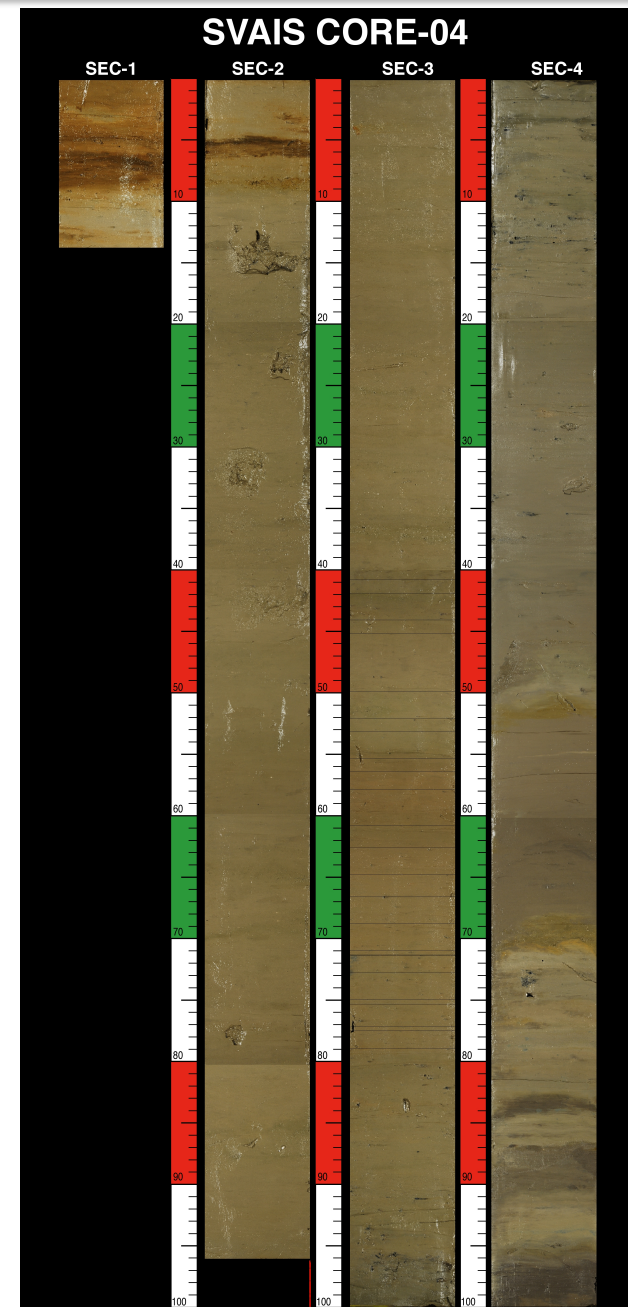
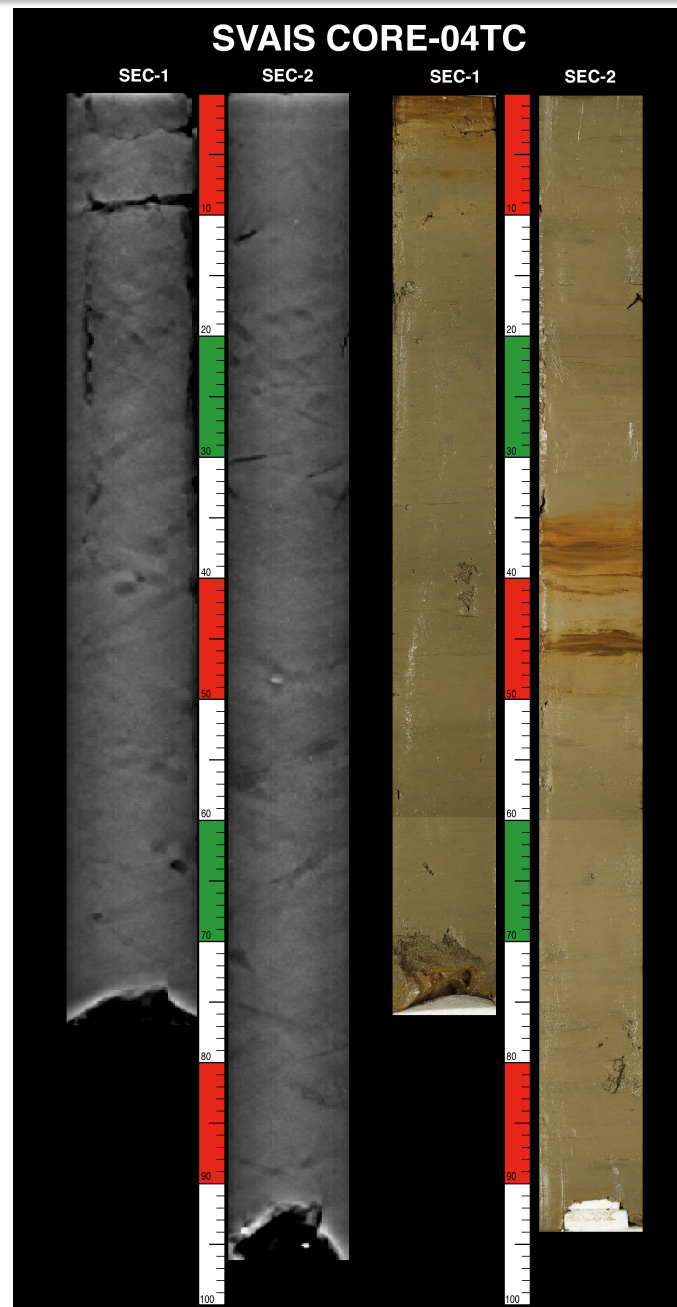


CORING DISTURBANCE



Visual core description 2° step sediment composition

Mud composition - Smear slides

- A smear slide is a thin layer of unconsolidated sediment embedded on a glass slide for petrographic microscopic examination;
- Smear slides are a useful tool to quickly assess the **compositional content** of clay-silty sediment samples;
- Smear slides are a powerful method for rapidly evaluating tiny quantities of sediment (mineralogy, components, form, size) as the basis for **sediment classification**, and for ascertaining the presence of microfossils.

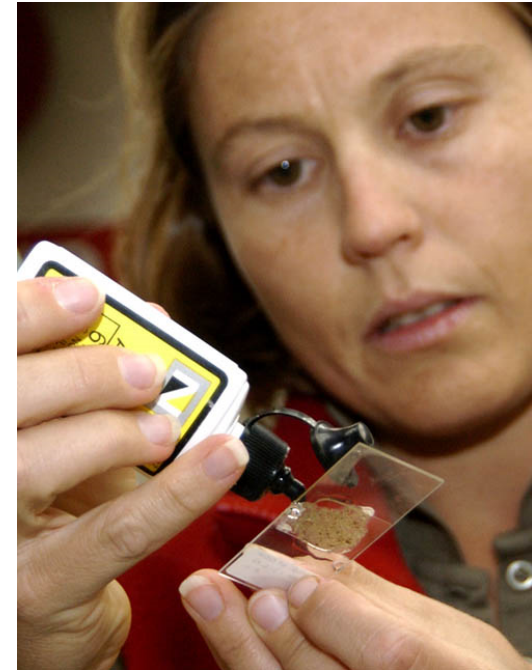
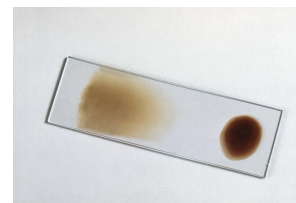
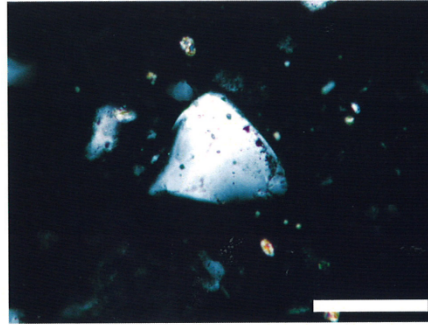
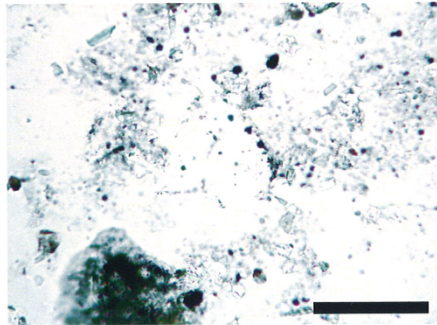


Foto: IODP Exp. 307

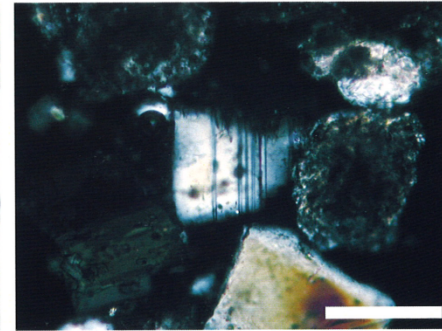
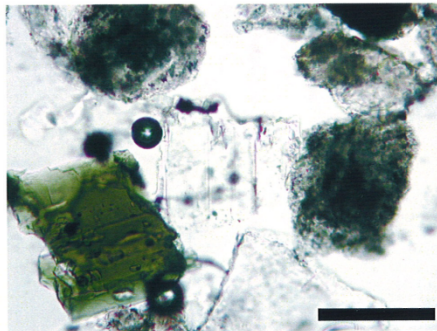


Quarz

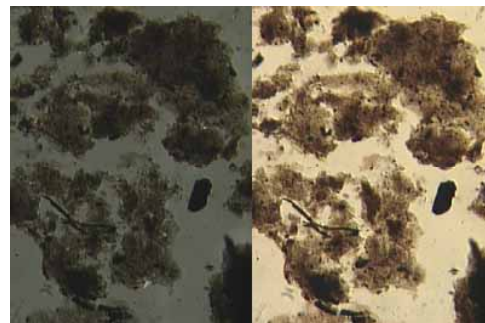


IODP Exp .320

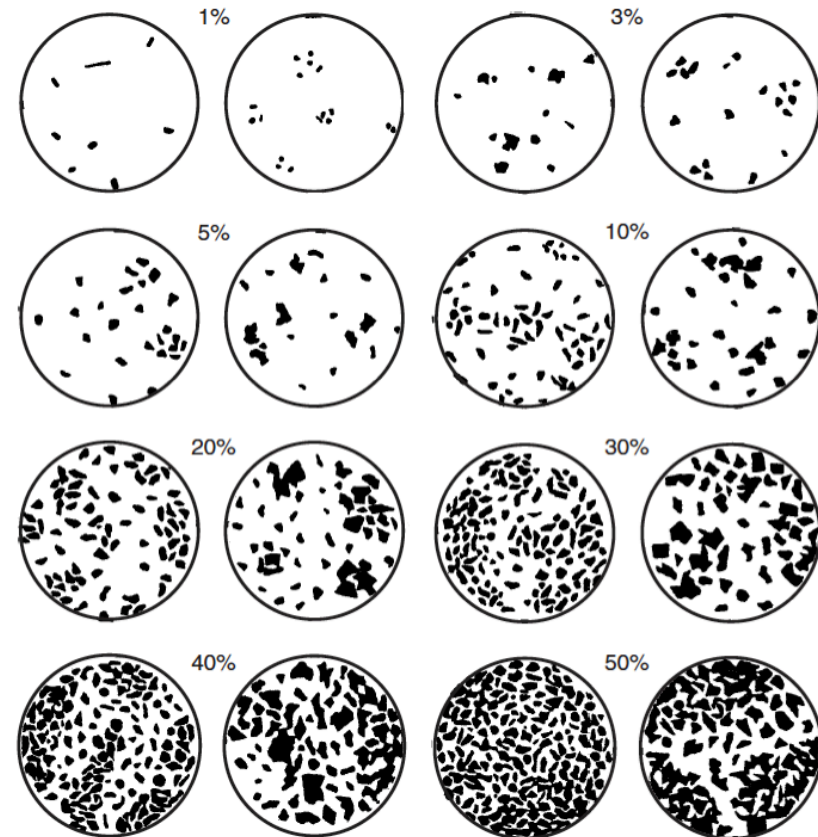
Plagioclase



Clay fraction

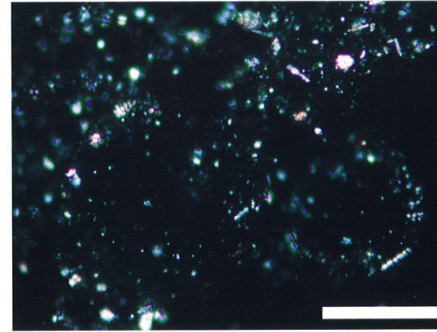
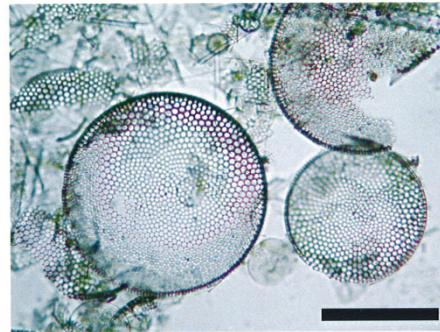


Composition/Quantification



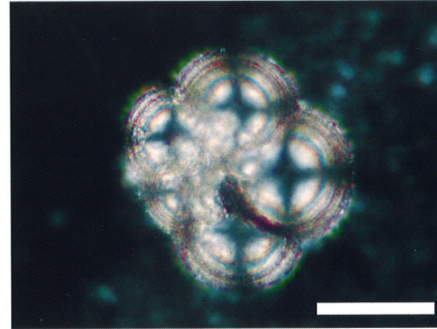
Rothwell R.G., 1988. Minerals and mineraloids in marine sediments. An Optical Identification Guide. Elsevier Science Publishers, 279 pp

Diatoms



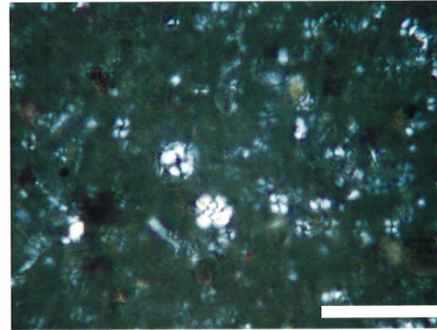
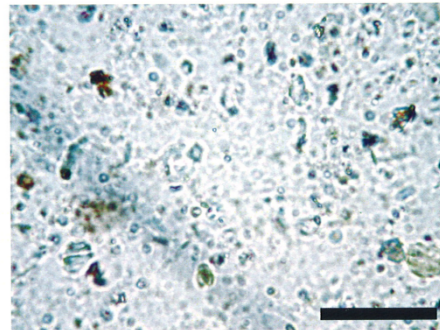
オホーツク海・中心部, 水深 1107m, XP98, PC1, Sec.1, 20cm
200 倍, スケールは横 100 μ m

Foraminifers



太平洋・熊野トラフ, 水深 2190m, KT02-1, KK2PC
400 倍, スケールは横 50 μ m

Calcareous nannoplankton

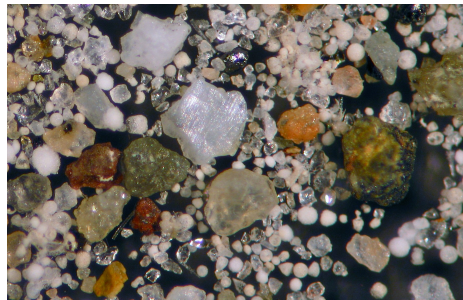


東地中海・キプロス沖, ODP Leg160, 967D, 1H, Sec.1, 0-5cm
1000 倍, スケールは横 20 μ m

Sand composition

- wet sievings at 63 microns are used to investigate the composition of sediment coarse fraction, the grains form and roundness, in order to define the sediment provenance. The sand fraction is also used for biostratigraphic purposes.

**Ice Rafted Debris
(Antarctica)**



**Beach sands
(Menorca-Spain)**



**Glacigenic
sediments
(Arctic)**



**Tephra
(volcanic glass)
(Tyrrhenian)**





SEDIMENT SAMPLE DESCRIPTION

Project:

lat. N long. E water depth (m)
core section cm cm from core top

sediment type lithology
colour remarks

DESCRIPTION OF RESIDUE

textural characteristics

sorting very good good
moderately sphericity high angularity very angular angular
poor very poor low sub-angular/rounded
rounded well rounded
remarks

residue composition

(AA=very abundant; A=abundant; O=occurring; R=rare; RR=very rare)

terrigenous components: ☐ predominant ☐ not predominant

quartz calcite K-feldspar gypsum glauconite
mica pyrite dark minerals volcanic glass micromodules
rock fragments others

bioclastic components: ☐ predominant ☐ not predominant

benthic forams planktonic forams pteropods bryozoa
echinoid spines sponge spicules ostracods corals
bivalves gastropods corals algae
radiolarians diatoms spores fish teeth
plant debris coccoliths discoasters organic matter
micrascidites of tunicates others

Foraminifera: list of the most characteristic taxa

<i>G. bulloides</i>	<i>G. tenellus</i>	<i>H. siphonifera</i>	<i>G. coriacaensis</i>
<i>G. trilobus</i>	<i>N. eggeri dutertrei</i>	<i>G. quinqueloba</i>	<i>G. inflata</i>
<i>N. pachyderma</i>	<i>G. ruber</i>	<i>G. scitula</i>	<i>O. universa</i>
<i>G. gomitulus</i>	<i>G. sacculifer</i>	<i>G. glutinata</i>	<i>G. truncatulin. exc.</i>
<i>G. conglobatus</i>	<i>G. quadrilobatus</i>	<i>H. pelagica</i>	<i>G. digitipreadigit.</i>
<i>S. ionica</i>	others		

AGE

ZONE

FACIES

REMARKS

SMEAR SLIDES DESCRIPTION

Project:

lat. N long. E water depth (m)
core section cm cm from core top

sediment type lithology
colour remarks

DESCRIPTION OF SMEAR SLIDES

Calcareous nannofossil: list of the most characteristic taxa and their abundance

(AA=very abundant; A=abundant; O=occurring; R=rare; RR=very rare)

<i>E. huxleyi</i>	<i>G. oceanica</i>	<i>G. caribbeanica</i>	<i>small Gephyrocapsa</i>
<i>H. carteri</i>	<i>C. leptoporus</i>	<i>S. pulchra</i>	<i>S. histrica</i>
<i>C. pelagicus</i>	<i>S. recurvata</i>	<i>P. scutellum</i>	<i>O. antillarum</i>
<i>R. clavigera</i>	<i>R. stylifer</i>	<i>S. fossilis</i>	<i>B. bigelowi</i>
<i>U. tenuis</i>	<i>C. jonesii</i>	<i>T. saxea</i>	<i>C. rugosus</i>
<i>C. cristatus</i>	<i>P. multipora</i>	<i>P. lacunosa</i>	<i>C. macintyreii</i>
<i>D. broweri</i>	<i>H. sellii</i>	<i>Discoaster sp.</i>	

others.....

Sediment composition

(AA=very abundant; A=abundant; O=occurring; R=rare; RR=very rare)

terrigenous component: ☐ predominant ☐ not predominant

quartz calcite K-feldspar gypsum glauconite
mica dark minerals pyrite volcanic glass micromodules
dolomite aragonite Fe oxides zeolite plagioclase
rock fragments clay minerals.....
others

bioclastic component: ☐ predominant ☐ not predominant

benthic forams planktonic forams pteropods bryozoa
echinoid spines sponge spicules ostracods corals
bivalves gastropods corals algae
radiolarians diatoms spores fish teeth
plant debris coccoliths discoasters fish remain
shell fragments silicoflagellates organic matter
others

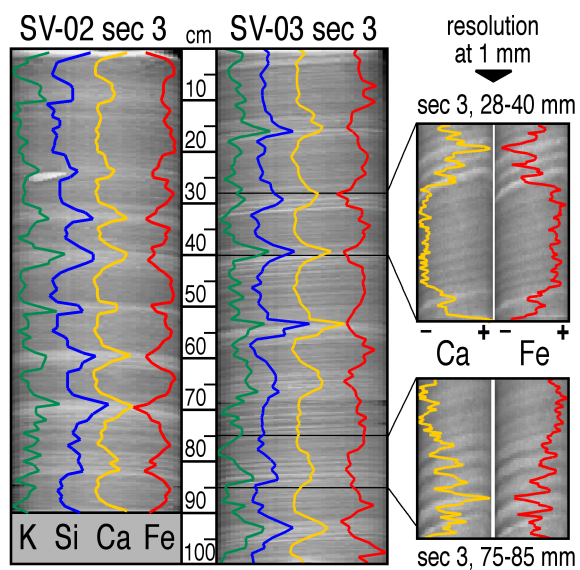
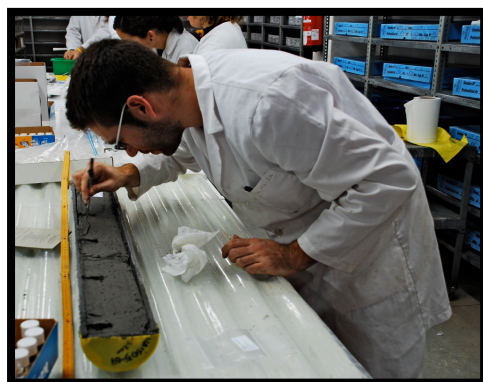
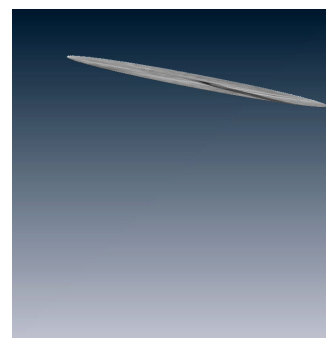
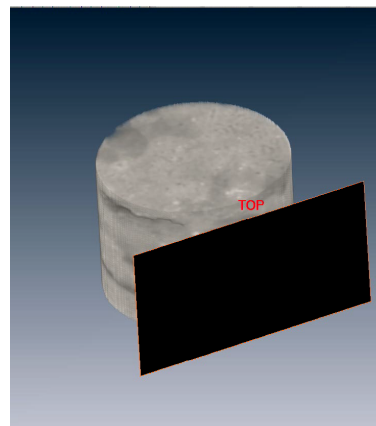
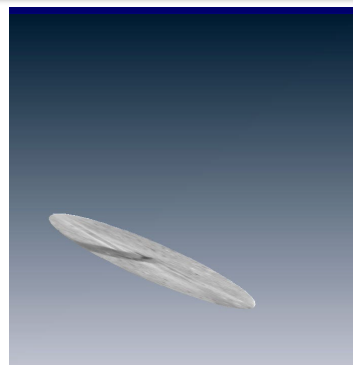
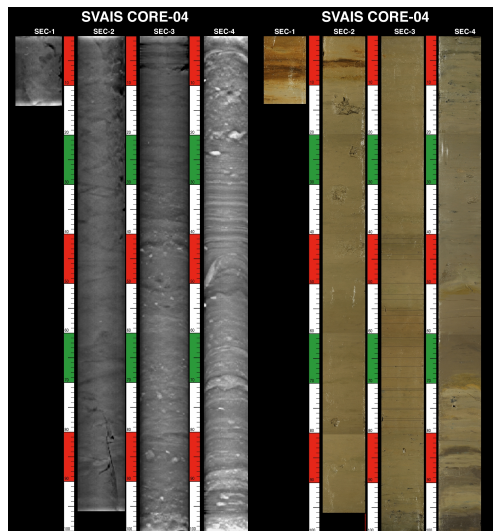
AGE

ZONE

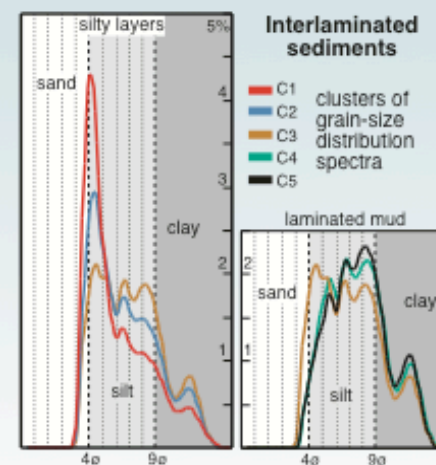
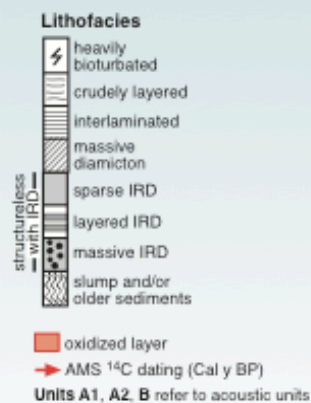
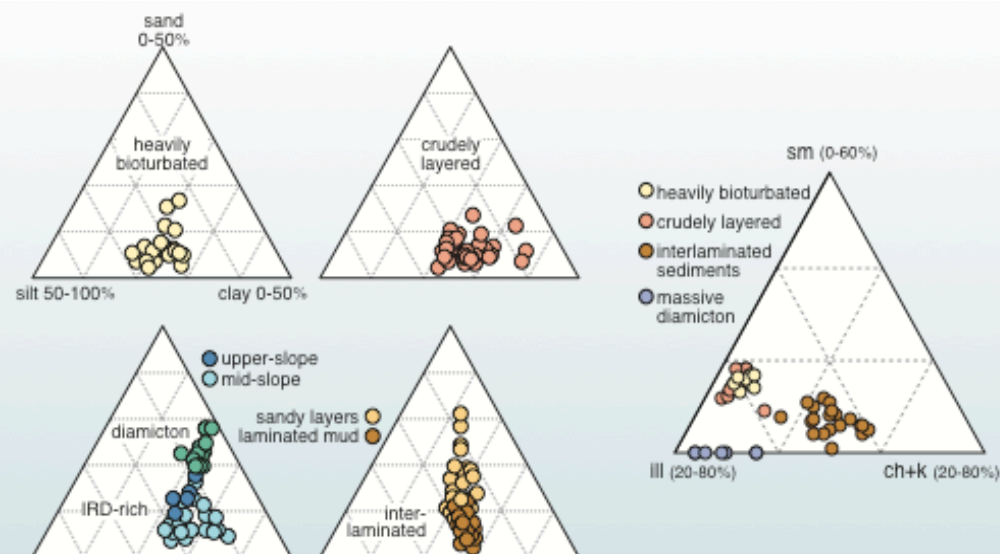
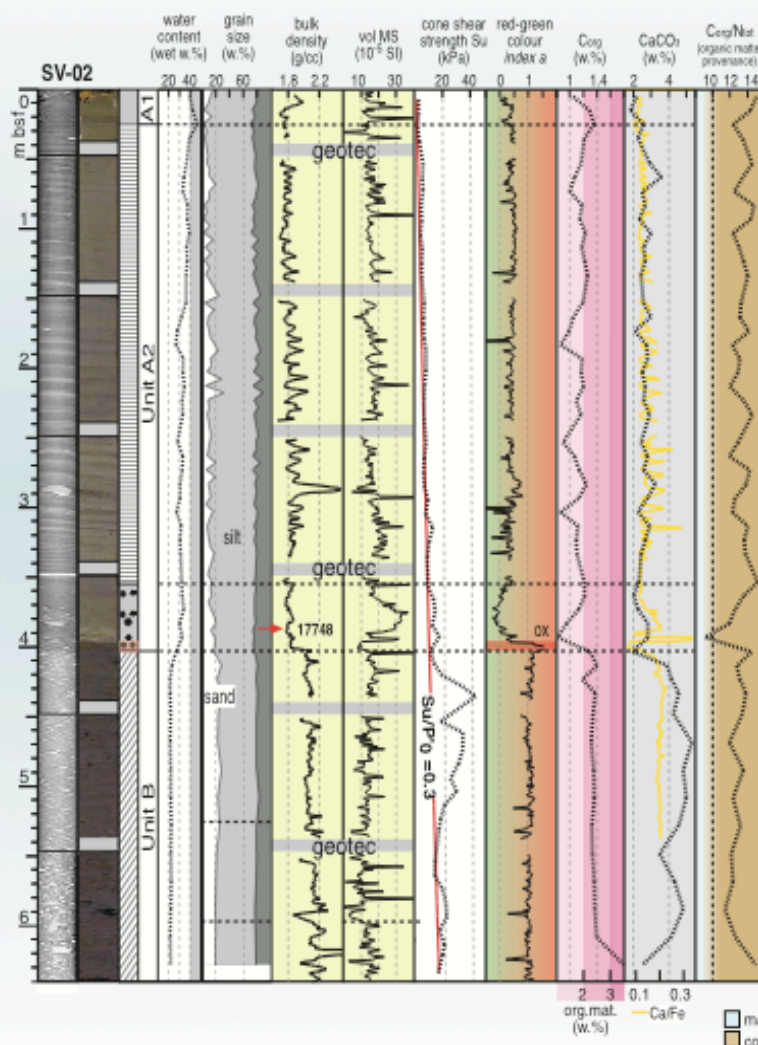
FACIES

REMARKS

SEDIMENT CORE ANALYSES



Plot of results





CORE REPOSITORY 4°C