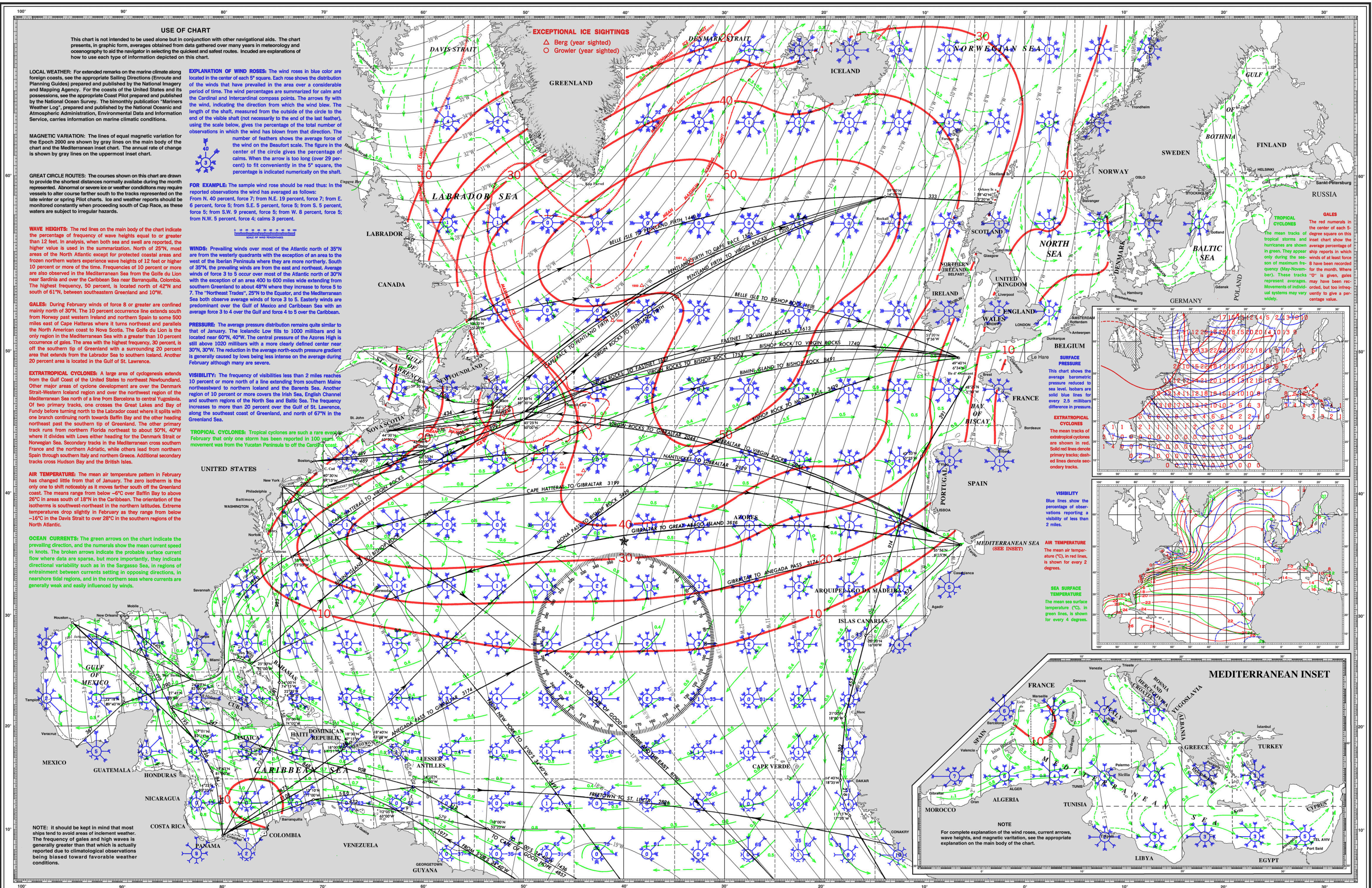


PILOT CHART OF THE NORTH ATLANTIC OCEAN

SEC. I - FEBRUARY



USE OF CHART

This chart is not intended to be used alone but in conjunction with other navigational aids. The chart presents, in graphic form, averages obtained from data gathered over many years in meteorology and oceanography to aid the navigator in selecting the quickest and safest routes. Included are explanations of how to use each type of information depicted on this chart.

LOCAL WEATHER: For extended remarks on the marine climate along foreign coasts, see the appropriate Sailing Directions (Enroute and Planning Guides) prepared and published by the National Imagery and Mapping Agency. For the coasts of the United States and its possessions, see the appropriate Coast Pilot prepared and published by the National Ocean Survey. The bimonthly publication "Mariners Weather Log", prepared and published by the National Oceanic and Atmospheric Administration, Environmental Data and Information Service, carries information on marine climatic conditions.

EXPLANATION OF WIND ROSES: The wind roses in blue color are located in the center of each 5° square. Each rose shows the distribution of the winds that have prevailed in the area over a considerable period of time. The wind percentages are summarized for calm and the Cardinal and Inter-cardinal compass points. The arrows fly with the wind, indicating the direction from which the wind blew. The length of the shaft, measured from the outside of the circle to the end of the visible shaft (not necessarily to the end of the last feather), using the scale below, gives the percentage of the total number of observations in which the wind has blown from that direction. The number of feathers shows the average force of the wind on the Beaufort scale. The figure in the center of the circle gives the percentage of calms. When the arrow is too long (over 20 percent) to fit conveniently in the 5° square, the percentage is indicated numerically on the shaft.



GREAT CIRCLE ROUTES: The courses shown on this chart are drawn to provide the shortest distances normally available during the month represented. Abnormal or severe ice or weather conditions may require vessels to alter course farther south or to the tracks represented on the late winter or spring Pilot charts. Ice and weather reports should be monitored constantly when proceeding south of Cape Race, as these waters are subject to irregular hazards.

FOR EXAMPLE: The sample wind rose should be read thus: In the reported observations the wind has averaged as follows: From N. 40 percent, force 7; from N.E. 19 percent, force 7; from E. 6 percent, force 5; from S.E. 5 percent, force 5; from S. 5 percent, force 5; from S.W. 9 percent, force 5; from W. 8 percent, force 5; from N.W. 5 percent, force 4; calms 3 percent.

WAVE HEIGHTS: The red lines on the main body of the chart indicate the percentage of frequency of wave heights equal to or greater than 12 feet. In analysis, when both sea and swell are reported, the higher value is used in the summarization. North of 25°N, most areas of the North Atlantic except for protected coastal areas and frozen northern waters experience wave heights of 12 feet or higher 10 percent or more of the time. Frequencies of 10 percent or more are also observed in the Mediterranean Sea from the Gole du Lion near Sardinia and over the Caribbean Sea near Barranquilla, Colombia. The highest frequency, 50 percent, is located north of 42°N and south of 61°W, between southeastern Greenland and 10°W.

WINDS: Prevailing winds over most of the Atlantic north of 35°N are from the westerly quadrants with the exception of an area to the west of the Iberian Peninsula where they are more northerly. South of 35°N, the prevailing winds are from the east and northeast. Average winds of force 3 to 5 occur over most of the Atlantic north of 30°N with the exception of an area 400 to 600 miles wide extending from southern Greenland to about 48°W where they increase to force 5 to 7. The "Northeast Trades", 25°N to the Equator, and the Mediterranean Sea both observe average winds of force 3 to 5. Easterly winds are predominant over the Gulf of Mexico and Caribbean Sea with an average force 3 to 4 over the Gulf and force 4 to 5 over the Caribbean.

GALES: During February winds of force 8 or greater are confined mainly north of 30°N. The 10 percent occurrence line extends south from Norway past western Ireland and northern Spain to some 500 miles east of Cape Hatteras where it turns northeast and parallels the North American coast to Nova Scotia. The Gole du Lion is the only region in the Mediterranean Sea with a greater than 10 percent occurrence of gales. The area with the highest frequency, 30 percent, is off the southern tip of Greenland with a surrounding 20 percent area that extends from the Labrador Sea to southern Iceland. Another 20 percent area is located in the Gulf of St. Lawrence.

PRESSURE: The average pressure distribution remains quite similar to that of January. The Icelandic Low fills to 1000 millibars and is located near 60°N, 40°W. The central pressure of the Azores High is still above 1000 millibars with a more clearly defined center near 30°N, 30°W. The reduction in the average north-south pressure gradient is generally caused by lows being less intense on the average during February although many are severe.

EXTRATROPICAL CYCLONES: A large area of cyclogenesis extends from the Gulf Coast of the United States to northeast Newfoundland. Other major areas of cyclone development are over the Denmark Strait-Western Iceland region and over the northwest region of the Mediterranean Sea north of a line from Barcelona to central Yugoslavia. Of two primary tracks, one crosses the Great Lakes and Bay of Fundy before turning north to the Labrador coast where it splits with one branch continuing north towards Baffin Bay and the other heading northeast past the northern tip of Greenland. The other primary track runs from northern Florida northeast to about 50°N, 40°W where it divides with one branch heading for the Denmark Strait or Norwegian Sea. Secondary tracks in the Mediterranean cross northern France and the northern Adriatic, while others lead from northern Spain through southern Italy and northern Greece. Additional secondary tracks cross Hudson Bay and the British Isles.

VISIBILITY: The frequency of visibilities less than 2 miles reaches 10 percent or more north of a line extending from southern Maine northeastward to northern Iceland and the Barents Sea. Another region of 10 percent or more covers the Irish Sea, English Channel and southern regions of the North Sea and Baltic Sea. The frequency increases to more than 20 percent over the Gulf of St. Lawrence, along the southeast coast of Greenland, and north of 67°N in the Greenland Sea.

AIR TEMPERATURE: The mean air temperature pattern in February has changed little from that of January. The zero isotherm is the only one to shift noticeably as it moves farther south off the Greenland coast. The means range from below -6°C over Baffin Bay to above 20°C in areas south of 18°N in the Caribbean. The orientation of the isotherms is southwest-northeast in the northern latitudes. Extreme temperatures drop slightly in February as they range from below -16°C in the Davis Strait to over 28°C in the southern regions of the North Atlantic.

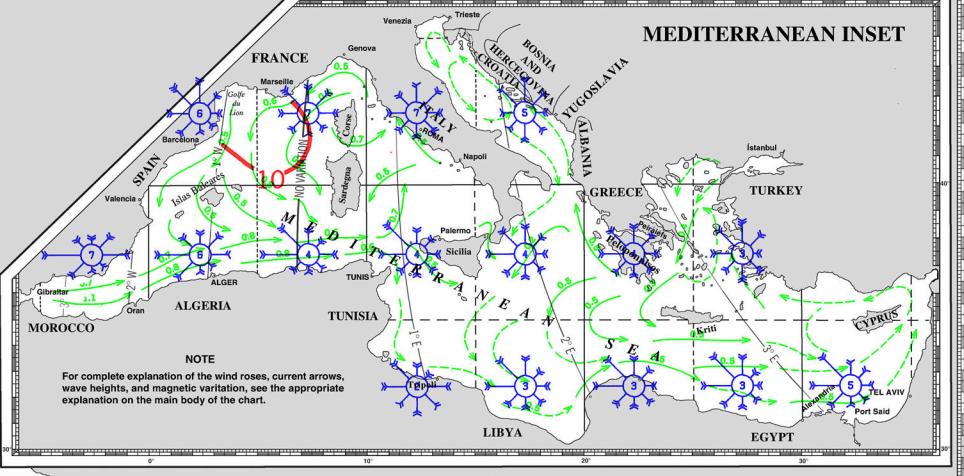
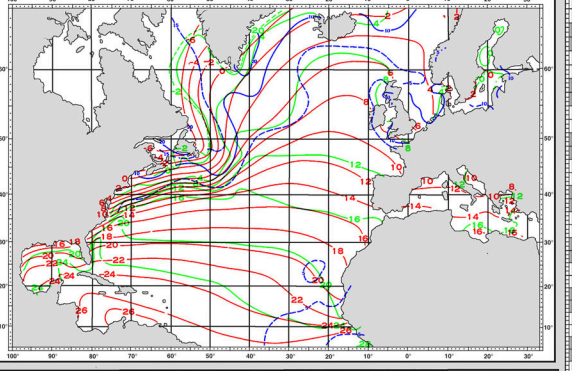
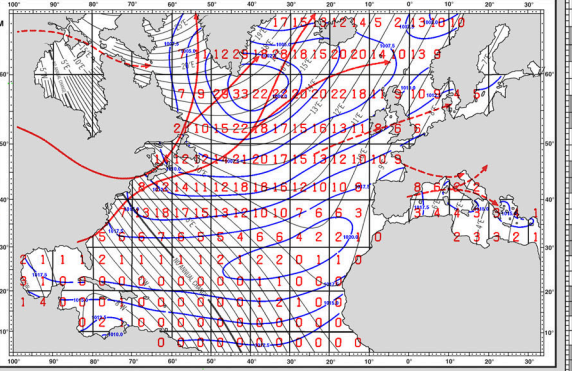
TROPICAL CYCLONES: Tropical cyclones are such a rare event in February that only one storm has been reported in 100 years. Its movement was from the Yucatan Peninsula to off the Carolinian coast.

OCEAN CURRENTS: The green arrows on the chart indicate the prevailing direction, and the numerals show the mean current speed in knots. The broken arrows indicate the probable surface current flow where data are sparse, but more importantly, they indicate directional variability such as in the Sargasso Sea, in regions of entrainment between currents setting in opposing directions, in nearshore tidal regions, and in the northern seas where currents are generally weak and easily influenced by winds.

NOTE: It should be kept in mind that most ships tend to avoid areas of inclement weather. The frequency of gales and high waves is generally greater than that which is actually reported due to climatological observations being biased toward favorable weather conditions.

EXCEPTIONAL ICE SIGHTINGS
△ Berg (year sighted)
○ Growler (year sighted)

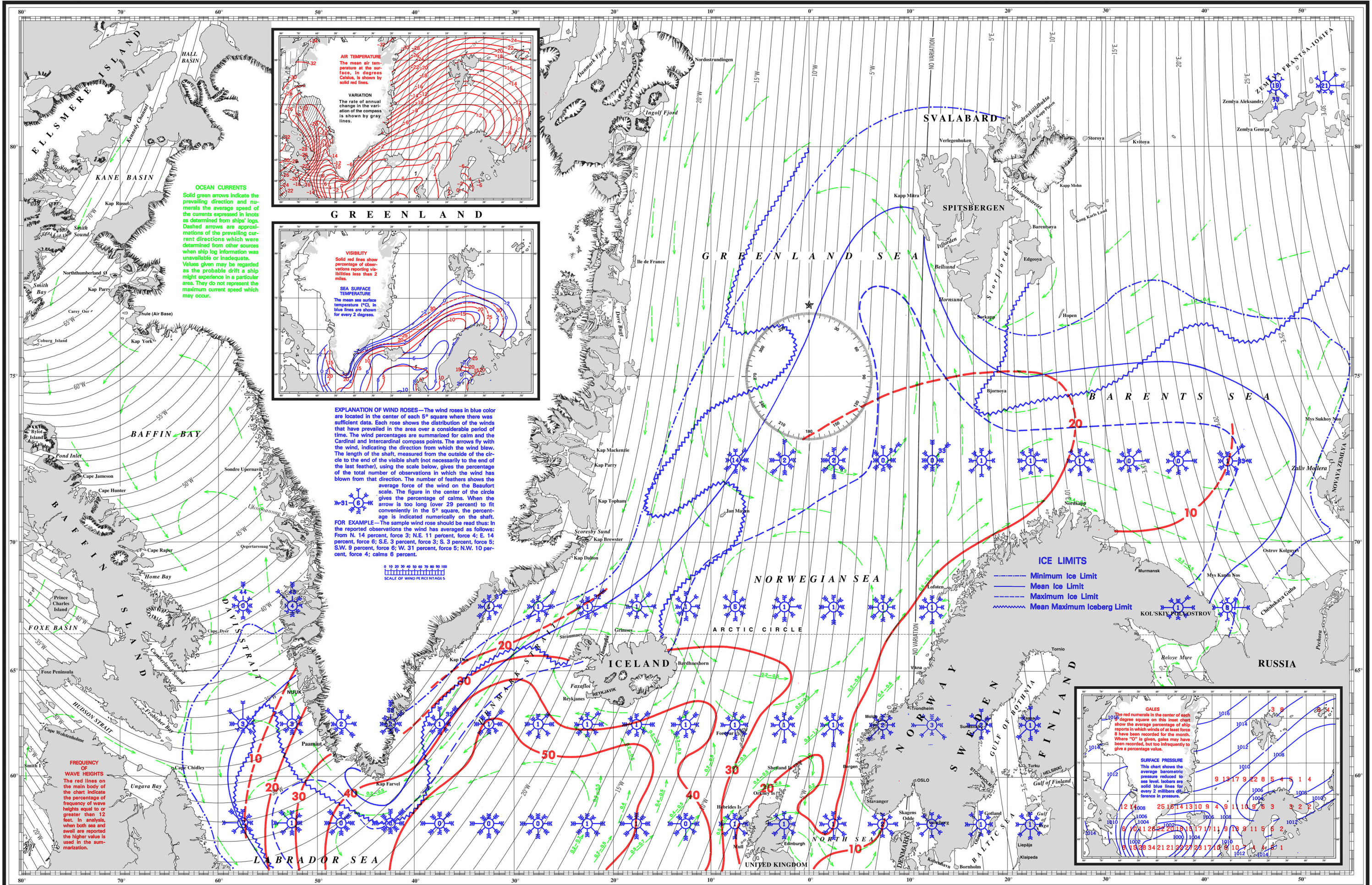
TROPICAL CYCLONES
The mean tracks of degree square on this tropical storms and inset chart show the average percentage of winds of at least force 8 have been recorded during the month. Where "0" is given, gales represent averages. Too infrequent systems may vary to give a percentage value.



NOTE
For complete explanation of the wind roses, current arrows, wave heights, and magnetic variation, see the appropriate explanation on the main body of the chart.

PILOT CHART OF THE NORTHERN NORTH ATLANTIC OCEAN

(THIS CHART SHOULD NOT BE USED FOR NAVIGATIONAL PURPOSES)



PILOT CHART OF CARIBBEAN SEA AND GULF OF MEXICO

