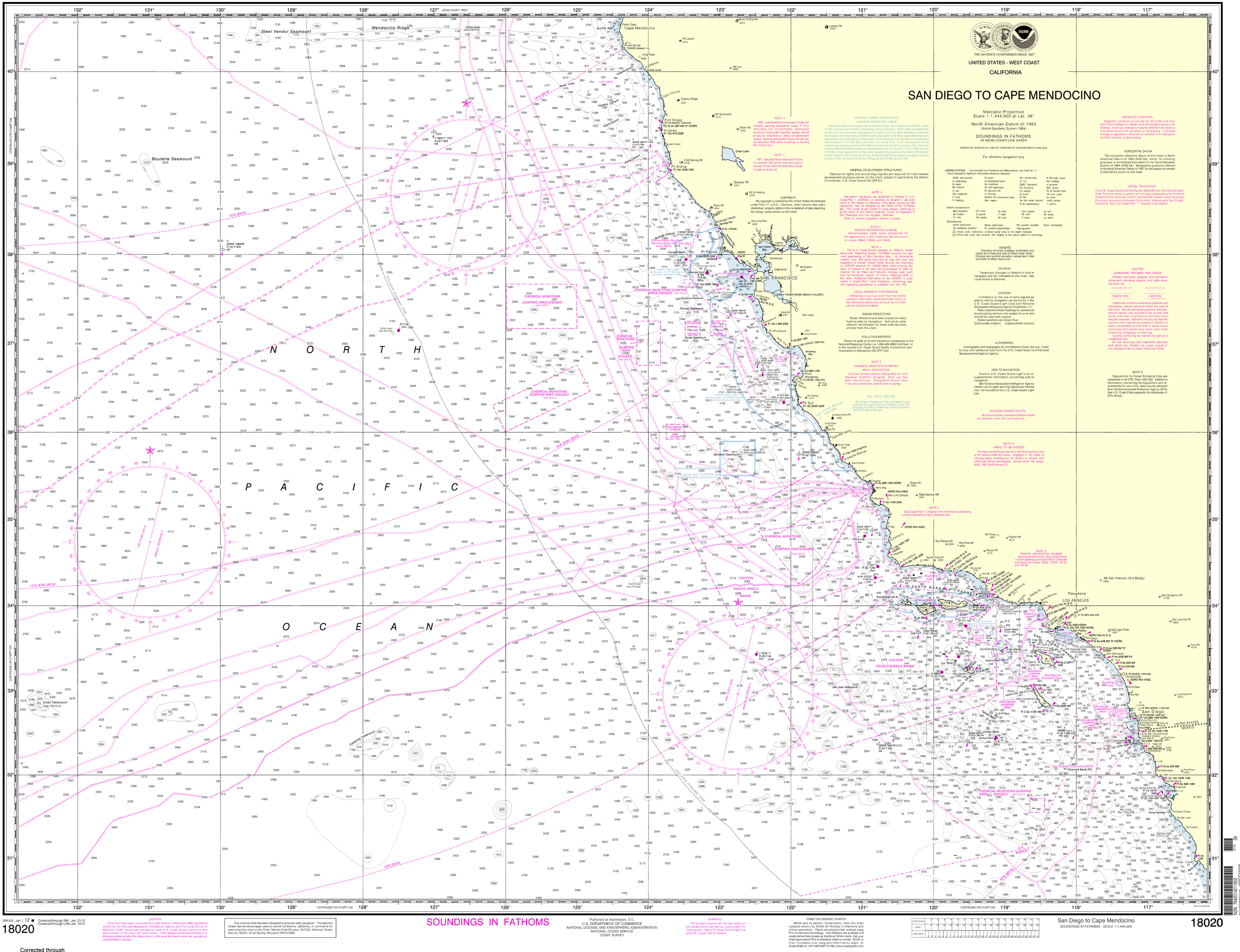
Formerly C&GS 5002, 1st Ed., Mar. 1900 C-1887-1p KAPP 1654

SOUNDINGS IN FATHOMS



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - WEST COAST

CALIFORNIA

SAN DIEGO TO CAPE MENDOCINO

Mercator Projection
Scale 1:1,444,000 at Lat. 38°

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.

For offshore navigation only

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)
Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical
Al alternating
Bl black
Bn beacon
Bu blue
Dia diaphone
F fixed
Fl flashing
Gr green
IQ interrupted quick
lts leadlines
Lt HO lighthouse
Mo(A) morse (A)
m minutes
MICRO TR microwave tower
Mkr marker
Mo morse code
N nun
OBSC obscured
Oc occulting
Or orange
Pu purple
R red
Ra Ref radar reflector
R Bn radiobeacon
R TR radio tower
Rot rotating
s seconds
SEC sector
St M statute miles
VQ very quick
W white
Whis whistle
Y yellow

Bottom characteristics:

Blds boulders
bk broken
Cy clay
Gn green
gy gray
h hard
M mud
Oys oysters
Rk rock
S sand
so soft
Sh shells
sy sticky

Miscellaneous:

AUTH authorized
(D) existence doubtful
(PA) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(1) Rocks that cover and uncover, with heights in feet above datum of soundings.
Obstn obstruction
PA position approximate
PD position doubtful
Rep reported
Subm submerged

NATIONAL MARINE SANCTUARIES & MARINE PROTECTED AREAS

National Marine Sanctuaries are protected areas, administered by NOAA, which contain sensitive and diverse natural and cultural resources. These areas are particularly sensitive to environmental damage such as spills of oil and other hazardous materials, discharges and groundings. Exercise particular caution and follow applicable Sanctuary regulations when transiting these areas. A full description of Sanctuary regulations may be found in 15 CFR 922 and in the U.S. Coast Pilot. A full description of the federal regulations governing the Marine Protected Areas located within Channel Islands National Marine Sanctuary boundaries may be found in 15 CFR 922 and 50 CFR 660. A full description of the state regulations governing the Marine Protected Areas located within Channel Islands National Marine Sanctuary boundaries may be found in Title 14 California Code of Regulations (CCR) section 632.

MINERAL DEVELOPMENT STRUCTURES

Obstruction lights and sound (fog) signals are required for fixed mineral development structures shown on this chart, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).

NOTE A

Navigation regulations are published in Chapter 2, U. S. Coast Pilot 7. 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, 11th Coast Guard District in Long Beach, California, or at the office of the District Engineer, Corps of Engineers in San Francisco and Los Angeles, California.
Refer to charted regulation section numbers.

NOTE C

TRAFFIC SEPARATION SCHEME
Recommended traffic lanes established for the approaches to San Francisco Bay are shown on charts 18645, 18680, and 18640

NOTE I

The U. S. Coast Guard operates an Offshore Vessel Movement Reporting System (OVMRS) covering the seaward approaches to San Francisco Bay. All commercial vessels over 300 gross tons and all tugs with tows are requested to contact Vessel Traffic Service San Francisco (VTS) prior to entering the Precautionary Area or the area. All vessels in the area are encouraged to listen on channel 12 at fifteen and forty-five minutes past each hour for broadcast reports of known shipping traffic in the area. Additional information on the OVMRS is published in Coast Pilot 7 and information concerning specific operating procedures is available from the VTS.

LOCAL MAGNETIC DISTURBANCE

Differences of as much as 3° from the normal variation have been observed in the vicinity of San Clemente Island and as much as 4° in the vicinity of Bolinas Bay.

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.

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 F

CHEMICAL MUNITIONS DUMPING AREA - RESTRICTION

Site was formerly used or designated for U.S. chemical munitions dumping. Such use has been discontinued. Designation of such area in no way constitutes authority for dumping.

SEA OTTER REFUGE

The State of California Fish and Game Code prohibits the use of bows or firearms and the trapping of birds or mammals in the California Sea Otter Game Refuge.

NOTE K

IMO - adopted Recommended Tracks for vessels carrying hazardous cargo in bulk (excluding ore, concentrates, explosives, munitions, chemicals, liquefied gases, refined products, distillates or other non-persistent cargo). Vessels using these tracks should use the Western TSS when entering or leaving San Francisco.

NOTE L

IMO - adopted Recorded Tracks for vessels 300 gross tons and above (except those carrying hazardous cargo in bulk or crude oil).

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NOTE J

See Coast Pilot 7, Chapter 5 for information pertaining to Naval Operating Area in Bechers Bay.

NOTE E

TRAFFIC SEPARATION SCHEME
Recommended traffic lanes established in Santa Barbara and San Pedro Channels are shown on charts 18022, 18720, 18740, and 18748

NOTE H

AREAS TO BE AVOIDED
All ships, except those bound to and from ports on one of the islands within the areas, engaged in the trade of carrying cargo, including but not limited to tankers and other bulk carriers and barges, should avoid the areas. (MSC, IMO 58/33 Annex 21).

MAGNETIC VARIATION

Magnetic variation curves are for 2012 derived from 2010 World Magnetic Model and accompanying secular change. If annual change is a same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing.

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 do not require conversion to NAD 83 for plotting on this chart.

VESSEL TRANSITING

The U.S. Coast Guard and the Pacific States/British Columbia Oil Spill Task Force endorse a system of voluntary measures and minimum distances from shore for certain commercial vessels transiting along the coast anywhere between Cook Inlet, Alaska and San Diego, California. See U.S.Coast Pilot 7, Chapter 3 for details.

HEIGHTS

Elevation of rocks, bridges, landmarks and lights are in feet and refer to Mean High Water. Contour and summit elevation values are in feet and refer to Mean Sea Level.

CAUTION

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

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 signals are subject to commercial broadcasting interference, subject to error and should be used with caution.
Station positions are shown thus:
(Accurate location) (Approximate location)

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard and National Geospatial-Intelligence Agency.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.
See National Geospatial-Intelligence Agency Center List of Lights and Fog Signals for information not included in the U.S. Coast Guard Light List.

ACOUSTIC RANGE FACILITY

Numerous shore connected bottom cables are located within the outlined area.

CAUTION

SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area — Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.
Covered wells may be marked by lighted or unlighted buoys.
Oil well structures and submarine pipelines and cables are charted only where outside of the indicated limits of charts 18720 and 18740.

NOTE S

Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices.

39th Ed., Jan. / 12 ■ Corrected through NM Jan. 21/12
Corrected through LNM Jan. 10/12

18020

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.

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/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

SOUNDINGS IN FATHOMS

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

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.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart 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 2-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at http://ocsdata.ncd.noaa.gov/dbai/inquiry.aspx, or OceanGrafix at 1-877-56CHART or http://www.oceangrafix.com.

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
FEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

San Diego to Cape Mendocino
SOUNDINGS IN FATHOMS - SCALE 1:1,444,000

18020

Corrected through
LNM: 4313 (10/22/2013), NM: 4413 (11/2/2013)

To ensure that this chart was printed at the proper scale, the line below should measure six inches (152 millimeters).
If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

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