

3rd and last weekly report SO226-2 CHRIMP

During the third week we finished our sampling program of the second working area, which confirmed our initial impression that the seafloor depressions in this area are also devoid of indications of a recent methane flux. While looking for alternative explanations of the formation of the depressions, the idea that they might represent stacked ancient meander cut-offs of a now partially buried deep-sea channel. In order to test this working hypothesis we expanded on the known detailed bathymetry and discovered indications of downslope sediment movement and retrograde erosion (Fig. 1). However, the spatial relationship with the depressions and possible sediment transport directions will have to be determined by future detailed analysis of the Parasound and multibeam data.

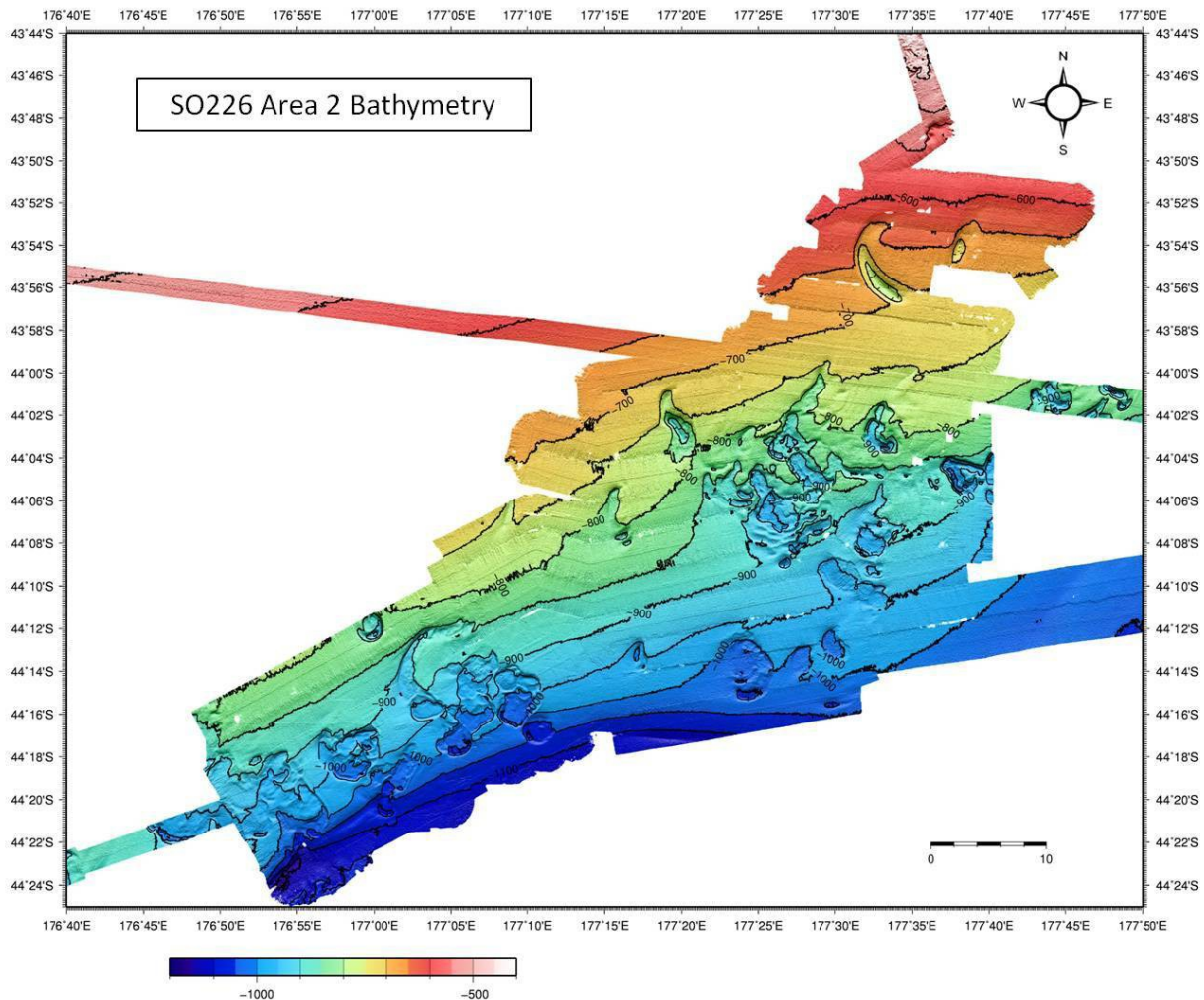


Figure 1: Extent of detailed bathymetric map of working area 2 at the end of cruise SO226-2.

After finishing work in area 2 we had a 18-hours transit to the third and last working area, which is located is slightly shallower (water depth around 500 meters) than the previous working areas and scattered by many small depressions. We again surveyed this area with sidescan sonar and could not detect any sign of recent or active methane emission. Following the sidescan profiles a series of multicorer and piston corer stations along one of the seismic profiles obtained during leg one was undertaken. Coring showed that the area is at least partially covered by massive sand layers, which explains our difficulty to sample these deposits with our equipment.

The second leg of cruise SO226 was quite successful regarding both the quantity and the quality of the data. Besides bathymetric surveying we mapped 500 km² with high-resolution sidescan sonar,

deployed the multicorer 46 times, the piston corer 39 times and almost all deployments were successful. The geochemists onboard ended up with more than 7000 individual samples to process and like all other groups (Fig. 2) will return with a wealth of interesting data that have to be processed and interpreted in the upcoming months.



Figure 2: The Science team onboard RV SONNE cruise SO226-2 CHRIMP.

Everyone on board is doing well and looking forward to be back on firm ground.
Best regards on behalf of all cruise participants,

Ingo Klaucke
Chief Scientist