U.S. Department of Transportation
United States Coast Guard

Commandant (G-MVI-3)
United States Coast Guard

MAILING ADDRESS:

Washington, DC 20593-0001
(202) 267-1444

COMDTPUB P16700.4
NVIC 7-91
20 MAY 1991

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 7-91

Subj: Determination of Cold Water Areas

Ref: (a) 46 U.S.C. 3102
(b) 46 U.S.C. 4502(b)

1. PURPOSE. This Circular provides clarification of cold water areas for which any current or proposed regulations require certain lifesaving equipment for cold waters on commercial vessels.

2. BACKGROUND.

a. In recent years, the role of hypothermia in deaths arising from vessel casualties has come to be better understood. Many deaths that were attributed to drowning actually were the direct or indirect result of hypothermia.

b. Hypothermia is a lowering of body core temperature which occurs when a person is immersed in water which is colder than body temperature. As body core temperature drops, the individual gradually loses muscular control as the body tries to conserve warm blood for the brain and other vital organs. At this point, an individual without flotation, or even with flotation in rough water, may ingest water and drown. If drowning does not occur, the heart and lungs may stop functioning as body temperature drops further. Eventually death results, although with proper medical treatment, many apparently "dead" drowning victims can be saved. Young people especially have been known to recover from apparent drowning after extended periods of immersion in cold water.

DISTRIBUTION - SDL No. 129

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A																										
B		2	10		3		3	1						132	1		1	1								30
C					*							1	*													
D	1	1		1*							1	*														
E														2	2											
F	1		1								1															
G																										
H																										

NON-STANDARD DISTRIBUTION:

(See page 7.)

2. c. In relatively warm waters, the lowering of body temperature is slow, and several days in the water might be necessary before any changes could be noticed. In water temperatures near freezing, a person without protective equipment might survive only a few minutes. A critical water temperature seems to be around 15° C (59° F). To the unprotected person, water at this temperature is painful and hypothermia seems to progress much faster than in warmer waters. In water above this temperature, most people are able to survive at least several hours. As a result, some new laws and regulations have been adopted or proposed which require additional lifesaving equipment for hypothermia protection on vessels operating in colder waters. The critical 15° C water temperature has been the basis for determining "cold waters" in each of these laws and regulations.

3. DISCUSSION -- IMMERSION SUITS.

a. The Coast Guard Authorization Act of 1984 added specific requirements to the United States Code (reference (a)) for immersion suits on certain vessels operating in the Atlantic Ocean north of 32° N or south of 32° S, and in all other waters north of 35° N or south of 35° S. (Immersion suits were formerly called "exposure suits" and are sometimes called "survival suits.") These latitudes were intended to include waters where water temperatures dropped below 15° C at some time during a typical year. This law originally applied to cargo vessels, tank vessels, and mobile offshore drilling units. The statutory notes explain that this law does not limit the authority of the Coast Guard to require immersion suits on vessels not specifically required under the law to have them. With the passage of the Commercial Fishing Industry Vessel Safety Act of 1988, Congress specifically extended the application of this law to documented commercial fishing vessels operating beyond the Boundary Line and vessels with more than 16 individuals on board.

b. The Coast Guard Authorization Act of 1984 also required the Secretary of Transportation to submit a report to Congress on the benefits and disadvantages of extending the regulations to require immersion suits on designated vessels operating in all waters north of 31° N or south of 31° S. The report says that in the open ocean, 35° N and 35° S latitudes correspond well with the 15° C temperature criterion. In ocean areas near shore, however, water temperatures are colder in the winter and warmer in the summer than they are in the open ocean. At the statutorily established 32° N in the Atlantic Ocean,

3. b. (cont'd) mean low water temperature near shore in the coldest month, according to the data used, was about 16° C. The study therefore found little reason to move the boundary south to 31° N. In the Pacific Ocean, a mean low water temperature of 15° C near shore was seen to occur near 32° N. The report concludes that the boundaries should be established at 32° N and 32° S in both the Atlantic and Pacific Oceans. Consequently, as regulations for immersion suits are proposed or revised, the specified boundaries are 32° N and 32° S, worldwide.

4. DISCUSSION -- SURVIVAL CRAFT. Casualty records indicate that there have been deaths from hypothermia in accidents involving small vessels which have not been required to carry lifesaving equipment that provides survivors with out-of-the-water flotation. New regulations address this by requiring inflatable liferafts or inflatable buoyant apparatus on certain of these vessels operating in cold waters (i.e., 15° C or less). Because many of these vessels operate seasonally, the regulations are written so as to require this additional equipment only when the vessel is operating in cold water areas. Cold water areas change throughout the year with seasonal water temperature variations.

5. IMPLEMENTATION -- IMMERSION SUITS.

   a. Inspected vessels. Inspected vessels required by regulation to carry immersion suits must do so in accordance with the appropriate regulation. Most of those regulations require suits north of 32° N or south of 32° S. Older regulations may still have a 35° N/35° S boundary outside the Atlantic Ocean. As is current practice, if a vessel does not carry immersion suits, then the vessel's Certificate of Inspection must be endorsed to limit the vessel's route to waters where immersion suits are not required by regulation. Officers in Charge, Marine Inspection have the authority to consider exemptions of the immersion suit requirement for those vessels which operate in waters where immersion suits are required by regulation. Exemptions can be considered when water temperatures in the regulated latitudes are above 15° C or when transiting regulated latitudes briefly in the course of a voyage.

   b. Uninspected vessels. Uninspected vessels required by regulation to carry immersion suits either have specific geographic boundaries with no seasonal or water temperature changes, or when operating in or beyond coastal waters (defined at 33 CFR 175.105(b)) have seasonal changes linked to the definition of cold waters. The areas listed in paragraph 6 of this Circular are

5. b. (cont'd) considered cold water for the purposes of regulations which require immersion suits when operating in cold water areas.

6. IMPLEMENTATION -- SURVIVAL CRAFT. According to water temperature data published by the National Oceanic and Atmospheric Administration, the navigable areas near the United States listed below have mean low water temperatures approximately 15° C or below during the indicated months. These areas are considered cold water for the purposes of regulations which require certain survival craft when operating in cold water areas. Coastal water areas are to correspond with adjacent ocean areas and connecting waters between the Great Lakes are to correspond with the most stringent requirement of the adjacent Great Lakes. The affected ocean areas are also illustrated in enclosure (1) to this Circular.

   a. Atlantic Ocean. The cold water areas in the Atlantic Ocean are as follows for the indicated months of the year:

      (1) January. North of Cape Hatteras, North Carolina (Cape Hatteras Light, 35°15.3' N latitude).

      (2) February. North of Cape Hatteras, North Carolina (Cape Hatteras Light, 35°15.3' N latitude).

      (3) March. North of Cape Hatteras, North Carolina (Cape Hatteras Light, 35°15.3' N latitude).

      (4) April. North of Cape Hatteras, North Carolina (Cape Hatteras Light, 35°15.3' N latitude).

      (5) May. North of Cape Charles, Virginia (Cape Charles Light, 37°07.4' N latitude).

      (6) June. North and east of a line which is drawn bearing 150° True from Watch Hill Light, Rhode Island (41°18.2' N latitude, 71°51.5' W longitude); north of Ambrose Light (40°27.6' N latitude) 20 or more nautical miles offshore.

      (7) July. North of Halifax, Nova Scotia (Chebucto Head Light, 44°30.4' N latitude), not including Bay of Fundy; north of Cape Cod, Massachusetts (Highland Light, 42°02.4' N latitude) 20 or more nautical miles offshore.

6. a. (8) August. North of Halifax, Nova Scotia (Chebucto Head Light, 44°30.4' N latitude), not including Bay of Fundy; north of Isle of Shoals Light, New Hampshire (42°58' N latitude) 20 or more nautical miles offshore.

(9) September. North of Halifax, Nova Scotia (Chebucto Head Light, 44°30.4' N latitude), not including Bay of Fundy; north of Isle of Shoals Light, New Hampshire (42°58' N latitude) 20 or more nautical miles offshore.

(10) October. North and east of a line which is drawn bearing 150° True from Watch Hill Light, Rhode Island (41°18.2' N latitude, 71°51.5' W longitude); north of Ambrose Light (40°27.6' N latitude) 20 or more nautical miles offshore.

(11) November. North of Cape Charles, Virginia (Cape Charles Light, 37°07.4' N latitude).

(12) December. North of Cape Hatteras, North Carolina (Cape Hatteras Light, 35°15.3' N latitude).

b. Pacific Ocean. The cold water areas in the Pacific Ocean are as follows for the indicated months of the year:

(1) January. All ocean areas off the continental United States and Alaska.

(2) February. All ocean areas off the continental United States and Alaska.

(3) March. North and west of a line which is drawn 255° True from San Mateo Point Light, California (33°23.2' N latitude, 117°35.7' W longitude); all other ocean areas more than 20 nautical miles offshore of the continental United States.

(4) April. North and west of a line which is drawn 255° True from San Mateo Point Light, California (33°23.2' N latitude, 117°35.7' W longitude); all other ocean areas more than 20 nautical miles offshore of the continental United States.

(5) May. North and west of a line which is drawn 255° True from San Mateo Point Light, California (33°23.2' N latitude, 117°35.7' W longitude).

6. b. (6) June. North of San Luis Obispo, California (San Luis Obispo Light, 35°09.6' N latitude); north and west of a line which is drawn 255° True from San Mateo Point Light, California (33°23.2' N latitude, 117°35.7' W longitude), more than 20 nautical miles offshore of the continental United States.

(7) July. North of San Luis Obispo, California (San Luis Obispo Light, 35°09.6' N latitude).

(8) August. North of San Luis Obispo, California (San Luis Obispo Light, 35°09.6' N latitude).

(9) September. North of Point Reyes, California (Point Reyes Light, 37°59.7 N latitude), not including Drakes Bay.

(10) October. North of San Luis Obispo, California (San Luis Obispo Light, 35°09.6' N latitude).

(11) November. North of San Luis Obispo, California (San Luis Obispo Light, 35°09.6' N latitude).

(12) December. North of San Luis Obispo, California (San Luis Obispo Light, 35°09.6' N latitude).

c. Great Lakes. The cold water areas in the Great Lakes are as follows for the indicated months of the year:

(1) January. All Great Lakes.

(2) February. All Great Lakes.

(3) March. All Great Lakes.

(4) April. All Great Lakes.

(5) May. All Great Lakes.

(6) June. Lakes Superior, Michigan, Ontario, and Huron except for Saginaw Bay.

(7) July. Lakes Superior and Huron, except for Saginaw Bay.

(8) August. Lake Superior.

(9) September. Lake Superior.

6. c. (10) October. All Great Lakes.

(11) November. All Great Lakes.

(12) December. All Great Lakes.

J. D. SIPES
Rear Admiral, U.S. Coast Guard
Chief, Office of Marine Safety,
Security and Environmental Protection

Encl: (1) Atlantic and Pacific Ocean Cold Water Area Chartlets

Non-Standard Distribution:

C:e New Orleans (90); Baltimore (45); San Francisco (40); Philadelphia, Port Arthur, Honolulu, Puget Sound (35); Miami, Houston, Mobile, Long Beach, Morgan City (25); Hampton Roads, Jacksonville, Portland OR (20); Boston, Portland ME, Charleston, Anchorage (15); Cleveland (12); Louisville, Memphis, Paducah, Pittsburgh, St. Louis, Savannah, San Juan, Tampa, Galveston, Buffalo, Chicago, Detroit, Duluth, Milwaukee, San Diego, Juneau, Valdez (10); Providence, Huntington, Wilmington, Corpus Christi, Toledo, Guam (5).

C:m New York (70); St. Ignace (5); Sturgeon Bay (4).

D:d Except Baltimore, Monterey, Moriches.

D:l CG Liaison Officer MILSEALIFTCOMD (Code N-7CG), CG Liaison Officer RSPA (DHM-22), CG Liaison Officer MARAD (MAR-720.2), CG Liaison Officer JUSMAGPHIL (1).

NOAA Fleet Inspection Officer (1).

6. c. (10) October. All Great Lakes.

(11) November. All Great Lakes.

(12) December. All Great Lakes.

J. D. SIPES
Rear Admiral, U.S. Coast Guard
Chief, Office of Marine Safety,
Security and Environmental Protection

Encl: (1) Atlantic and Pacific Ocean Cold Water Area Chartlets

Non-Standard Distribution:

C:e New Orleans (90); Baltimore (45); San Francisco (40); Philadelphia, Port Arthur, Honolulu, Puget Sound (35); Miami, Houston, Mobile, Long Beach, Morgan City (25); Hampton Roads, Jacksonville, Portland OR (20); Boston, Portland ME, Charleston, Anchorage (15); Cleveland (12); Louisville, Memphis, Paducah, Pittsburgh, St. Louis, Savannah, San Juan, Tampa, Galveston, Buffalo, Chicago, Detroit, Duluth, Milwaukee, San Diego, Juneau, Valdez (10); Providence, Huntington, Wilmington, Corpus Christi, Toledo, Guam (5).

C:m New York (70); St. Ignace (5); Sturgeon Bay (4).

D:d Except Baltimore, Monterey, Moriches.

D:l CG Liaison Officer MILSEALIFTCOMD (Code N-7CG), CG Liaison Officer RSPA (DHM-22), CG Liaison Officer MARAD (MAR-720.2), CG Liaison Officer JUSMAGPHIL (1).

NOAA Fleet Inspection Officer (1).

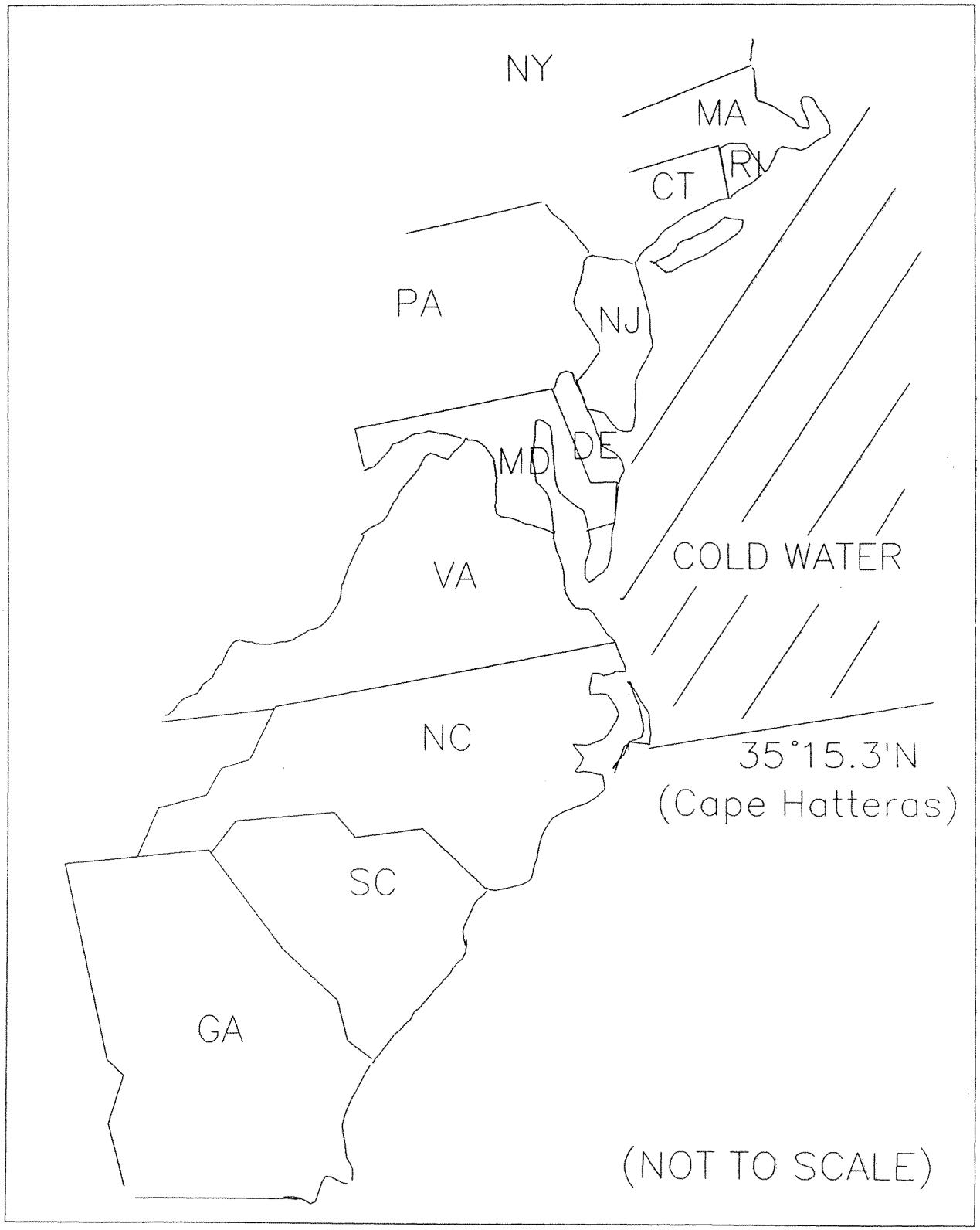

Figure 1. January – Atlantic Ocean

Enclosure (1) to NVIC **7 - 91**

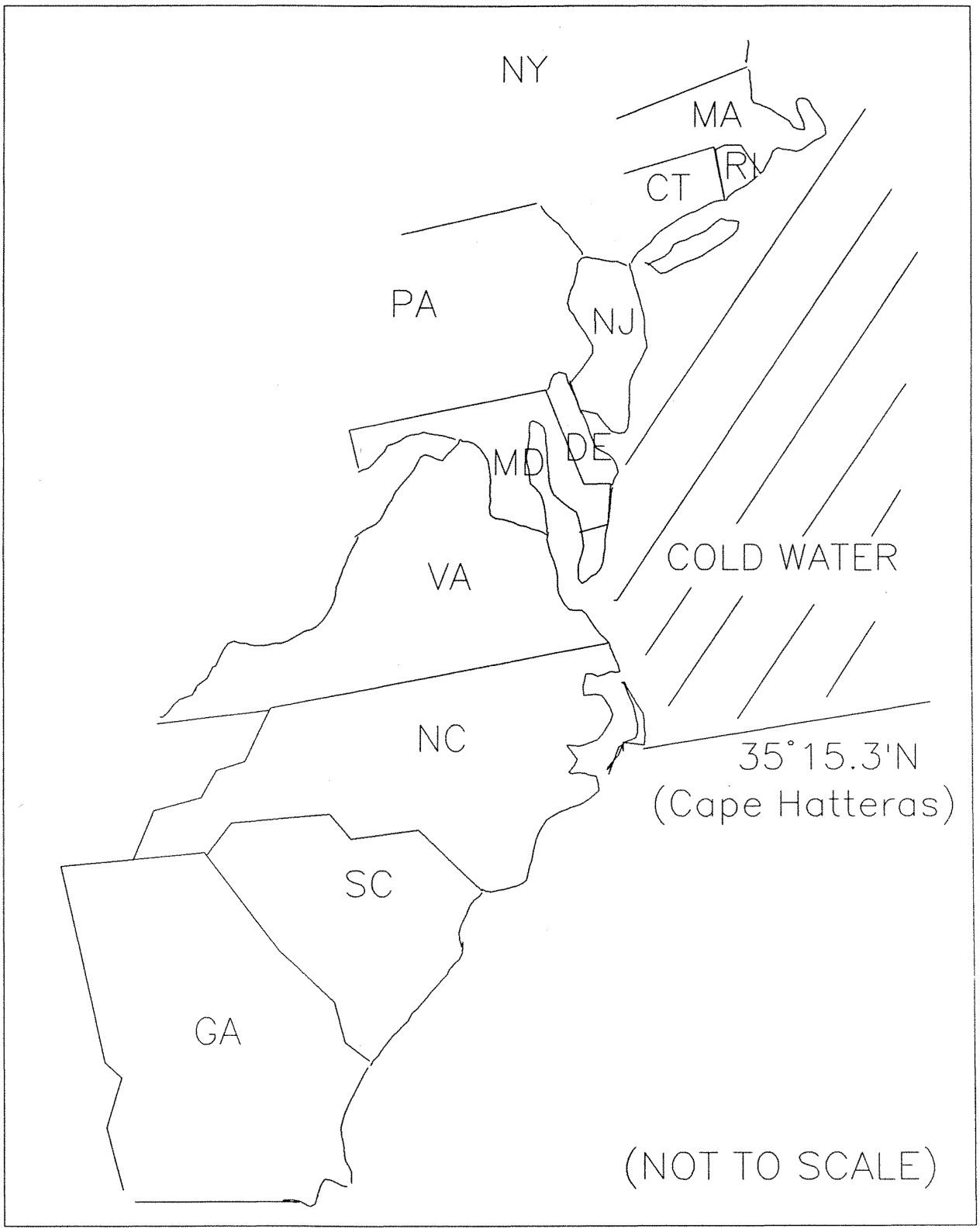

Figure 2. February – Atlantic Ocean

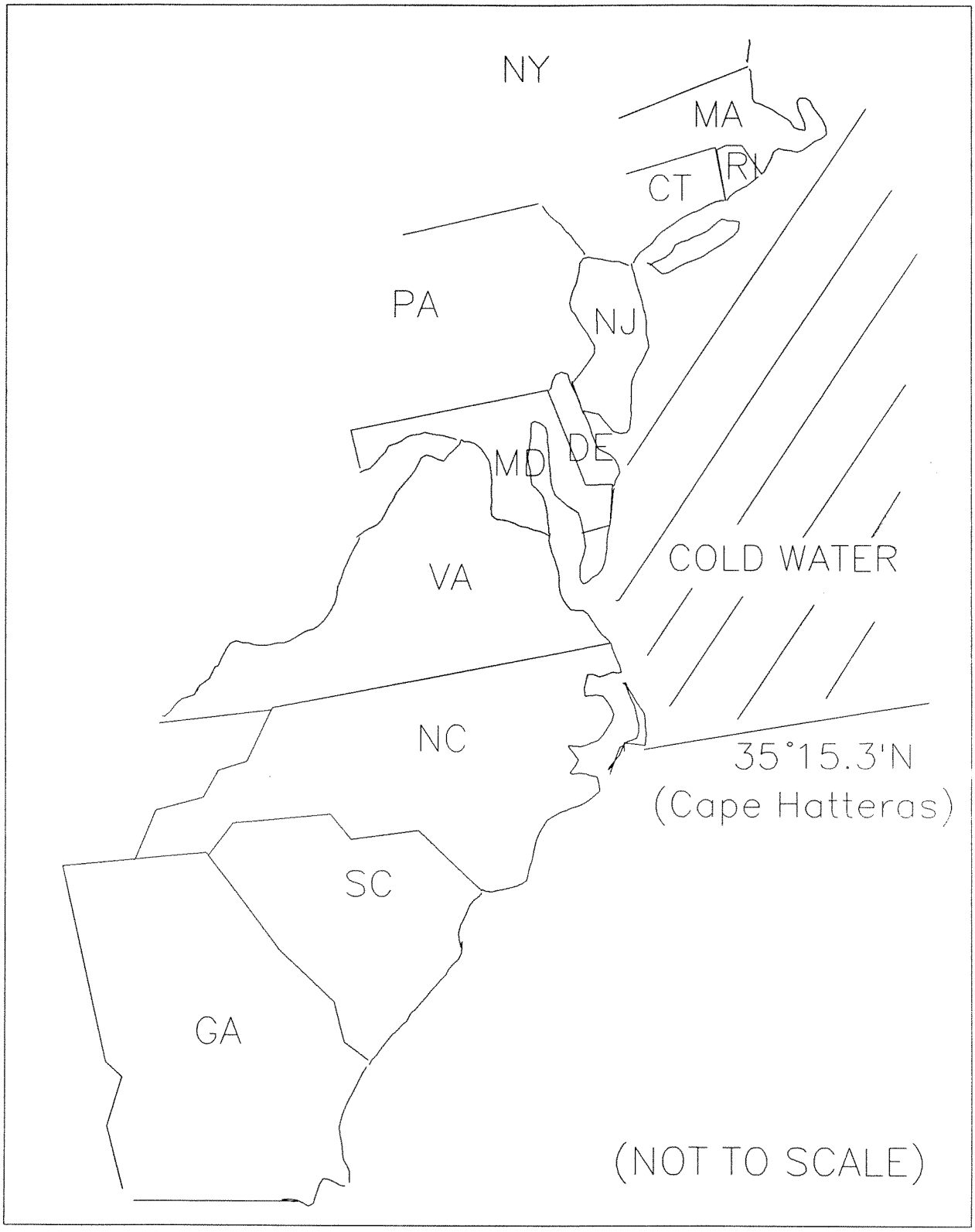

Figure 3. March – Atlantic Ocean

Enclosure (1) to NVIC **7-91**

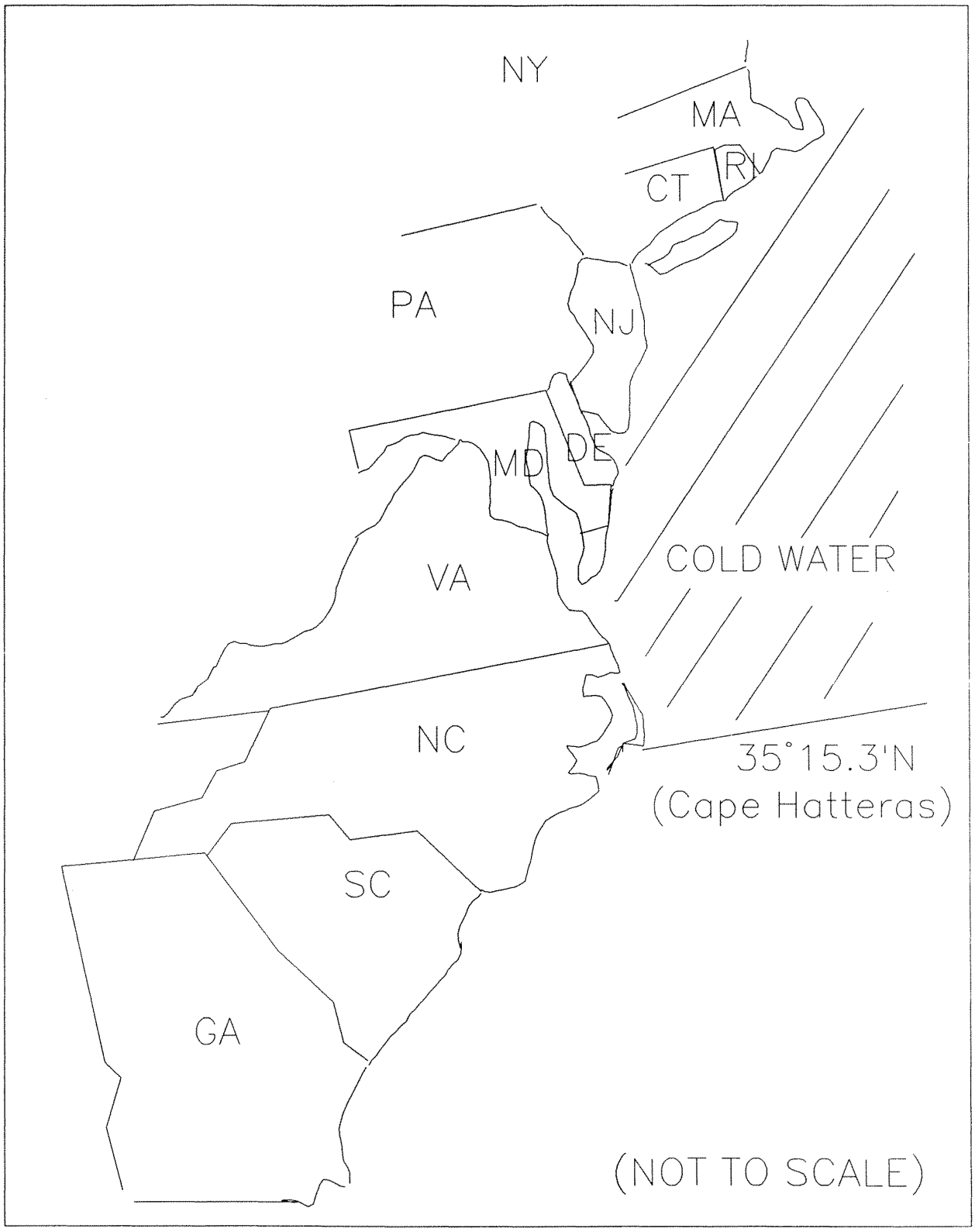

Figure 4. April – Atlantic Ocean

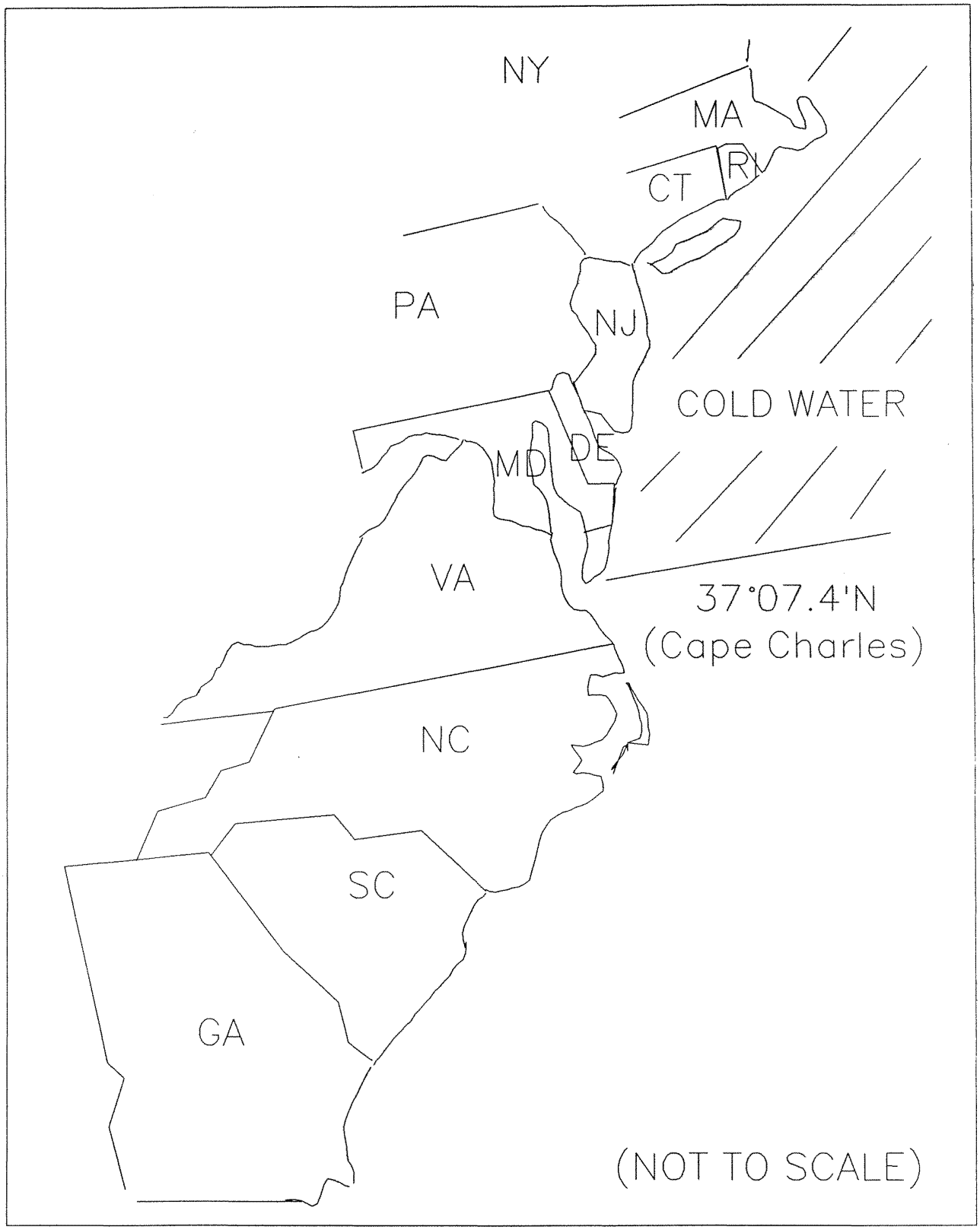

Figure 5. May – Atlantic Ocean

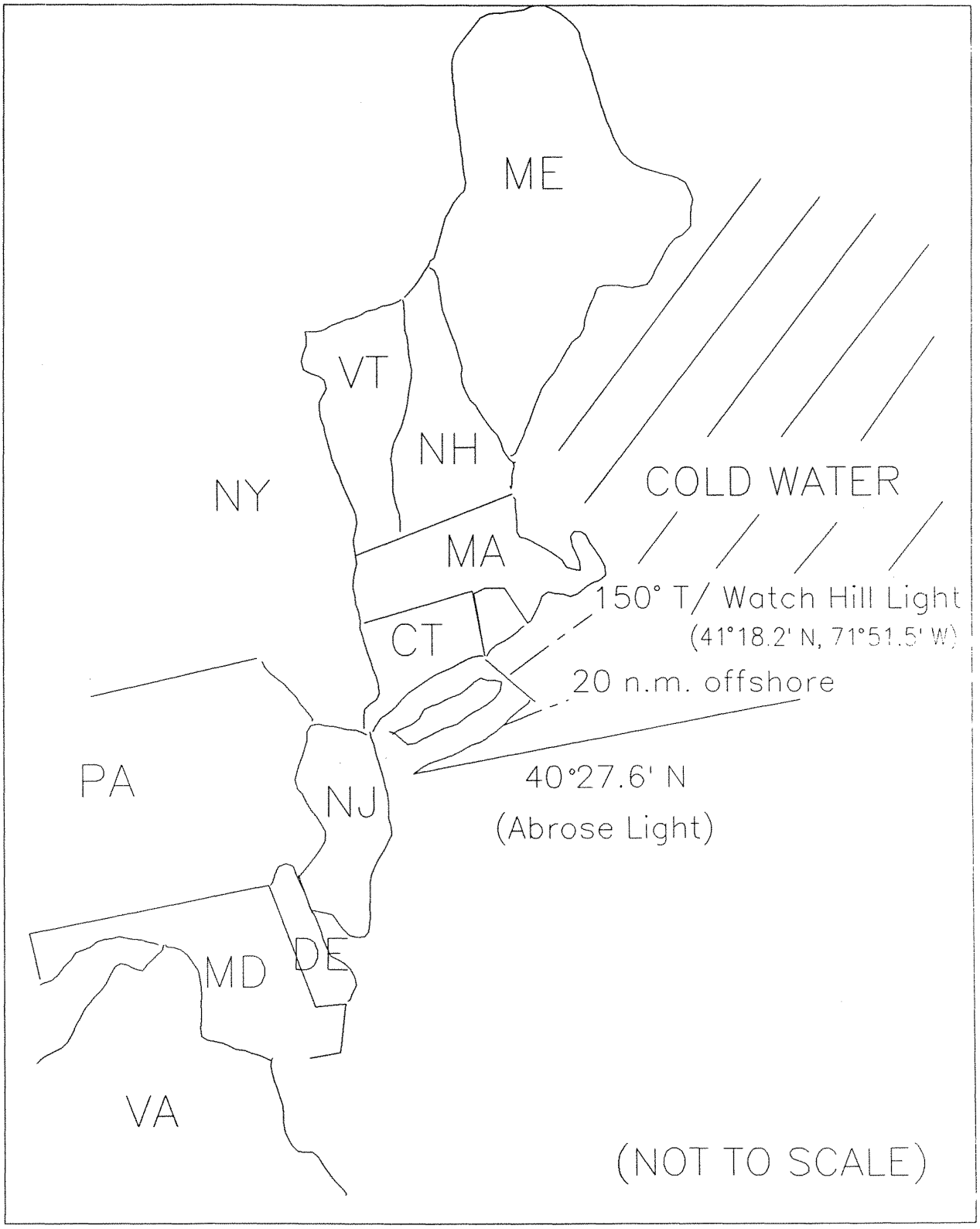

Figure 6. June – Atlantic Ocean

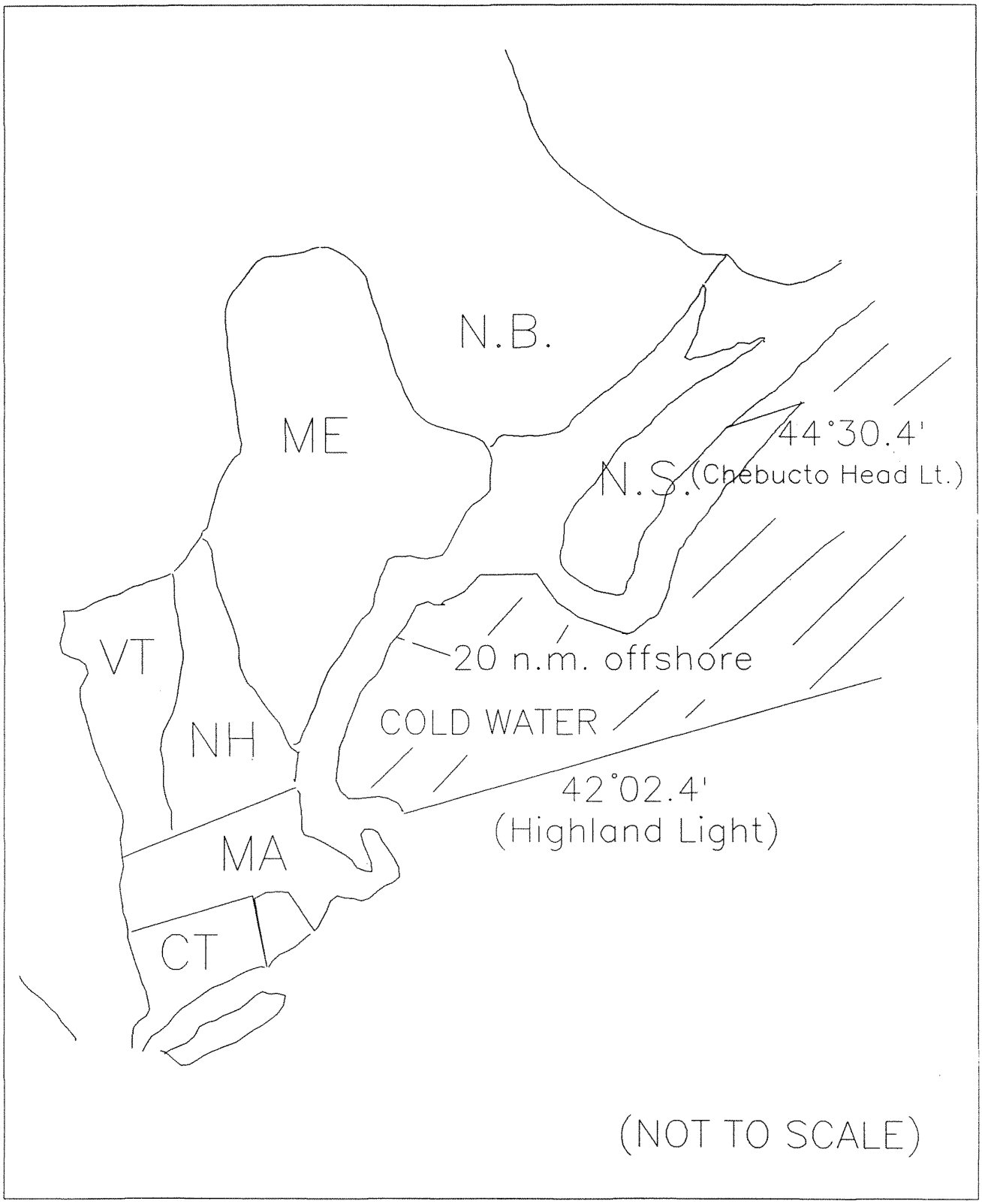

Figure 7. July– Atlantic Ocean

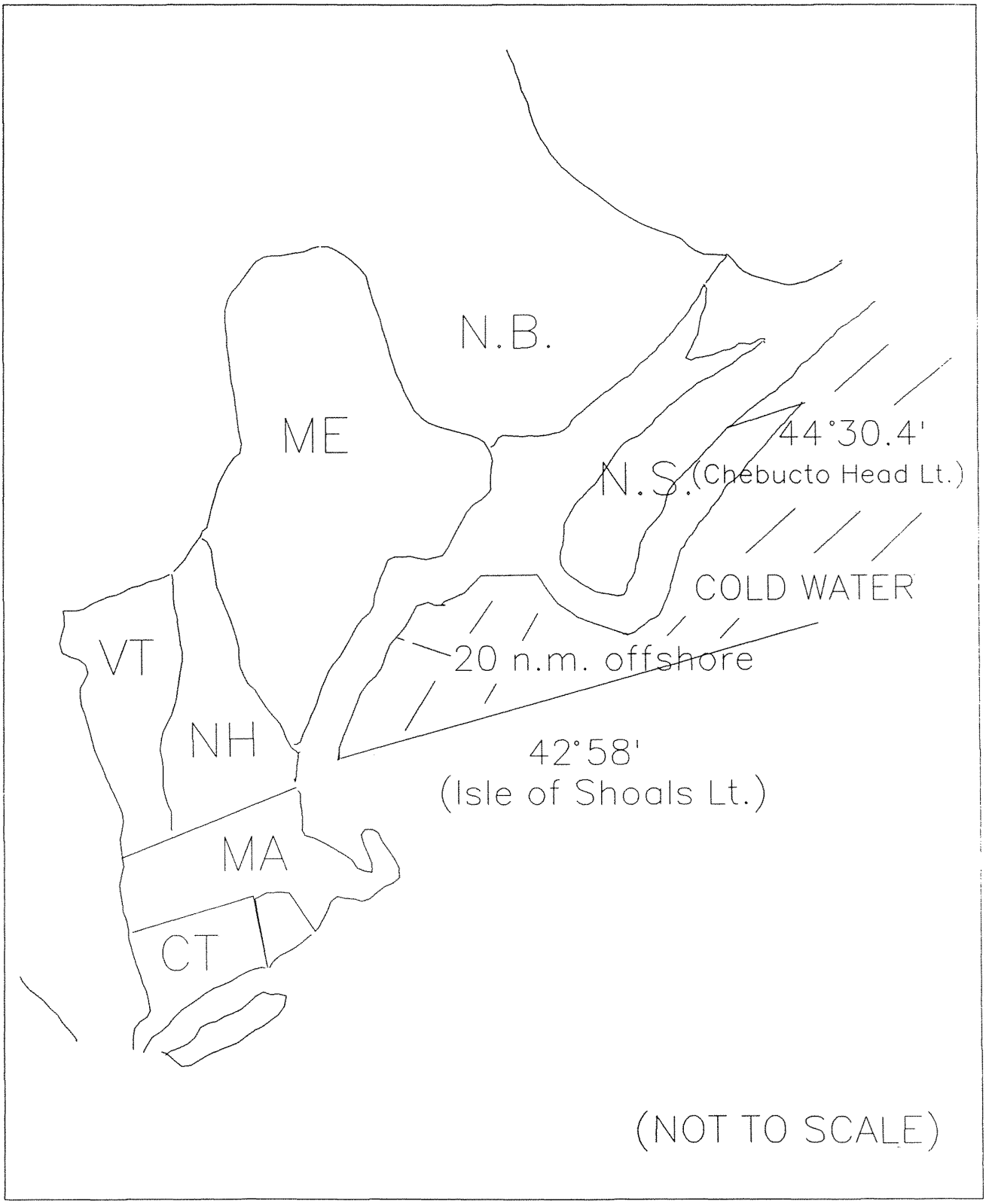

Figure 8. August – Atlantic Ocean

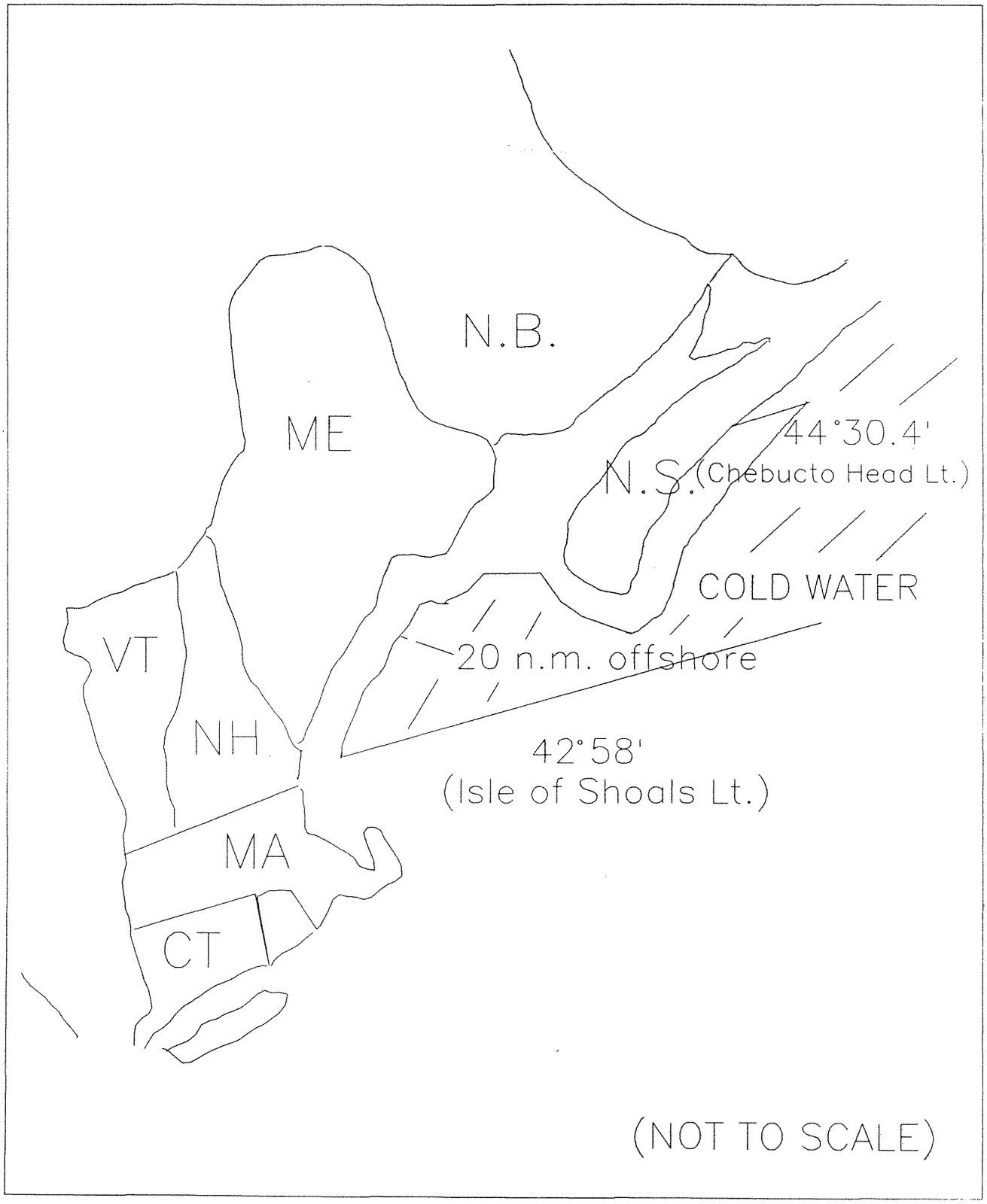

Figure 9. September – Atlantic Ocean

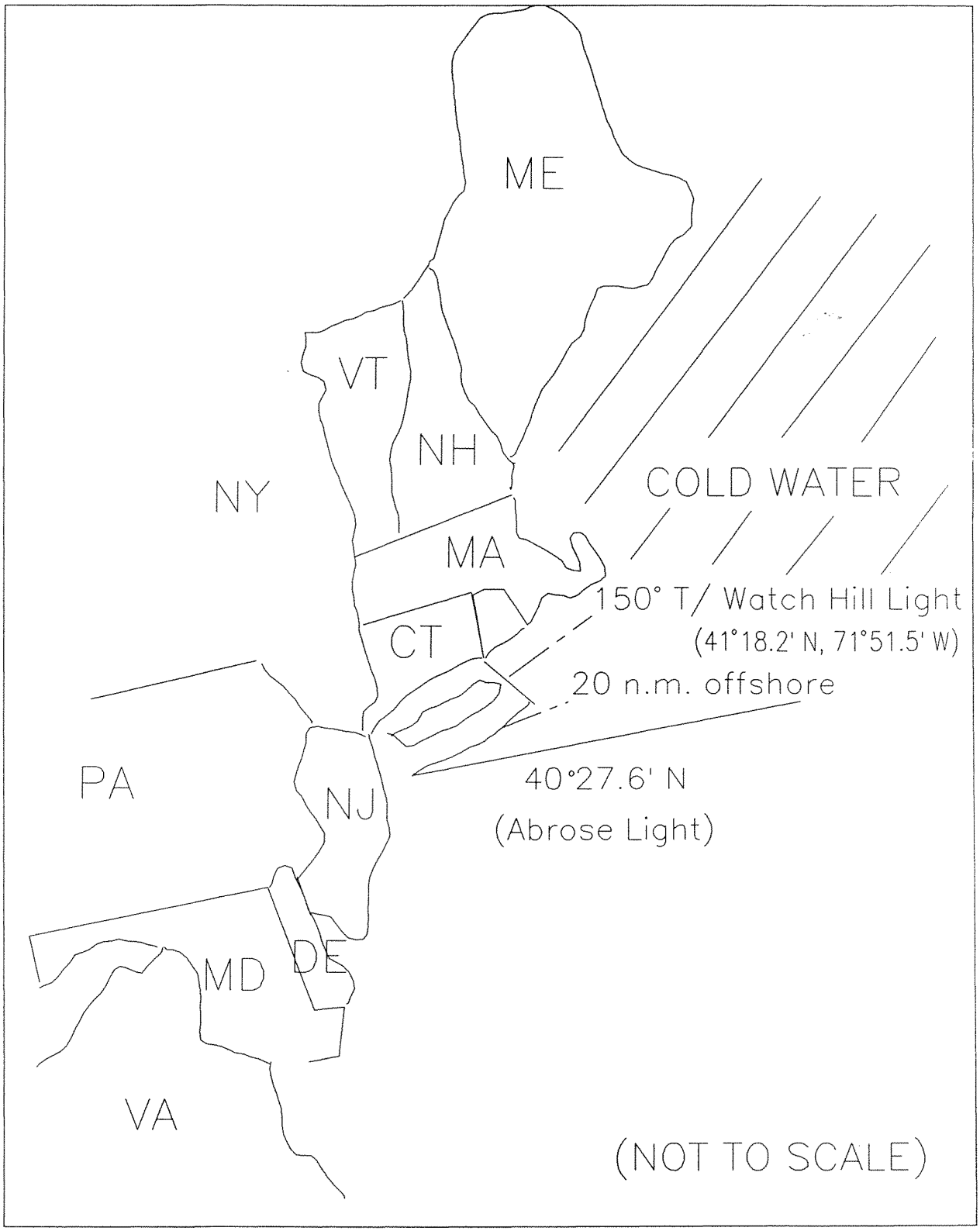

Figure 10. October – Atlantic Ocean

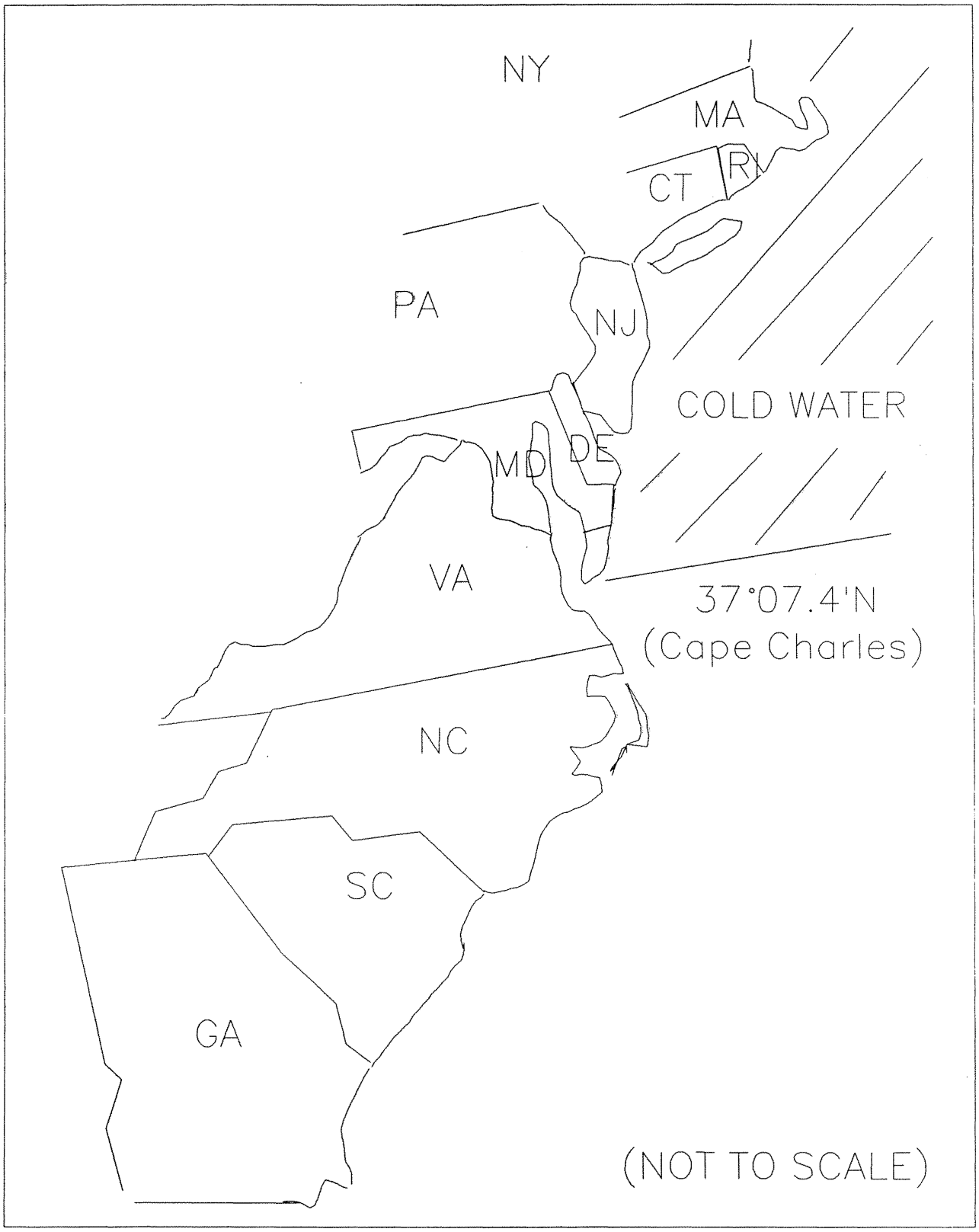

Figure 11. November – Atlantic Ocean

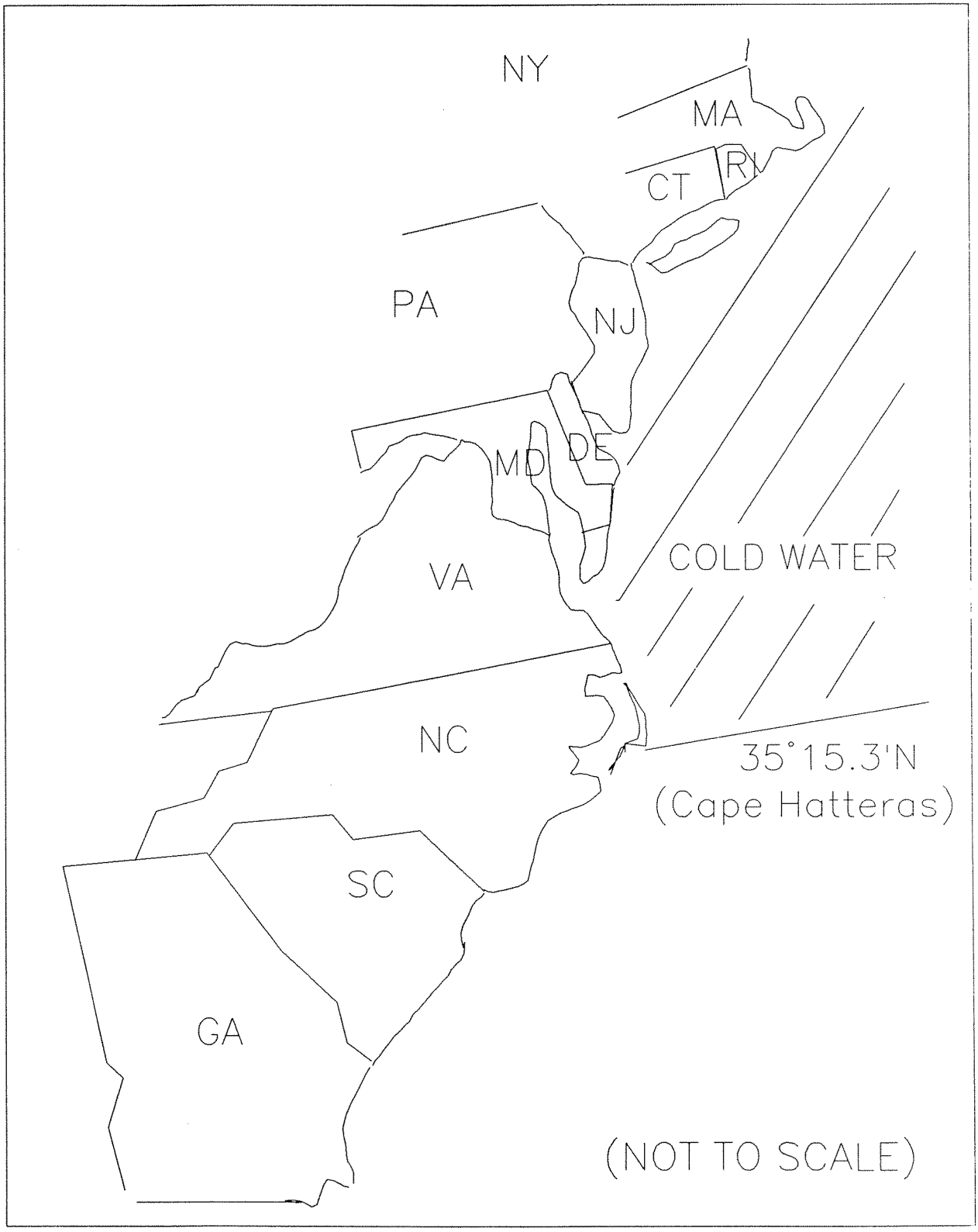

Figure 12. December – Atlantic Ocean

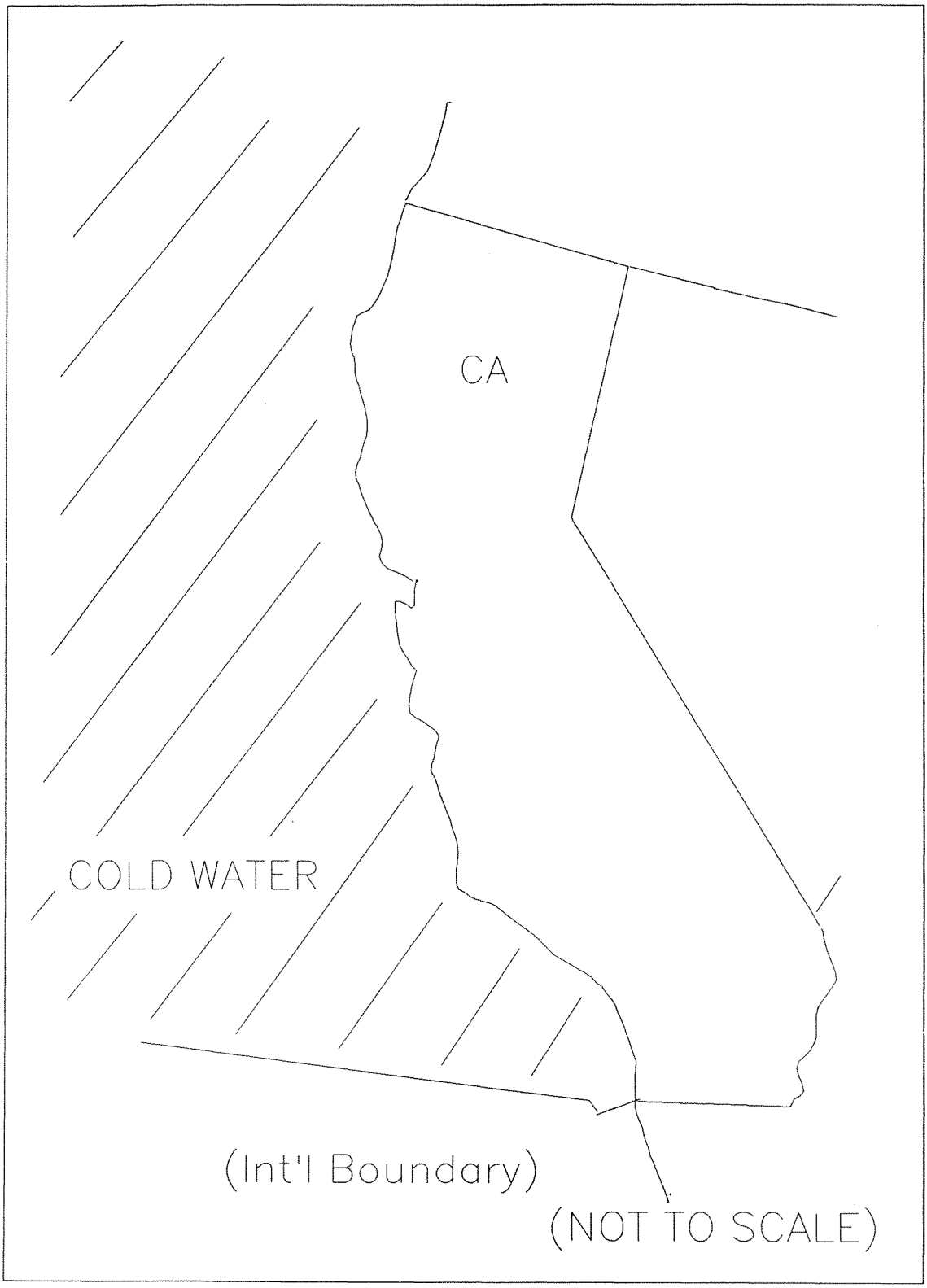

Figure 13. January – Pacific Ocean

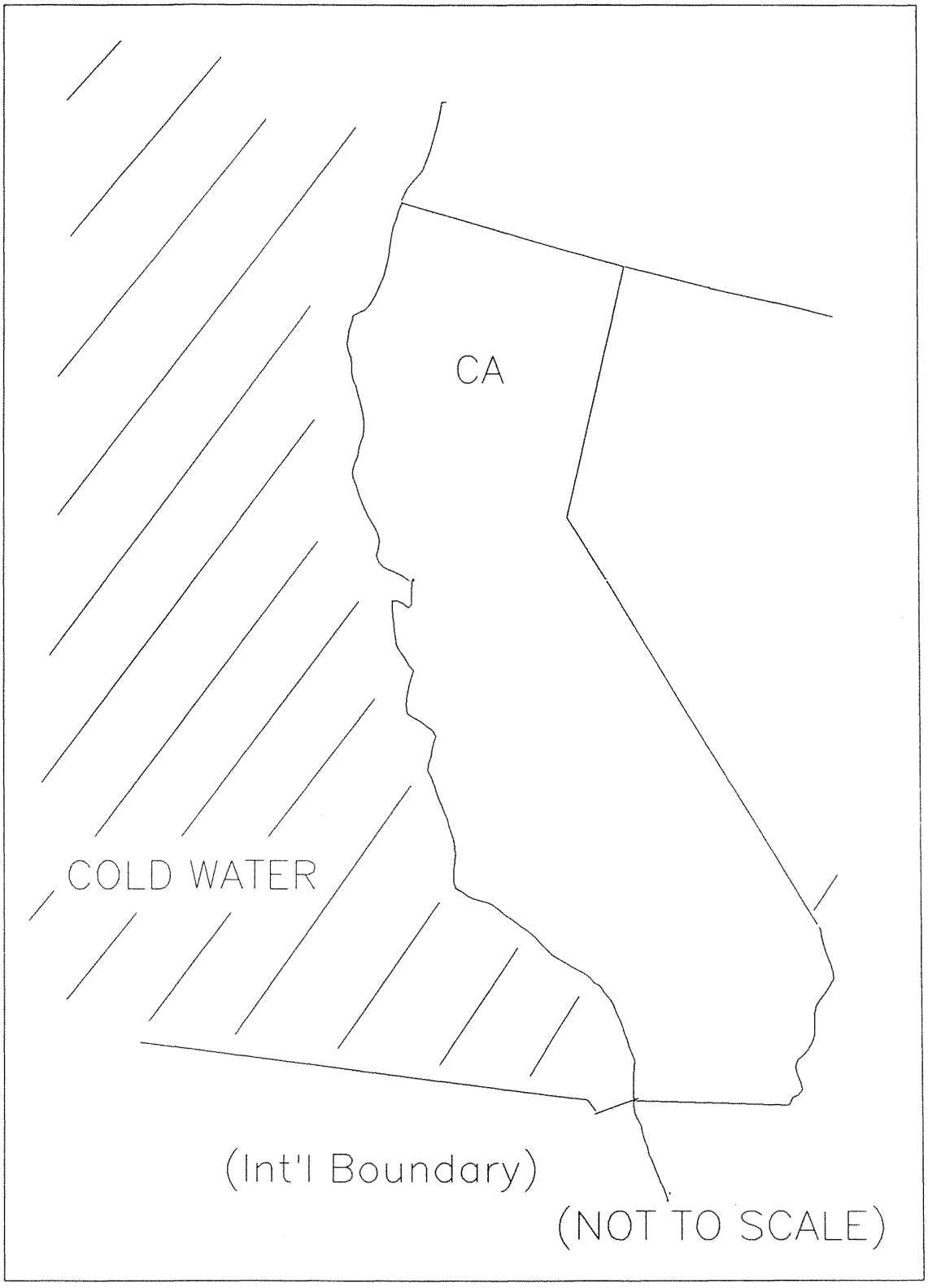

Figure 14. February – Pacific Ocean

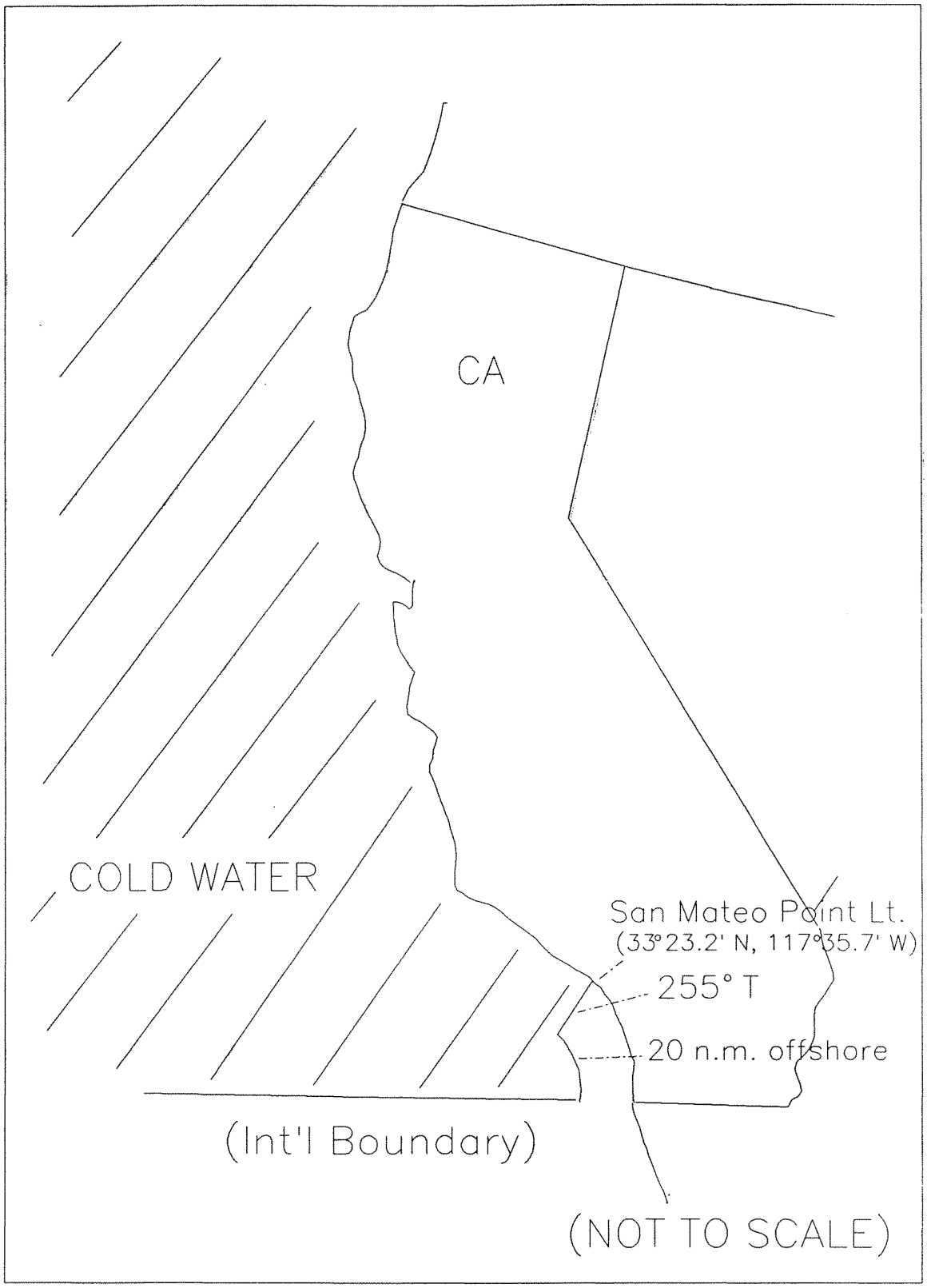

Figure 15. March – Pacific Ocean

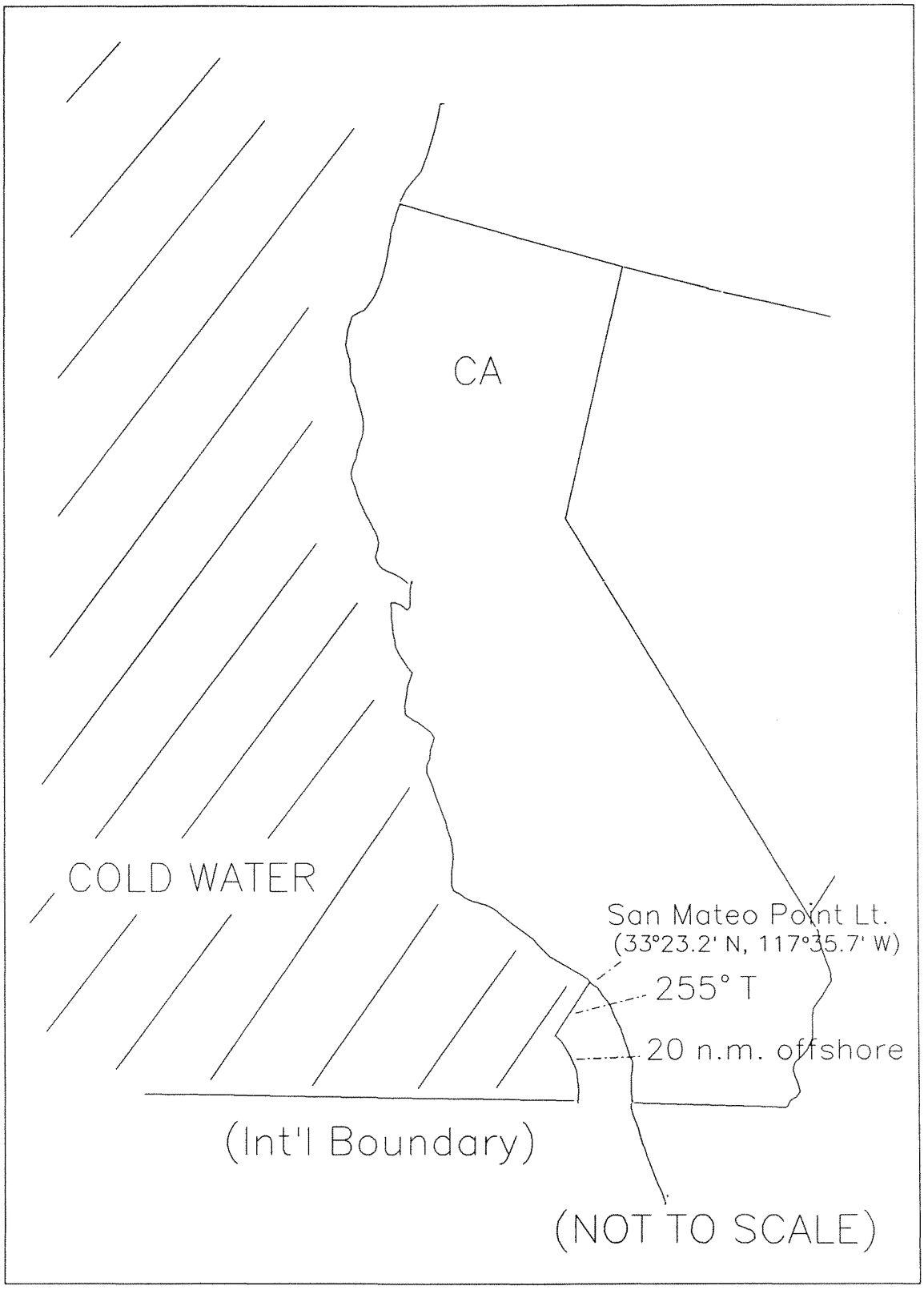

Figure 16. April – Pacific Ocean

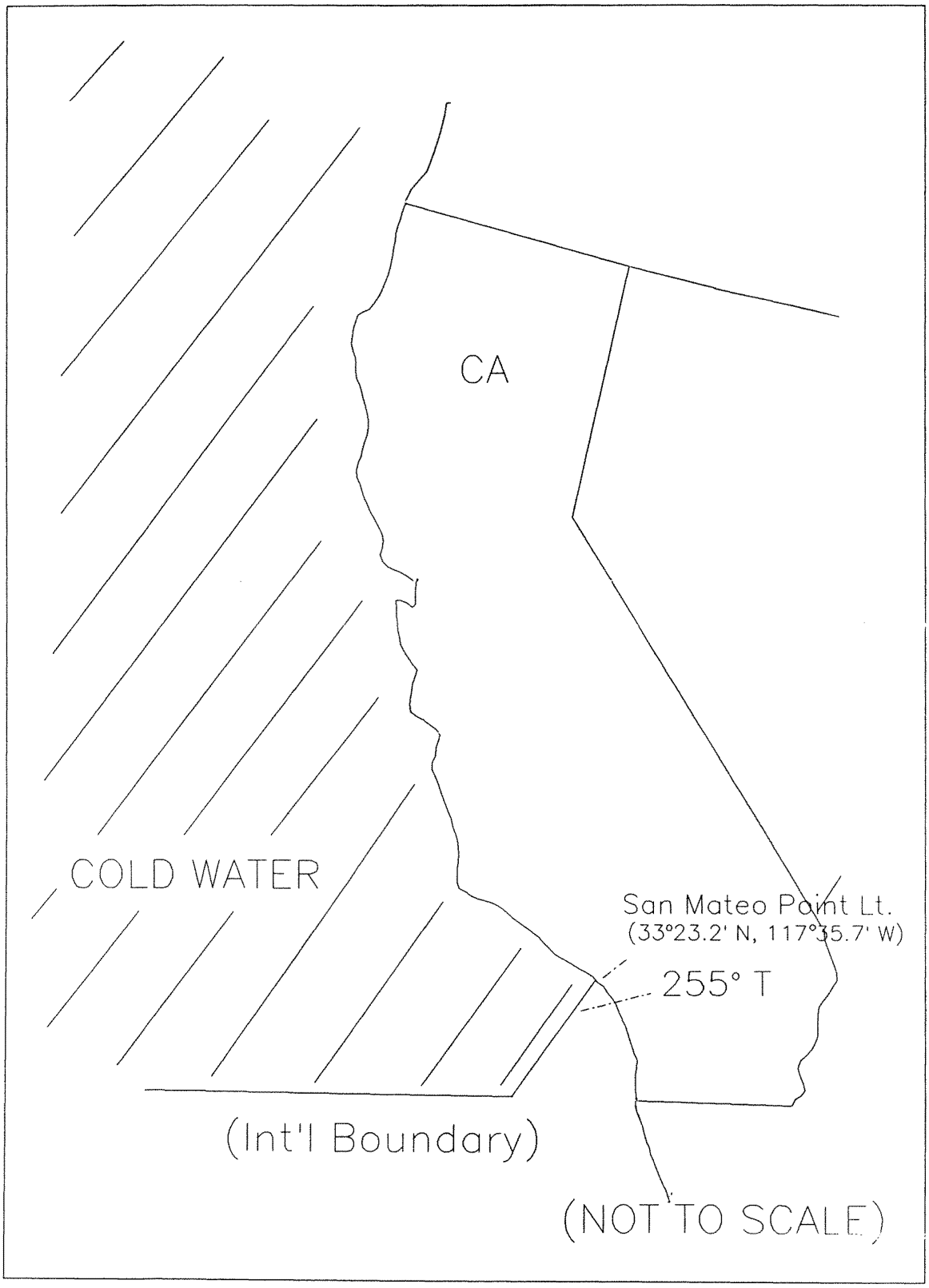

Figure 17. May – Pacific Ocean

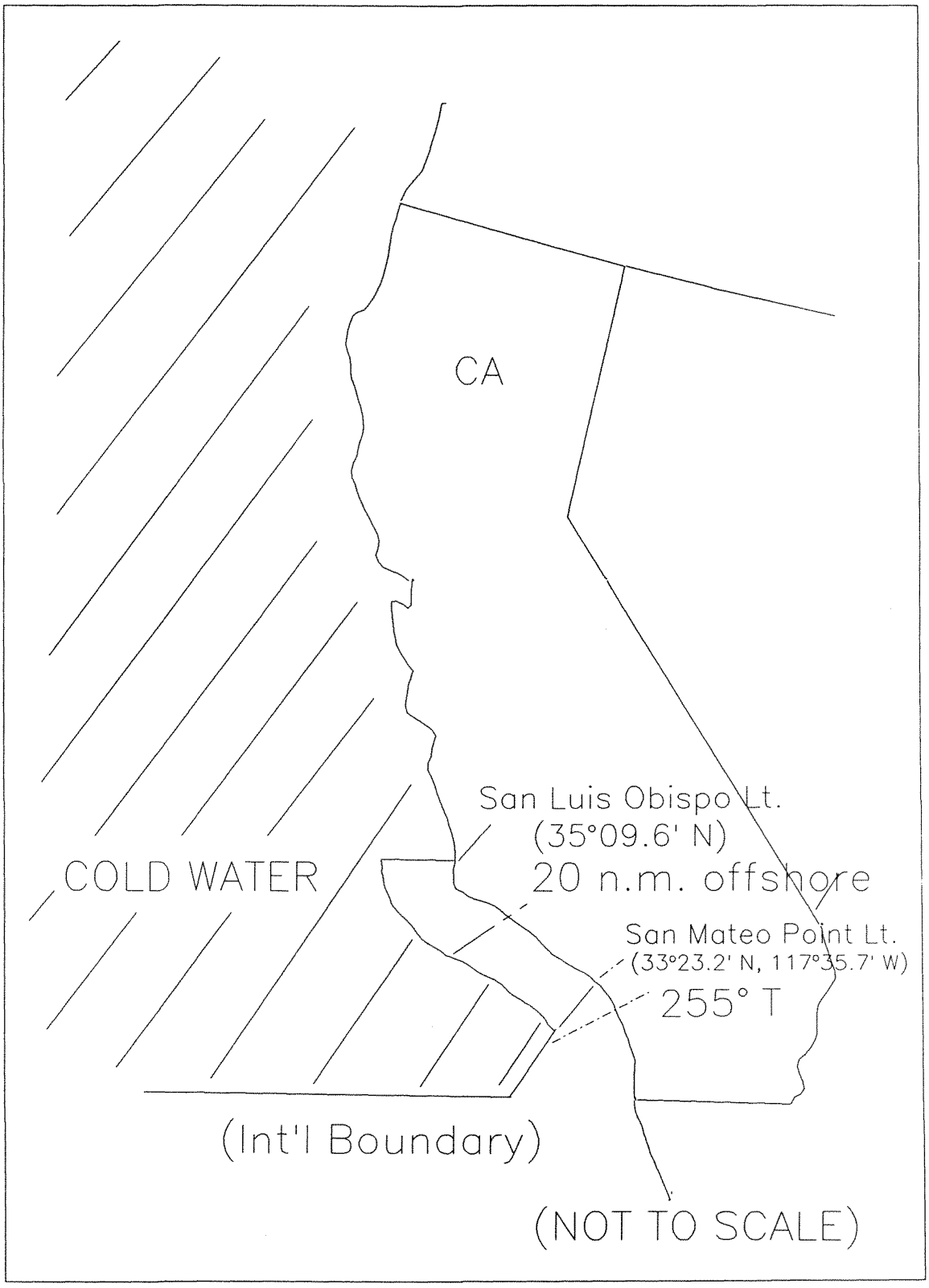

Figure 18. June – Pacific Ocean

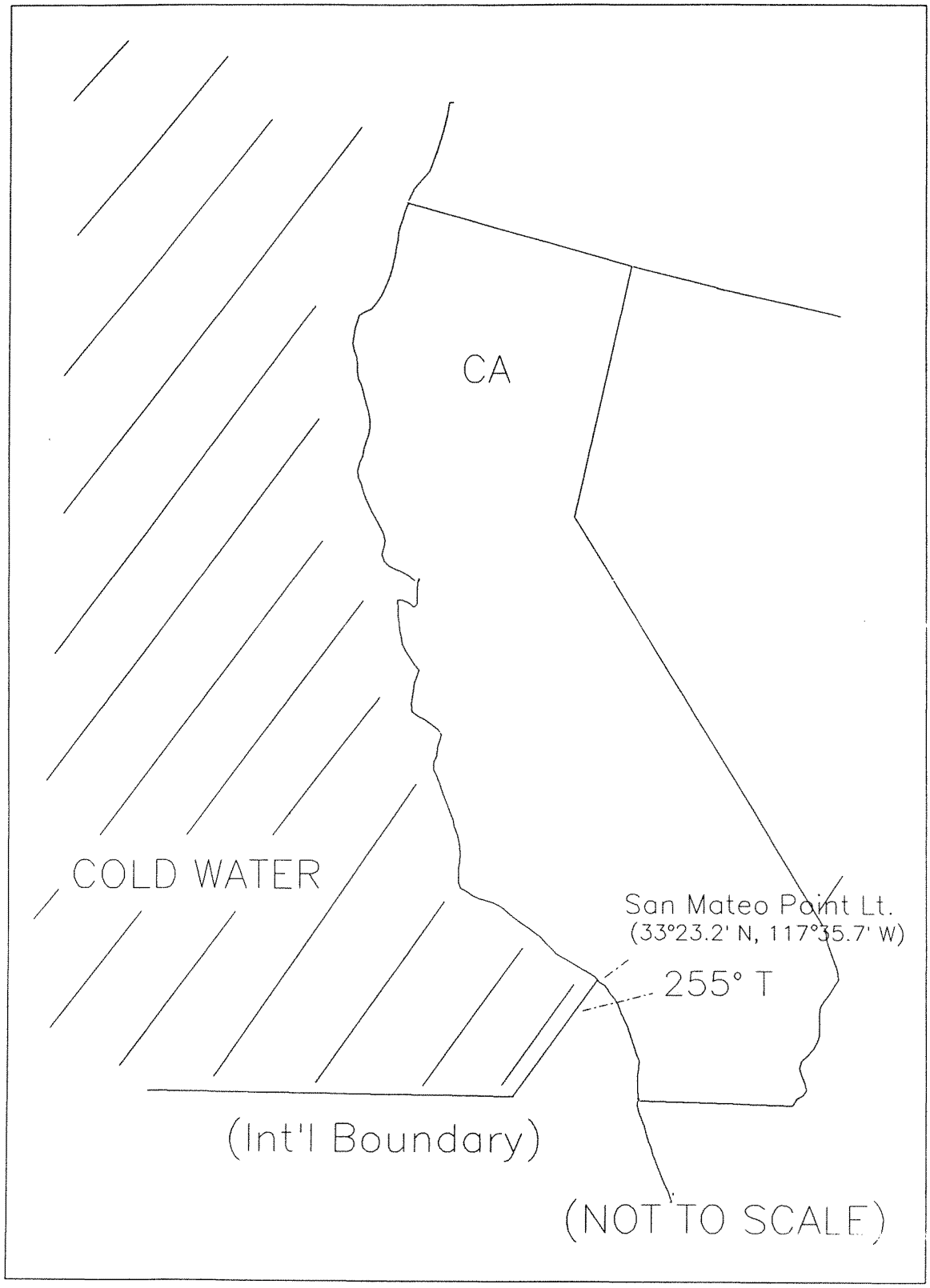

Figure 17. May – Pacific Ocean

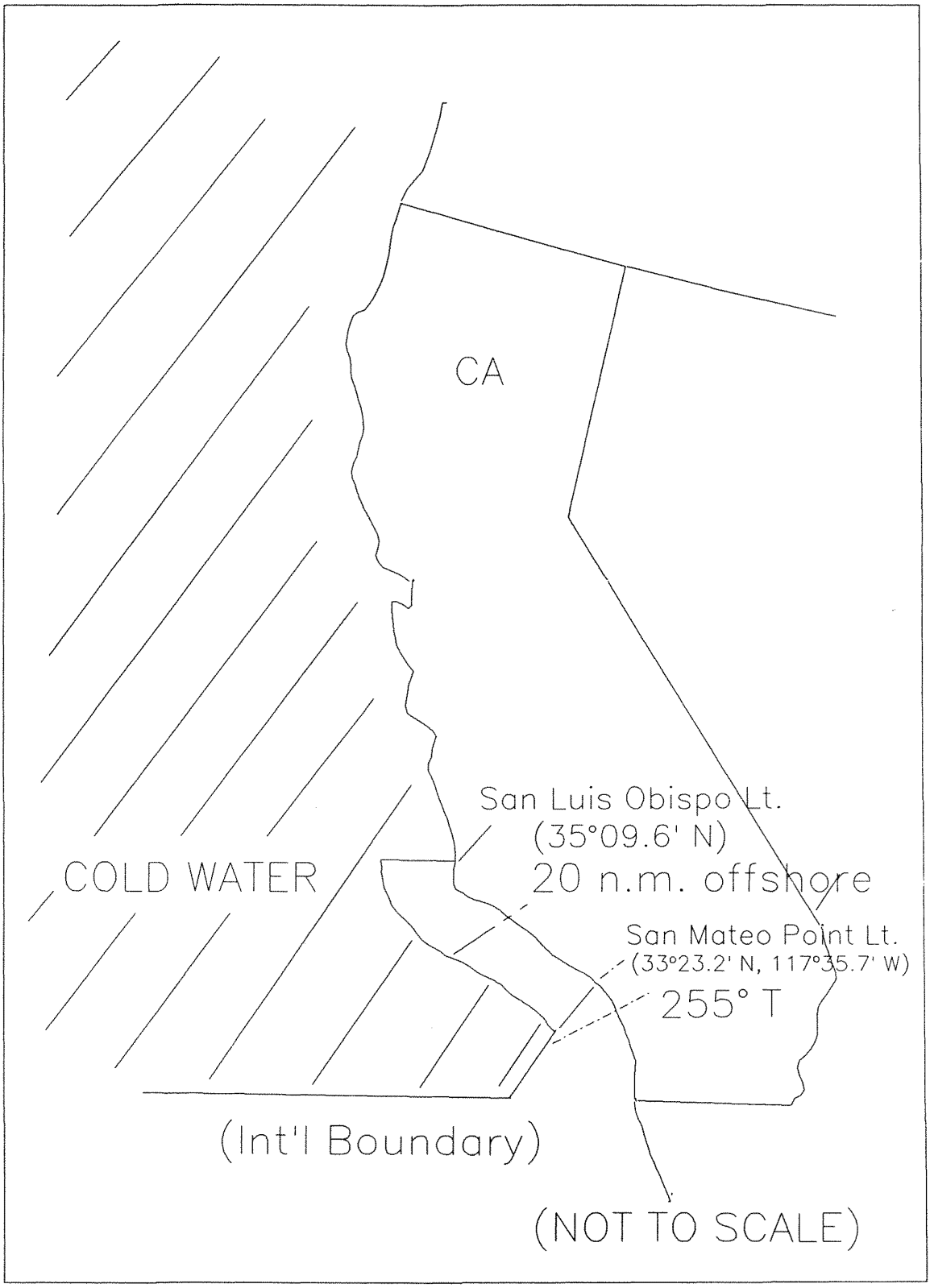

Figure 18. June – Pacific Ocean

Figure 19. July – Pacific Ocean

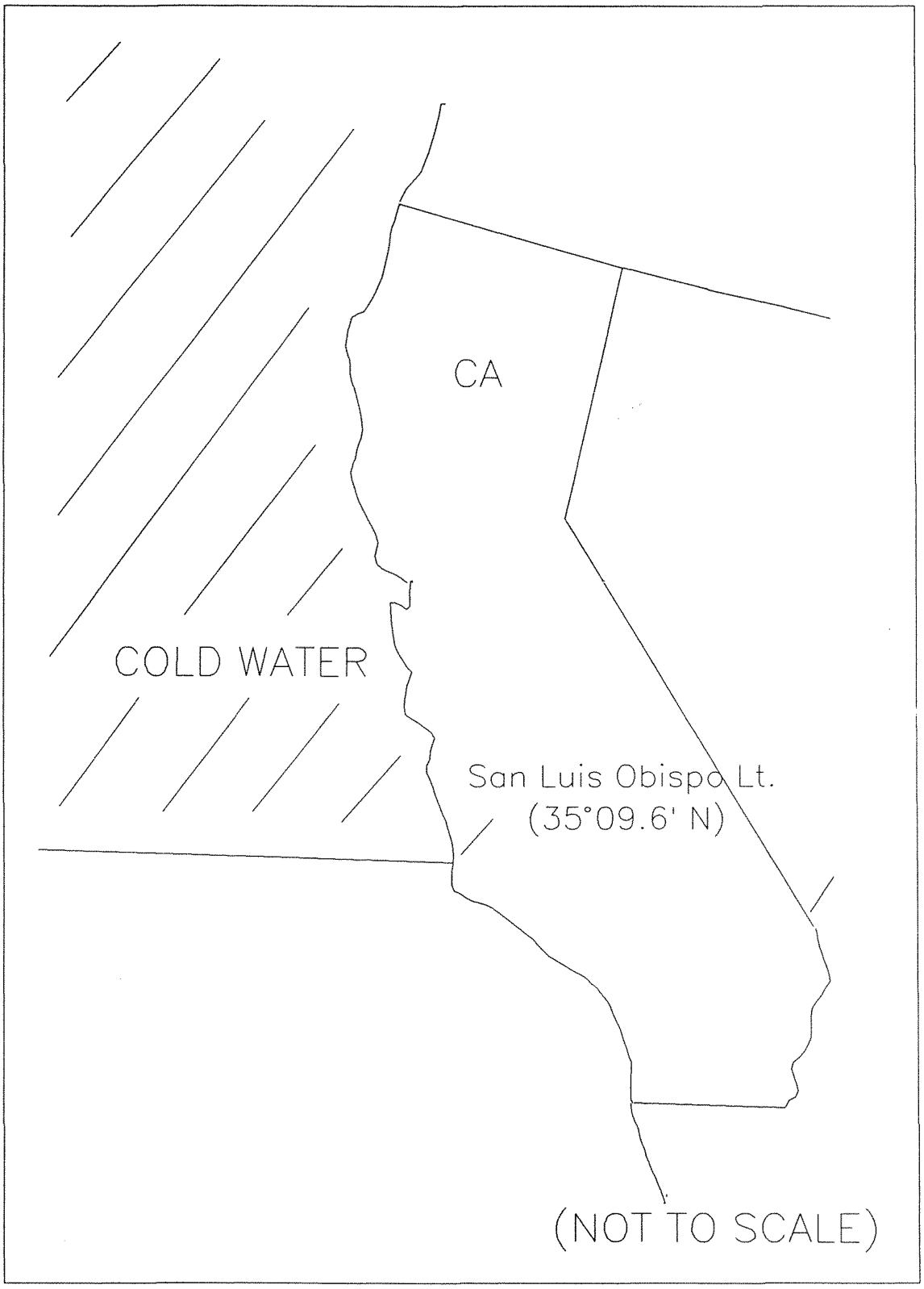

Figure 20. August – Pacific Ocean

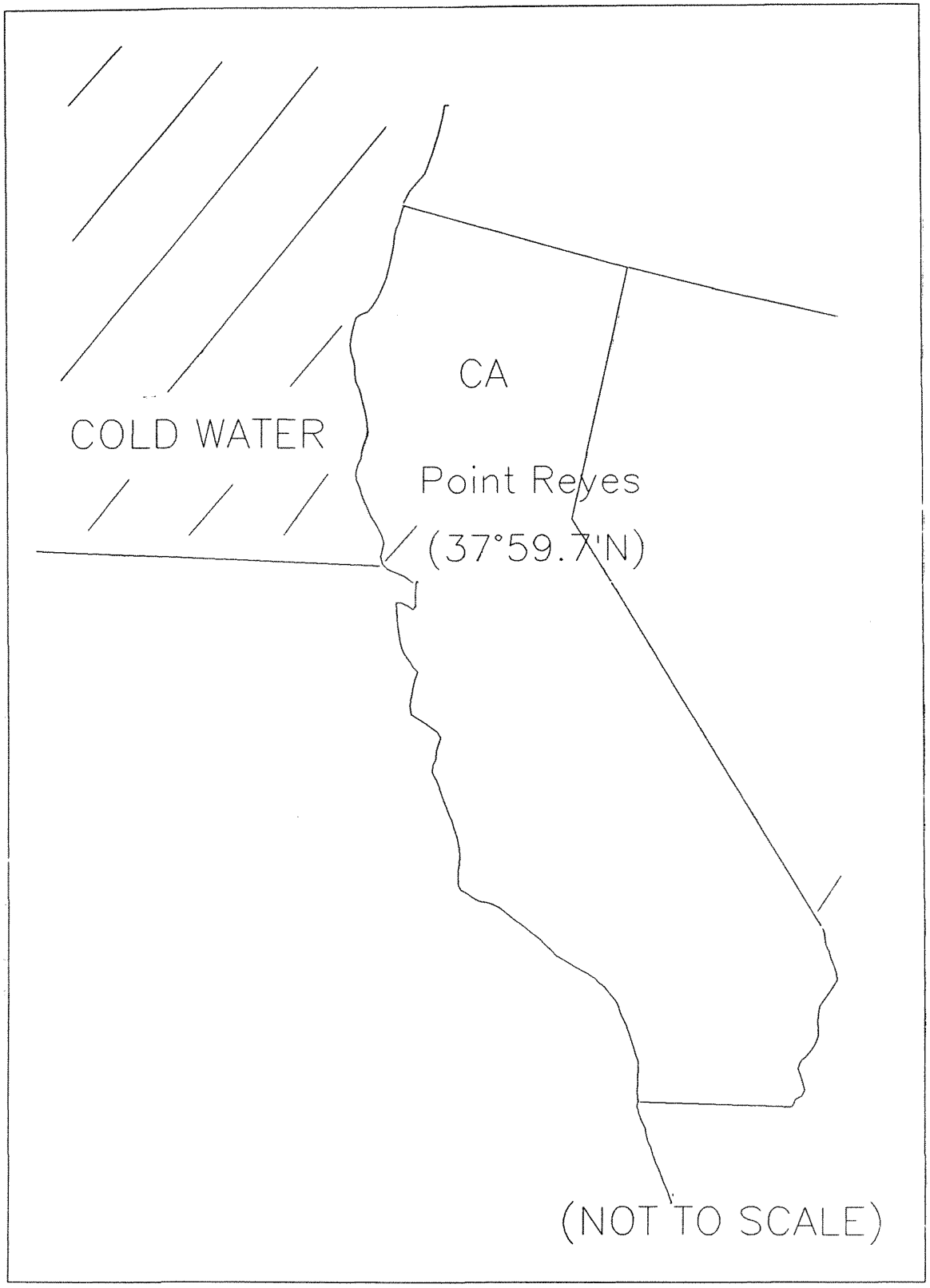

Figure 21. September – Pacific Ocean

Figure 22. October – Pacific Ocean

Figure 23. November – Pacific Ocean

Enclosure (1) to NVIC 7-91

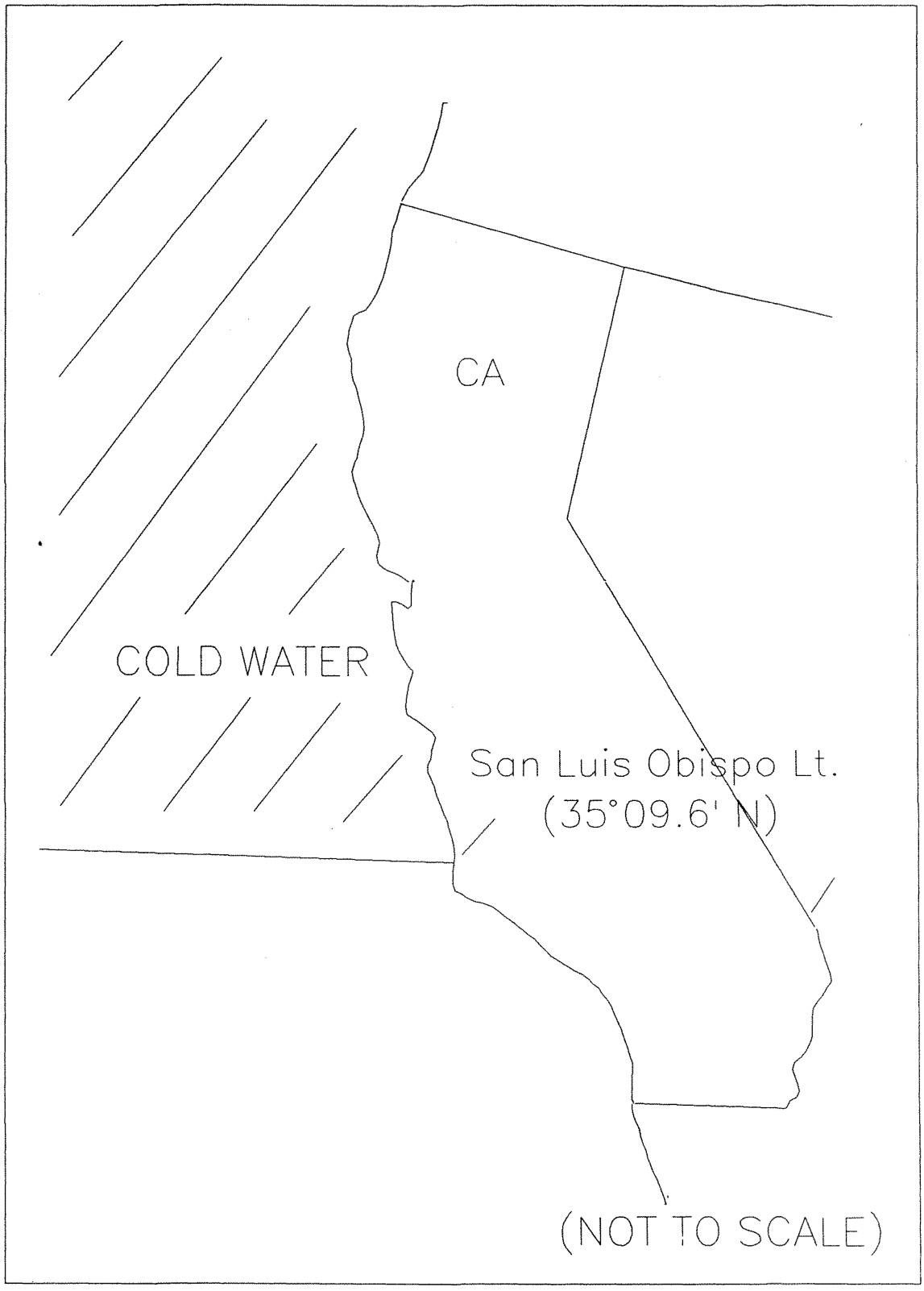

Figure 24. December – Pacific Ocean

*U.S. GOVERNMENT PRINTING OFFICE: 1991--517-000/46029