

- CTD casts (instrument) and Niskin bottles water column samples above the hydrate decomposition zone along the western Svalbard slope and Vestnesa Ridge.
- Servicing and redeployment of the AOEM observatory and temporary deployment of IFREMER BOB acoustic bubble imaging system during the cruise.

4. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished

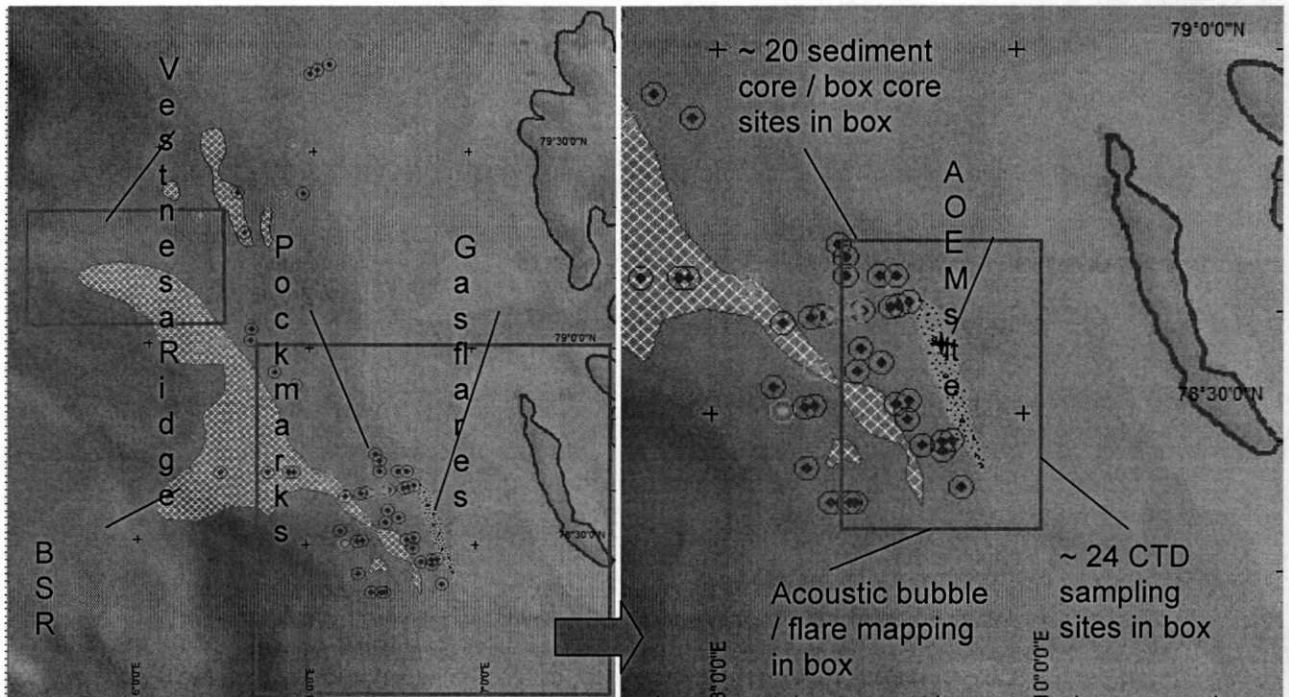


Chart showing areas of proposed JCR253 research along Vestnesa Ridge and western Svalbard shelf and slope.

5. a) TYPES OF SAMPLES REQUIRED (e.g., geological/water/plankton/fish/radionuclide)

The following samples will be recovered from the two investigation sites:

- Sediment cores and surficial seafloor sediments for biogeochemical analysis of sediment matrix and pore-fluid chemistry
- Seafloor bacterial mats for microbial analysis to understand biogeochemical processes
- Water-column samples for biogeochemical, microbial, and fluid chemistry analysis

b) METHODS OF OBTAINING SAMPLES (e.g., dredging/coring/drilling/fishing, etc. When using fishing gear, indicate fish stocks being worked, quantity of each species required, and quantity of fish to be retained on board).

The principal sampling methods will be:

- 24 bottle CTD rosette taking sea-water samples through the water-column for geochemical analysis
- Gravity / piston coring taking sediment cores up to maximum of 5-6 m in length
- Box corer taking surficial sediment / bacterial mat samples
- Mega corer for taking surficial sediment / bacterial mat samples

DETAILS OF MOORED EQUIPMENT

<u>Dates Laying</u>	<u>Recovery</u>	<u>Description</u>	<u>Depth</u>	<u>Latitude</u>	<u>Longitude</u>
13 th Oct 2010 ⁽¹⁾	Jul-Aug 2011 ⁽²⁾	4 tonne trawl protected seafloor lander	398 m	78°33.272 N	09°28.699 E