

# SIGNAL 2009

## Weekly Newsletter #5 (Sunday, July 5)

The last week was fully dedicated to line 1 extending from Cape Bonavista on Newfoundland, through Orphan Basin and across Orphan Knoll. For the GSC and the Canadian UNCLOS program, this line has the highest priority and that is why we made sure to have some contingency time in case of bad weather and other unforeseen events. Last Sunday and Monday we deployed 22 OBS along the line and when we were close to Cape Bonavista, there was a lot of activity on deck since we had cell phone coverage.

The weather was very cooperative during the OBS deployment but also during the shooting with the airgun array. The seas were very calm, with some sun but also with a lot of fog, which is not unusual for this region. The shooting lasted from Monday morning to Thursday evening without any downtime for repairs. This is a major achievement and shows that the investment into the new airgun array paid off. With the old array we could not have shot the 630-km-long line in one run. The only problem we had was a short circuit in the electrical system in one of the compressors, but the second compressor could fill in during the repair work.

Due to the good weather and fast progress during the shooting, we had two spare days that we decided to use for re-shooting a critical segment of the line close to the shelf break, where the OBS spacing was rather wide. We started the recovery of OBS along the eastern end of the line to have five instruments ready for redeployment on the shelf and yesterday we started shooting along the 185-km-long segment. We also shot short segments with six and nine guns only to see how the signal quality reduces compared to the full 12-gun array.

As far as the OBS recovery is concerned, in the deep water we had one instrument that would not react at all to our transducer signal. Two OBS on the shelf would send pinger signals back to the ship but did not release from the seafloor. These instruments have the backup release time set for Tuesday morning and that is why we will be back in St. John's early on Wednesday and not on Tuesday afternoon as many of us had hoped for. Despite these delays, we have excellent data on the sonobuoys that transmitted signals back to the ship for ranges of 30 to 40 km. Also the OBS that we already recovered on the eastern segment of the line have a good data quality and will be fun to work with. The seismic records show clear seismic energy down to the Moho (crust-mantle boundary) and from the upper mantle.

On Canada Day (July 1) we had a small celebration on deck. People showed up for the BBQ with maple leaf tattoos on their face and we had lots of fun despite temperatures of only 8°C and an unpleasant wind. It was my first Canada Day ever with a toque on.

Cheers,  
Thomas



Towing the array



Second officer Douglas Roe practicing with sextant