

GEORGES BANK MONITOR

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Vol.2 No.1

We apologize for the delay in publishing our third Monitor and appreciate the numerous requests for additional issues. The North Atlantic District office is now 19 months old including one year at our present location in the Blanchard Building, Barnstable Municipal Airport. New additions to the staff include Todd Palmatier (Petroleum Engineering Technician - PET, transferred from Alaska), Dan Knowlson, (Petroleum Engineer, transferred from Metairie, LA), and Virginia Reed (secretary from Centerville, MA). Each has successfully completed a rigorous training program which included assertiveness training (one half hour of aggressive driving on the airport rotary), mob psychology (a march through the Sweater Barn on a rainy August day), and diplomacy (videotape of the Maine public hearings).



Front Row (L to R)
Virginia Reed, Sec.;
Joan Roberts, Geologist;
Dale Roberts, Chief PET;
Bobbie Marks, Clerical
Assistant; (Back Row
L to R) Barry Clark,
Fishery Biologist;
Bud Danenberger, Super-
visor; Todd Palmatier,
PET; Dan Knowlson, Eng.;
Richard Clingan, Geo-
physicist.

Drilling Begins

As most readers are no doubt aware, the first two exploratory oil and gas wells are presently being drilled on Georges Bank. The following is a brief chronology of some of the events over the past 10 years which led up to the activity.

Georges Bank leasing proposed,
discussed: early 1970's
Call for nominations: 6/17/75
G-1 Cost Well spudded: 4/6/76
Tract selection announced: 1/2/76
Draft EIS published: 10/76
Public hearing: 12/76
G-2 Cost Well spudded: 1/6/77

Final EIS published: 8/77
District court halts sale: 1/28/78
Court of Appeals dissolves
injunction: 2/22/79
OCS Sale No.42: 12/18/79
Leases issued: 2/1/80
First Exploratory Well Spudded:
1:45 a.m., 7/24/81 Exxon,
Alaskan Star

18 Months

The "18 month gap" between the issuance of leases and the initiation of drilling is not likely to be erased from our memories. Eighteen months may seem unduly long until one considers the years of debate leading to the sale and the extensive surveying and permitting activity during that period. These include high resolution geophysical surveying (in some cases followed by resurveying); the development of an integrated long term biological monitoring program (the first time such a program has been established in an OCS area prior to drilling); the preparation of a fisheries training program for OCS personnel; the conclusion of an ongoing mud bio-assay program; the testing of Clean Atlantic Associates Fast Response Unit and the purchase of additional spill control equipment; determinations as to which oil spill equipment would be kept offshore and which personnel would be responsible for deployment; a major oil spill training and deployment exercise; the preparation of detailed Exploration Plans, Environmental Reports, Oil Spill Contingency Plans, Hydrogen Sulfide Plans, Critical Operations Curtailment Plans, NPDES permit applications, consistency determinations, Applications for Permit to Drill, and Corps of Engineer permit applications; public hearings sponsored by the States of Massachusetts and Maine and by EPA; collection of sediment and biological samples at 46 locations on and near Georges Bank; and numerous other spin-off activities. We will not soon forget our experiences during this period.

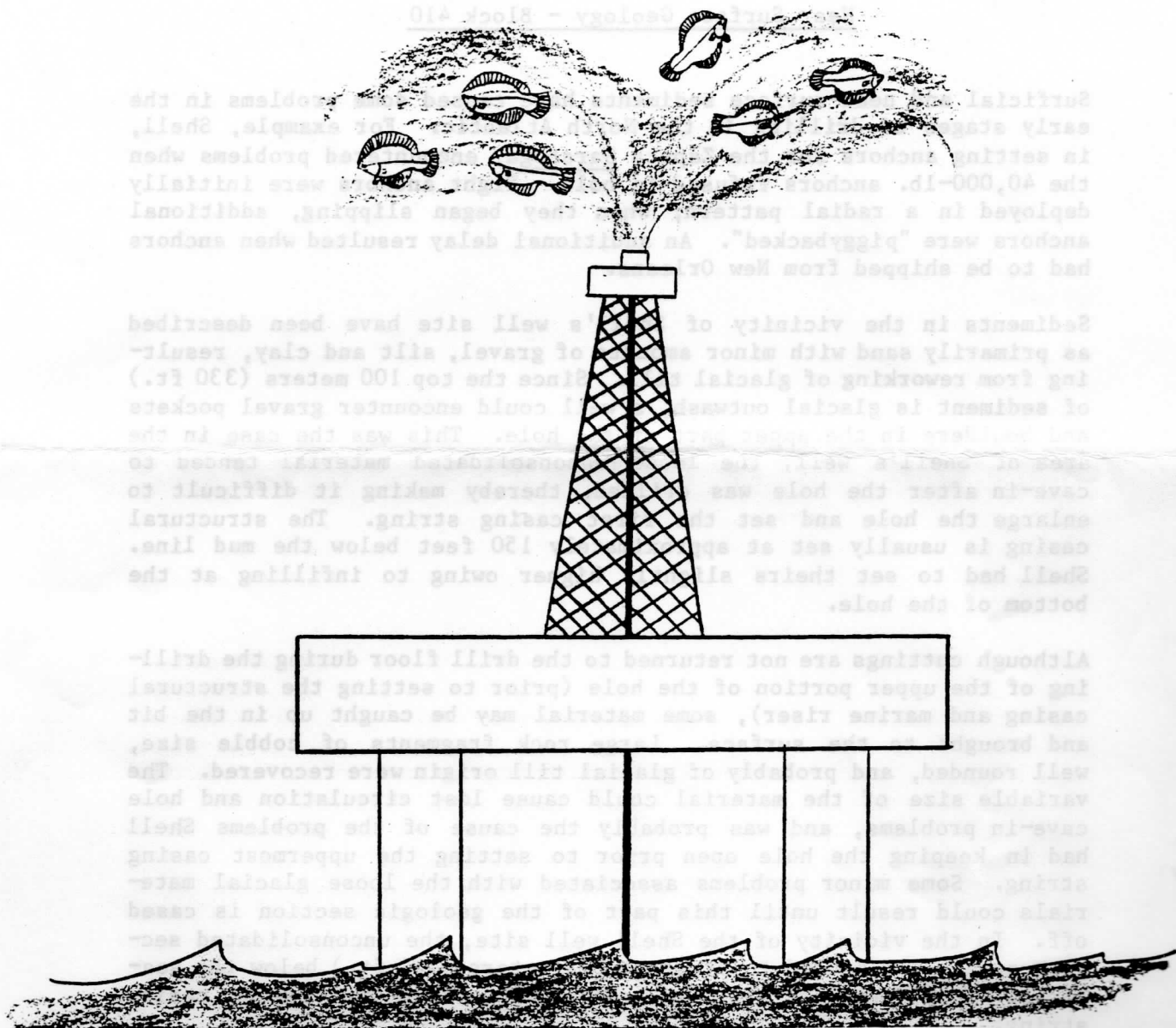
Paperwork Reduction

Our "paperwork reduction drive" is gaining momentum. Thanks to cooperation from the States of Connecticut, Rhode Island, Massachusetts, Maine, and New Jersey, and the U.S. Fish and Wildlife Service, we have been able to reduce the number of copies of Exploration Plans and Environmental Reports by 24%. In addition, we are receiving cooperation from the OCS operators. Reports are being streamlined by referencing previously submitted materials and focusing on new, site-specific information.

Rig Status Report

<u>Rig</u>	<u>Location</u>	<u>Operator</u>	<u>Proposed T.D.</u>	<u>Water Depth</u>	<u>Distance SE Nantucket</u>
Alaskan Star	L.C. Blk. 133	Exxon	15500'	227'	112 mi.
Saratoga	L.C. Blk. 410	Shell	17000'	452'	155 mi.

Rig Forecast: 1-2 additional rigs could be operating on the Bank by the end of the year. These include the Rowan Midland for Mobil on Block 312 and the Aleutian Key for Arco on Block 138.



.....and a 100% Chance of Striking Flounder

Many (this office included) have been confused by the frequent revisions in the Geological Survey's resource estimates for Georges Bank. Here is the latest official word:

<u>Water Depth</u>	<u>Oil Billion Barrels</u>	<u>Gas Trillion cu. ft.</u>
0-200 m	0-2.1 range .4 mean	0-9.7 range 2.5 mean
>200 m	0-3.8 range 1.0 mean	0-12.5 range 3.2 mean

Near Surface Geology - Block 410

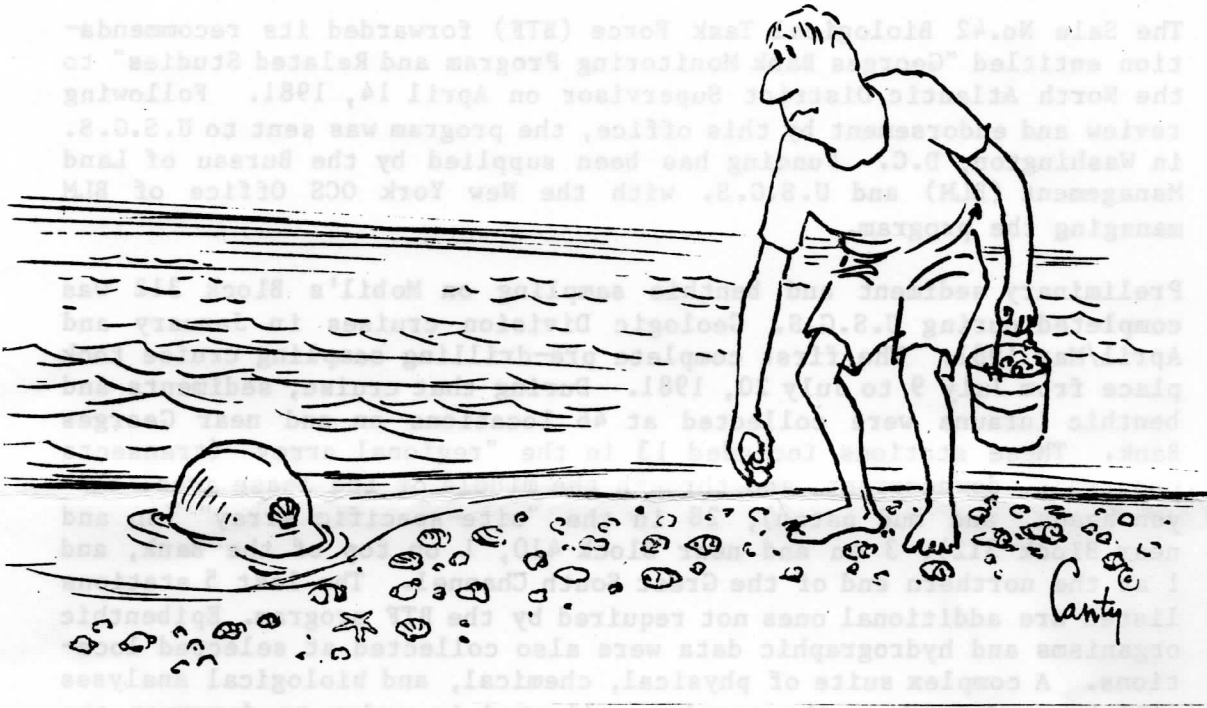
Surficial and near-surface sediments have caused some problems in the early stages of drilling in the North Atlantic. For example, Shell, in setting anchors for the Zapata Saratoga, encountered problems when the 40,000-lb. anchors refused to hold. Eight anchors were initially deployed in a radial pattern; when they began slipping, additional anchors were "piggybacked". An additional delay resulted when anchors had to be shipped from New Orleans.

Sediments in the vicinity of Shell's well site have been described as primarily sand with minor amounts of gravel, silt and clay, resulting from reworking of glacial till. Since the top 100 meters (330 ft.) of sediment is glacial outwash, a well could encounter gravel pockets and boulders in the upper part of the hole. This was the case in the area of Shell's well; the loose unconsolidated material tended to cave-in after the hole was drilled, thereby making it difficult to enlarge the hole and set the first casing string. The structural casing is usually set at approximately 150 feet below the mud line. Shell had to set theirs slightly higher owing to infilling at the bottom of the hole.

Although cuttings are not returned to the drill floor during the drilling of the upper portion of the hole (prior to setting the structural casing and marine riser), some material may be caught up in the bit and brought to the surface. Large rock fragments of cobble size, well rounded, and probably of glacial till origin were recovered. The variable size of the material could cause lost circulation and hole cave-in problems, and was probably the cause of the problems Shell had in keeping the hole open prior to setting the uppermost casing string. Some minor problems associated with the loose glacial materials could result until this part of the geologic section is cased off. In the vicinity of the Shell well site, the unconsolidated section appears to extend to at least 263 meters (861 ft.) below the seafloor. This interval has now been cased off by the second casing string.

USGS - North Atlantic - Fall Recreation Program

Geostriders North Running Club - contact Bud Danenberger
Sunday Touch Football - contact Richard Clingan
Fishing - contact Barry Clark
A Martha's Vineyard cycling trip is being organized. Contact
Todd Palmatier.



Fishermen Look to Drilling Rig for Assistance

On at least two occasions, Georges Bank fishermen have sought assistance from employees onboard Exxon's drilling rig Alaskan Star. The first case involved a seriously injured fisherman who was transferred to the rig and cared for until the U.S. Coast Guard helicopter transported him to the hospital. The second situation centered around a fishing vessel which ran short of oil; Exxon gave them enough to get safely back to port.

The oil and fishing industries can co-exist on Georges Bank and in cases such as those outlined above, representatives of the oil companies can actually assist the fishermen. It is anticipated that the drilling rigs will serve as aids to navigation and sources of assistance, especially during bad weather conditions.

Georges Bank Monitoring Program

The Sale No.42 Biological Task Force (BTF) forwarded its recommendation entitled "Georges Bank Monitoring Program and Related Studies" to the North Atlantic District Supervisor on April 14, 1981. Following review and endorsement by this office, the program was sent to U.S.G.S. in Washington, D.C. Funding has been supplied by the Bureau of Land Management (BLM) and U.S.G.S. with the New York OCS Office of BLM managing the program.

Preliminary sediment and benthic sampling on Mobil's Block 312 was completed during U.S.G.S. Geologic Division cruises in January and April/May 1981. The first complete pre-drilling sampling cruise took place from July 9 to July 20, 1981. During that cruise, sediments and benthic infauna were collected at 46 locations on and near Georges Bank. These stations included 13 in the "regional array" (transects upcurrent, downcurrent, and through the middle of the lease area, canyon heads, and mud patch), 28 in the "site-specific array" (on and near Block 312), 3 on and near Block 410, 1 on top of the Bank, and 1 at the northern end of the Great South Channel. The last 5 stations listed are additional ones not required by the BTF program. Epibenthic organisms and hydrographic data were also collected at selected locations. A complex suite of physical, chemical, and biological analyses will be performed on the samples collected in order to document the conditions found in the area prior to the initiation of oil and gas activities.

Subsequent sampling cruises are scheduled to occur quarterly, with results being reported to the U.S.G.S. North Atlantic District Supervisor, N.Y. BLM, and the BTF.

BTF Monitoring Cruise, Fisheries Training Program, and Whale Watching

What do these seemingly unrelated topics have in common? All three involve the vital link to the drilling rigs supplied by Petroleum Helicopters Incorporated (PHI).

Shell Oil Company saved approximately two days of steaming time for the crew of the R/V Eastward during the July 9 to 20 pre-drilling portion of the BTF Monitoring Program when Shell authorized an extra PHI flight to the semi-submersible drilling unit Zapata Saratoga. Following completion of the regional sampling array, a shortage of two important solvents occurred which would have required the Eastward to make an unscheduled trip to Woods Hole before collecting the site-specific samples. When contacted by USGS, Shell quickly agreed to fly the chemicals to the drilling rig where they were picked up by the Eastward. Owing to the nature of the solvents, a special trip with no passengers aboard was required.

Since that time, the USGS North Atlantic District Office has obtained its own contract with PHI, the main purpose of which is to transport our Petroleum Engineering Technicians to the rigs for inspections. The NAD Fishery Biologist also flies to the rigs with PHI in order to present the Fisheries Training Program mandated by Sale No. 42 Lease Stipulation No. 6 and Notice to Lessees NA-80-10. This program was designed to familiarize personnel active in oil and gas operations in the Georges Bank area with the complexities of the fishing industry and methods of minimizing conflicts. Although most of the training occurs at the beginning of the well, this will be an ongoing process with new personnel being trained as they arrive on location.

PHI is also coming into play in tracking the movements of whales in the North Atlantic. Some PHI employees, as well as USGS personnel, are utilizing the 2-3 hour round trip flights to the lease area to plot the locations and identities of whales. As appropriate, these sightings data are forwarded to interested parties including the BLM-sponsored Cetacean and Turtle Assessment Program (CETAP).

Oil Spill Response Drill

On July 30, 1981, Clean Atlantic Associates (an oil spill response cooperative comprised of Mid- and North Atlantic operators) concluded 3 days of spill response training with a deployment exercise in Rhode Island Sound.

The 3 day program was primarily geared toward training those rig and workboat personnel who will be responsible for the initial deployment of response equipment. Without such training, it would be of little benefit to maintain response equipment at the well locations. The following equipment was deployed from workboats which are presently servicing the 2 drilling rigs operating on Georges Bank.

Fast Response Unit (FRU) - Designed for quick response to minor spills in moderate seas. Deployed off the starboard side of a workboat, the unit is comprised of a floating boom section and weir-type skimmer to extract oil from the water surface. A 500 gpm pump is used to pump the fluids into storage separation tanks mounted on the deck.

Skimming Barrier - Designed for response to a continuous discharge or large spill. Performs effectively in 5 foot seas, 20 knot winds, and 1 knot currents with sufficient strength to withstand 10 foot seas, 40 knot winds, and 3 knot currents. The barrier is 612 feet long with 6 skimming weirs built into the middle section. A pump float is towed immediately aft of the skimming weirs. The system was deployed in less than 45 minutes using 2 workboats.

Dracone - The Dracone is a flexible barge (capacity of 1020 bbl) used for storing recovered oil. Towed by its loading/discharge hose, the Dracone is equipped with permanent flotation.

Odds and Ends

Although we were rooting for Seagrams (it would have made for great cartoons), we congratulate Dupont on their acquisition of Conoco. Now, when can we expect an Exploration Plan?

* * *

Mobil will be moving its Neddrill drilling rig into the Caribbean after completing its Baltimore Canyon Well. Does Mobil really expect to find oil and gas in the waters of the British Virgin Islands or is this a winter vacation scheme concocted by Dick Stauble?

* * *

A number of people have inquired about this new company at Barnstable Municipal Airport that has a Greek letter for a name. PHI is Petroleum Helicopters Inc., a prominent helicopter company which services offshore oil and gas operations worldwide. PHI has 4 helicopters at the Hyannis facility. Two Aerospatiale Pumas and a Bell 212 are under contract to Shell and Exxon. A second 212 has been contracted by the Geological Survey for our inspection program.

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Two bumper stickers seen recently on adjacent cars in the Geological Survey lot seem to indicate that there is no conflict between opposing factions in the offshore oil and gas issue. Next to a car with a sticker reading "Food Not Fuel on Georges Bank" was a car with a sticker reading "Offshore Oil Feeds My Family."

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The first chapter of a book on Shell's Block 410 well might be entitled "Eight Angry Partners." However, the initial problems have been overcome and the most important chapters have yet to be written.

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We recently received an inquiry from an irate citizen who had been told that a disguised Russian fishing trawler was secretly drilling for and producing oil in the Atlantic. Is this BAST, Dr. Kash?

* * *

Cape Cod Community College conducted its first Well Control Training Course during the week of August 23. The College has applied to USGS for certification of this program.

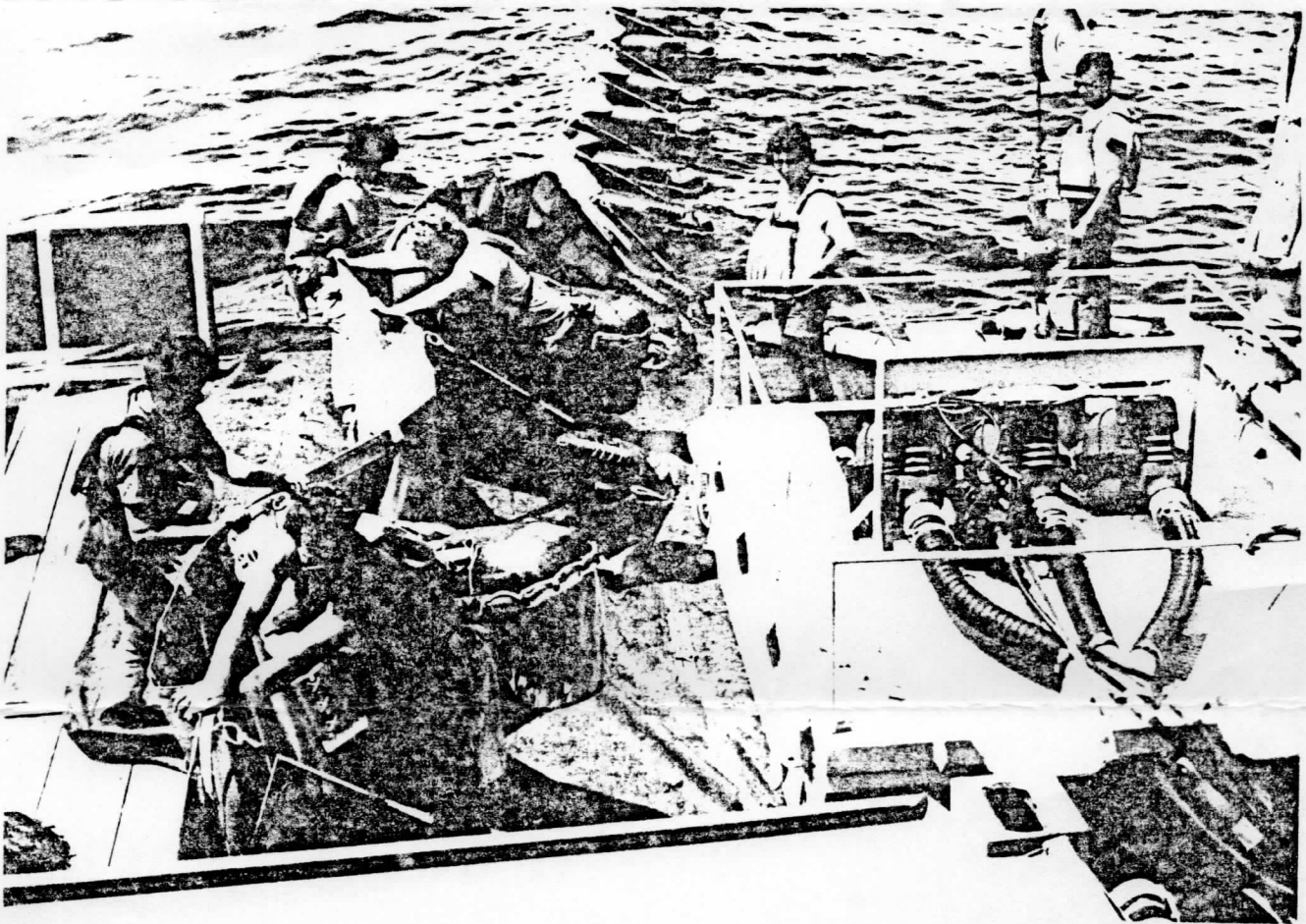
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Best wishes to Kevin McDonough (former Mass. CZM employee) and Susan Poole (our former secretary) who vacated their former positions to continue their education.

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Congratulations to Rich Delaney on being appointed Director of the Coastal Zone Management Program in Massachusetts.

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Deploying the Skimming Barrier