

SIGNAL 2009

Weekly Newsletter #2 (Sunday, June 14)

For the first six days of this week, the weather gods were good to us as the seas were calm. Often we had glassy seas, which is not what you normally would expect off southern Greenland. On Tuesday and Wednesday we deployed a total of 24 ocean bottom seismometers (OBS) along line3 that runs on the Eirik Ridge in SW-NE direction. Borden and his team used this time to finish the installation of the airgun array that went into the water on Wednesday morning after breakfast. We had to idle three hours because on the first line we did not want to deploy the new array during night time. The deployment took just under three hours with a total of 15 people (deck crew and technicians) involved. We detected a humpback whale during the deployment, but at fair distance. We also carried out a soft start as outlined by the permit from the BMP. Something that made the ship's officers very happy was that we got dispensation from reporting our position every hour to the Greenpos system. Now we are asked to report every six hours

The shooting went fast, we could sail with 4.5 knots through the water and the East Greenland current added another 0.5 knot to it over ground. We had one airgun leaking shortly after the start but continued shooting without any problems with the remaining 11 guns. We also had a first sonobuoy deployment to check if our setup is working. We got arrivals up to 40 km distance before we got out of radio range. This is a very good result and this will certainly help to fill in between the OBS on the longer lines (1 and 5).

The recovery of the OBS went without major problems. However, one OBS was sticking to the seafloor for more than an hour before it released. We hope this is not a bad omen for line 1 in Orphan Basin where the release of OBS is notoriously slow. The OBS on line 3 were equipped with an ARGOS beacon and a radio but no strobe. This system worked fine for recovery also during the few hours of night time. During the retrieval we carried out one XBT to obtain a water velocity function down to 1830 m.

We have started some initial QC on the data from line 3 and could identify some high-amplitude Moho reflections. Two OBS returned with no data, which always seems to happen on the first line. We have addressed these problems and hopefully do better on the next lines.

After finishing line 3, the captain turned on an extra engine for a faster transit to line 2 (cross-line on Eirik Ridge) and for a faster deployment of the 20 OBS along that line. The reason for that was the hope that we could get the airgun array in the water before the winds of an approaching major weather system get too strong. However, we had to break after the deployment of 17 OBS early Sunday morning, when a major wave damaged two OBS on deck with some flooding of the GP lab. For now we keep the nose in the wind (50 knots) and pray to the weather gods for calmer seas. We got spoiled during our first week at sea.

Cheers,
Thomas



Sunday morning south of Greenland



Deployment of ocean bottom seismometer