

BookletChart™



Unimak and Akutan Passes and Approaches

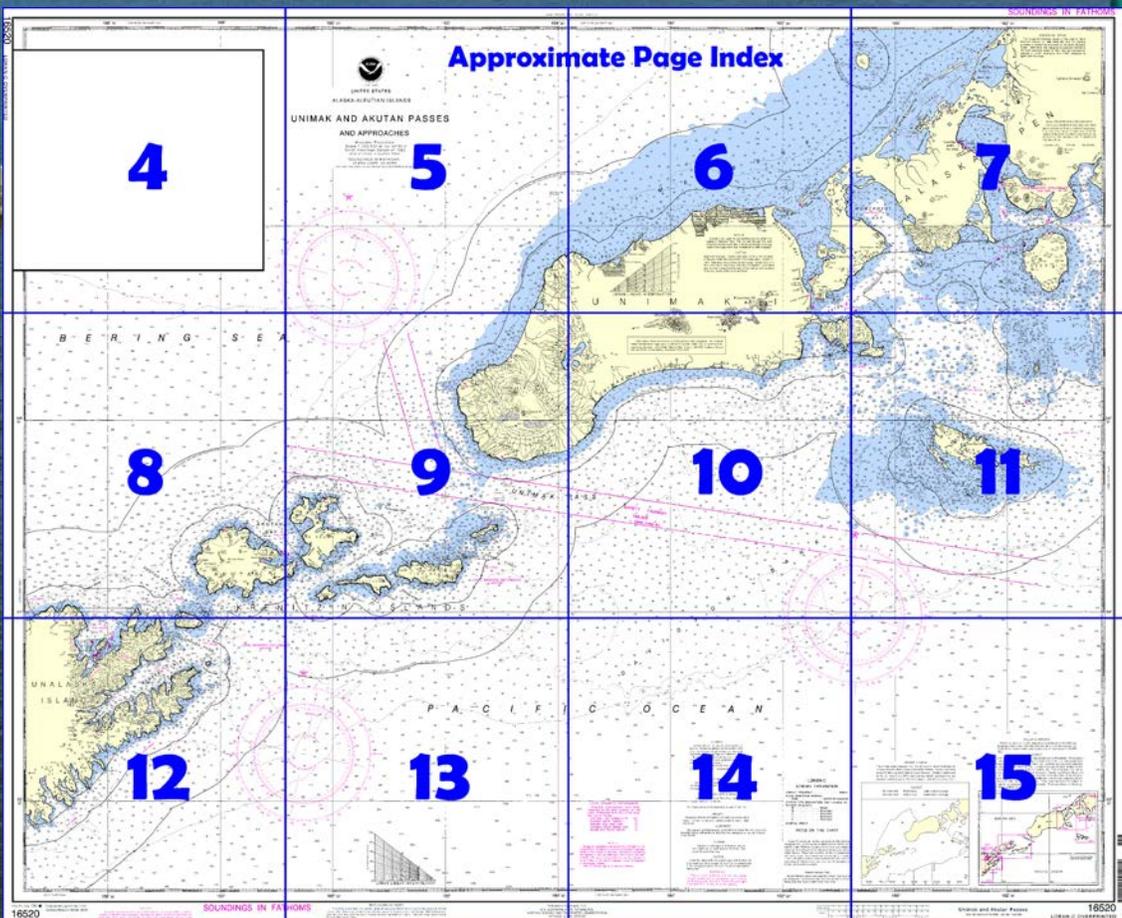
NOAA Chart 16520

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



**Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA**

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=16520>.



(Selected Excerpts from Coast Pilot)

Dangers along the N side of Sanak Islands are within 0.5 mile of the shore, except **Crowley Rock**, 1.5 miles offshore 348° from Sanak Peak. This rock has several small pinnacles with a least depth of ½ fathom over them. The rock, not always marked by kelp, only breaks in a disturbed sea and occasionally shows a prominent slick. Foul ground of numerous reefs, islands, islets, shoals, and covered and uncovered rocks extends almost 6 miles S and over 12

miles W of Sanak Islands; heavy breakers extend a considerable distance offshore. **Aleks Rock**, 16.7 miles 241° from Sanak Peak, is covered 1½

fathoms and is the farthest outlying known rock SW of Sanak Islands. A 7½-fathom pinnacle is 4 miles N of the rock. The harbors on the S side of the Sanak Islands, except possibly Peterson Bay, should not be approached without local knowledge. **Caton Island**, at the E end of the Sanak group, is rolling and grass covered. Most of the beaches are composed of rocky ledges, or boulders and gravel. Steep and prominent bluffs are on the NW point. The low E side and the S side of the island are fringed with rocky ledges up to 1 mile offshore.

Whale Bay, on the NE side of Caton Island, is extremely shoal. Temporary anchorage in S winds can be had W of Caton Island and S of Lida Island. Approaching the anchorage from E, stand in near the visible rocks off the E end of Lida Island, taking care to avoid the partially covered reef, nearly 0.5 mile E of Lida Island, that extends N from Caton Island. Anchor about 0.4 mile from Caton Island, and 0.3 to 0.5 mile S of Lida Island, in 6 to 7 fathoms, sandy bottom. Care should be taken not to approach the S side of the anchorage.

If the anchorage S of Lida Island is approached from W, steer for the SW side of Caton Island on 144°, passing about 0.5 mile S of Lida Island, and leaving a rock that uncovers, 0.5 mile N from **Wanda Island**, about 0.4 mile on the starboard hand, and anchor as directed above. The W end of Lida Island should not be approached closer than 0.5 mile.

Caton Harbor, between Sanak Island on the E and Caton Island on the W, is large and affords anchorage in 2 to 3 fathoms, sandy bottom; it is protected on the S by Elma Island and on the N by the islands and reefs between Caton Island and Sanak Island. The harbor is protected from all swells, and schooners of considerable size have wintered here. These waters provide the best all-weather anchorage for small vessels in the Sanak Islands. Water in small quantities may be obtained.

Princess Rock, off the W end of the islet in the center of Caton Harbor, is the most prominent feature in the vicinity. It is high and grassy on top; extensive reefs surround the rock.

The best entrance to Caton Harbor is from the N through a narrow channel close to the W end of Caton Island. Proceed as directed for entering the anchorage S of Lida Island from W, and when well past the rock that uncovers, 0.5 mile N of Wanda Island, bring the S side of the rock that uncovers in range with Northeast Point astern, and stand in, keeping the range astern, course 125°, until close to Caton Island. Then keep the bare rocks and kelp projecting from Caton Island close aboard on the port hand, but do not approach the kelp on the starboard hand; the least depth in the narrowest part of the passage is 3½ fathoms, shoaling inside to 3 fathoms. When past the rocks on the port hand, steer 193° for about 0.5 mile, and anchor in about 3 fathoms with Princess Rock in line with Sanak Mountain, bearing 294°. This anchorage is about 0.5 mile from Caton Island, and the same distance from the nearest reef on the W side. Anchorage, with probably better shelter from NE gales, can be made off the sand beach on Caton Island, just inside the narrow entrance.

To enter **Caton Harbor** from the S through Devils Pass, W from Elma Island, or through Southeast Pass, E of Elma Island, requires local knowledge to avoid the reefs and breakers. These passes should not be attempted by a stranger. Surveys indicate a controlling depth of 1¼ fathoms in the approach to Devils Pass with deeper water through the narrow part of the pass. Tide rips in Devils Pass are at times dangerous to small craft.

**U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies**

RCC Juneau Commander
17th CG District (907) 463-2000
Juneau, Alaska

Table of Selected Chart Notes

Corrected through NM Aug. 09/08
Corrected through LNM Jul. 29/08

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

LOCAL MAGNETIC DISTURBANCE

Magnetic disturbances have been observed in the area covered by this chart. Differences from the normal variation are as follows:

Cold Bay, near Vodapoin Pt.	14°
Krenitzin Island, Tigaida I.	5°
Beikofski Bay, east coast	5°
Unalaska Island, Beaver Inlet	4°
Akutan and Rookok Islands	3°

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Unalaska, AK	WXK-89	162.55 MHz
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CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

○ (Accurate location) ◦ (Approximate location)

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

For Symbols and Abbreviations see Chart No. 1

Mercator Projection

Scale 1:300,000 at Lat 54°20.5' North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

CAUTION

Extremely heavy tide rips and strong currents which at times make control of a vessel difficult may be encountered in the passages between the North Pacific Ocean and the Bering Sea.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 3.124" southward and 7.037" westward to agree with this chart.

NOTE B

Mariners are urged to use extreme caution while navigating in Bechevin Bay. The channel through the north entrance and Bechevin Bay is subject to frequent shoaling. Local knowledge of the area is essential for safe navigation.

HEIGHTS

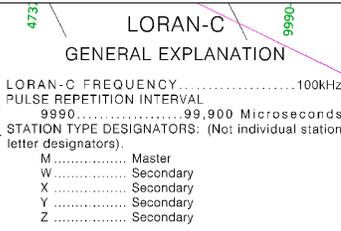
Elevations of rocks and lights are in feet above Mean High Water. Contour values and summit elevations refer to Mean Sea Level.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.



LORAN-C
GENERAL EXPLANATION

LORAN-C FREQUENCY 100kHz
PULSE REPETITION INTERVAL
9990 99,900 Microseconds
STATION TYPE DESIGNATORS: (Not individual station letter designators).
M Master
W Secondary
X Secondary
Y Secondary
Z Secondary

EXAMPLE: 9990-X

RATES ON THIS CHART

9990-X 9990-Y 9990-Z

Loran-C correction tables published by the National Geospatial-Intelligence Agency or others should not be used with this chart. The lines of position shown have been adjusted based on theoretically determined overland signal propagation delays. They have not been verified by comparison with survey data. Every effort has been made to meet the 1/4 nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned not to rely solely on the lattices in inshore waters.

CAUTION

Significant changes in depths and shoreline may have occurred in this area of the chart as a result of the earthquake of March 27, 1964. Tidal observations since the earthquake indicate bottom uplift of +0.3 feet in King Cove. Mariners are urged to use extreme caution when navigating in the area of this chart as the magnitude of change except at this site is not known.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

875

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

NOTE X

Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

16520

LORAN-C OVERPRINTED

166° 30'

CONTINUED ON CHART 16011

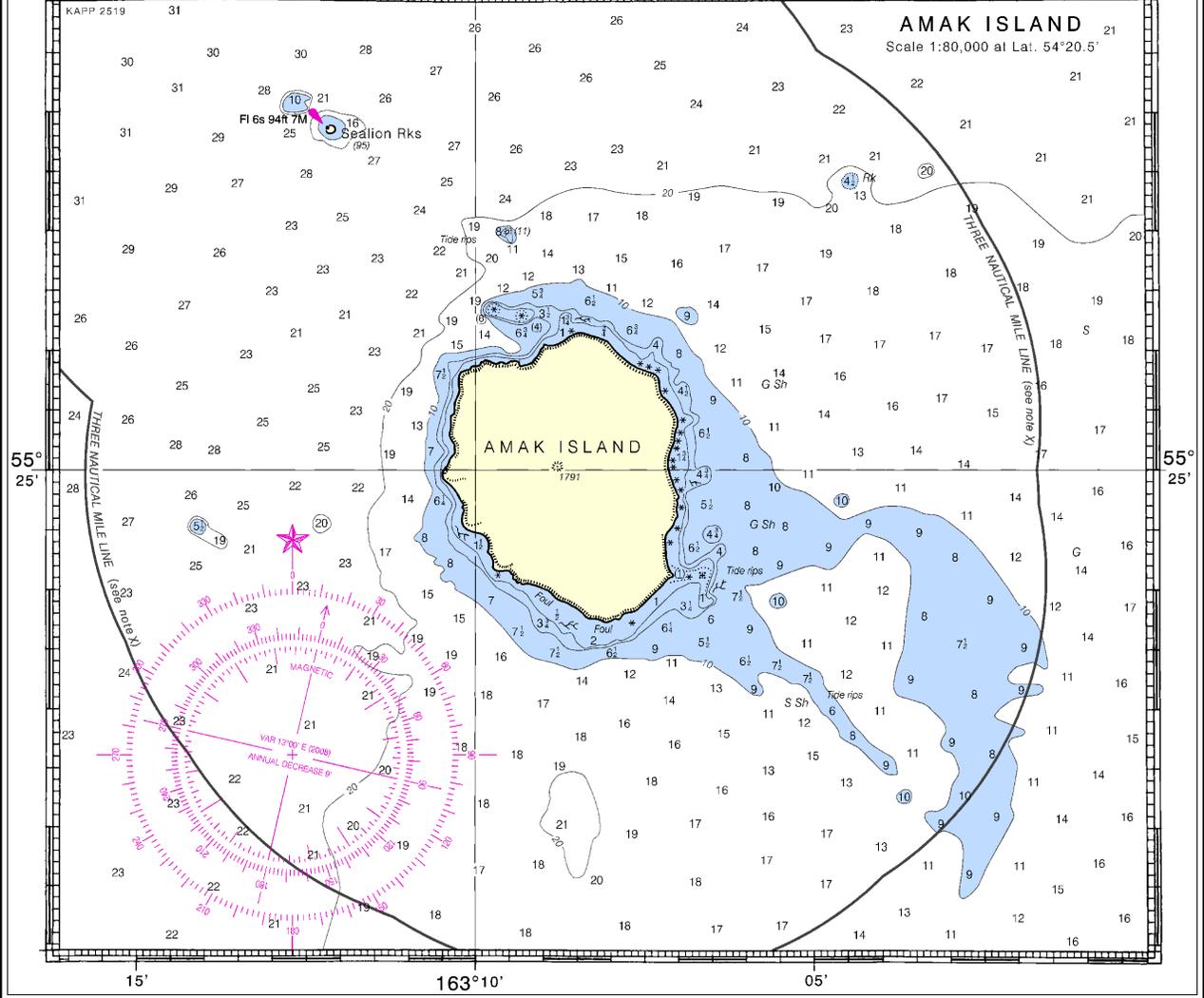
166°

15'

163° 10'

CONTINUED ON CHART 16011

05'



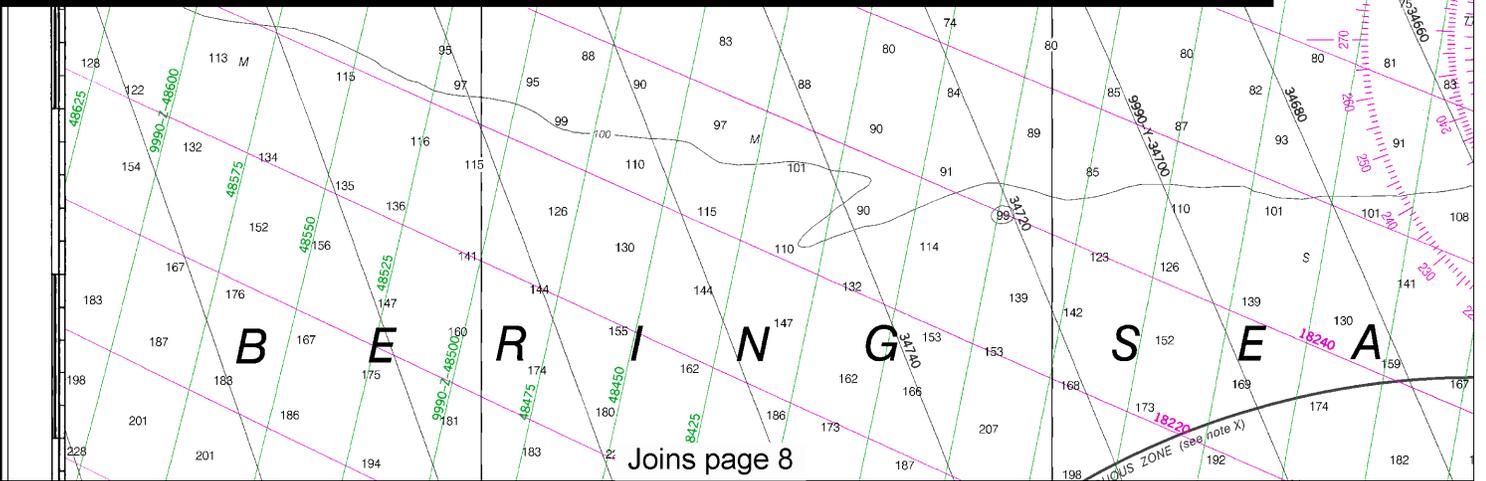
55° 25'

55° 25'

15'

163° 10'

05'



Joins page 8

4

Note: Chart grid lines are aligned with true north.

165° 30'

165°

164° 30'

CONTINUED ON CH



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES

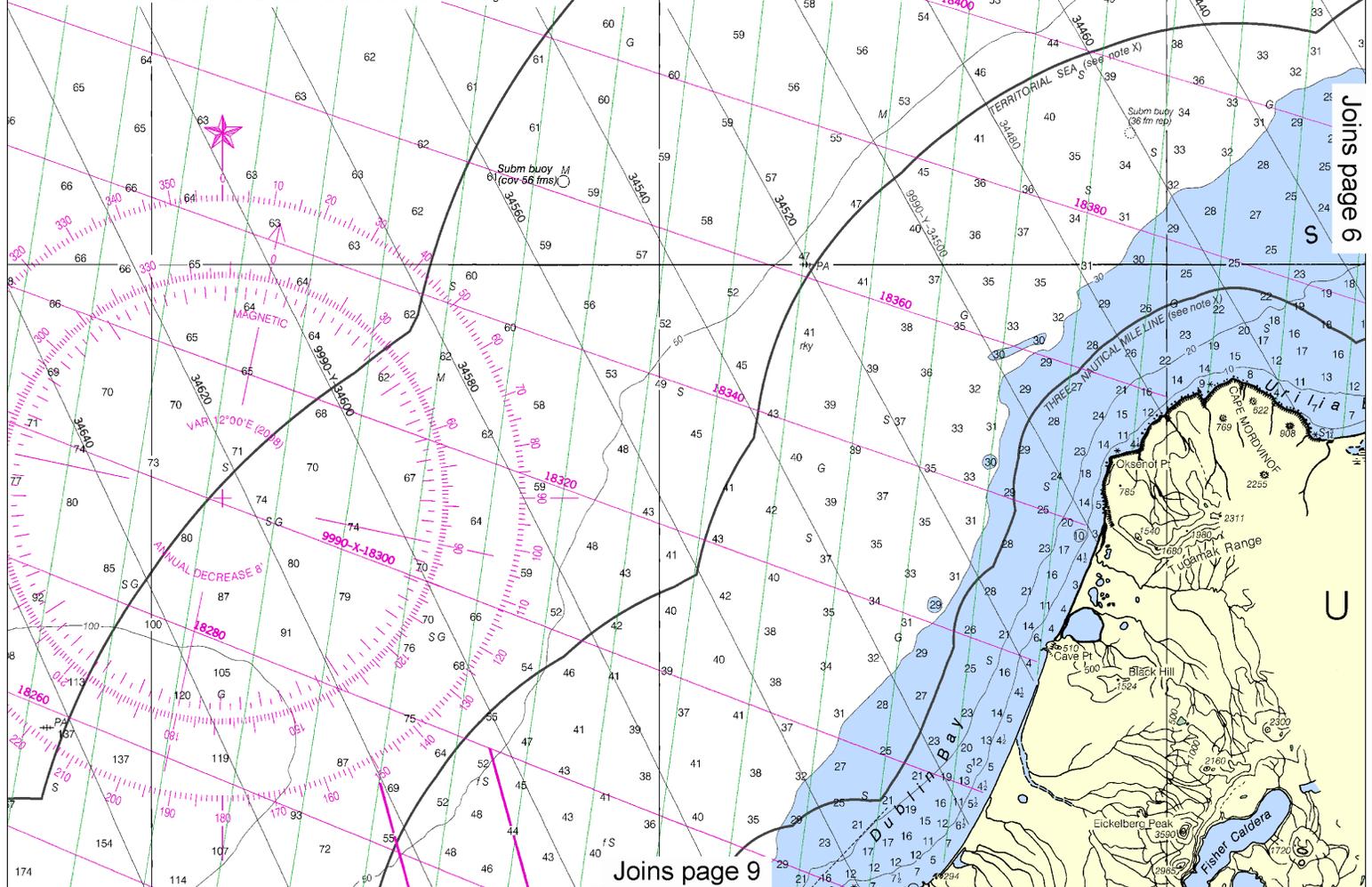
ALASKA-ALEUTIAN ISLANDS

NIMAK AND AKUTAN PASSES AND APPROACHES

Mercator Projection
Scale 1:300,000 at Lat 54°20.5'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov.

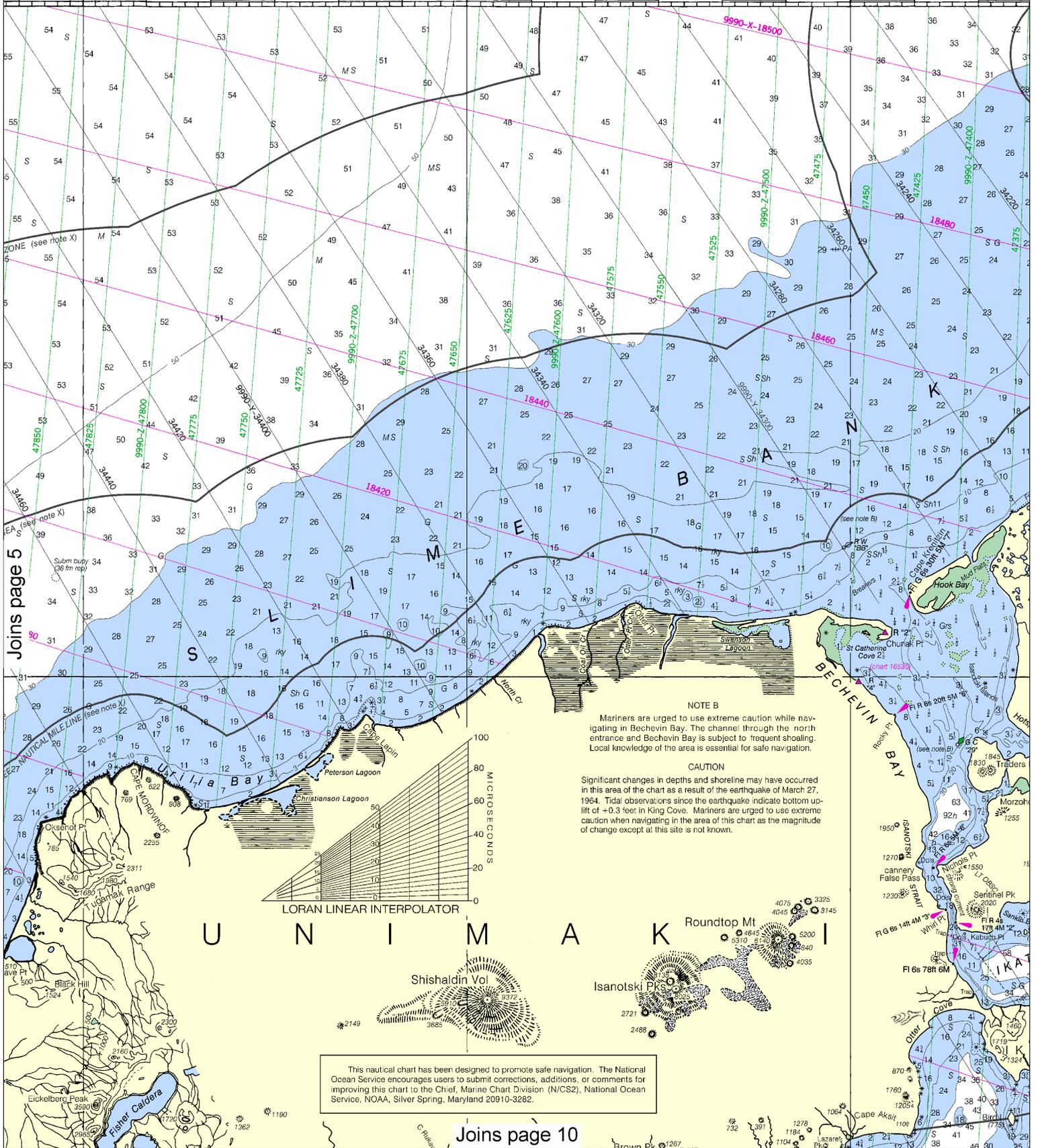


Joins page 6

Joins page 9

This BookletChart was reduced to 70% of the original chart scale. The new scale is 1:428571. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.





Joins page 5

90

EA (see note X)

Subm buoy (36 fm rap)

NAUTICAL MILE LINE (see note X)

100

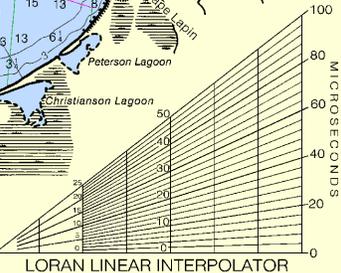
80

60

40

20

0



NOTE B
 Mariners are urged to use extreme caution while navigating in Bechevin Bay. The channel through the north entrance and Bechevin Bay is subject to frequent shoaling. Local knowledge of the area is essential for safe navigation.

CAUTION
 Significant changes in depths and shoreline may have occurred in this area of the chart as a result of the earthquake of March 27, 1964. Tidal observations since the earthquake indicate bottom uplift of +0.3 feet in King Cove. Mariners are urged to use extreme caution when navigating in the area of this chart as the magnitude of change except at this site is not known.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/C52), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

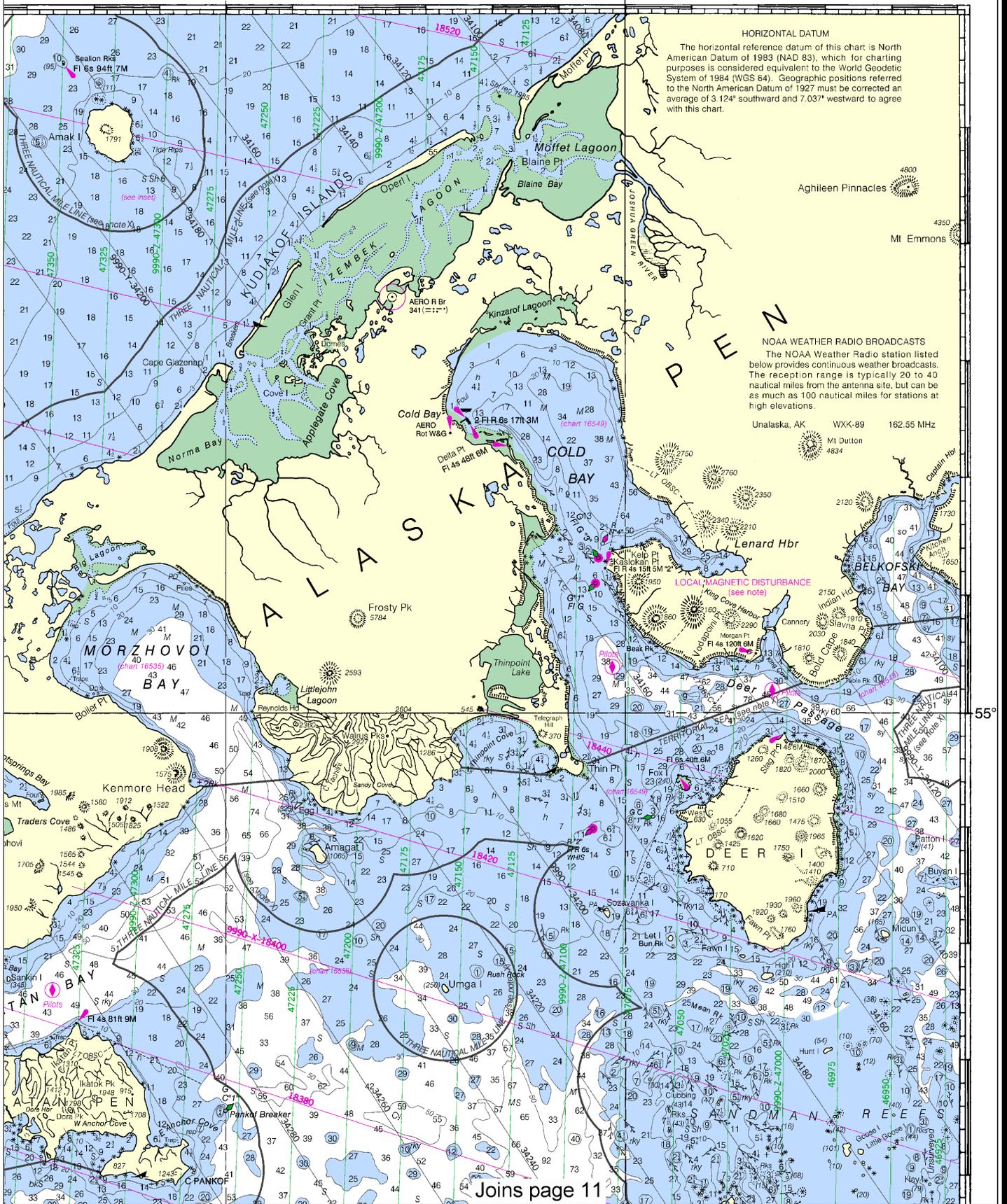
Joins page 10



Note: Chart grid lines are aligned with true north.

163°

162° 30'



HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 3.124" southward and 7.037" westward to agree with this chart.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Unalaska, AK	WXX-89	162.55 MHz
	Mt Dutton	4834

Joins page 11

B E R I N G S E A

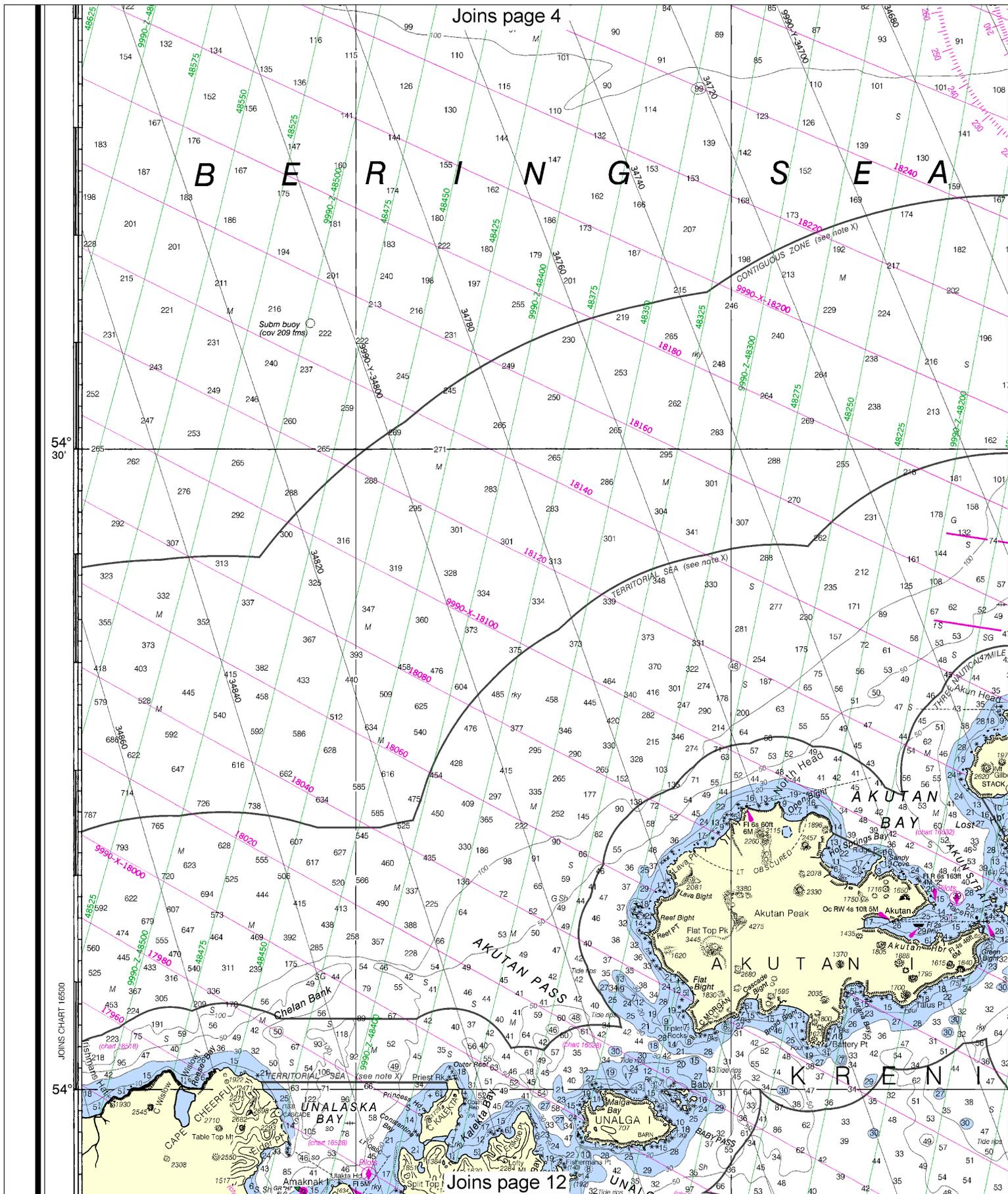
54° 30'

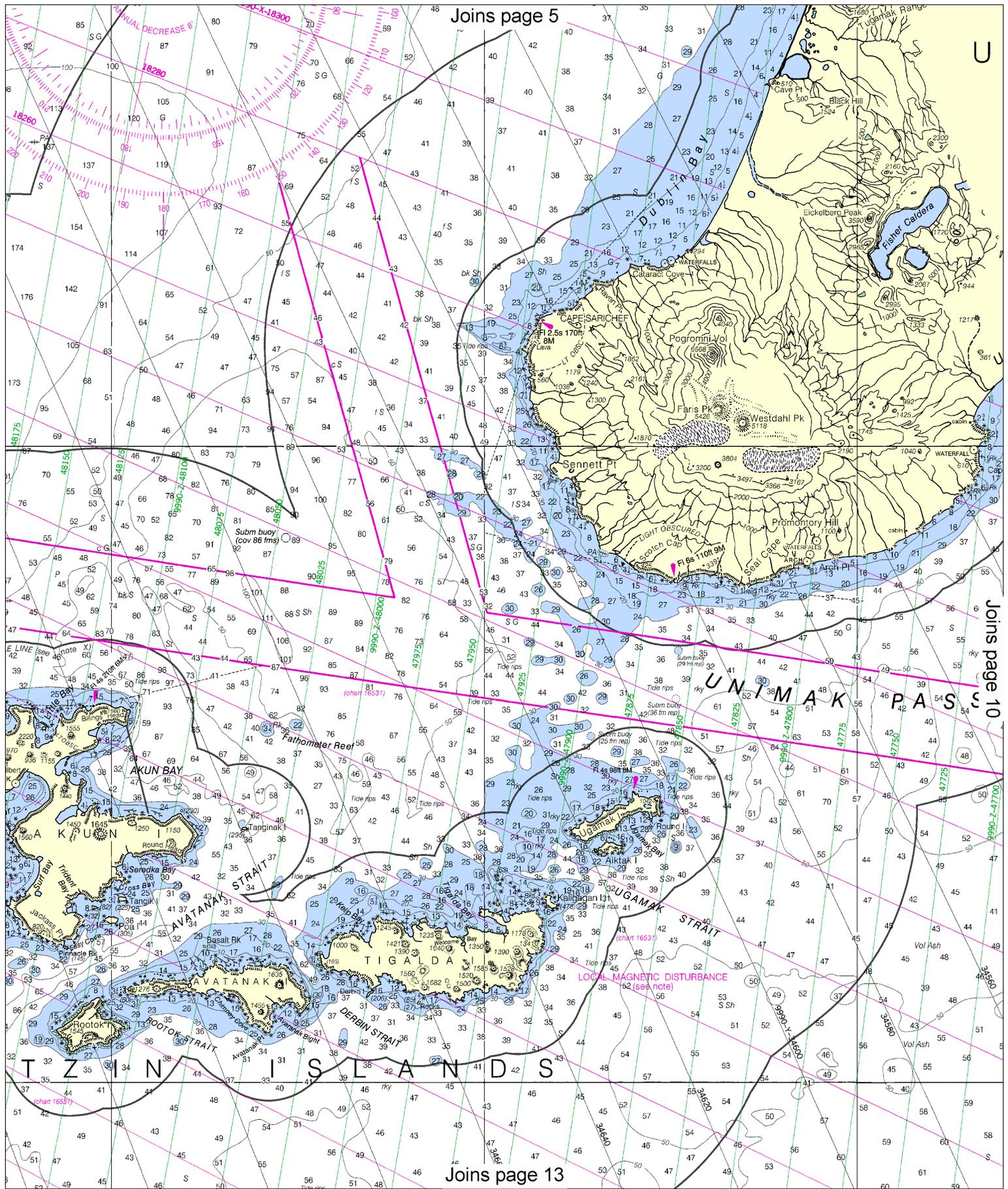
54°

JOINS CHART 16500



Note: Chart grid lines are aligned with true north.



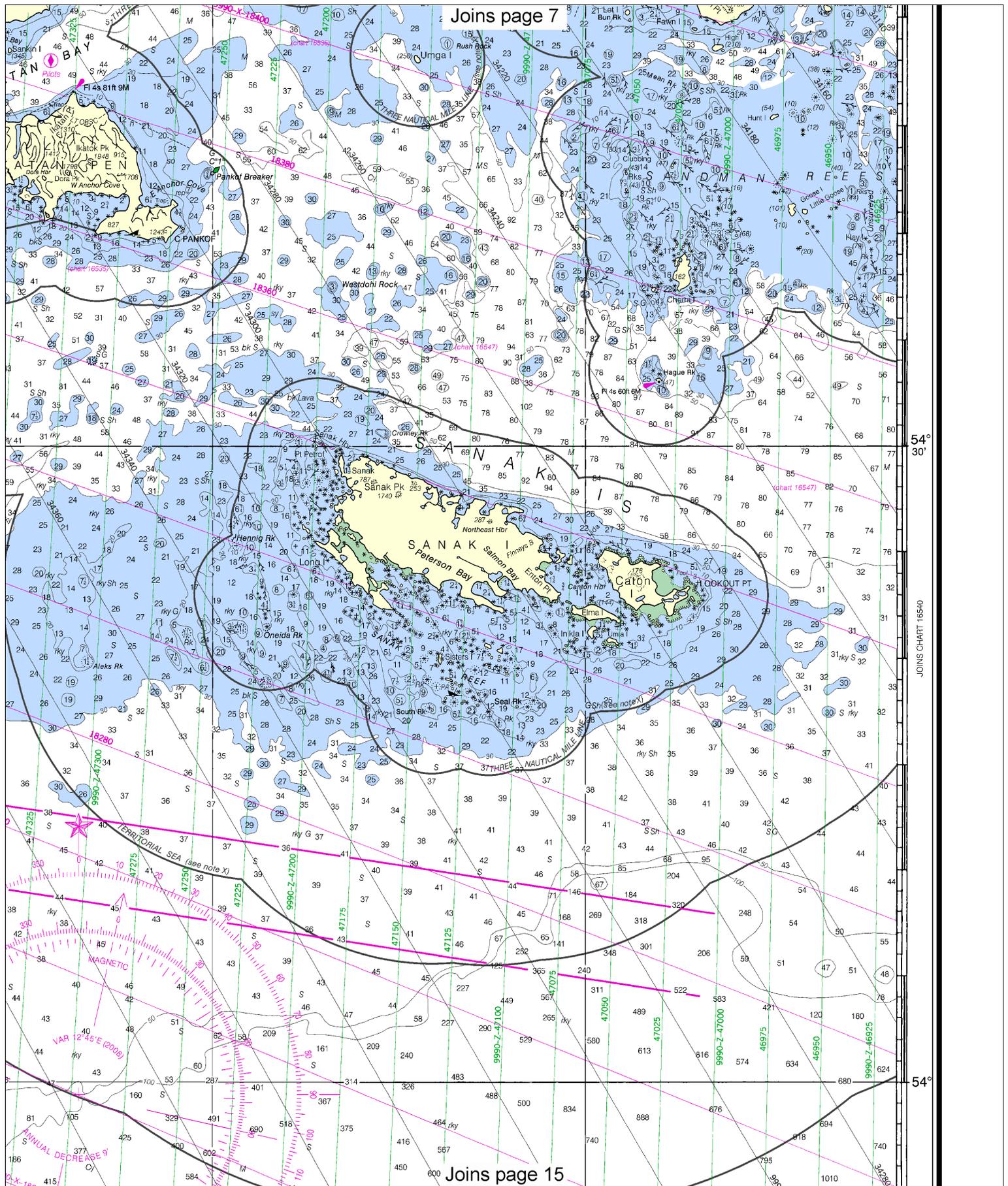


Joins page 5

U

Joins page 10

Joins page 13



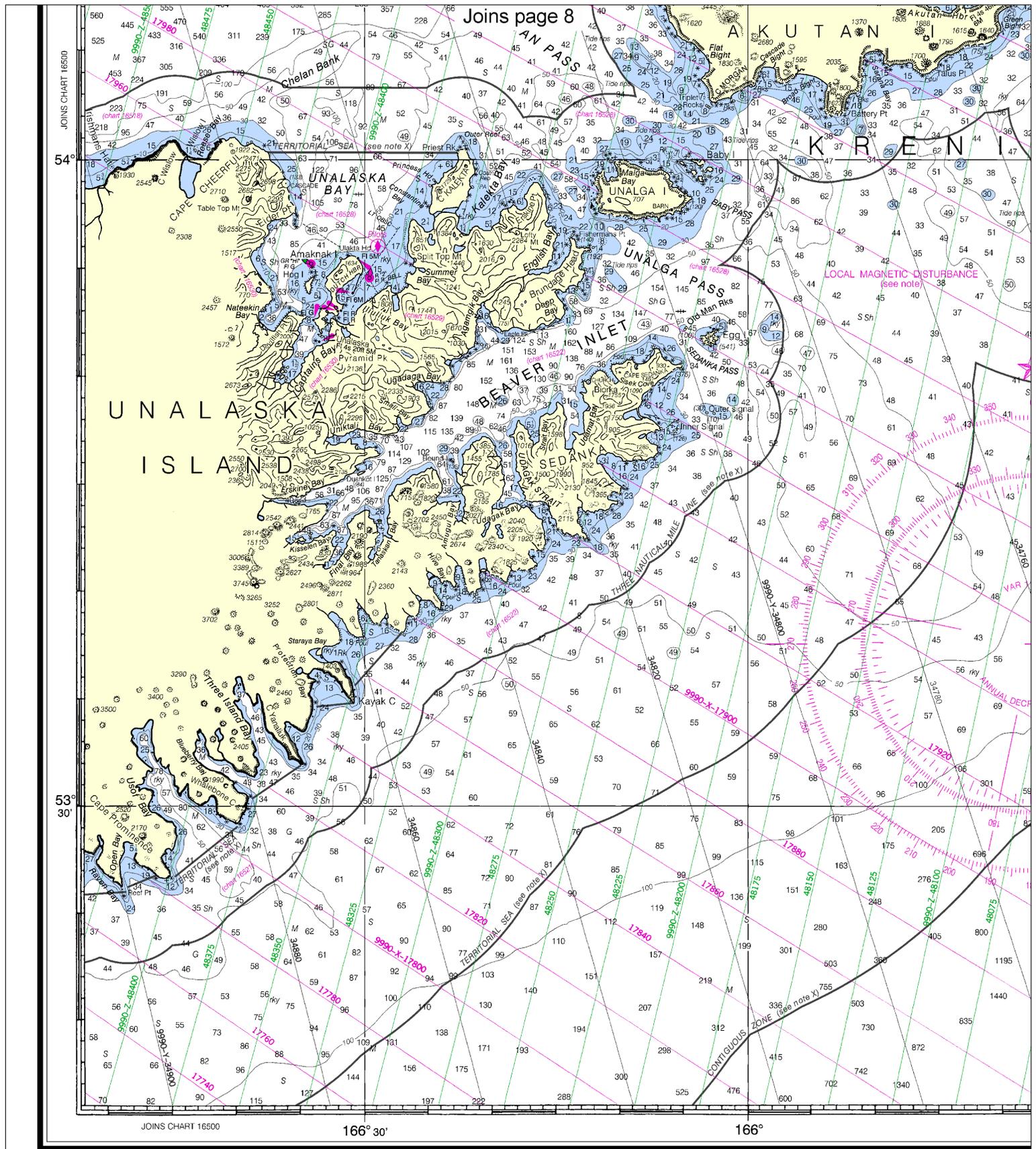
Joins page 7

Joins page 15

54° 30'

54°

JOINS CHART 18540



23rd Ed., Aug. / 08 ■ Corrected through NM Aug. 09/08
 Corrected through LNM Jul. 29/08

16520

LORAN-C OVERPRINTED

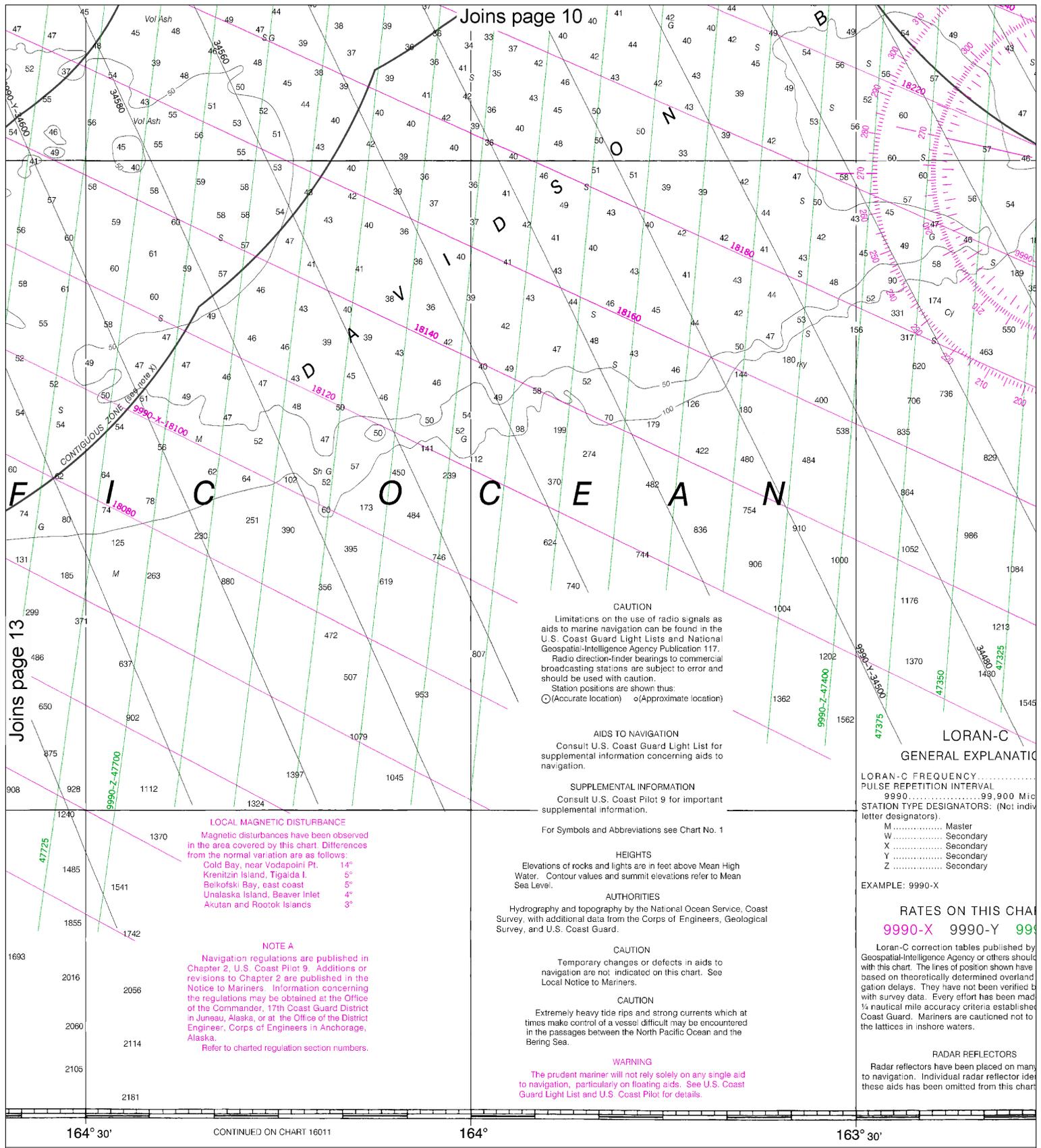
CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

SOUNDING

12

Note: Chart grid lines are aligned with true north.



Joins page 10

Joins page 13

LOCAL MAGNETIC DISTURBANCE
 Magnetic disturbances have been observed in the area covered by this chart. Differences from the normal variation are as follows:
 Cold Bay, near Vodopini Pt. 14°
 Krenitzin Island, Tigalda I. 5°
 Beikofski Bay, east coast 5°
 Unalaska Island, Beaver Inlet 4°
 Akutan and Rookok Islands 3°

NOTE A
 Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.
 Refer to charted regulation section numbers.

CAUTION
 Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution. Station positions are shown thus:
 ○ (Accurate location) ◦ (Approximate location)

AIDS TO NAVIGATION
 Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

SUPPLEMENTAL INFORMATION
 Consult U.S. Coast Pilot 9 for important supplemental information.
 For Symbols and Abbreviations see Chart No. 1

HEIGHTS
 Elevations of rocks and lights are in feet above Mean High Water. Contour values and summit elevations refer to Mean Sea Level.

AUTHORITIES
 Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

CAUTION
 Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

CAUTION
 Extremely heavy tide rips and strong currents which at times make control of a vessel difficult may be encountered in the passages between the North Pacific Ocean and the Bering Sea.

WARNING
 The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

LORAN-C
GENERAL EXPLANATION
 LORAN-C FREQUENCY
 PULSE REPETITION INTERVAL
 9990 99,900 Mils
 STATION TYPE DESIGNATORS: (Not individual letter designators).
 M Master
 W Secondary
 X Secondary
 Y Secondary
 Z Secondary

RATES ON THIS CHART
 9990-X 9990-Y 9990-Z
 Loran-C correction tables published by Geospatial-Intelligence Agency or others should with this chart. The lines of position shown have based on theoretically determined overland gation delays. They have not been verified b with survey data. Every effort has been mad ¼ nautical mile accuracy criteria established Coast Guard. Mariners are cautioned not to the lattices in inshore waters.

RADAR REFLECTORS
 Radar reflectors have been placed on many to navigation. Individual radar reflector ide these aids has been omitted from this chart

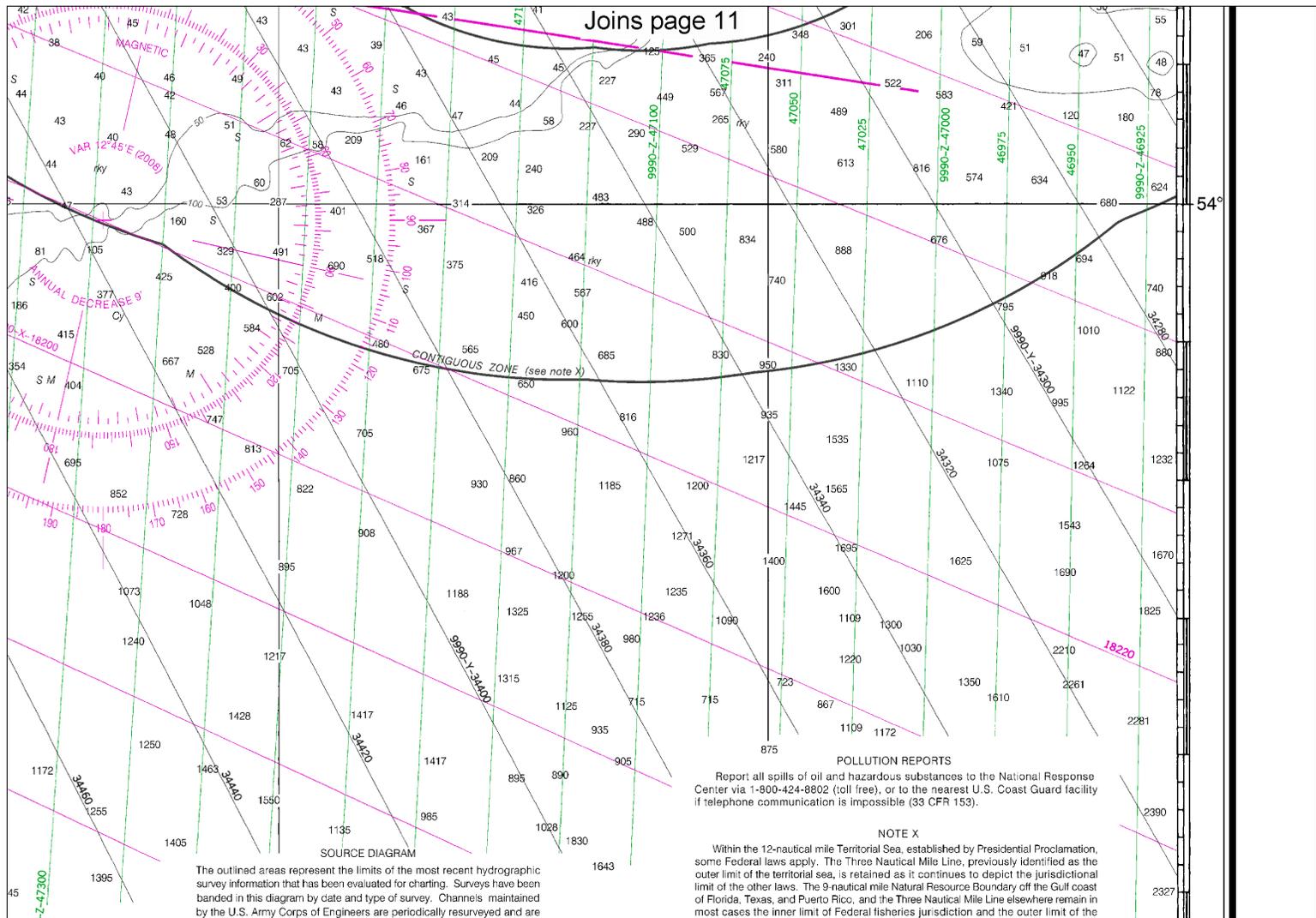
Published at Washington, D.C.
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE
 COAST SURVEY

PRINT-ON-DEMAND CHARTS
 This chart is available in a version updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts.

FATHOMS	
FEET	
METERS	

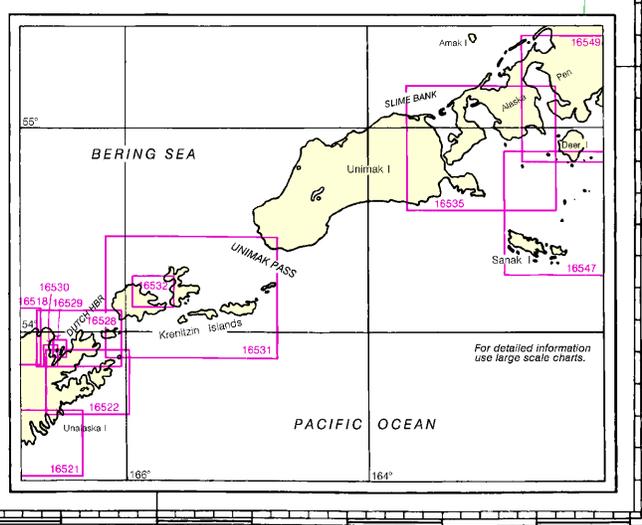
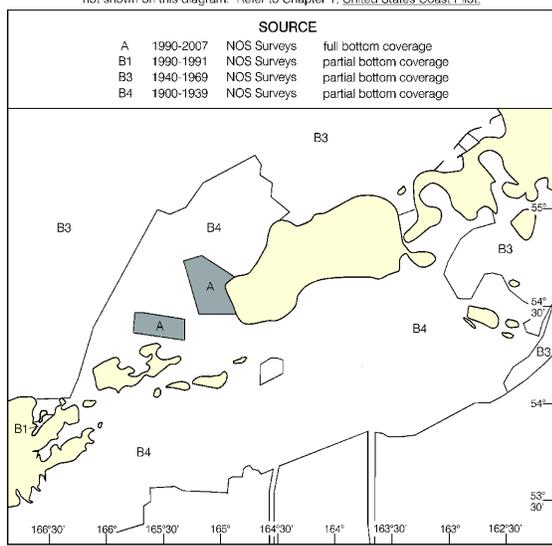
14

Note: Chart grid lines are aligned with true north.



POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

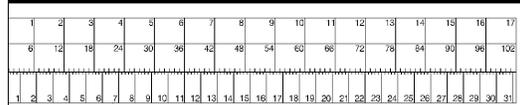
NOTE X
Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.



ION
..... 100kHz
microseconds
dividual station

ART
990-Z
by the National
id not be used
e been adjusted
d signal propa-
-by compariso
de to meet the
ed by the U.S.
o rely solely on

ny floating aids
ertification on
rt.



Unimak and Akutan Passes
SOUNDINGS IN FATHOMS - SCALE 1:300,000

16520
LORAN-C OVERPRINTED

ED. NO. 23
NSN 7642014011247
NGA REFERENCE NO. 16ACO16520



EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

- Nautical chart related products and information — <http://www.nauticalcharts.noaa.gov>
- Online chart viewer — <http://www.nauticalcharts.noaa.gov/mcd/NOAChartViewer.html>
- Report a chart discrepancy — <http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx>
- Chart and chart related inquiries and comments — <http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs>
- Chart updates (LNM and NM corrections) — http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
- Coast Pilot online — <http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm>
- Tides and Currents — <http://tidesandcurrents.noaa.gov>
- Marine Forecasts — <http://www.nws.noaa.gov/om/marine/home.htm>
- National Data Buoy Center — <http://www.ndbc.noaa.gov/>
- NowCoast web portal for coastal conditions — <http://www.nowcoast.noaa.gov/>
- National Weather Service — <http://www.weather.gov/>
- National Hurricane Center — <http://www.nhc.noaa.gov/>
- Pacific Tsunami Warning Center — <http://ptwc.weather.gov/>
- Contact Us — <http://www.nauticalcharts.noaa.gov/staff/contact.htm>



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

