25 July 2004

CRUISE REPORT

F/V *Big Valley*
July 3-8, 2004

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The objectives of this cruise were to deploy 3 near surface temperature sensing moorings on the GLOBEC Line south of Seward. Anchors, floats, mooring wire, hardware and instruments were shipped in advance to Kodiak in a 20 foot container.

In the past we have used the Big Valley for mooring recovery and ROV work but not for mooring deployments. We tested their camera sled trawl winch to see if it would handle the 1600 lb anchors and it would not. Since it was late evening on the 4th of July we could not arrange for a hydraulics technician until the morning of the 5th. After several rounds of testing and modifications to this winch, the hydraulics expert determined that winch was not designed to handle a 1600 lb weight. Gary Edwards (owner of the Big Valley) had access to a used winch that was heavy enough to do the deployments but one that had been stored outside for the past 3 years. This winch was located, tested at the hydraulics shop, loaded aboard, bolted and welded to the deck and connected to the ship's hydraulic lines. As we tested this newer winch obvious problems with lift and breaking were evident. Again the hydraulics technician was called out to trouble shoot this winch. After several hours he was able to isolate and repair the winch problems. At 0100 hours on July 6th we left the Kodiak dock.

The first deployment was 04-GBT-1A. All 3 moorings would be deployed using the gravity release to ensure the surface float was near 4 meters depth and the top temperature sensor was at 5 meters depth. Following deployment the top float of each mooring was clearly visible from the surface. A short search was conducted at each station for the proper bottom depth. The sounder on the Big Valley appears to read 6-7 meters deeper than what would be expected assuming the moorings were cut to the specified length. Care was taken to place these moorings away from existing subsurface moorings at these sites and the damaged moorings at these locations that will be recovered by the ROV in August.

Deployment Data: (Times are GMT)

04-GBT-1A deployed at 0648 July 7th in 235 meters of water by ships sounder.
59 degrees 42.367 minutes north, 149 degrees 20.126 minutes west.

04-GBT-2A deployed at 1015 July 7th in 218 meters of water.
59 degrees 31.327 minutes north, 149 degrees 10.943 minutes west.

04-GBT-4A deployed at 1540 July 7th in 152 meters of water.
59 degrees 07.298 minutes north, 148 degrees 46.005 minutes west.

We worked through the night to deploy these moorings than started the transit back to Kodiak. There was no equipment aboard the Big Valley to conduct CTD casts at the mooring sites.

The winch drum diameter is too small to accommodate the potted terminations on the wire without causing some damage during deployment. If we contract *Big Valley* for mooring deployments in the future, we should include a "fat boy" trawl block in the equipment we provide and probably avoid the potted terminations for longer term deployments.

We arrived in Kodiak around 0400 the morning of July 8th. The equipment was offloaded from *Big Valley* and moved it to the fuel pier parking lot at the U.S. Coast Guard Base. Some of the equipment was transferred to *Sir Wilfred Laurier* to be used for the St. Lawrence and St. Mathew island mooring deployments. The accumulation of PMEL boxes and equipment staged at the U.S. Coast Guard will be loaded on a container and shipped back to Seattle following the *Big Valley* ROV cruise in August 2004.