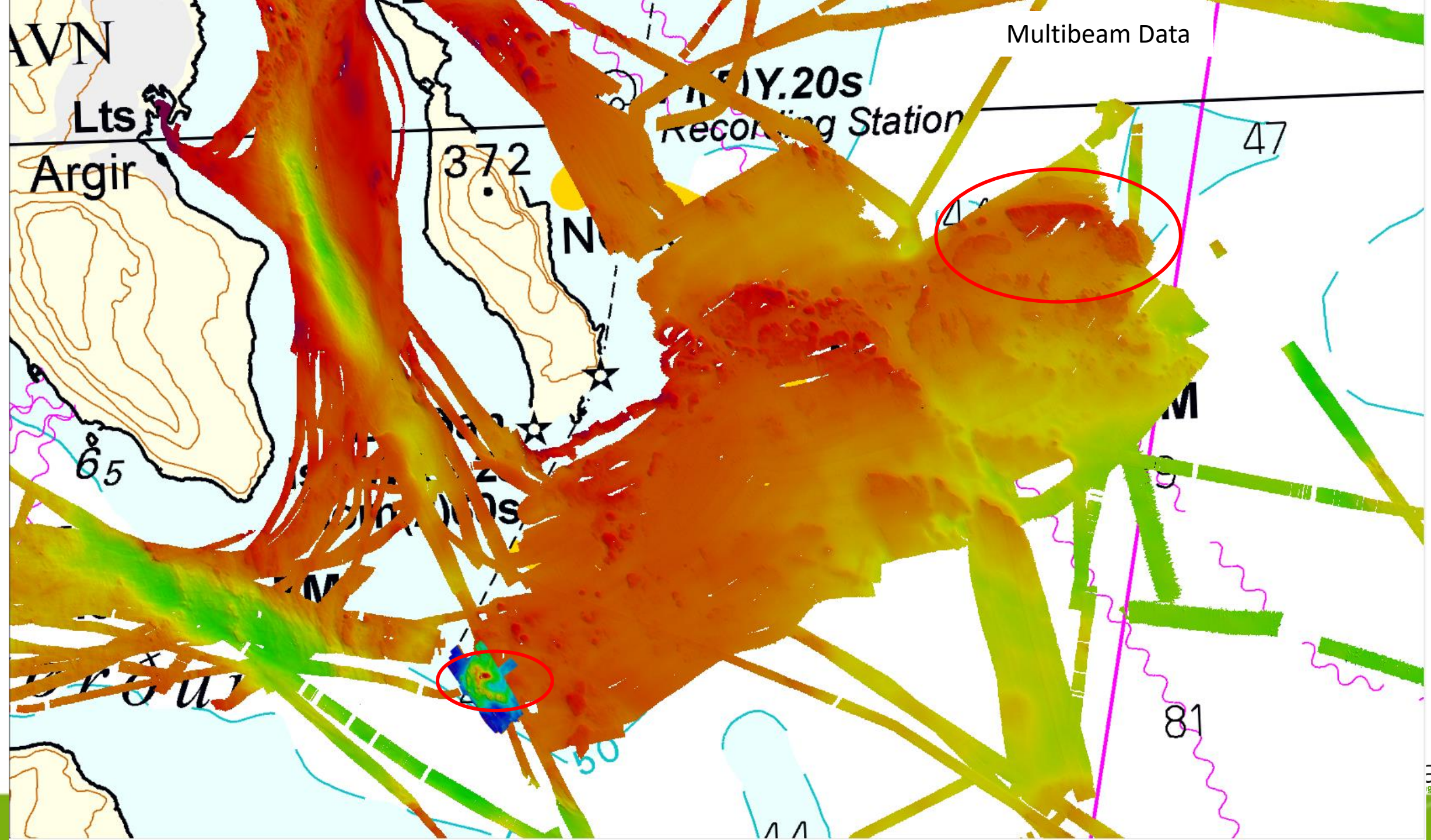
**a** 2001 multibeam

**b** 1985 singlebeam

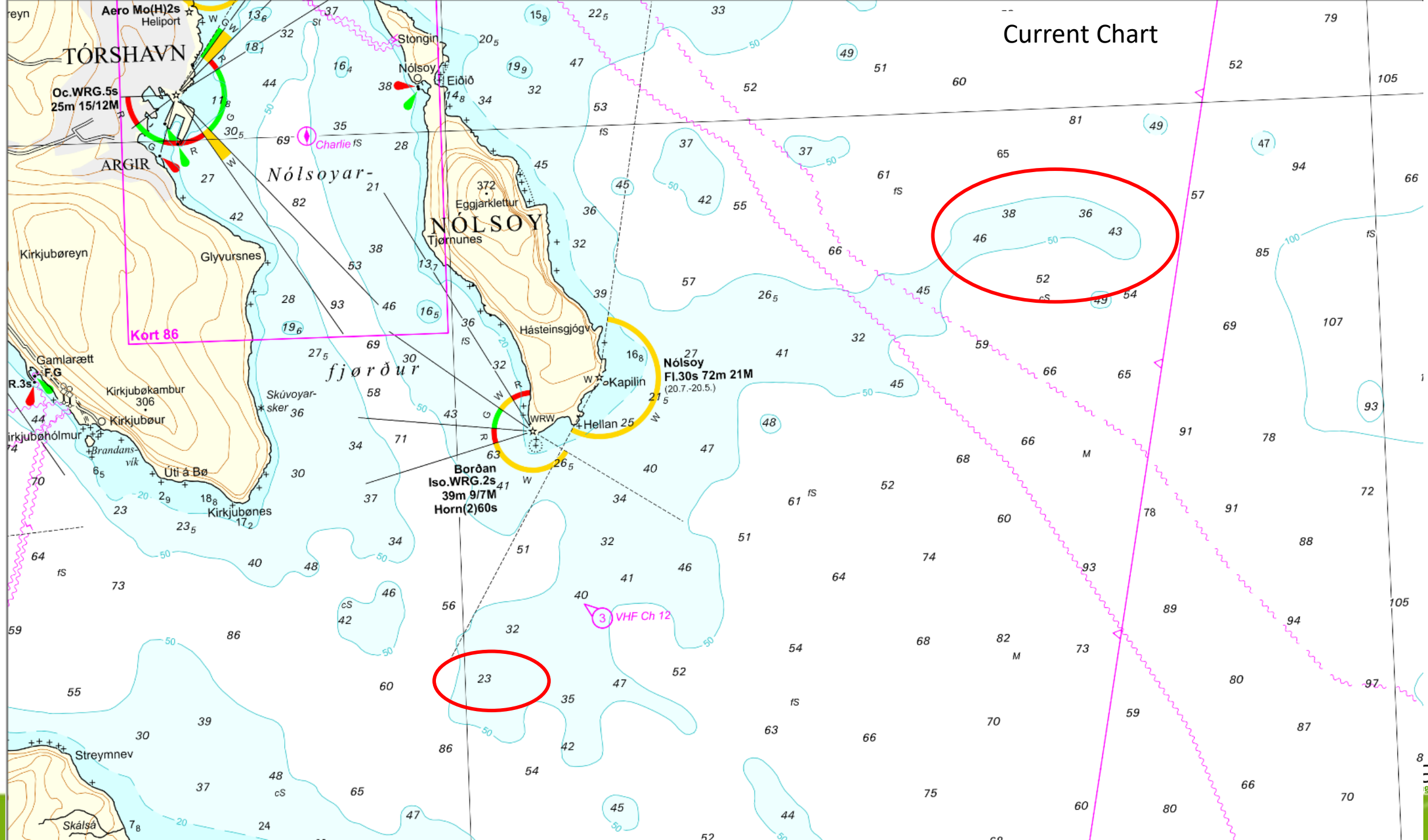
**Others (DE, DK, F,**

**c** Miscellaneous list



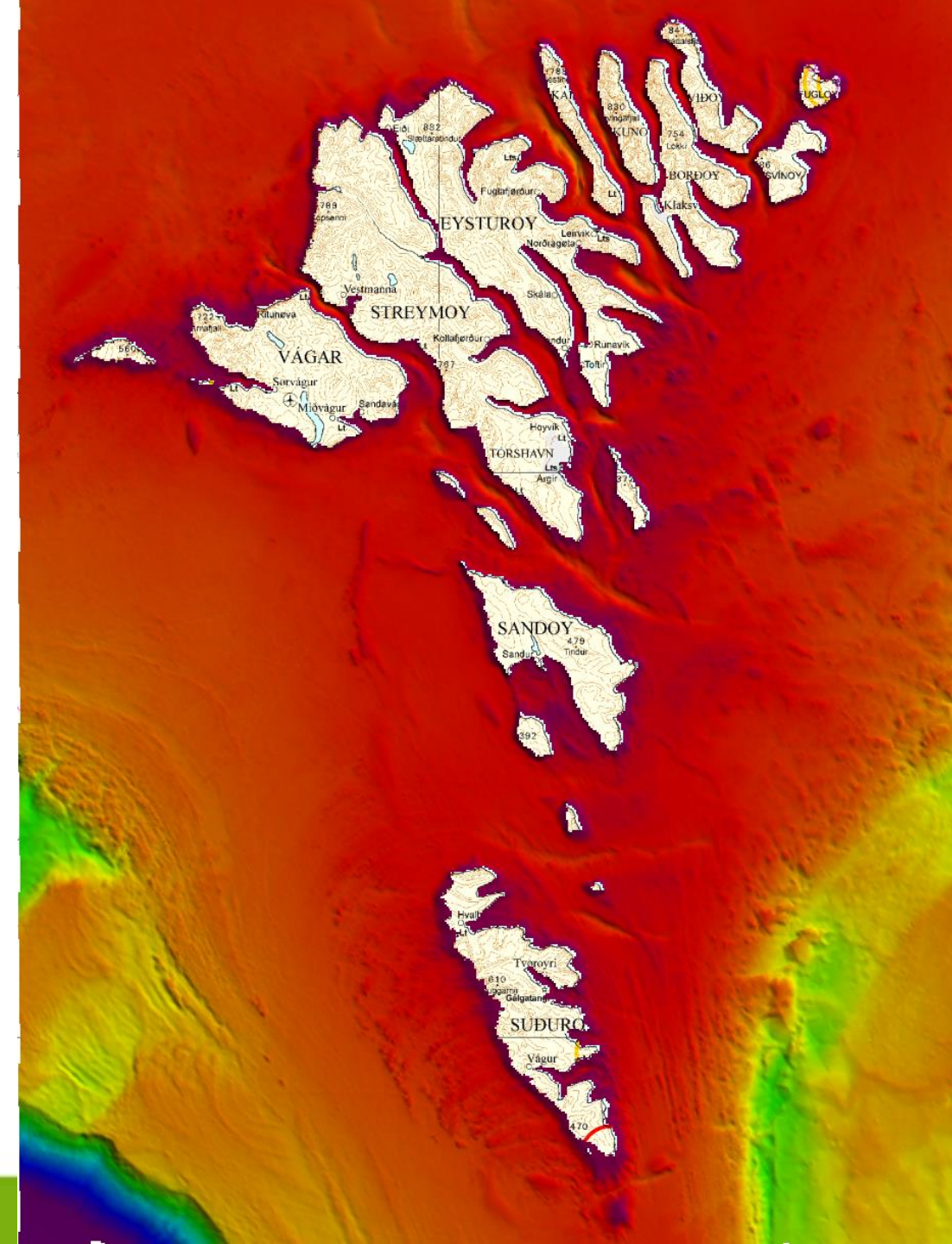


### Current Chart





- 50m Depth Model
- Initial coverage
- Freely available to all
- Further models and updating data planned
- Not for navigation, but can be used for other purposes eg fishing charts, water flow modelling, location of fish farms, wind farms etc





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