

90044rpt

CRUISE REPORT, OCEANUS # 227

( November 4 - 24, 1990)

Program Title:

MARINE LONG-TERM ECOSYSTEMS OBSERVATORY SITES OFF THE COASTT OF NEW  
JERSEY: A POTENTIALLY IMPACTED DEEP-SEA AREA AT THE 2500-m DEPTH  
MUNICIPAL SEWAGE DISPOSAL SITE.

Dr. J. Fredrick Grassle  
Program Coordinator  
December 6, 1990

CRUISE REPORT, OCEANUS #227

Vessel: R/V Oceanus

Cruise number: OC 227

Project name: Marine long-term ecosystems observatory sites off the coast of New Jersey: a potentially impacted deep-sea area at the 2500m 106-mile sewage disposal site.

Funding agency: NOAA/NURP and USGS

Area of operation: Continental slope off New Jersey, Deep-water dump site-106 (Figure 1).

Cruise dates: 1600 hrs. 4 Nov., to 1600 hrs. 24 Nov. 1990.

Ports: Woods Hole to Woods Hole with a stopover in Bermuda to drop off Fred Sayles' equipment.

Chief Scientist: Dr. William Martin (WHOI - 14 days funded) and Dr. Fred Grassle (IMCS - 10 days funded).

Scientific personnel and affiliation:

From Rutgers: Rose Petrecca and Kelly Rankin.

From USGS: Rick Rendigs and Carol Parmenter.

From Ocean Taxonomic Services: Russell Winchell

From WHOI: Fred Sayles, Joann Olmsted, Wayne Dickinson, Dan McCorkle and John Lee.

Ship's crew: Michael Palmieri, Captain: Larry Bearse, 1st Mate; Doug Mayer, 2nd Mate; Rick Simkin, Bosun; Jeff Stolp, Alberto Collasius, and Ed Graham, A.B.; Buzz McLaughlin, Chief Engineer; Kevin Kay and Patrick Mone, engineers; Hugh Dakers, Stewart; and Chris Blank, Messman.

Purpose of Cruise: To establish a transect line east and west of the DWD-106 square with the purpose of getting as much coverage of the area as possible. The stations will be placed along the depth contour of 2640 meters at 0 nm. (center of DWD-106 box), 2.5, 5, 10, 15, 20, 30, 40 and 50 nm. on either side of DWD-106. Single box cores are to be taken at every station except for the 2.5 sta SW of DWD-106 and the two 50 nm. stations on either side where 3 replicate box cores are to be taken.

A second objective is the deployment of Sayles' ROLAID lander at two or three stations for a period of 4-5 days on the bottom. At

the precruise meeting it was established that these three stations would be between Stations 10 and 11; at Butman's CM 336 site; and then somewhere to the east of DWD-106 to be used as a control.

The third objective is to complete four 3.5 KHz bathymetry transects.

And not related to our NOAA/NURP project is the deployment of Sayles' WHIMP lander for W. Martin in a transect line east of DWD-106 down to Bermuda.

Equipment used:

MK3 box core with 25 vegematic subcores and Sayles' ROLAID lander and WHIMP lander.

Summary of samples collected: Due to severe unfavorable weather conditions the full scope of work was not accomplished. Out of 24 days we only had 6 working days on station. So the scope of work we did complete is the following:

8 sediment sampling stations were occupied.

10 box cores were taken

1 Rolaid Lander

2 WHIMPs

3 bathymetric transect were completed

Stations occupied to the EAST of DWD-106:

Station 20 (2.5 nm)	1 box core
Station 15 (7 nm)	1 box core
Station 19 (16 nm)	1 box core
Station 18 (26 nm)	1 box core
Station 17 (50 nm)	1 box core

Stations occupied to the SOUTHWEST of DWD-106:

Station 14 (2.5 nm)	1 box
Station 16 (26 nm)	1 box core
Station 21 (50 nm)	3 replicate box cores
	1 WHIMP

At Station 10 established on OCEANUS # 222 --- 1 ROLAID Lander  
1 WHIMP

Table 1: Leo 2500, OCEANUS #227 Station Locations and Samples Collected.

Station	Lat/Long	Depth(m)	Box Core	ROLAID Lander	WHIMP
Station 14:	38° 47.46'N 72° 05.06'W	2640	1		
Station 15:	38° 48.13'N 71° 54.31'W	2640	1		
Station 16:	38° 34.19'N 72° 29.52'W	2640	1		
Station 17:	39° 15.09'N 71° 10.95'W	2650	1		
Station 18:	38° 53.49'N 71° 28.82'W	2640	1		
Station 19:	38° 49.92'N 71° 40.80'W	2640	1		
Station 20:	38° 49.27'N 71° 59.97'W	2640	1		
Station 21:	38° 16.03'N 72° 52.62'W	2645	1		1
Station 10: **	38° 49.20'N 72° 06.81'W	2625		1	1

### 3.5 KHz. Bathymetry Transects:

Line 1 - start: 38° 40.96'N, 72° 19.98'W  
end: 39° 15.16'N, 71° 30.07'W

Line 2 - start: 39° 02.2'N, 72° 14.16'W  
end: 38° 37.06'N, 71° 52.17'W

Line 3 - start: 39° 03.46'N, 72° 10.25'W  
end: 38° 39.98'N, 71° 49.13'W

\*\* = Station established on OCEANUS #222 (Aug. 1990)

# DWD Study Area

Seabeam contours (50-m interval) within study area  
 Older NOAA contours (100-m interval) around study area

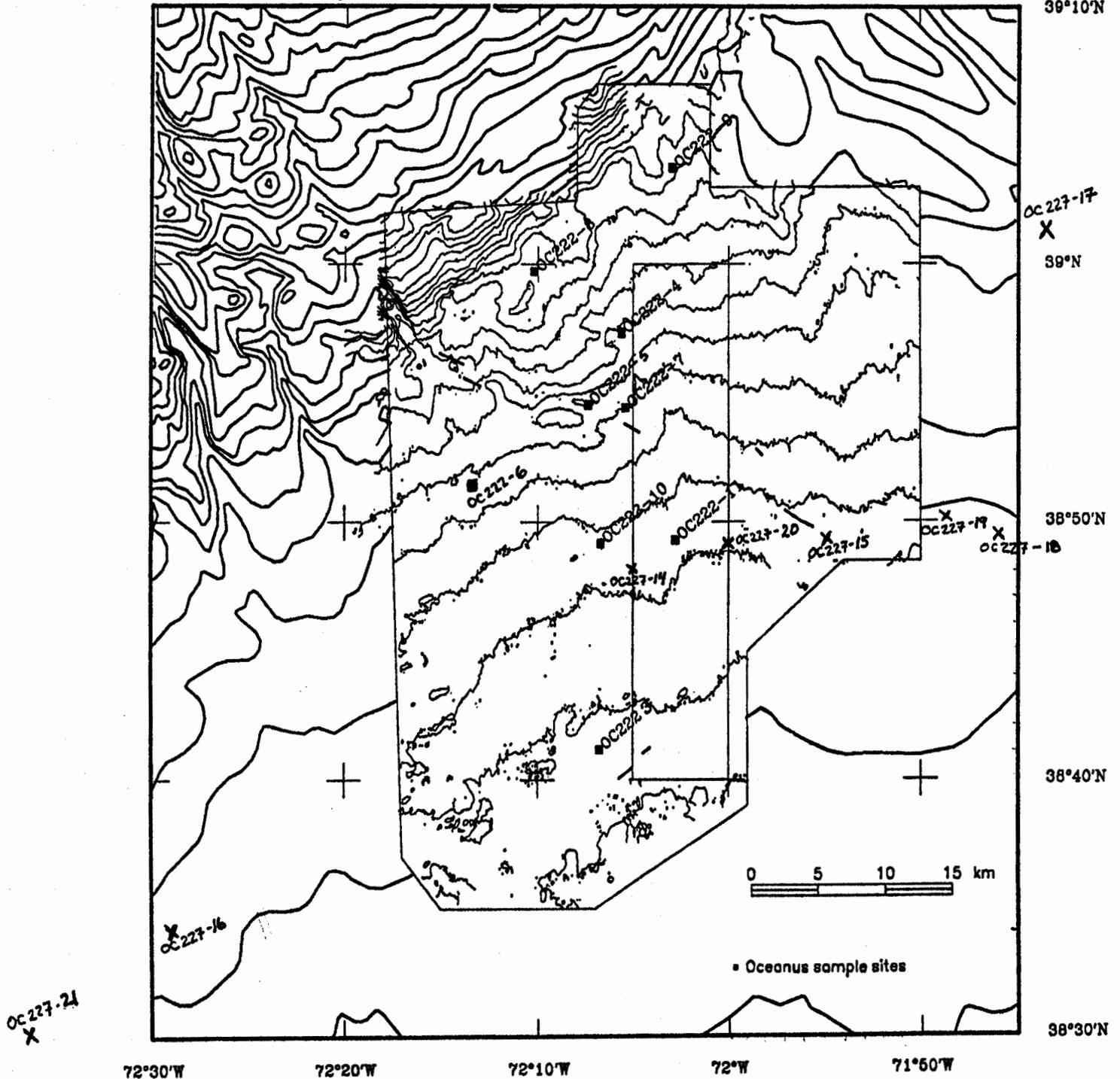


Figure 1. Sediment sampling station locations: Oceanus 222 and Oceanus 227

STATION: 3.5 bathymetry line 1: THIS IS ONLY A TEST!!

SAMPLE: Transect 1

TD

L/L: start 38° 41.1'N, 72° 20.2'W;  
end 38° 57.59'N, 71° 40.81'W

DATE: November 5, 1990 to Nov.6, 1990

TIME:2359 (start): 0430 (end)

DEPTH:

PULLOUT:

GENERAL Comments:

This transect line went up to the Control area established on Oc 222, Sta. 1&2.

THE REASON WHY THIS LINE IS ONLY A TEST IS BECAUSE RICKY GAVE THE BRIDGE THE WRONG END POINT .SO WE ENDED UP WAY OFF THE TRANSECT'LINE. IT WILL HAVE TO BE DONE AGAIN. BUT IT CERTAINLY DID GIVE US SOME GOOD PRACTICE USING THE RECORDER.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: No Station

SAMPLE:

TD

L/L:

DATE: November 6, 1990

TIME:

DEPTH:

PULLOUT:

GENERAL COMMENTS: Looks like today will be a wipe out. Wind up to 40 kts, seas approx 12'. It might calm down later tonight. When Rick and Parm get up we might be able to do another 3.5 line but all the lines are in the trough(as usual) and will make for an uncomfortable ride and no one would be able to work out on deck.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION:No Station!

SAMPLE:

TD

L/L:

DATE: November 6, 1990

TIME:

DEPTH:

PULLOUT:

GENERAL COMMENTS:THE WEATHER IS TOO ROUGH TO DO ANYTHING! WIND WNW  
35-40 KTS, SEAS 12-15'. WILL HAVE TO POSTPONE BOX CORING AND  
PUTTING THE LANDER OVER.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: TRANSECT LINE 1

SAMPLE: 3.5 Bathymetry

TD start:26174.0, 42653.2; end 25855.2, 42960.6

L/L: start:38° 40.96'N, 72° 19.98'W

DATE: November 6, 1990

TIME: 1806-0025(nov.7)

DEPTH:

PULLOUT:

GENERAL COMMENTS: Transect 1 revisited! Ended up this transect line in the vicinity of Control station 2 established on OC 222. After we had gotten off the chart supplied by Jim Robb there was an increase in depth which put us in the 2250 m range. At this time we lost the bottom trace for approx. 45 mins. while we attempted to shift the trace to the center of the page instead of along the edge.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: Station 14 (2.5nm sw side of DWD-106)

SAMPLE: Box core 1

TD 42716.3, 26083.9

L/L: 38° 47.46'N, 72° 05.06'W

DATE: November 7, 1990

TIME: (start at 0730) B.C.1 @ 1045

DEPTH: 2640 m

PULLOUT: 65-70k lbs.

GENERAL COMMENTS: The target position for this station is 38° 47.49'N, 72° 05.04'W.

Hit bottom at 35-40m/min. no shift no pullout..... Brought it up 100m and tried again. hit bottom at 45m/min. got a pullout this time! Back on deck ,we did get a sample but the vent doors were blown off!! But how lucky we were that they got jammed inside the box and did not go the other way!!!

At 1000 sending it back down again. Sliced off 1/2'' on the vent door pins just in case they were too long.

The seas started off rather lumpy this morning but have settled out and its calm now.

Finially we got a good shift and pullout!!

Core back on deck and it is a Pretty One!! Our success must be due to Russ' lucky PATCH!!

#### GEOCHEMISTRY:

SUBCORES: 19,14- pushcores (tef.); 20,9- FLUFF (tef); core 10- hydrocarbon (0-2cm).

COMMENTS: Mike would be proud of Parm and Rick's Fluff technique!

MICROBIOLOGY: Cores 8,13 and 18 (all from the inner nine)

SUBCORES:

COMMENTS:

#### BIOLOGY:

SUBCORES: nine cores were taken for biology, shifted to the left. Took bio cores from the same C.P. cores because the front row was disturbed.

COMMENTS: Surfaces of all cores looked undisturbed.

STATION: Lander Sta. A (near sta. 10)  
SAMPLE: Rolaid Lander  
TD 26093.1, 42731.4  
L/L:38° 49.20'N, 72° 06.81'W  
DATE: November 7, 1990 (recovered 15 Nov. @ 0600)  
TIME:2345  
DEPTH:2625m  
PULLOUT:

GENERAL COMMENTS: OOPPS at 1545 having problems with the acoustic release on the lander. Wayne ended up rebuilding one of the release boards.

**GEOCHEMISTRY:**

SUBCORES: 1 pushcore from Cell A and one from Cell B  
COMMENTS: 2 pushcores and 2 scoop samples for silver were taken.

**MICROBIOLOGY:**

SUBCORES:  
COMMENTS:one syringe sample was taken for C.P.

**BIOLOGY:**

SUBCORES:  
COMMENTS:

STATION: Transect 2

SAMPLE: 3.5 Bathymetry

TD start:26132.0, 42846.3; end: 26017.9, 42634.8

L/L:start: 39° 02.2'N, 72° 14.16'W; end: 38° 37.06'N, 71° 52.17'W

DATE: November 8, 1990

TIME: 0540 to 0905

DEPTH:

PULLOUT:

GENERAL COMMENTS: After Fred finished up with his lander the wind had picked up to 30 kts. along with the seas - weather forcast had predicted it to be like this for a good portion of the day with the seas increasing.

At the end of this line a command decision was made to do another 3.5 line. Rough conditions prevail.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: Transect 3

SAMPLE: 3.5 Bathymetry

TD start:26107.5, 42858.3: end: 25999.4, 42656.8

L/L:start: 39° 03.46'N,72° 10.25'W; end: 38° 39.98'N, 71°49.13'W

DATE: November 8, 1990

TIME:1430 to 1820

DEPTH:

PULLOUT:

GENERAL COMMENTS:1st. attempt aborted due to a very faint trace. Rough seas causing alot of cavitation. Decided to run the line in the opposite direction. So running NNW to SSE.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: Station 17 (50 nm east of DWD-106)  
SAMPLE: Box Core 2  
TD 42959.1, 25744.9  
L/L: 39° 15.09'N, 71° 10.95'W  
DATE: November 9, 1990  
TIME: 0730

DEPTH: 2650 m

PULLOUT: 7000 lbs

GENERAL COMMENTS: (Target position: 39° 15.07'N, 71° 10.94'W)

Attempt #1 at 2000 m we experienced a pretrip!! Back on deck it turns out that it didn't pretrip at all. So why then did we see a shift in the pinger particularly on that swell?? 2nd attempt once again we saw a shift in the pinger at 2000m let it the bottom anyway thinking it was a false alarm. got a 6500lb pullout, thought we had one but no way!! Vent doors came back blown off and we lost one this time so in a nutshell we had to get the WHOI box core going. here it is 0430 and the corer is on the way down again! The 2nd attempt was a real pretrip.

3rd attempt- There is no logical reason why the corer did not trip. Safety bar was down, pin was pulled back.

At 0705 the 4th attempt is going down!

And the 4th attempt produced a good pullout of 7000lbs.

FINIALLY a Good Core A very HARD earned Box of Mud!!

#### GEOCHEMISTRY:

SUBCORES: 9&14- pushcores (tef. inner nine); 19&20- Fluff (19-inner, 20-side); core 25- hydrocarbon (0-2 from side)

COMMENTS:

#### MICROBIOLOGY:

SUBCORES: 8, 13, and 18

COMMENTS: nice undisturbed cores

#### BIOLOGY:

SUBCORES: nine cores taken. cores 3, 6&9 = 21, 22&23. Shifted to allow C.P. samples to be taken from the inner nine.

COMMENTS: Collected two 16 oz. jars of mud (0-2cm) for Ron Etter.

STATION: Whimp Sta B

SAMPLE:

TD 42921.9, 25666.1

L/L:39° 10.48'N, 70° 54.96'W

DATE: November 9, 1990

TIME: approx. 1100 to 1600. (includes rigging time)

DEPTH:2735 m

PULLOUT:

GENERAL COMMENTS: Martin Station

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: WHIMP Station C  
SAMPLE:  
TD 43043.4, 25712.8  
L/L: 39° 25.51'N, 71° 08.28'W  
DATE: November 9, 1990  
TIME:2258  
DEPTH:2510 m  
PULLOUT:  
GENERAL COMMENTS:

GEOCHEMISTRY:

SUBCORES:  
COMMENTS:

MICROBIOLOGY:

SUBCORES:  
COMMENTS:

BIOLOGY:

SUBCORES:  
COMMENTS:

STATION: Whimp Sta. B  
SAMPLE: Mc Corkle Box Core  
TD 42921.9, 25666.2  
L/L: 39° 10.48'N, 70° 54.98'W  
DATE: November 9, 1990  
TIME: 1720  
DEPTH: 2735m  
PULLOUT: 7.5k lbs.  
GENERAL COMMENTS:

GEOCHEMISTRY:

SUBCORES:  
COMMENTS:

MICROBIOLOGY:

SUBCORES:  
COMMENTS:

BIOLOGY:

SUBCORES:  
COMMENTS:

STATION:

SAMPLE:

TD

L/L:

DATE: November 12, 1990

TIME:

DEPTH:

PULLOUT:

GENERAL COMMENTS: Some notes to fill in the log: After we finished the above mentioned box core we then proceeded to Martin's Whimp Sta. C, the Whimp was deployed and back on the surface at 0230 Sat morning. The Captain did not want us to attempt to box core back at Sta. 17 which was an hour transect south because the wind was expected to pick up at any moment, And by 0300 the wind had picked up the predicted forcast was for 50 plus knot winds and 25ft seas. Back to Vineyard Sound we came and jogged back and forth in the lee of the islands. 50 kt. winds were recorded. On Sunday it was still blowing a gale and Mike brought us back to the WHOI dock. On Monday the gale was still blowing our original intent was to sail at 0900 but now we asked people to check in at 5:00 just in case the weather took a turn for the better.

The wind was still howling a GALE and we remained at the dock all day Tuesday. A tentative time was set for 1600-2000 hours but the wind was still blowing a gale and we couldn't get off the dock!!!! And so we spent another night to the dock.

Finially at 0600 Wednesday Nov. 14 we set our course back out to sea!!

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: Station 15 ( 7nm East of DWD-106)  
SAMPLE: Box Core 3  
TD 42725.8, 26021.6  
L/L: 38° 48.13'N, 71° 54.31'W  
DATE: November 15, 1990 / Nov. 15, 1990  
TIME: 0805  
DEPTH: 2640 m  
PULLOUT: 8500 lb  
GENERAL COMMENTS: Targer position: 38° 48.15'N; 71° 54.30; 42726.1,  
26021.6.

GEOCHEMISTRY:

SUBCORES: 19 and 14-pushcores (tef.), FLUFF- cores 15, and 9;  
hydrocarbon- core 20( slight edge disturbance)  
COMMENTS: For Fluff core 15, there was a slight edge  
disturbance.

MICROBIOLOGY:

SUBCORES: cores 3, 6, and 9  
COMMENTS: surfaces looked beautiful. Too bad I couldn't use  
these for bio.

BIOLOGY:

SUBCORES: nine cores were taken and split 0-4 and 4-10 cm. The  
0-4 frac was not sieved.  
COMMENTS: cores 1, 2, 4, 5, 7 were taken near the center of the  
box. The other cores were taken in various other places depending  
on the surface of the sediment.

STATION: Station 16 ( 25.8nm SW of DWD-106; near Bat.Sed Trap E-1)  
SAMPLE: Box Core 4  
TD 42585.8, 26229.3  
L/L: 38° 34.19'N, 72° 29.52'W  
DATE: November 15, 1990  
TIME: 1340  
DEPTH: 2640 m  
PULLOUT: 5500 lbs

GENERAL COMMENTS: Target position: 38° 34.18'N, 72° 29.54'W

We got a shift but I was hoping that the pullout would be more.

Well in all my history of box coring I have never had the spade come back half off. One cam on either side was attached. But the most remarkable thing about this is that we were able to save the box!!!

GEOCHEMISTRY:

SUBCORES: 19, 14 and 9- pushcores; Fluff- cores 8, and 15. (#8 was NOT teflon); Hydrocarbon (0-2cm) core 20

COMMENTS: All cores were slightly disturbed but still useable. Parm took an extra pushcore.

MICROBIOLOGY:

SUBCORES: cores 7, 13 and 18 for C.P.

COMMENTS:

BIOLOGY:

SUBCORES: nine cores were taken. Cores 21, 22 & 23 substituted for cores 3, 6 & 9. Core 10 used for core 8.

COMMENTS: the majority were ok and a couple edge ones were slightly disturbed.

STATION: Whimp Sta. D  
SAMPLE:  
TD 43136.9, 25767.9  
L/L:39° 36.66'N, 71° 20.27'W  
DATE: November 16, 1990  
TIME: 0030-0430  
DEPTH: 2000m  
PULLOUT:  
GENERAL COMMENTS:Martin Station

GEOCHEMISTRY:

SUBCORES:  
COMMENTS:No samples were taken for Mike. Very shallow core,  
hard packed clay

MICROBIOLOGY:

SUBCORES:  
COMMENTS:

BIOLOGY:

SUBCORES:  
COMMENTS:

STATION: Station 18 (26 nm East of DWD-106)  
SAMPLE: Box Core 5  
TD 42778.4, 25874.4  
L/L: 38° 53.49'N, 71° 28.82'W  
DATE: November 16, 1990  
TIME: 0915  
DEPTH: 2640 m  
PULLOUT: 6500 lbs  
GENERAL COMMENTS: Target position: 38° 53.52'N, 71° 28.78'W; 42778.7,  
25874.2.

GEOCHEMISTRY:

SUBCORES: pushcores- cores 19&14 (tef); FLUFF - cores 9&15  
(tef); hydrocarbon - core 20(0-2cm).  
COMMENTS:

MICROBIOLOGY:

SUBCORES: 8, 13 and 18 for C.P.  
COMMENTS: surfaces looked good

BIOLOGY:

SUBCORES: nine cores taken.  
COMMENTS: cores 21,22 and 23 substituted for cores 8,13 and  
18. All surfaces looked good. like my johnson!

STATION: Station 19 (16.5 nm East of DWD-106)

SAMPLE: Box Core 6

TD 42745.2, 25944.5

L/L: 38° 49.92'W, 71° 40.80'W

DATE: November 16, 1990

TIME: 1220

DEPTH: 2640m

PULLOUT: 6500 lbs

GENERAL COMMENTS: Target position: 38° 49.92'N, 71° 40.81'W;  
42745.1, 25944.6.

GEOCHEMISTRY:

SUBCORES: 14&19-pushcores (tef); 9&15-FLUFF (tef); 20-  
hydrocarbon (0-2cm)

COMMENTS:

MICROBIOLOGY:

SUBCORES: 8, 13, 18 for C.P.

COMMENTS: all surfaces looked good

BIOLOGY:

SUBCORES: nine cores taken; 21, 22, 23 substituted for 3, 6, and  
9.

COMMENTS:

STATION: WHIMP Sta. E (Lander Site, Oc 222 Sta.10)

SAMPLE:Whimp

TD 26093.0, 42731.2

L/L:38° 49.19'W, 72° 06.79'W

DATE: November 16, 1990

TIME: 1610-1915

DEPTH:2645 m

PULLOUT:

GENERAL COMMENTS:The data from this Whimp deployment will be used to verify the data obtained from the lander

GEOCHEMISTRY:

SUBCORES: 1 pushcore was taken for Mike Bothner

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: Station 20 (2.5 east from sta.11, on the eastern border of DWD-106)

SAMPLE:Box Core 7

TD 42734.0, 26053.4

L/L:38° 49.27'N, 71° 59.97'W

DATE: November 16, 1990

TIME:2220

DEPTH:2640 m

PULLOUT:5500 lbs

GENERAL COMMENTS: Target position: 38° 49.3'N, 72° 00.0'W. Good Core  
The upper 4 cm was very soft

GEOCHEMISTRY:

SUBCORES: 19&14- pushcores(tef); cores 20&9- Fluff(tef); and  
core 15-Hydrocarbon (0-2cm)

COMMENTS:

MICROBIOLOGY:

SUBCORES: cores 8,13& 18 for C.P.

COMMENTS:

BIOLOGY:

SUBCORES: nine cores taken: 21,22 and23 substituted for cores  
3,6,and9.

COMMENTS:upper 0-4cm very soft. Good surfaces.

STATION: Station 21 (50nm southwest of DWD-106)

SAMPLE: Box Core 8

TD 42399.5, 26358.3

L/L: 38° 16.03'N, 72° 52.62'W (New Target Position )

DATE: November 17, 1990

TIME: 0545

DEPTH: 2645 m

PULLOUT: 8000 lbs

GENERAL COMMENTS: Target position: 38° 16.01'N, 72° 52.53'W; 42399.3, 26357.7. This position is 3' (minutes = 3 miles) more to the west than my target position on the chart. Another example that the bathy chart

is slightly off.

GEOCHEMISTRY:

SUBCORES: 14&19-pushcores (tef); 9&15-FLUFF (tef); core 20-hydrocarbon (0-2cm).

COMMENTS: very soft mud

MICROBIOLOGY:

SUBCORES: 8, 13 and 18 for C.P.

COMMENTS: very soft oozy mud

BIOLOGY:

SUBCORES: nine cores taken: 21, 22&23 substituted for cores 3, 6&9. Extremely soft oozy mud through out the 10 cm.

COMMENTS: The edge core were slightly slumped.

STATION: Station 21  
SAMPLE: Box Core 9  
TD 42399.5,26358.1  
L/L: 38° 16.03'N, 72° 52.60'W  
DATE: November 17, 1990  
TIME:0755  
DEPTH:2645 m  
PULLOUT:6000 lbs

GENERAL COMMENTS: At first we thought that there was a pretrip because the pinger shift but at 2100 m we decided to go for it hoping that the magnet had just eased out a bit. And so it had because we did get a 6K pullout.

The sediment is very soft and oozy with a very high water content in the upper 4 cm. This high water content caused some slumping of the core surfaces.

GEOCHEMISTRY:

SUBCORES: 14&19-pushcores(tef); 15&9-FLUFF(tef); core 20-hydrocarbon (0-2cm).

COMMENTS: Very soupy sediment

MICROBIOLOGY:

SUBCORES:8,13 and 18 for C.P.

COMMENTS:The best on of these is core 13. Core 8 was rather short, and core 18 was slightly disturbed.

BIOLOGY:

SUBCORES: nine cores were taken. cores 10,22 and 25 substituted for cores 3,6,and9 respectively.

COMMENTS: Upper surface was very soupy and caused slumping of the cores.

STATION: WHIMP-F (Fred) Station 21 (50nm SW of DWD-106)  
SAMPLE: Whimp-F  
TD 42399.5, 26358.5  
L/L: 38° 16.03'N, 72° 56.66'W  
DATE: November 17, 1990  
TIME: 0930  
DEPTH: 2645 m  
PULLOUT:  
GENERAL COMMENTS:

GEOCHEMISTRY:

SUBCORES: 1 pushcore and 1 whirlpack of mud for silver  
COMMENTS:

MICROBIOLOGY:

SUBCORES:  
COMMENTS:

BIOLOGY:

SUBCORES:  
COMMENTS:

STATION: Station 21  
SAMPLE: Box Core 10  
TD 42399.5, 26358.3  
L/L: 38° 16.04'N, 72° 52.63'W  
DATE: November 17, 1990  
TIME:1410  
DEPTH: 2645 m  
PULLOUT: 8000 lbs.  
GENERAL COMMENTS: Comments about the sediment are the same as the other two cores.

GEOCHEMISTRY:

SUBCORES:14&19-pushcores(tef); 9&15-FLUFF(tef); core 20-  
hydrocarbon(0-2cm)  
COMMENTS:

MICROBIOLOGY:

SUBCORES: 8,13,&18 taken for C.P.  
COMMENTS:

BIOLOGY:

SUBCORES: only eight cores were taken. I made a major mistake and miscounted. Subcore 5 was completely blown away and left on the bottom.

COMMENTS: 0-2 cm mud was saved for Ron Etter, placed in two 16 oz. jars and frozen.

STATION: Station 22  
SAMPLE: Box Core 11  
TD Target for station: 42639.6, 26166.4  
L/L: 38°39.48'N, 72° 18.74'W  
DATE: November 17, 1990  
TIME: 1930  
DEPTH: 2640 m  
PULLOUT:????

GENERAL COMMENTS: Water sample, NFG. WE knew that something wasn't right because we didnot get a shift, and as for the pullout well it could have been 6000 lbs or was it just the heave of the ship?? Decided to haul it up just incase the wire had wrapped around the corer.

The wind has picked up considerably 30plus kts and the seas are up too. We are all pretty tired and the command decision was not to attempt this again. Rick was going to run the fourth bathymetry line but the sea conditions were too rough to run this course line in the trough. The Captain suggested we not attempt it.

At 2100 we are hove too.

GEOCHEMISTRY:

SUBCORES:  
COMMENTS:

MICROBIOLOGY:

SUBCORES:  
COMMENTS:

BIOLOGY:

SUBCORES:  
COMMENTS:

STATION: NO STATION / HOVE TO

SAMPLE:

TD

L/L:

DATE: November 18, 1990

TIME:

DEPTH:

PULLOUT:

GENERAL COMMENTS: The weather once again has kicked up its heels-  
Gale force winds and 12-15' seas. Having a movie marathon.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: At 1000 still hove to!  
SAMPLE:  
TD  
L/L:  
DATE: November 19, 1990  
TIME:  
DEPTH:  
PULLOUT:  
GENERAL COMMENTS:

GEOCHEMISTRY:

SUBCORES:  
COMMENTS:

MICROBIOLOGY:

SUBCORES:  
COMMENTS:

BIOLOGY:

SUBCORES:  
COMMENTS:

STATION: Station 22

SAMPLE:

TD

L/L:

DATE: November 19, 1990

TIME:

DEPTH:

PULLOUT:

GENERAL COMMENTS: WE CAME WE SAW WE LEFT!! At 1200 we arrived on station and had a look at the weather. Well it was on the edge and we were going to go for it but the Captain squelched our attempts.

At 1300 we set a course South!

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: WHIMP Station G

SAMPLE:

TD

L/L: 37° 02.22'N, 70° 12.145'W (GPS postioning)

DATE: November 20 1990

TIME: 0924

DEPTH:

PULLOUT:

GENERAL COMMENTS:

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS:

STATION: Bermuda ROLAID Lander Site

SAMPLE:

TD

L/L:

DATE: November 22, 1990 (Turkey Day)

TIME: 1932

DEPTH:

PULLOUT:

GENERAL COMMENTS: Gale Force conditions. Too rough to deploy the ROLAID Lander. Aborted. Set course for Bermuda. Arrive in St. Georges Harbor Nov. 23 at 0720.

GEOCHEMISTRY:

SUBCORES:

COMMENTS:

MICROBIOLOGY:

SUBCORES:

COMMENTS:

BIOLOGY:

SUBCORES:

COMMENTS: