178

OBSERVER'S LOG
R/V OCEANUS 178
September 9 - 13, 1986

8602smp

SEP 9 -1

U.S. GEOLOGICAL SURVEY
OFFICE OF MARINE GEOLOGY

Woods Hole, Massachusetts
02543

P. ShouKimas

U. S. GEOLOGICAL SURVEY
WOODS HOLE, MA 02543
SEPTEMBER 2, 1986

MEMORANDUM

TO: Distribution

FROM: Mike Bothner

SUBJECT: Details regarding the cruise to Georges Bank September 9.

I am very pleased to have 5 days on the R.V. Oceanus to continue some of the investigatons of the Georges Bank Monitoring Program. I would like to begin the cruise in Woods Hole on September 9, 1986 at 0900. I would like to take full advantage of the ship time we have, so I am requesting to return to Woods Hole as late as 2400 on September 13.

The objectives for the cruise are as follows:

(1) At least two cores will be collected at 8 stations of the Monitoring Program using the Hydraulically Damped Gravity Corer. These samples will be used to determine how the depth distribution of barium has changed with time since the completion of drilling operations. Three grab samples will be taken at the same stations for analysis of trace metals. Additional samples will be collected for chemistry around the drilling site at station 5 (see attatched figure).

(2) Six grab samples will be collected at each of the same stations for analysis of benthic infauna. This work will extend the sampling period for benthic biology to 5 years since the start of the Monitoring Program.

(3) Bathymetry, near bottom water samples, cores and grabs will be collected in a depression (water depth about 210 m) just north of Georges Bank and south of Franklin Basin to investigate the anoxic sediments found during the Atlantic Margin Coring Program.

Sampling stations are indicated on the attatched figure.

Major equipment for this cruise:

Ships equipment: trawl winch, hydro winch (max sampling depth 250 m), precision depth recorder, XBT launcher and recorders, walk in freezer.

Scientific equipment: 2 teflon coated grabs, 2 small stainless

grabs, 1 Smith-Mac grab, hydraulically damped gravity corer, Booth's gravity corer, 3 Niskin bottles, 2 cases of XBT's, Epsco plotter, Loran 7000 and interface with Rose's navigation recording system.

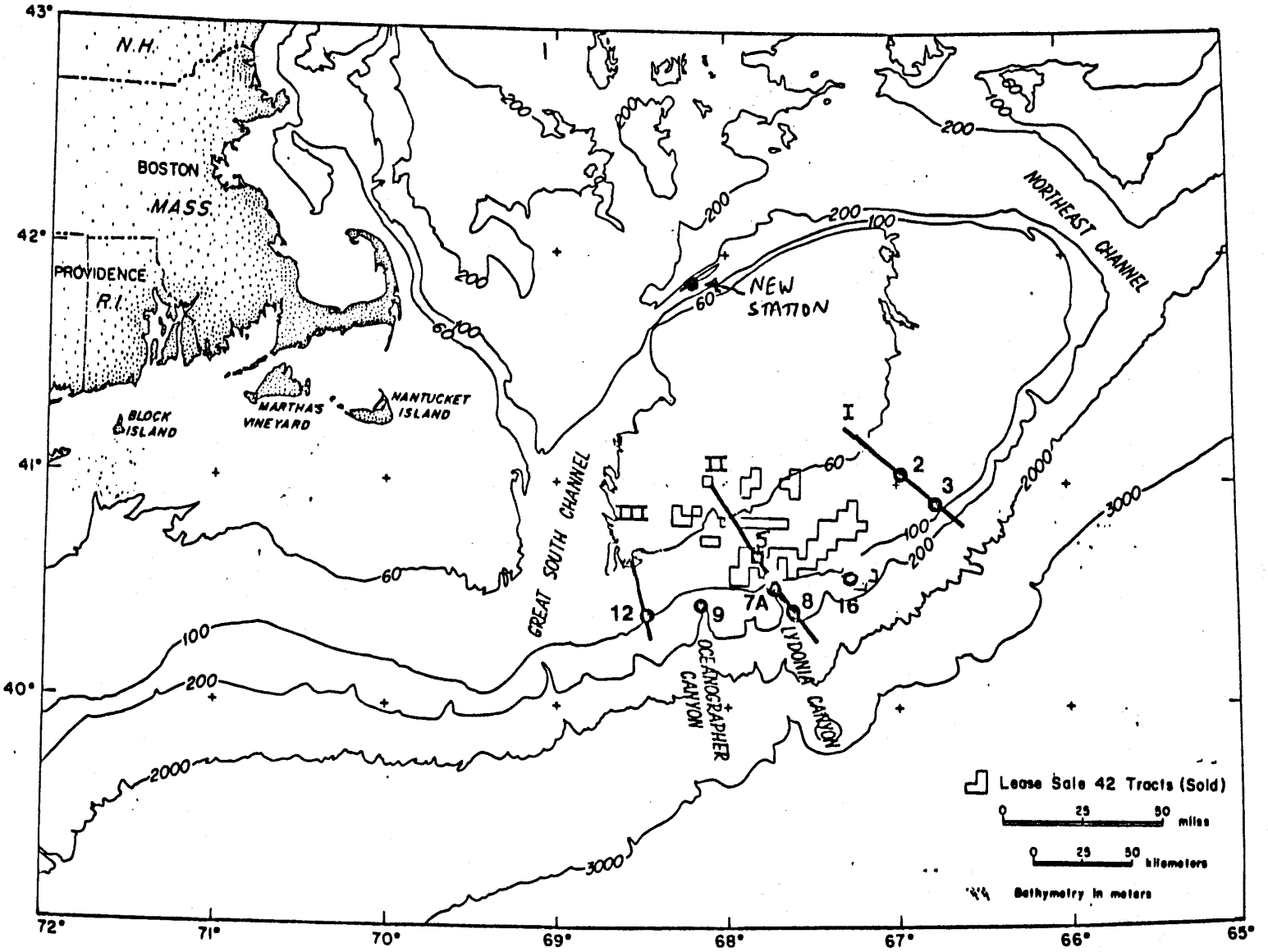
Cruise personnel:

USGS
Mike Bothner, Chief Scientist
Greg DiLisio
George Harrison
Steve Mateus
John Moody
Carol Parmenter
Rick Rendigs
Polly Shoukimas
Bill Strahle
Bill Winters

WHOI
Rose Petrecca

Costal Zone Management
Pat Hughes

Distribution: Halley, D. Folger, G. Folger, Aldrich, Soderberg, O'Brien, Bowles, Newell, Sexton, Barton, Cruise Participants



SAMPLING LOCATIONS FOR OCEANUS CRUISE SEPTEMBER 9-13, 1986

~~GMT~~ EDT				LINE #	SHIPS		NAVIGATION						
DAY	MO	YR	TIME		COURSE	SPD	FIX TIME	LATITUDE ± DEGREES ±	LATITUDE MINUTES	LONGITUDE ± DEGREES ±	LONGITUDE MINUTES	TYPE	QUAL.
09	09	86	0900										
			1730										
			2105										
			2135										
			2210										
09	09	86	0230										
10	09	86	0000										
			0020										
			0100										
			0341										
			0540										
			0603										
			0826										
			[illegible]										
			0915										
			1000										
			1050										
			1135										
			1220										
			1312										
			1346										
			1432										
			1508										
			1545										
			1630										

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE 1

Depart Woods Hole.
Arrive Station 10. Get ready to do slow core
Salinity bottle SS1
Hit bottom on second slow core
Finished 3rd chem grab
Finished last biology sample
Underway to Station 9
Arrive Station 9. Check depth. Set up NOC.
Fishing gear located directly on top of site. Need to make decision as to how to proceed.
Will start sampling on east side of site, getting as close as possible. 3.8, 4.6
Complete first NOC grab
Launched XBT as we exited gracefully toward S-1.
Arr Sta S-1
Start Slow Core, Sample D.
Underway to station S-2.
Sample D' >8" so only one slow core done @ S-2.
S-2 complete
S-3 complete
S-4 complete
S-5 complete
S-6 complete. Due to impending bad weather, proceed to station S-14
S-14 complete
S-20 complete
S-12 complete
S-8 complete
S-16 complete
S-10 complete

GMT				LINE #	SHIPS		NAVIGATION					
DAY	MO	YR	TIME		COURSE	SPD	FIX TIME	LATITUDE ± DEGREES ± MINUTES .	LONGITUDE ± DEGREES ± MINUTES .	TYPE	QUAL.
10	09	86	1732								
			1852								
			1955								
			2100								
			2358								
11	09	86	0200								
			0448								
			0710								
			0955								
			1220								
			1930								
			2000								
			2150								
			2300								
			2320								
12	09	86	0830								
			1040								
			1130								
			1325								

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE

Complete Sta 5-2
" " 5-18
" 5-29
Arrive Station 7-A. Delay due to shipping traffic.
Having trouble with the lines jumping all over.
Also, large wire angle on most of Stations
Station 7A - Salinity bottles:
SS-7 is surface ; SS-8 is bottom
Underway for St. 16
Start Sta 16
Station 16 complete - heading for 3
Arrive Sta 3
Bottom covered with shells. Difficult to get good samples.
Did 3rd slow core as this is a central station and the weather is picking up. Also, D only 10cm and E-2 had unusual air bubble (also, only 8cm).
Station 3. Complete. ETA Station 2 10:42
Station 2 complete. Underway to Station 22 (Franklin Bank)
Arrive station 22
First chem grab complete. Prepare to set up gravity corer.
Cores back in cradle & tied down.
HDC not operating in current ice conditions. Made 2 attempts at slow core with no luck.
Underway to first bathymetric trace
Bathymetry resumed after grab sample #26
Complete bathymetry. Prepare to do gravity core.
Complete first gravity core at Station 22.
Chem grab complete. Underway to station 19

GMT				LINE #	SHIPS		NAVIGATION						
								LATITUDE		LONGITUDE			
DAY	MO	YR	TIME		COURSE	SPD	FIX TIME	± DEGREES ±	MINUTES	± DEGREES ±	MINUTES	TYPE	QUAL.
12	09	86	1930						.		.		
									.		.		
			2018						.		.		
13	09	86	0000						.		.		
			0045						.		.		
			0120						.		.		

TAPE #	START	END	COMMENTS AND OBSERVATIONS	PAGE ____
			Hdc bathymetry. Station 30 complete. Continue up bathymetry	
			Bathymetric line complete. Underway to Rogers Pass	
			Arrive Rogers Pass	
			No luck turning off release. Off to grab site	
			Grab sample complete. Homeward bound.	