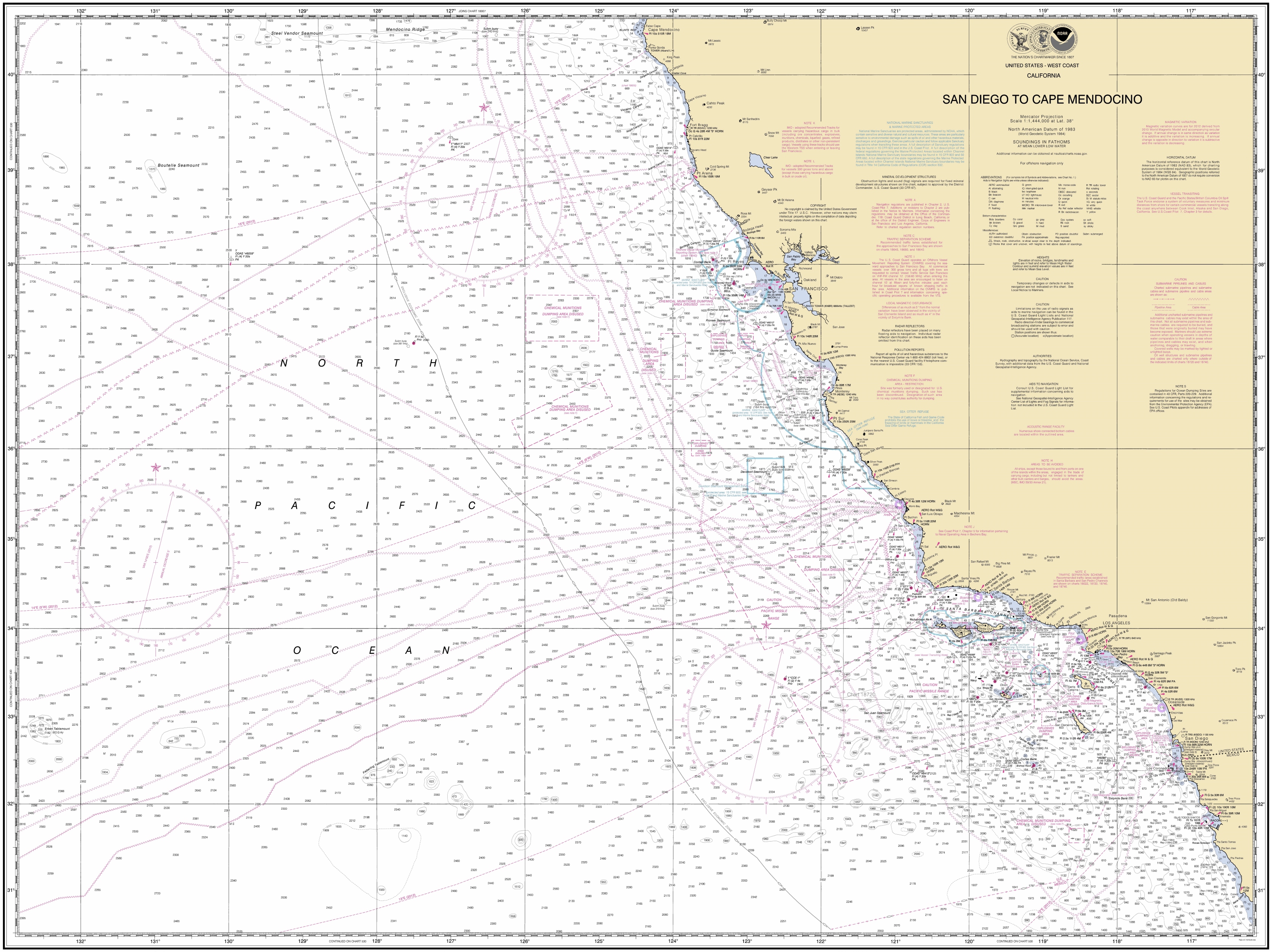
SOUNDINGS IN FATHOMS

Formerly C&GS 5002, 1st Ed., Mar. 1900   C-1887-19   KAPP 1654


18020
132°
131°
130°
129°
128°
127° JOINS CHART 18007
126°
125°
124°
123°
122°
121°
120°
119°
118°
117°
40°
39°
38°
37°
36°
35°
34°
33°
32°
31°
CONTINUED ON CHART 530
Steel Vendor Seamount
Mendocino Ridge
Boutelle Seamount
Erben Tablemount
Fieberling Tablemount
Davidson Seamount
Pioneer Seamount
Guide Seamount
Gumdrop Seamount
San Juan Seamount
N O R T H
P A C I F I C
O C E A N
15°E (2012)
14°E (6°W) (2012)
13°E (2012)
12°E (2012)
VAR 14°00'E (2012)
ANNUAL DECREASE 5'
EXCLUSIVE ECONOMIC ZONE
CHEMICAL MUNITIONS DUMPING AREA DISUSED
(see note F)
EXPLOSIVES DUMPING AREA DISUSED
CAUTION
PACIFIC MISSILE RANGE
Chart 18720
Chart 18740
Cape Mendocino
False Cape
Fl 15s 515ft 18M
Punta Gorda
King Peak
Pt Delgada
Shelter Cove
Cape Vizcaino
Cahto Peak
Fort Bragg
Pt Cabrillo
Fl 10s 81ft 22M
Navarro Head
Pt Arena
Fl 15s 155ft 19M
Clear Lake
Bodega Head
Bodega Bay
Pt Reyes
Fl 5s 265ft 20M HORN
Drakes Bay
San Pablo Bay
Vallejo
Benicia
Richmond
Oakland
SAN FRANCISCO
Farallon Is
Mt Diablo
San Jose
Pt Año Nuevo
Monterey Bay
Monterey
Pt Pinos
Carmel
Pt Sur
Fl 15s 250ft 25M
SEA OTTER REFUGE (see note)
Cape San Martin
Pt Piedras Blancas
San Simeon
Cambria
Pt Estero
Morro Bay
San Luis Obispo
Pt San Luis
Pt Sal
Purisima Pt
Pt Arguello
Pt Conception
Santa Barbara
SANTA BARBARA CHANNEL
San Miguel I
Santa Rosa I
Santa Cruz I
Anacapa I
Ventura
Pt Hueneme
Pt Dume
Santa Monica
Pasadena
LOS ANGELES
Mt San Antonio (Old Baldy)
San Pedro Bay
SAN PEDRO CHANNEL
Santa Barbara I
Santa Catalina I
San Nicolas I
San Clemente I
Osborn Bank
Tanner Bank
Cortes Bank
Bishop Rock
Sixtymile Bank
Newport Beach
San Clemente
Oceanside
Encinitas
Del Mar
Pt La Jolla
Pt Loma
San Diego
Los Coronados
UNITED STATES
MEXICO
Ensenada
ISLAS TODOS SANTOS
Pta Santo Tomas
Pilot Boarding Area
Lassen Pk
Mt Pinos
Frazier Mt
San Rafael Mt
Big Pine Mt
Reyes Pk
Santa Ynez Pk
San Gorgonio Mt
San Jacinto Pk
Santiago Peak
Toro Pk
Cuyamaca Pk

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	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

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 direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
⊙(Accurate location)   o(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.

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 59/33 Annex 21).

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

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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 on VHF-FM channel 12 (156.60 MHz) when entering this 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 5° from the normal variation have been observed in the vicinity of San Clemente Island and as much as 4° in the vicinity of Sixtymile Bank.

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 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 18746.

MAGNETIC VARIATION
Magnetic variation curves are for 2012 derived from 2010 World Magnetic Model and accompanying secular change. If annual change is in 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 plottin 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.

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/idrs/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
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102

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

18020

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