

Havbundstyper i de indre danske farvande

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GEUS



Temadag om havbund og fisk den 7. juni 2012

Præsentationen

- *Kortlægning af den danske havbund*
- *Kortlægnings metoder*
- *Den geologiske dannelses historie*
- *Havbundstyper*

Stenbund og stenrev

Grusbund

Sandbund

Mudderbund

Havbundskortlægningen i Danmark

➤ Råstofkortlægning



➤ Anlægsarbejder



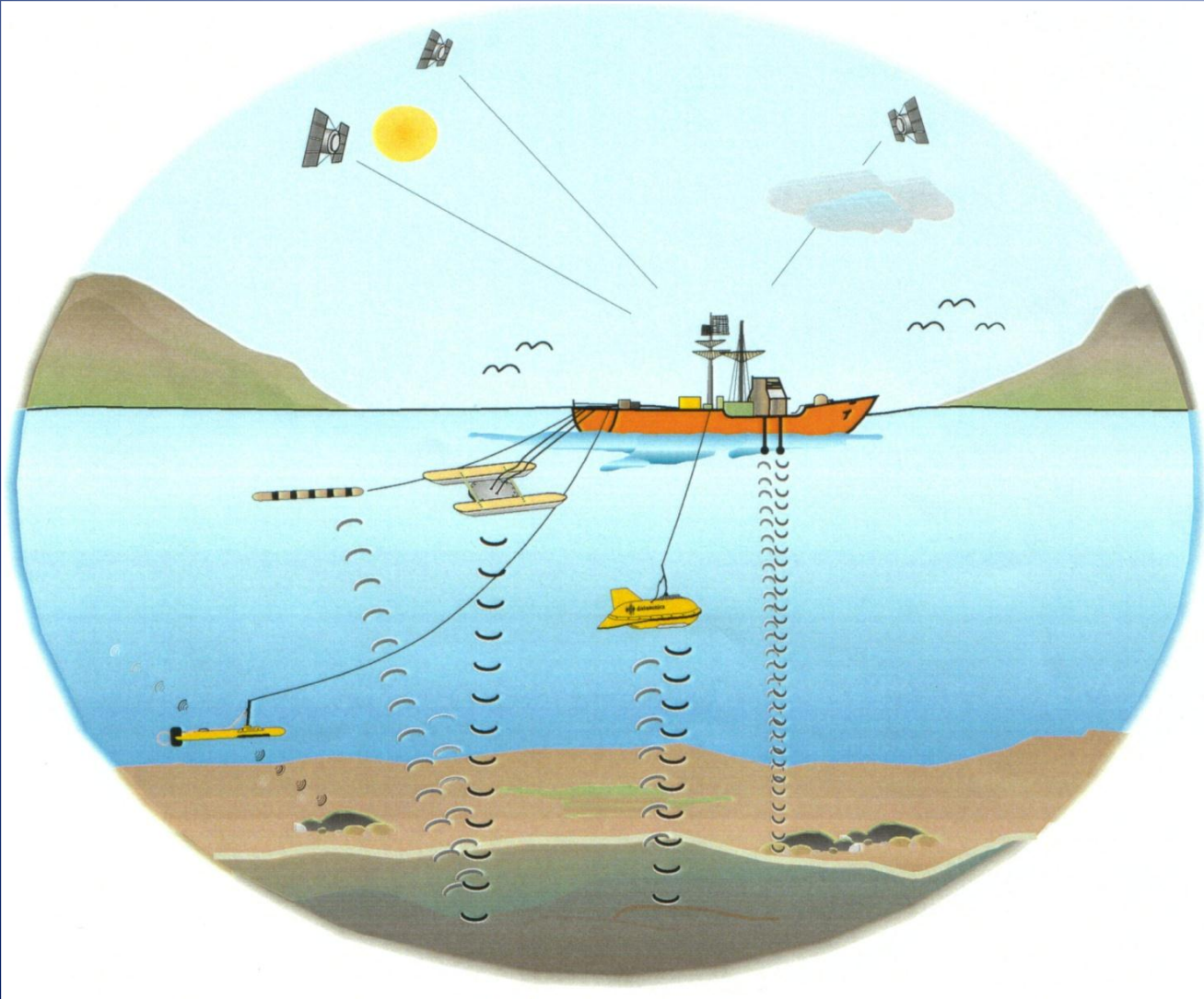
➤ Habitatkortlægning



➤ Forskningsprojekter



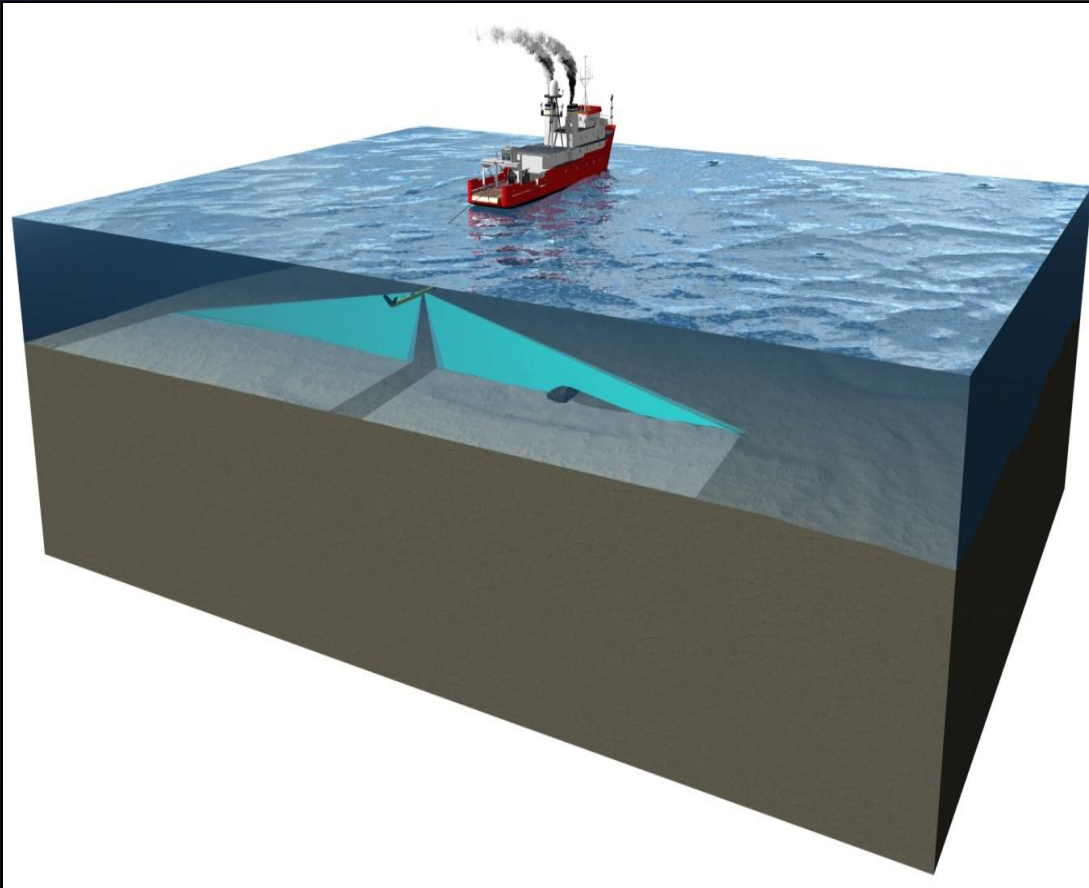
Marine kortlægnings metoder – seismik/akustik



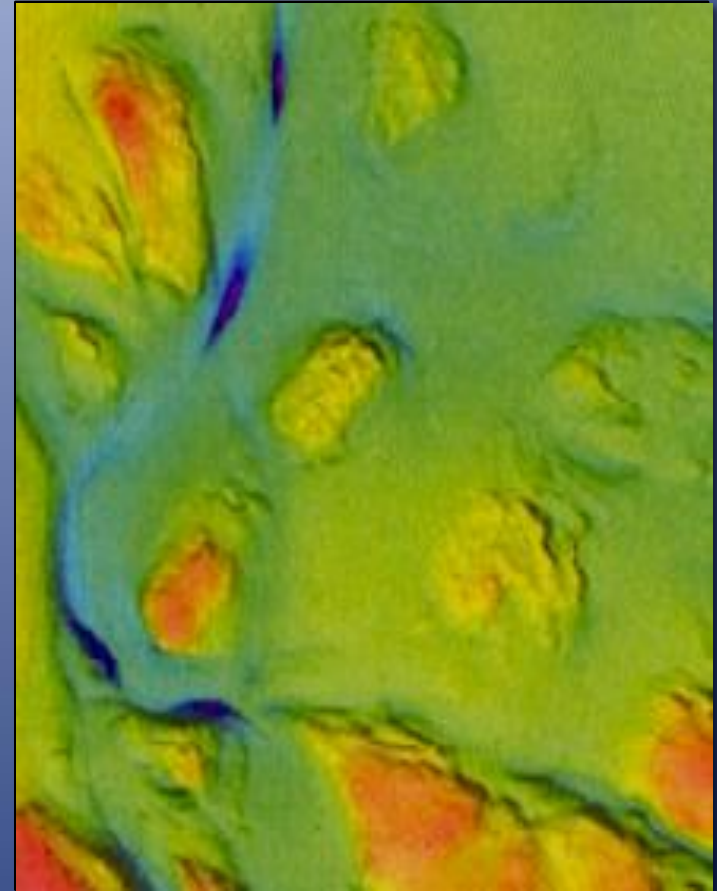
- Navigation
- Ekkolod/*multibeam*
- Sparker
- Chirp
- *Side scan sonar*

Marin kortlægning – side scan-/multibeam sonar

Side scan sonar



Multibeam bathymetri



Marine kortlægnings metoder - prøvetagning

Vibrations borer



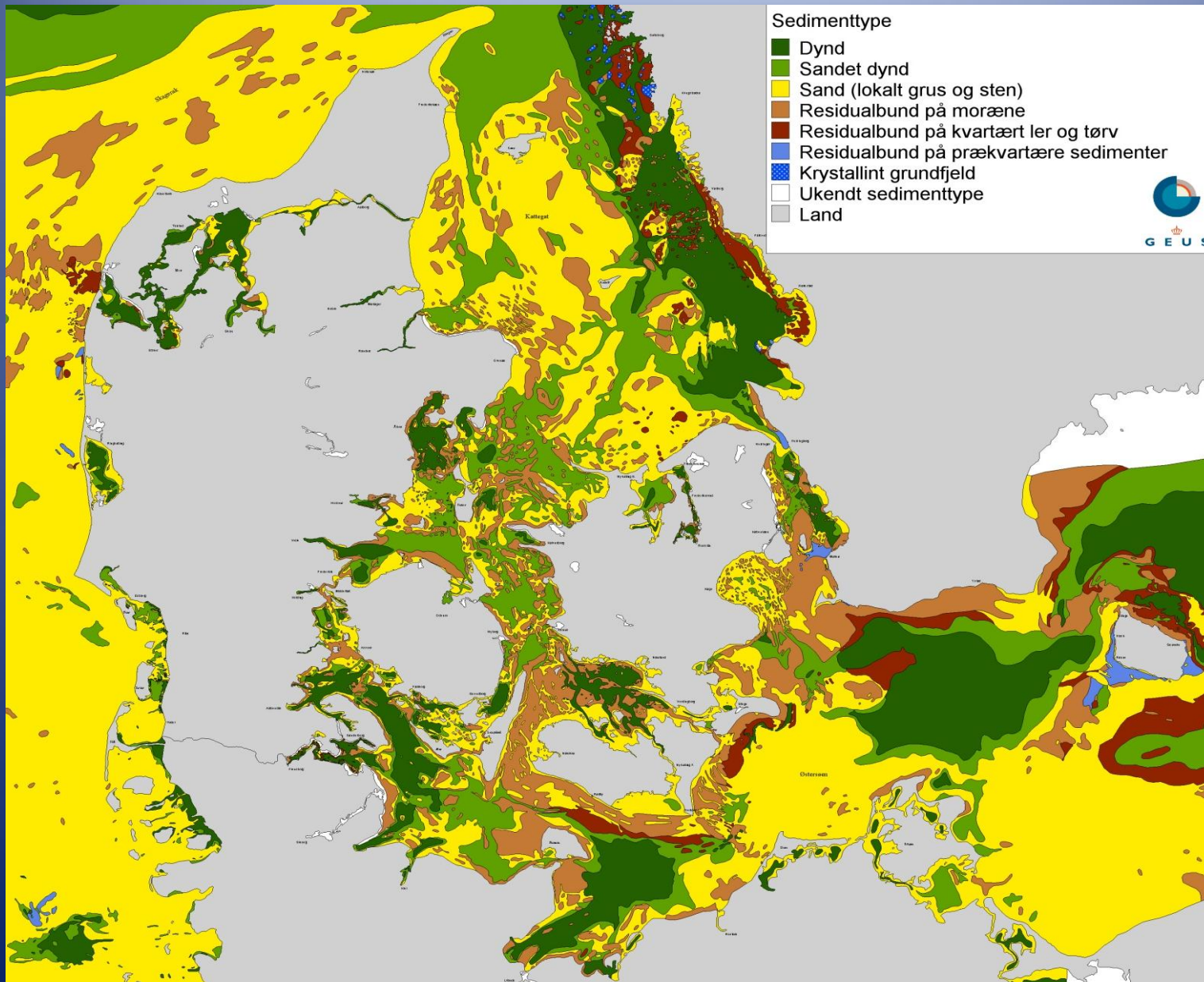
Grab prøvetagning



Video / ROV



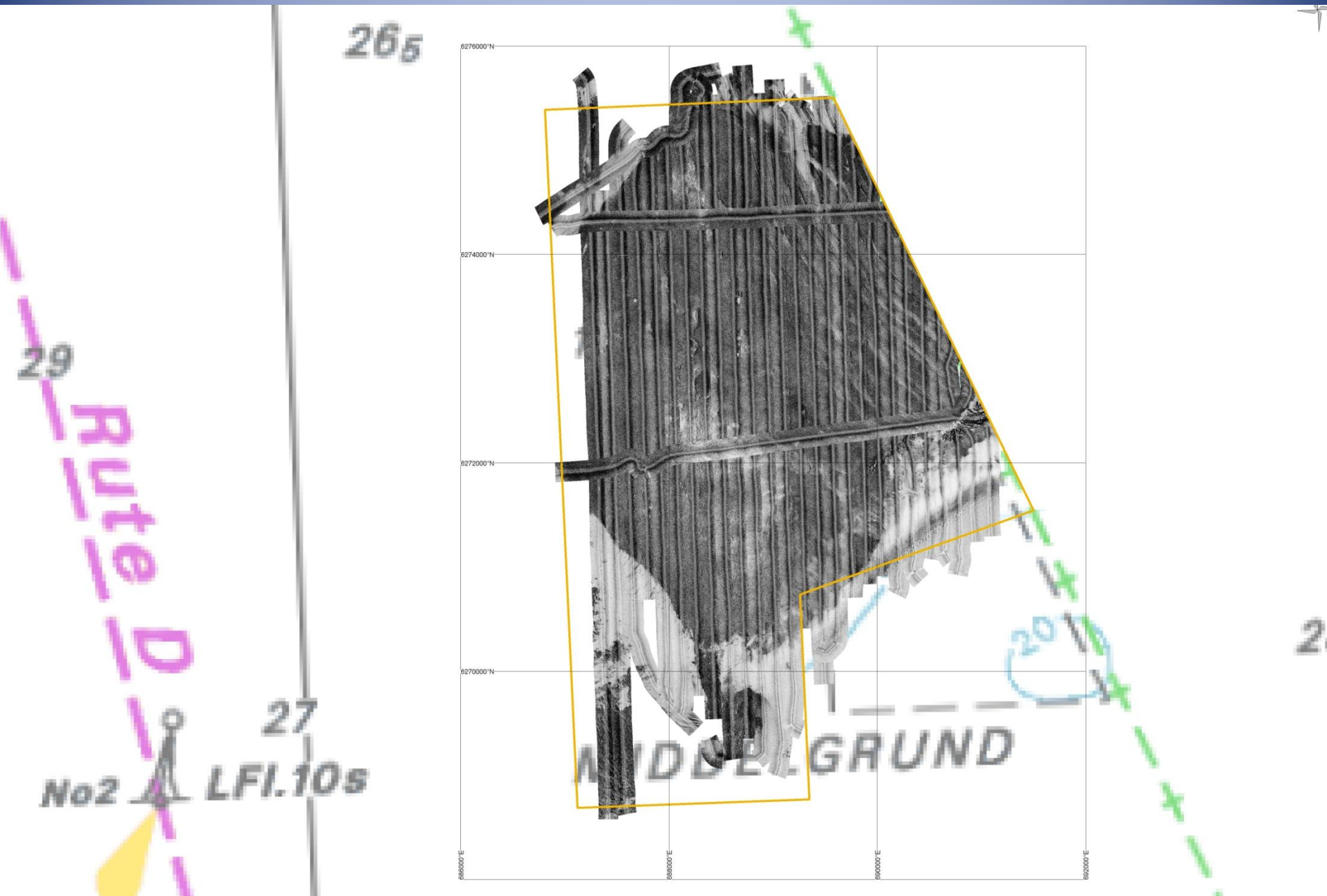
Havbundssedimenter i de danske farvande



Kortlægningsprojekt 2011



Eksempel: Store Middelgrund – side scan mosaik



Eksempel: Store Middelgrund – substrat typer

SIGNATURFORKLARING:

 Kortlægning 2011 Natura2000 område

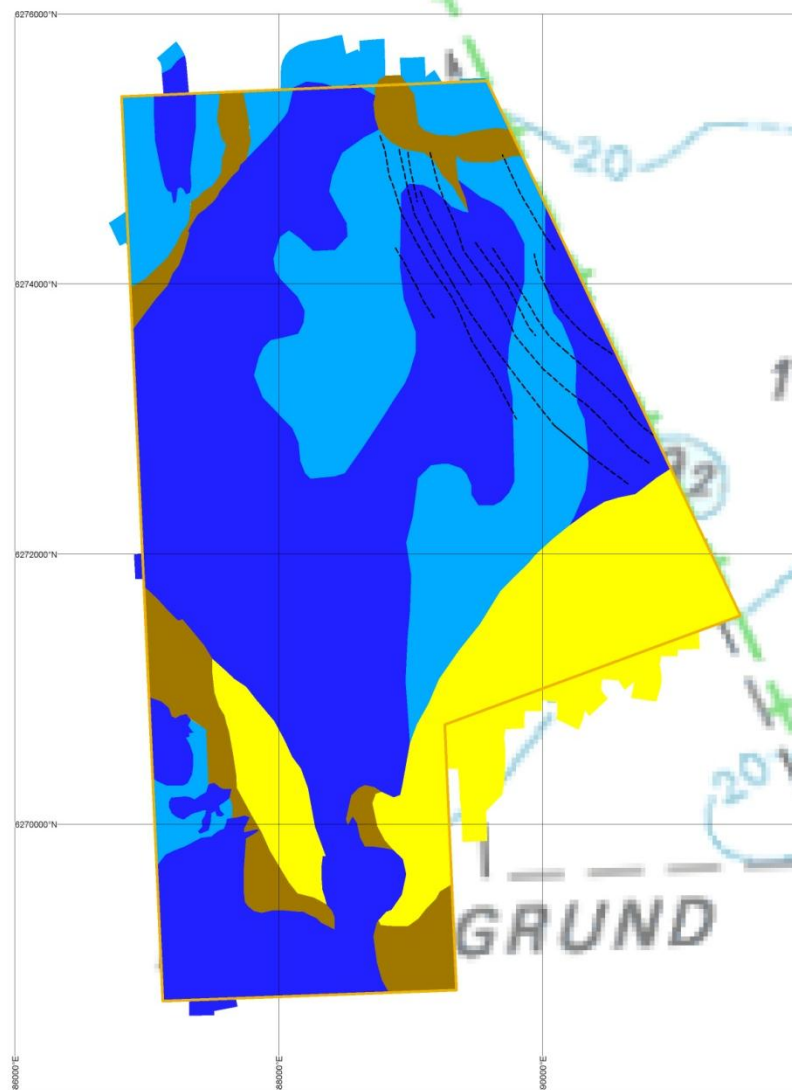
 Substrattype 1b

 Substrattype 2

 Substrattype 3

 Substrattype 4

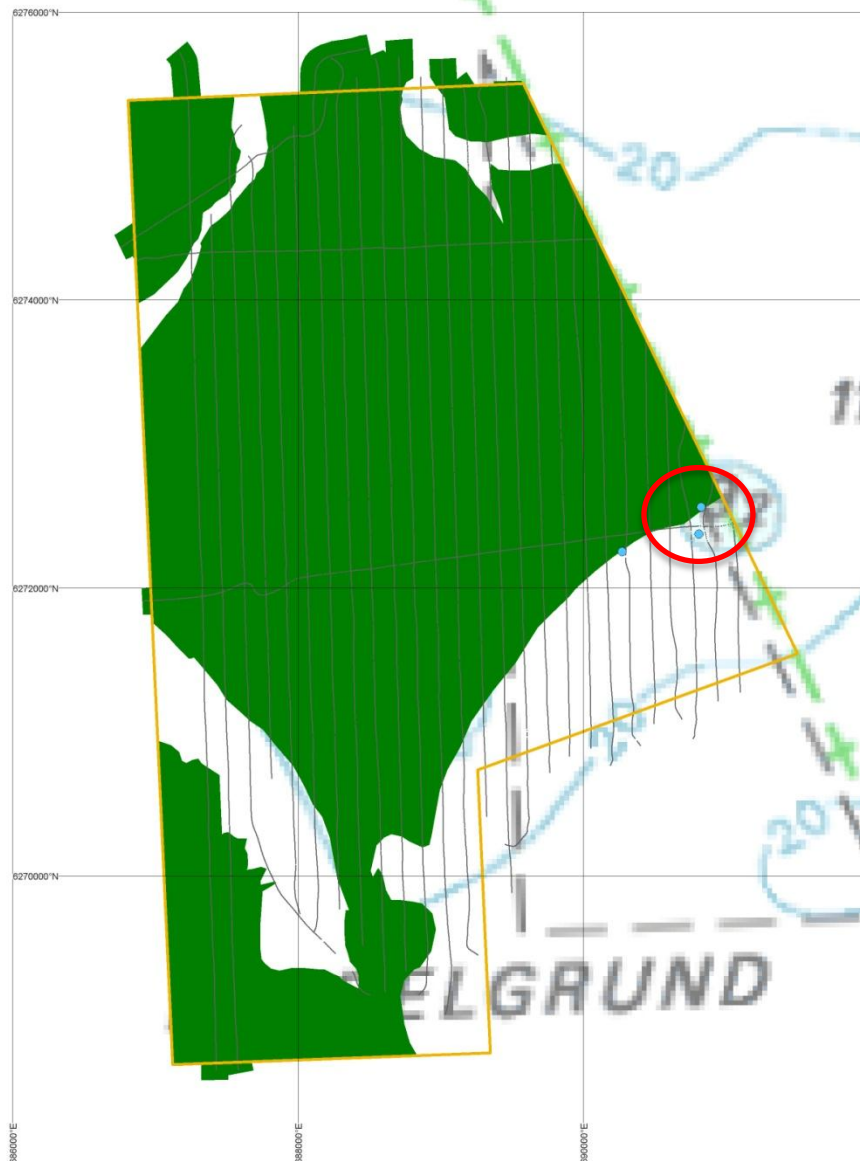
 Rygge



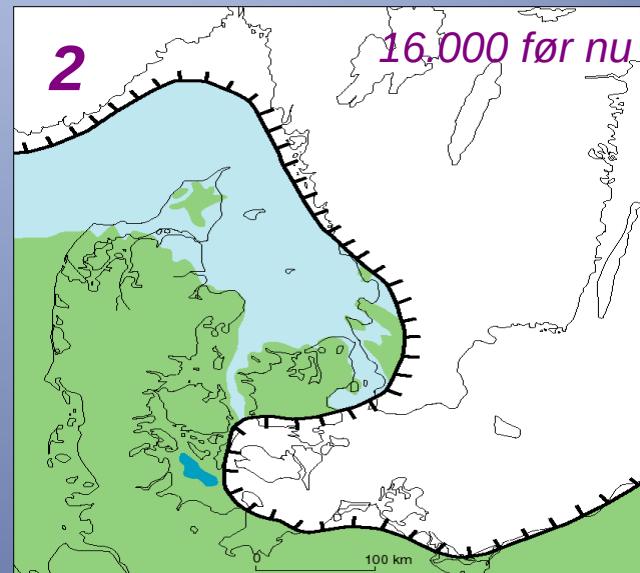
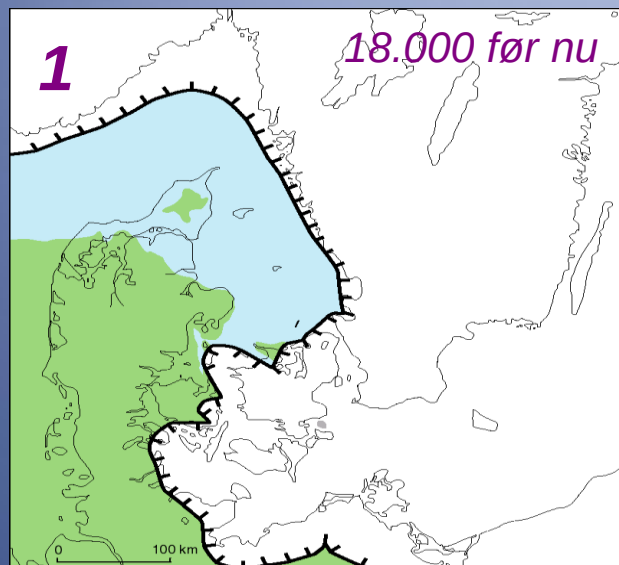
Eksempel: Store Middelgrund – naturtyper

SIGNATURFORKLARING:

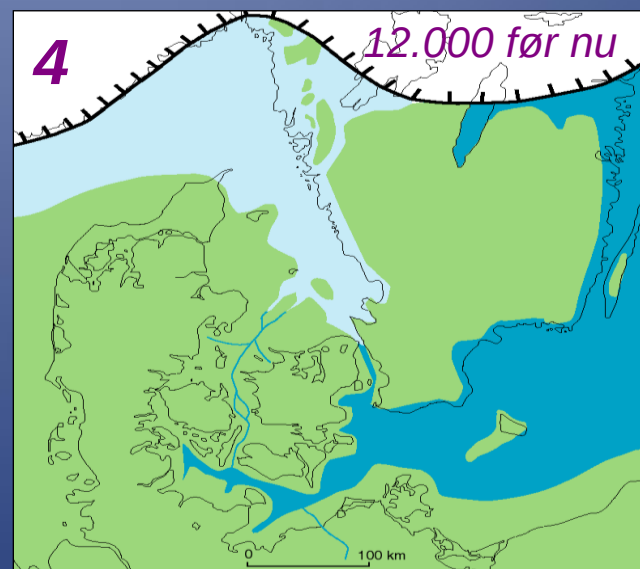
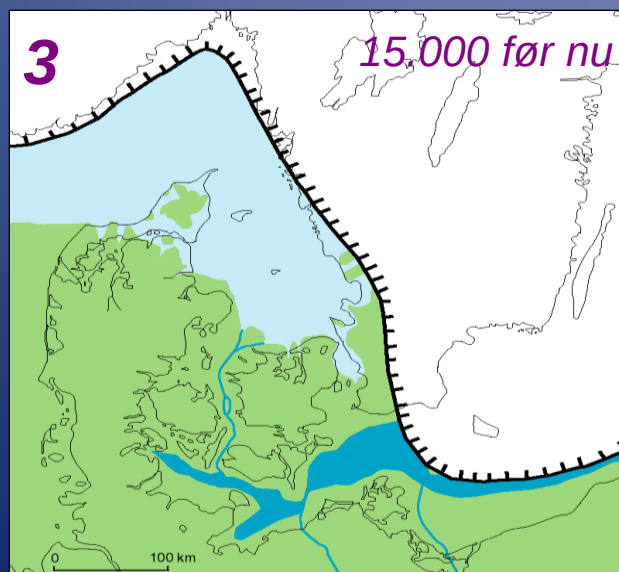
-  Kortlægning 2011 Natura2000 område
-  Sejlliner
-  Stenrev
-  Boblerev



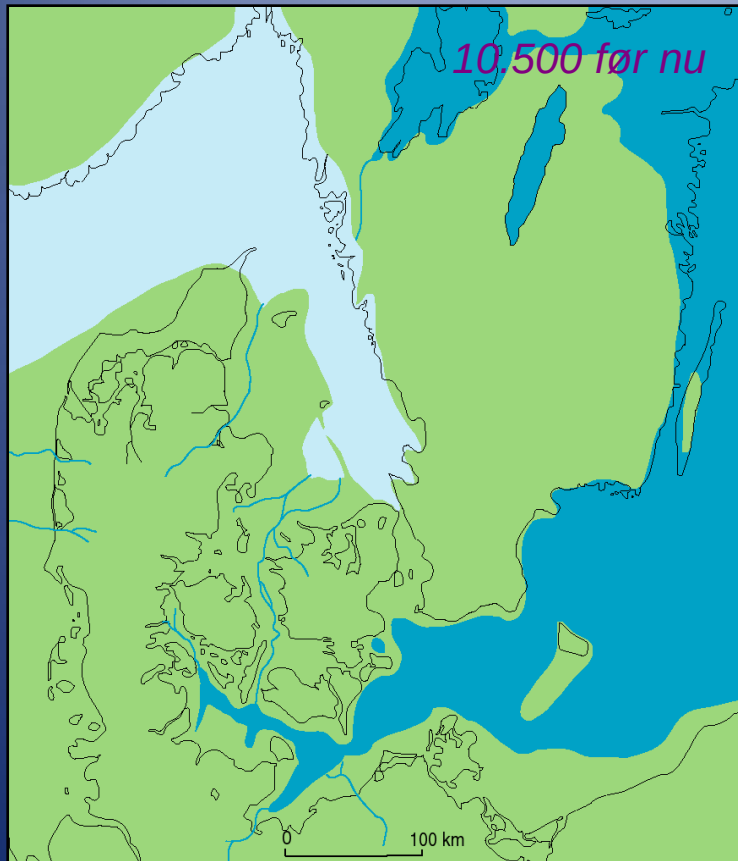
Istidens sidste faser



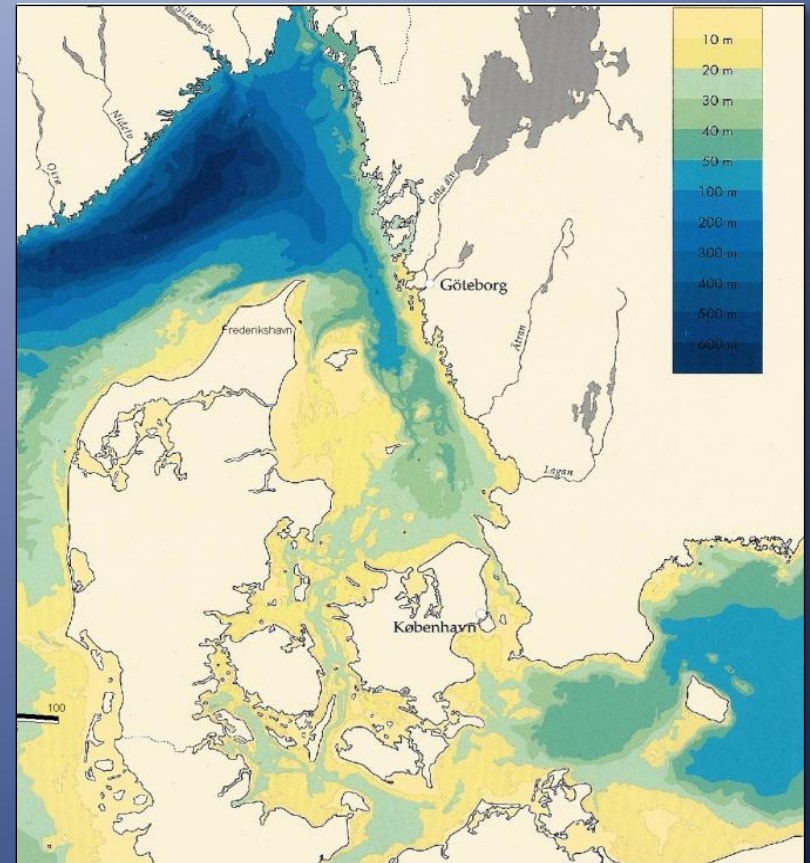
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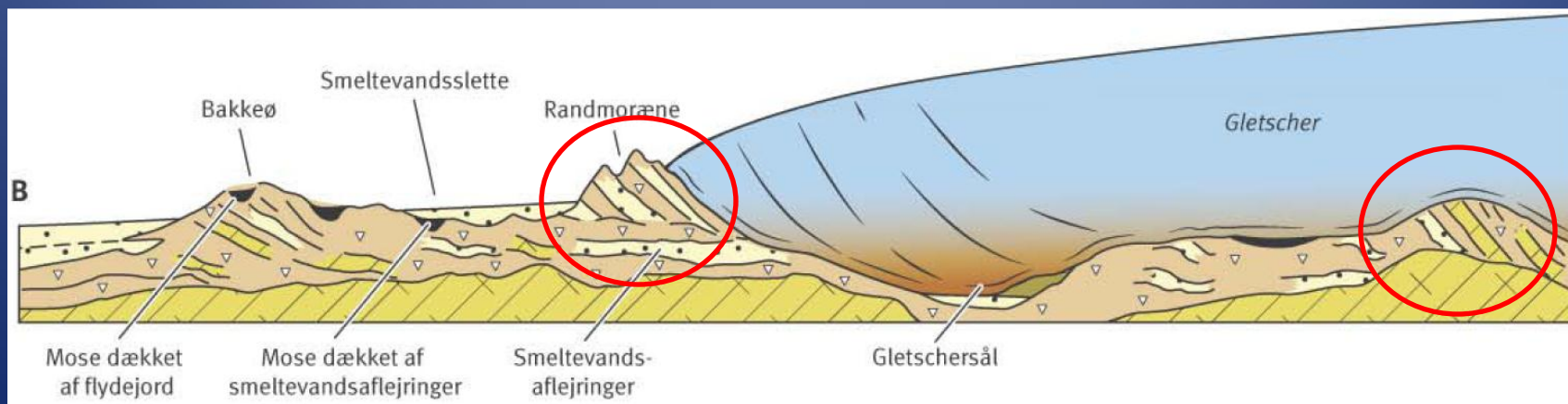
Havspejlsstigningen i de danske farvande



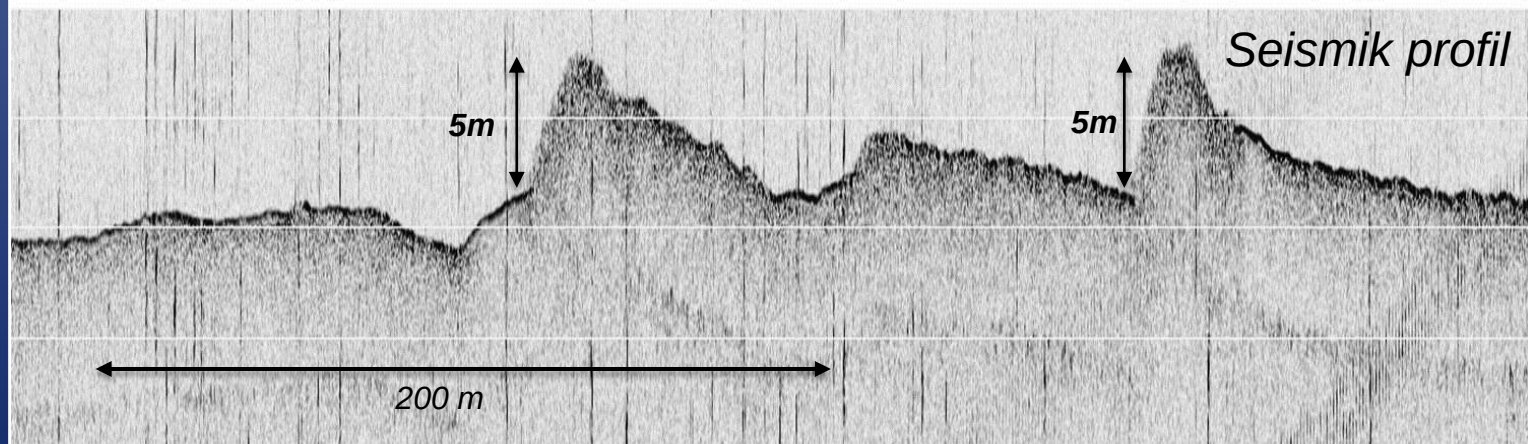
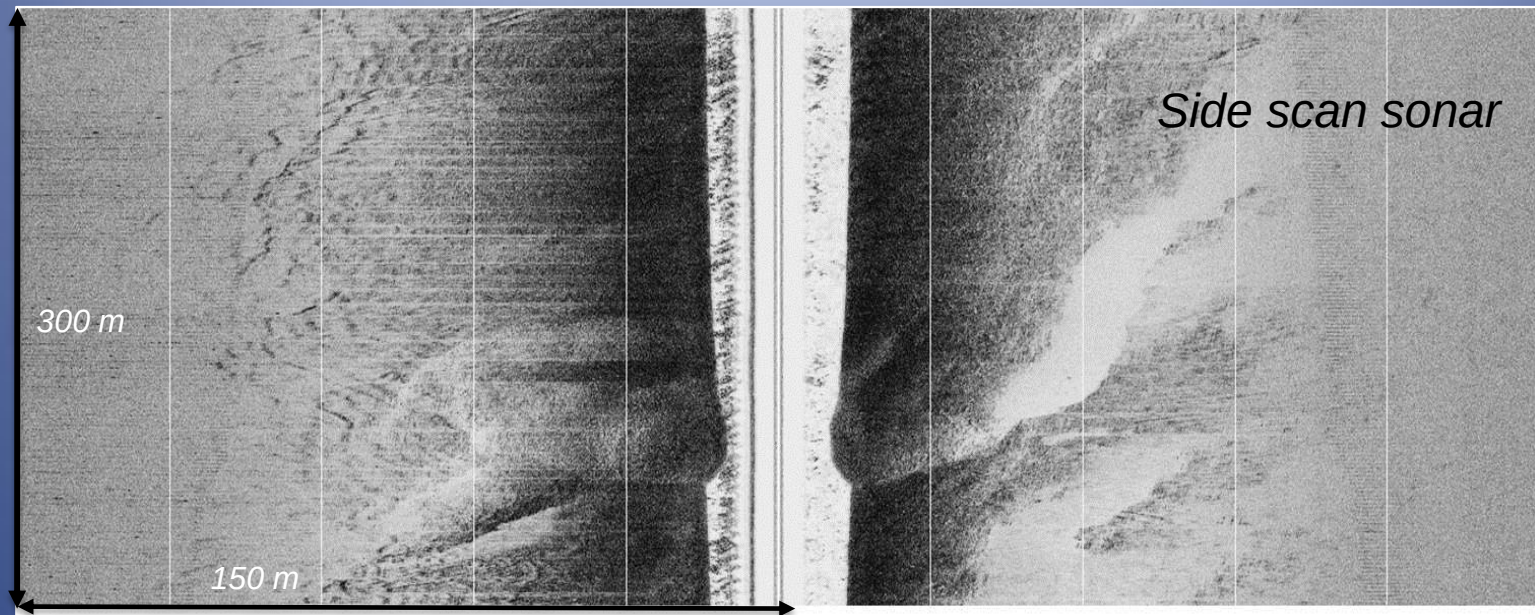
Landhævningen af det danske område



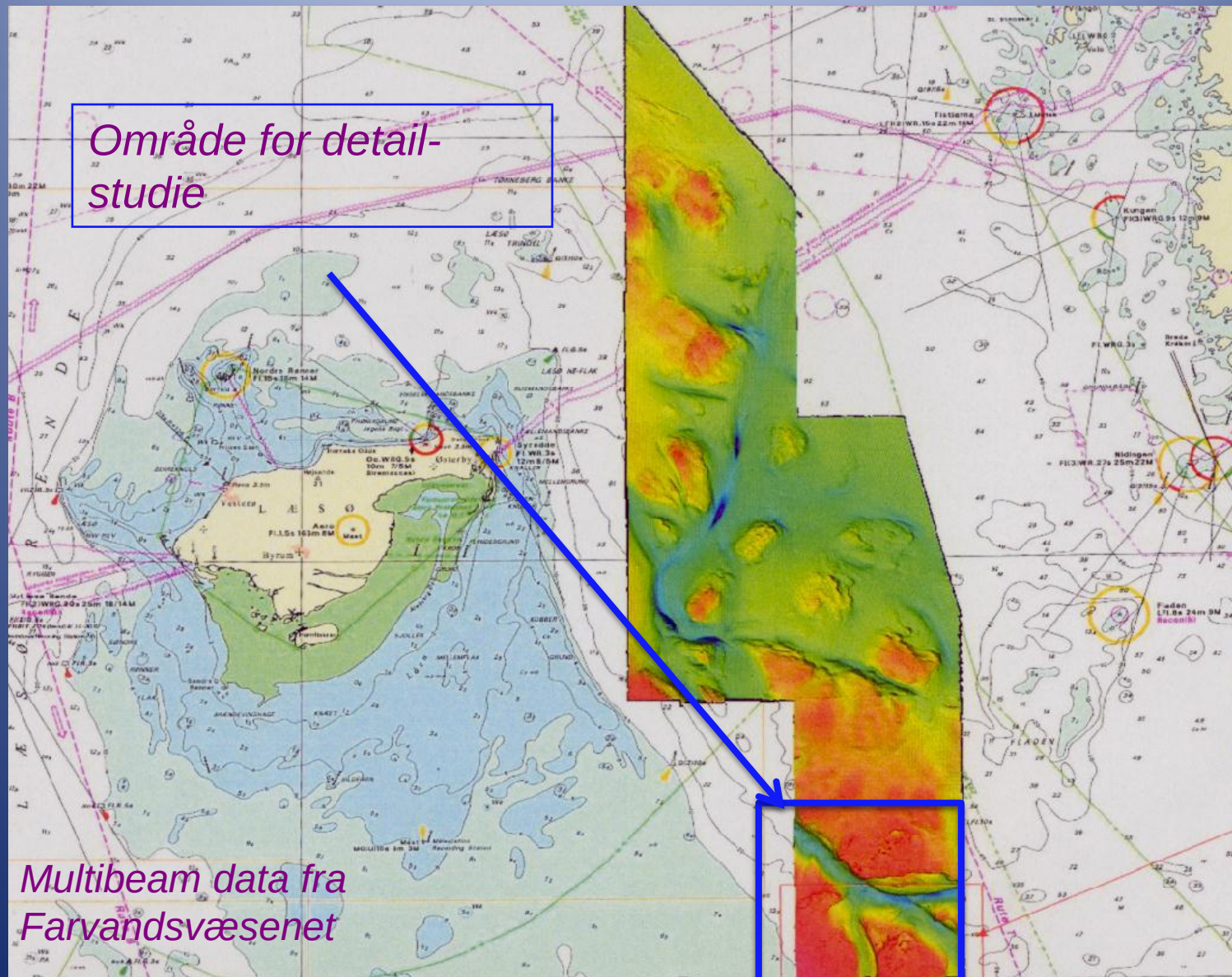
Dannelsen af danske havbundstyper



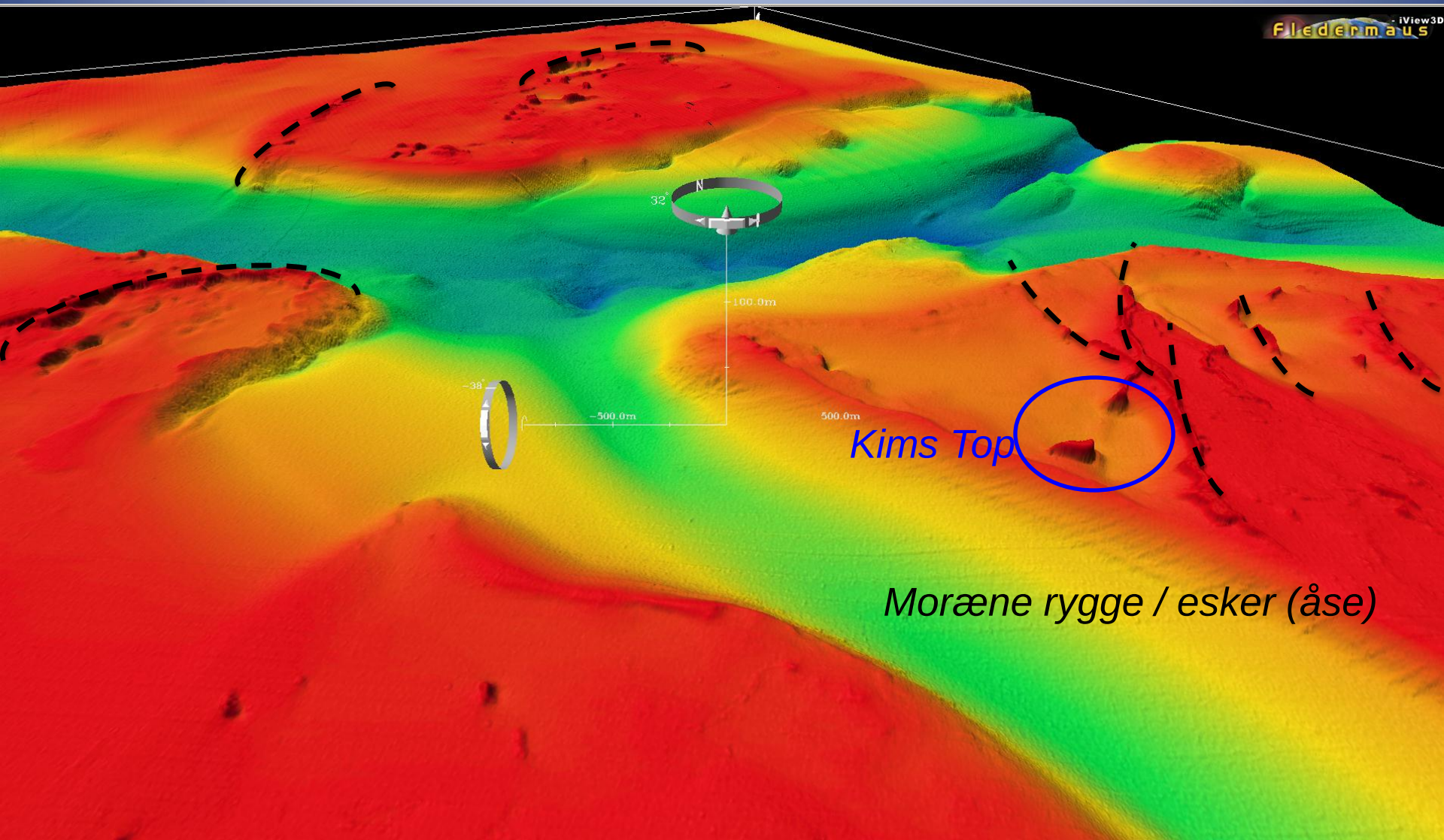
Stenrev 1 - randmoræner



Eksempel: Multibeam kortlægning i Kattegat

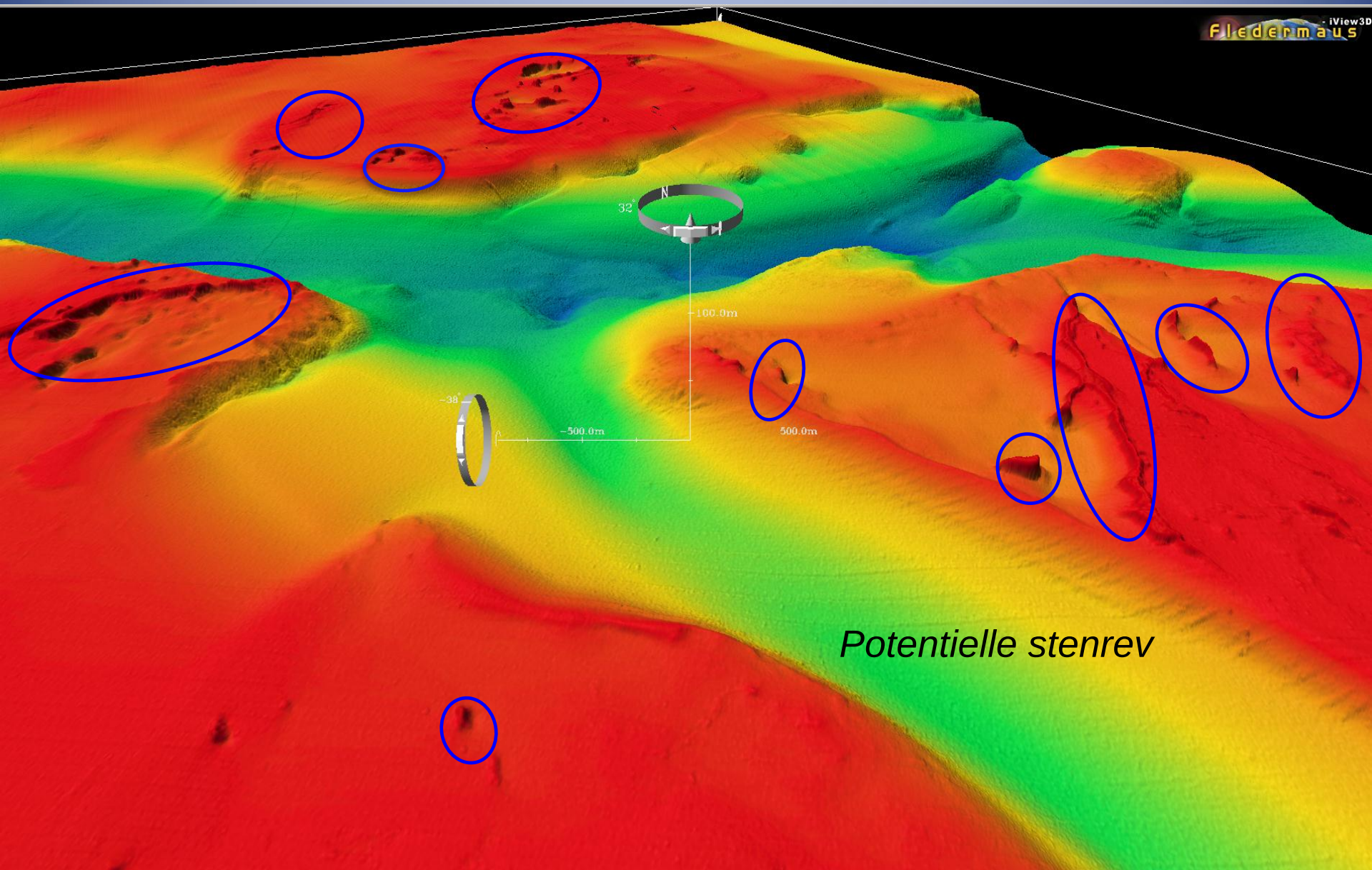


Multibeam kortlægning i Kattegat



Stenrev i Kattegat

iView3D
Fliedermaus



Potentielle stenrev

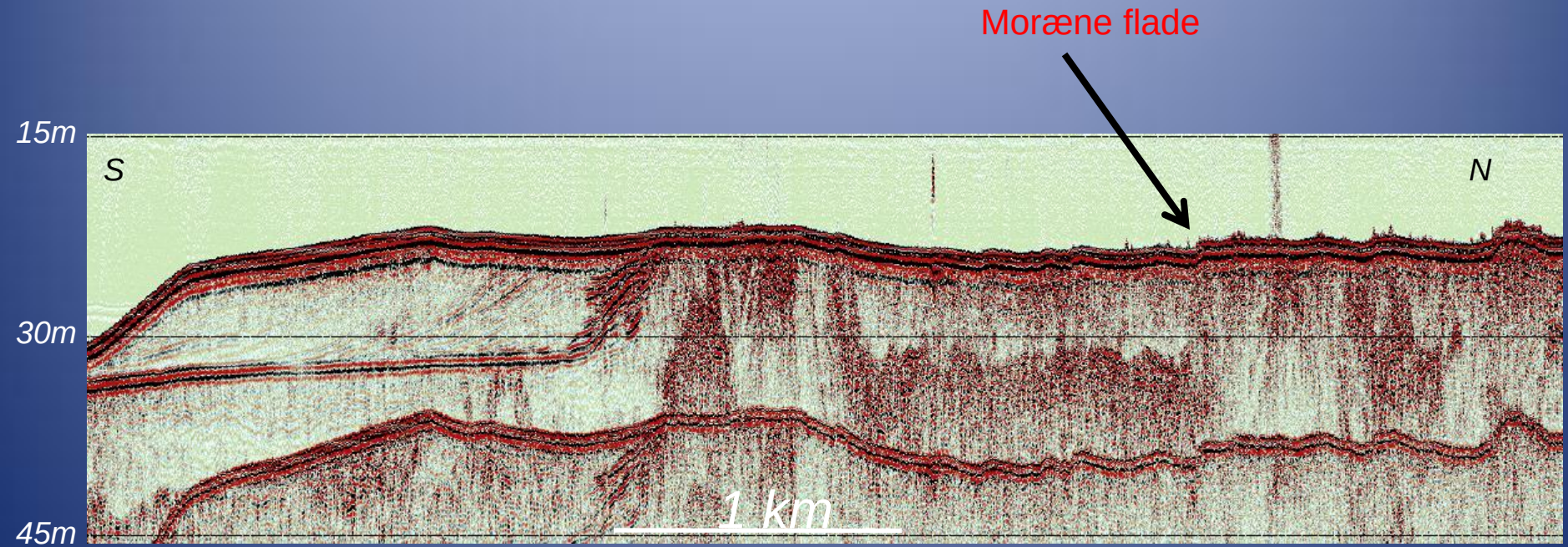
Huledannende stenrev

FISK

F1P1006

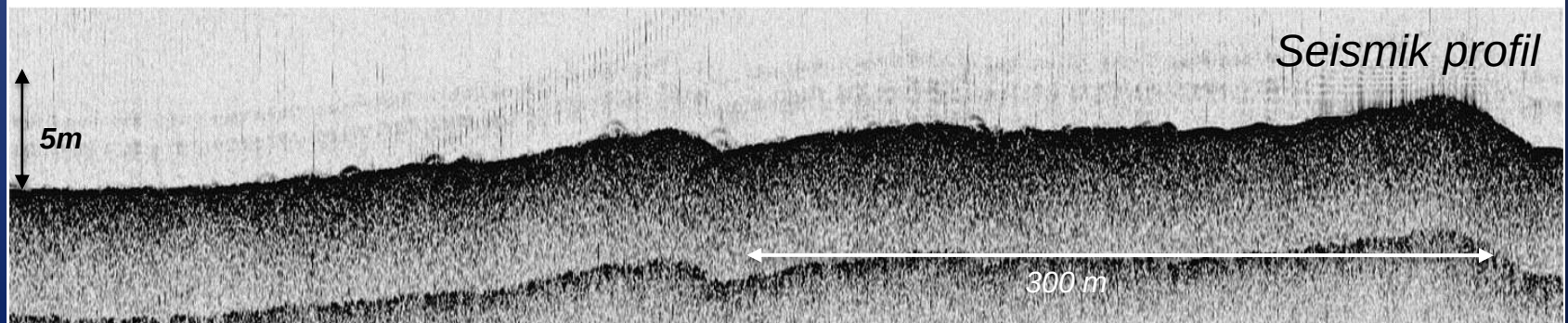
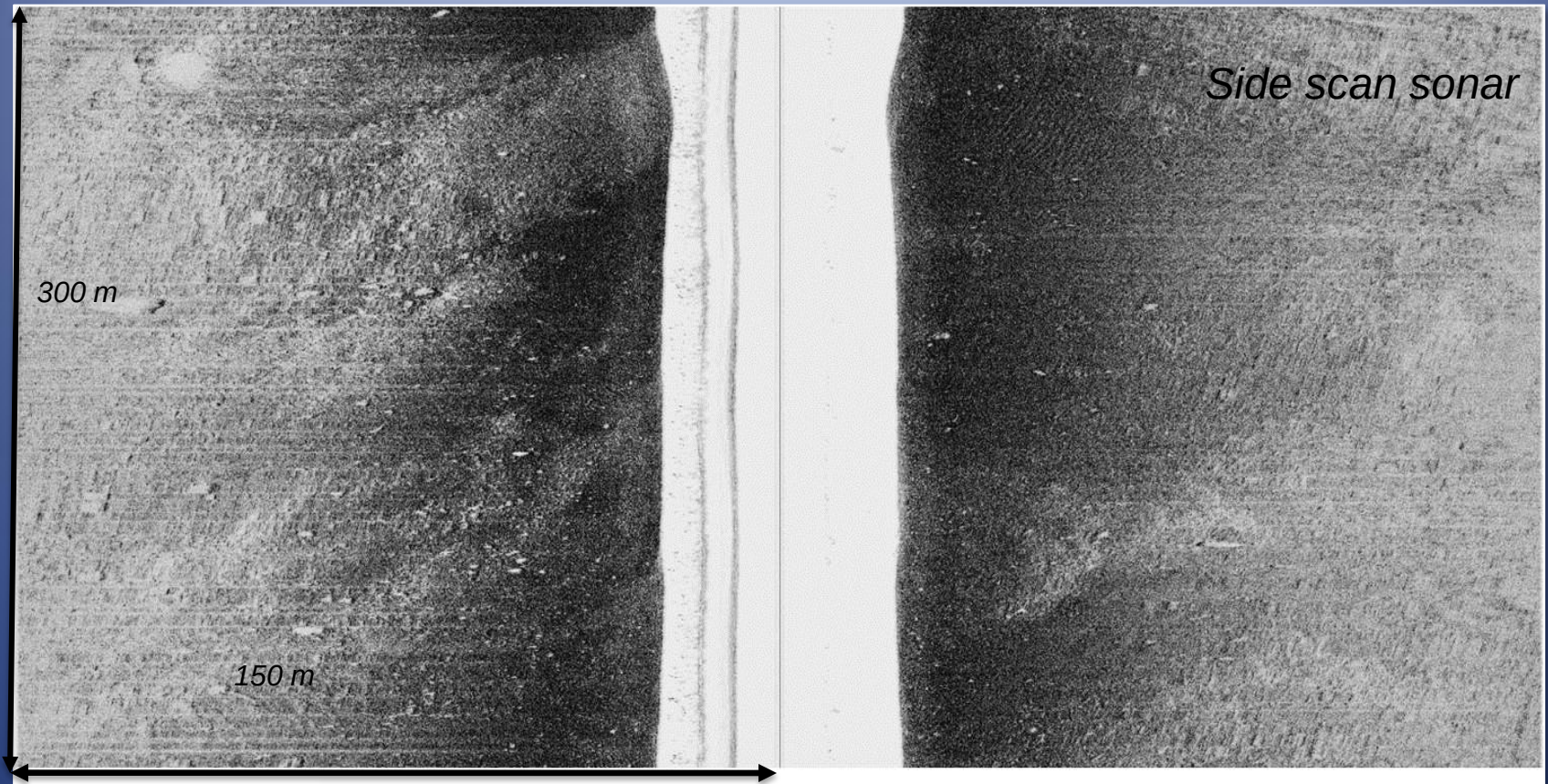
V9 081HD-1 CA-40 03AUG10
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Stenrev 2 - moræneflade



Seismik profil

Stenrev 2- moræneflader



Erosionsbund på moræneflade



Restsediment:
Gruset bund, moderat sorteret, indhold af småsten

The photograph shows a seabed with distinct horizontal layers of sediment. The upper layers are composed of light-colored, fine-grained material (silt and clay) with some darker, more heterogeneous material (moraine) interspersed. The lower layers are more uniform and consist of fine sand and silt. The overall texture is rough and eroded, with visible cracks and small depressions. Reddish-brown seaweed or algae are scattered across the surface, particularly on the left side. The lighting is somewhat dim, suggesting an underwater environment.

Moræneler:
Fast ler, dårlig sorteret, stenet og gruset

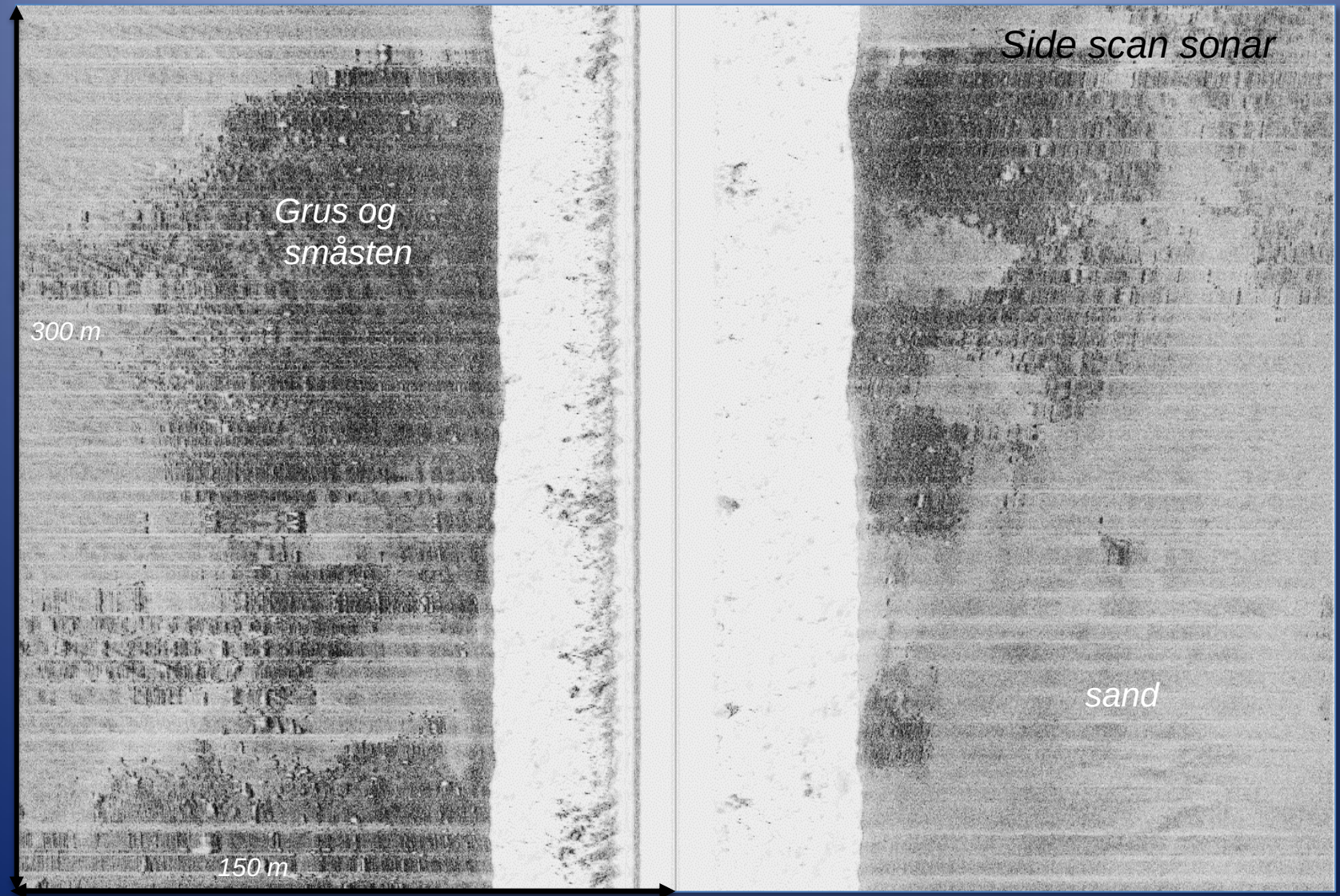
Erosionsbund på moræneflade



Hård bund / stenrev på moræneflade



Hård bund: sand, grus og småsten



Hård bund: sand, grus og småsten

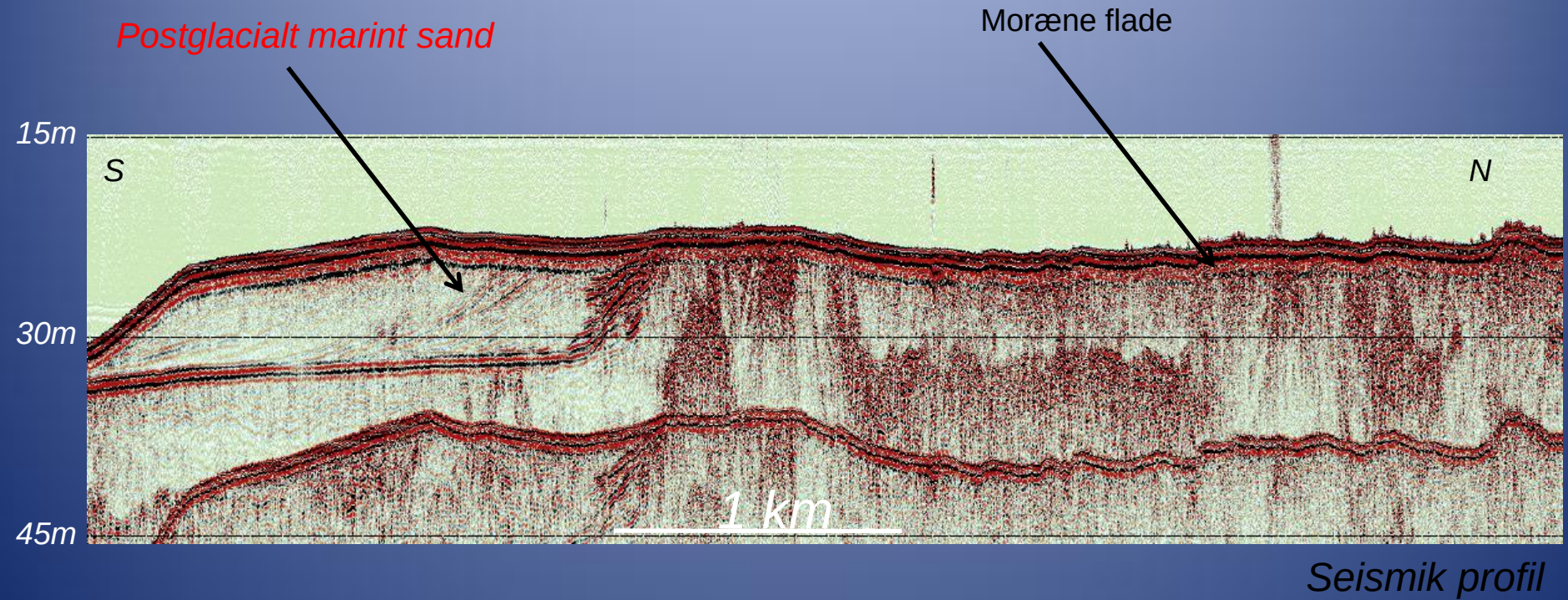


Restsedimenter: sand, grus og småsten

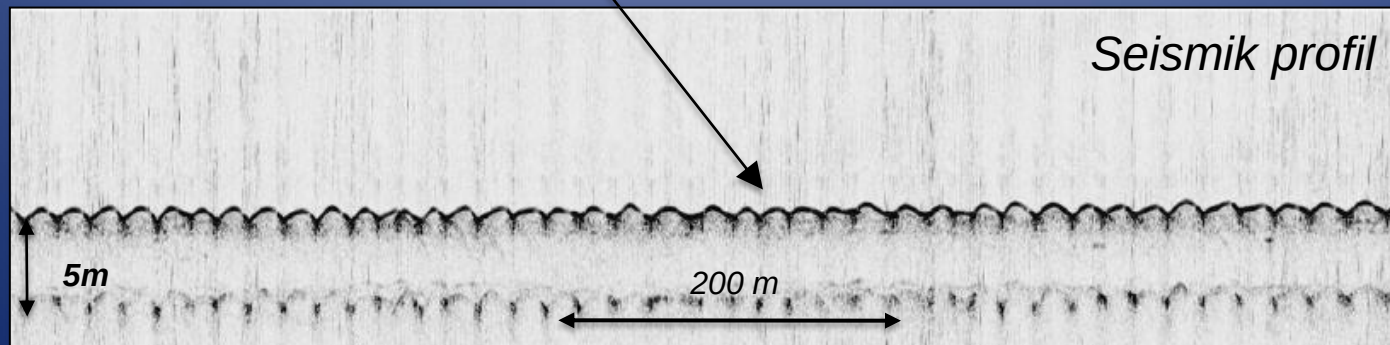
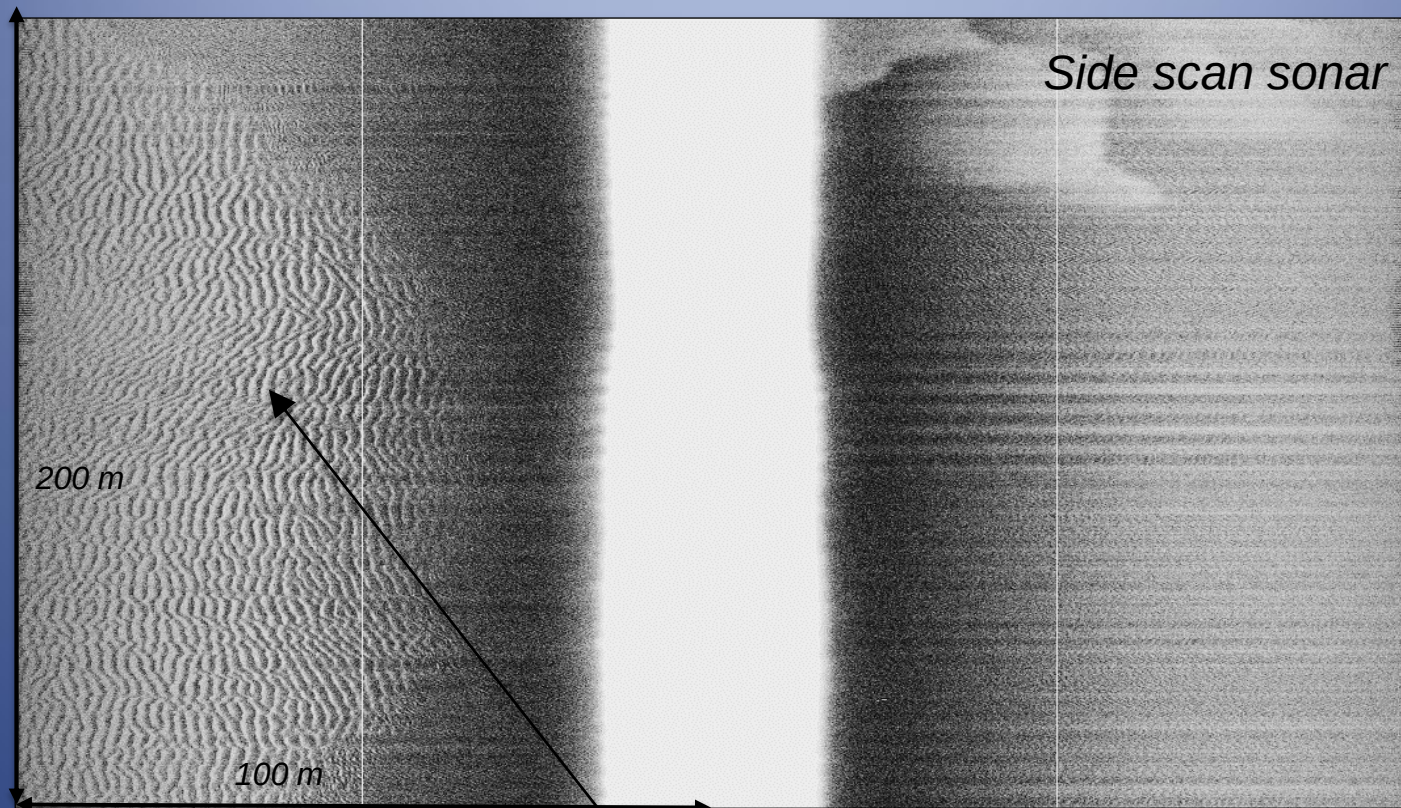
F1P1003

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Sandbund



Sandbund



Sandbund - video

7/20/2010 12:13:33 PM

F1P2013

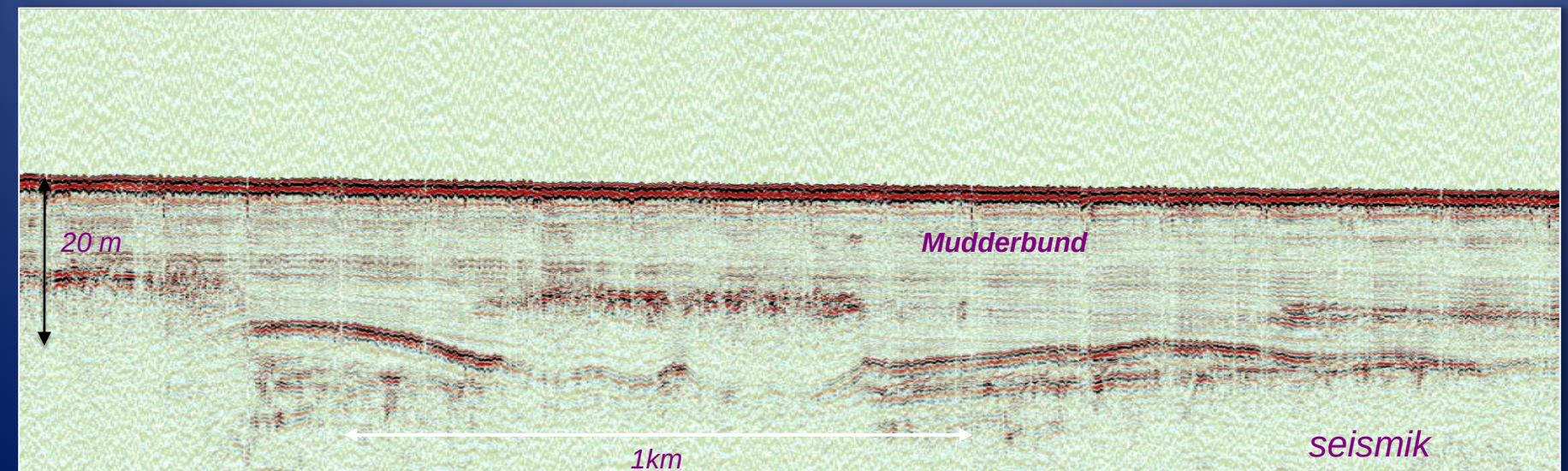
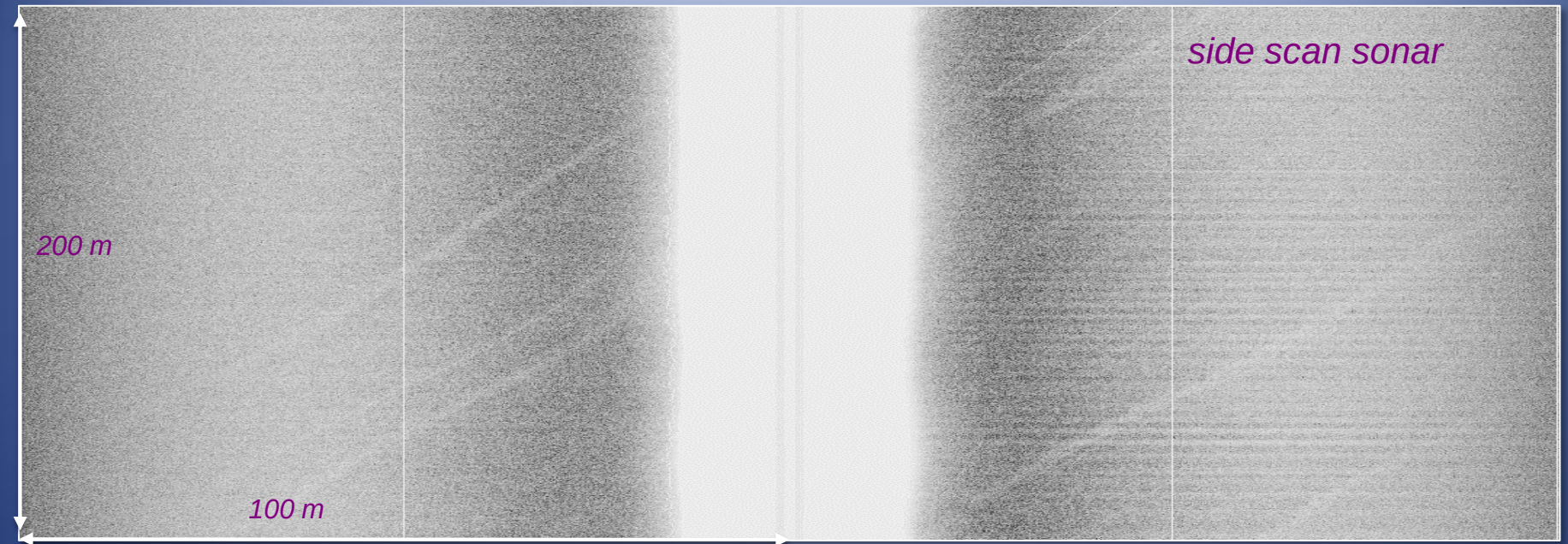
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D: 23.64 m

Temp: 16.1 °C



Mudderbund



Mudderbund - video

F2B130

V9 143HD+5 CA-15 07AUG10
H9 EL 0058.6MS OSC 19:11:24

Tak for
opmærksomheden

