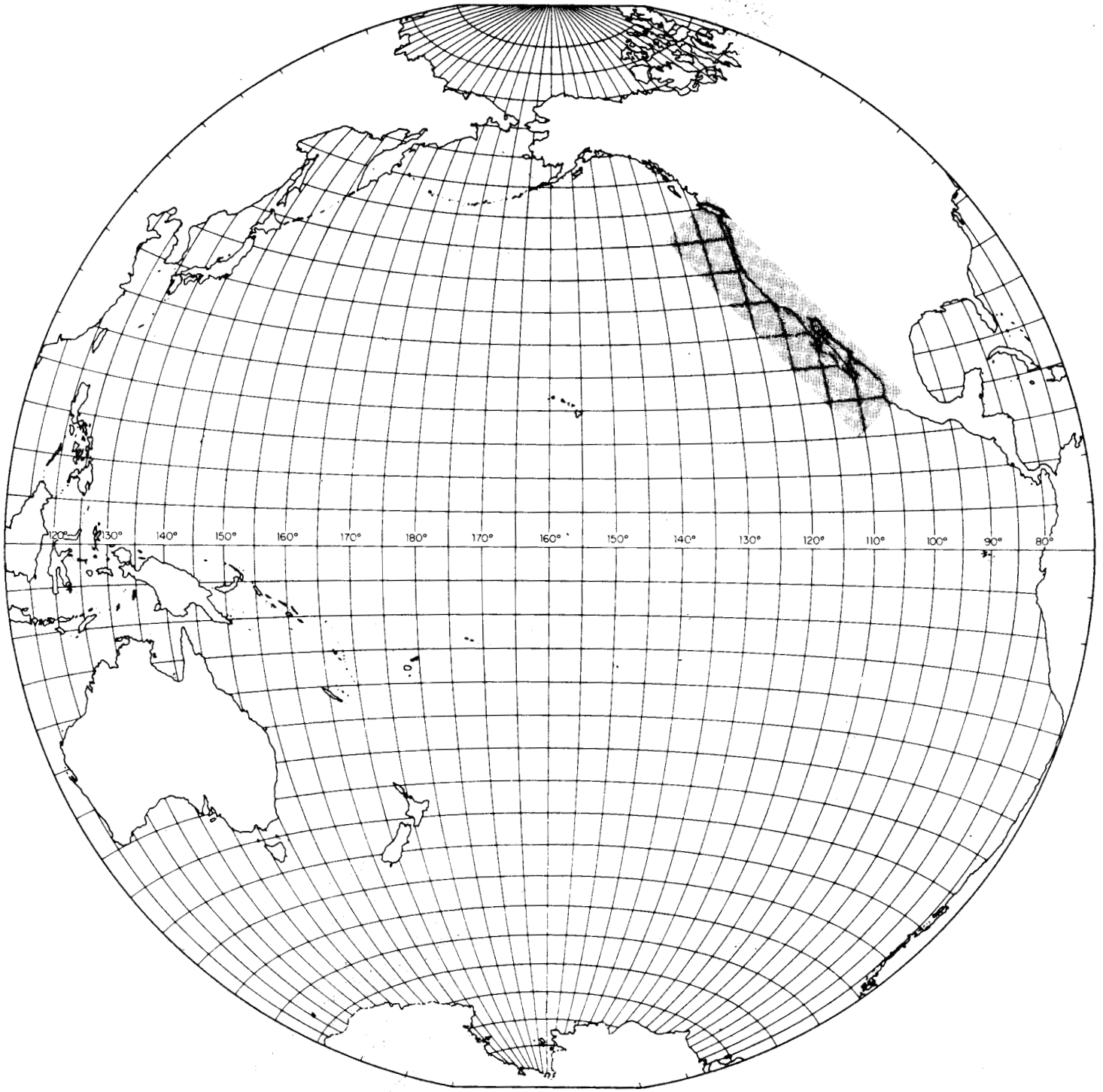


STATE OF CALIFORNIA
MARINE RESEARCH COMMITTEE



CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS

ATLAS No. 1

STATE OF CALIFORNIA
MARINE RESEARCH COMMITTEE

CALIFORNIA
COOPERATIVE
OCEANIC
FISHERIES
INVESTIGATIONS

Atlas No. 1

CALCOFI Atlas of 10-Meter
Temperatures and Salinities

1949 through 1959

Cooperating Agencies:

CALIFORNIA ACADEMY OF SCIENCES
CALIFORNIA DEPARTMENT OF FISH AND GAME
STANFORD UNIVERSITY, HOPKINS MARINE STATION
U. S. FISH AND WILDLIFE SERVICE, BUREAU OF COMMERCIAL FISHERIES
UNIVERSITY OF CALIFORNIA, SCRIPPS INSTITUTION OF OCEANOGRAPHY

July 1963

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KEY to boxed Index

The numbers for the rows (years) combined with those for the columns (months) form the cruise numbers.

- - Temperature and Salinity presented
- TL - The same, but Temperature Chart enlarged
- G - Gulf of California included

	01	02	03	04	05	06	07	08	09	10	11	12	
49			●	●	●	●	●	●	●	●	●		49
50		●	●	●	●	●	●	●	●		●		50
51	●	●	●	●	●	●	●	●	●	●	●	●	51
52	●	●	●	●	●	●	●	●	●	●	●		52
53	●	●	●	●	●	●	●	●	TL	●	●	●	53
54	●	●	●	●	●	●	●	●	●	●	TL	●	54
55	●	●	●	●	●	●	●	●	●	●	●	●	55
56	●	G	●	G	●	●	●	●	●	●	●	●	56
57	●	G	●	G	●	G	●	G	●	●	●	●	57
58	●	●	●	●	●	●	●	●	●	●	●	●	58
59	●	●	●	●	●	●	●	●	●	●	●	●	59
	01	02	03	04	05	06	07	08	09	10	11	12	

INTRODUCTION

This Atlas of temperature and salinity charts for a depth of 10 meters is an attempt to provide oceanic data in as simple and usable a form as possible.

The Atlas consists of the following charts and graphs:

- 1) Basic station plans of the CALCOFI program. Additional unbound charts are available upon request.
- 2) CALCOFI Area Index Charts, showing, on a greatly reduced scale, the approximate over-all area covered by each monthly cruise. Additional unbound charts are available upon request.
- 3) Time-series graphs of temperature from twenty-two selected stations. None of these stations has been occupied less than 75 times. Included with each time-series graph is a plot of the 1950-1959 mean for that station, and an anomaly plot from this mean.
- 4, 5) Monthly mean 10-meter temperature and salinity charts for each month of the year, based on data collected from 1950 through 1959. No less than 5 years of data were used to derive each value. This 10-year period, 1950-1959, was adopted by the Eastern Pacific Oceanic Conference (EPOC, Lake Arrowhead, California, 1959) as the reference period for the surface water temperatures of the Pacific Ocean.
- 6, 7) One hundred twenty-five monthly 10-meter charts each of temperature and salinity, covering a 130-month period from March 1949, through December, 1959.
- 8) For optional use, one-degree grid charts, covering somewhat different areas, and identified by the number of dots (one through four) appearing in the lower right-hand corner of the page. Additional unbound charts are available upon request.
- 9) The same as (8), but the charts are without the one-degree grid. Additional unbound charts are available upon request.

The cruise numbers consists of four digits, the first two representing the year, and the last two the month in which all or the major portion of the cruise falls.

The analyses of the horizontal charts were made essentially by one man so as to eliminate, as much as possible, variations from chart to chart owing to different interpretations of the same data. We believe the true conditions to be close to our interpretation, but we realize there is an element of subjectivity involved in contouring any set of data.

The temperature data were collected by bathythermograph and reversing thermometer. For each established hydrographic station, data were available from both types of instrument to provide a check on the value. In case of disagreement, the reversing thermometer was considered correct, unless an obvious malfunction occurred. The water samples were collected with Nansen bottles, and the salinities were determined by the Knudsen titration method.

Since these data have been collected by trained personnel on oceanographic research ships using carefully calibrated instruments, we feel that they are the most accurate data presently available for the coastal waters of California and Baja California. Because of the relatively small-scale grid of stations, it was possible to obtain temperature and salinity conditions in greater detail than could have been obtained, for example, from averages of one-degree squares. For the charts of the individual months the values used are not averages, of course, but the actual values at the time of observations.

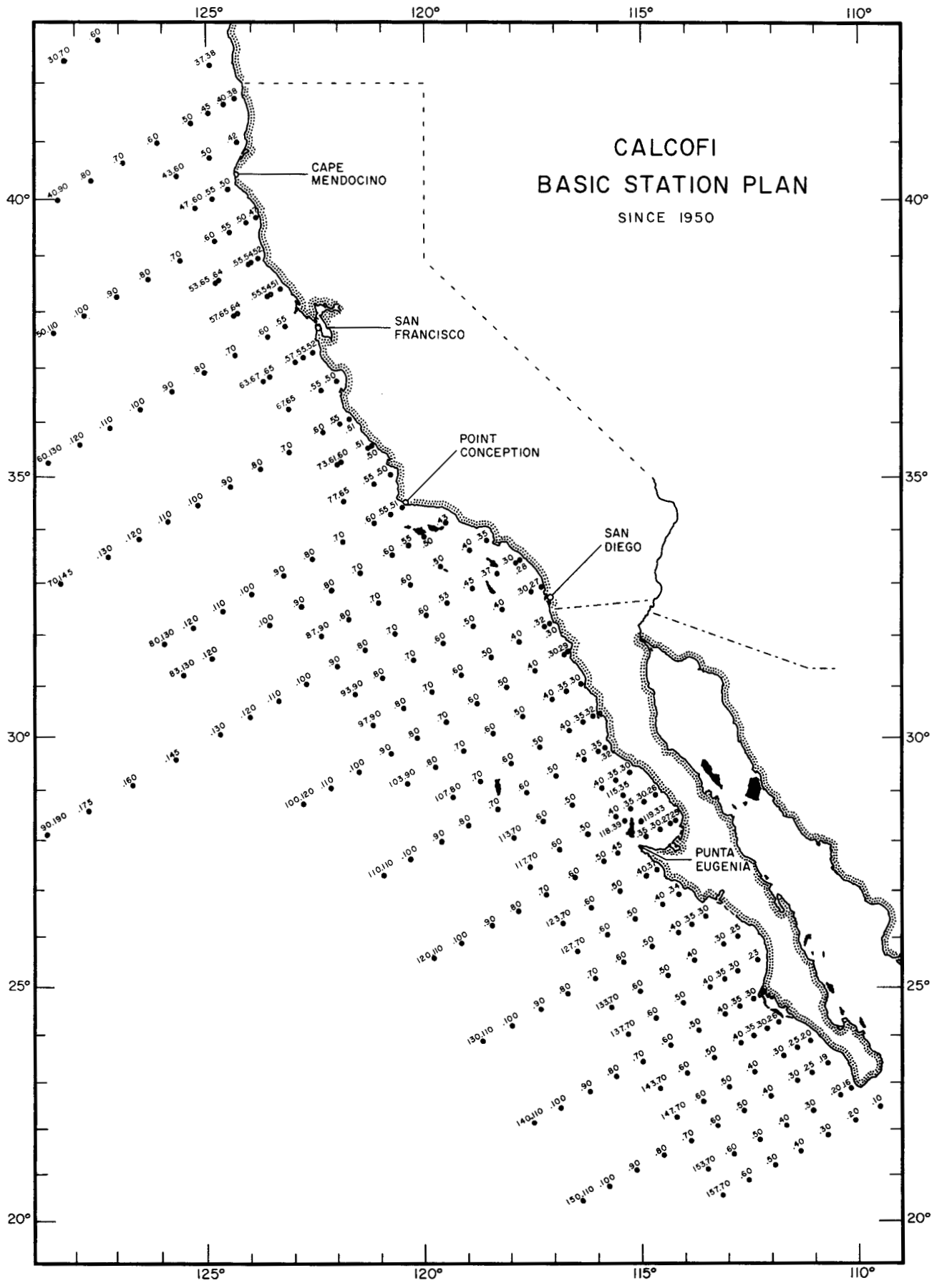
More CALCOFI* atlases will follow. The present atlas has been prepared with the convenience of the reader in mind. To facilitate the overlaying of charts the pages have been printed on one side only, and the charts are all of the same size and scale except where conditions made this impractical. Holes have been punched to simplify use and rearrangement in loose-leaf binders. The abbreviated identification in the lower right-hand corner of the page will help to sort the charts quickly or to select those of particular interest. Future atlases will be prepared in the same manner to facilitate rearrangement of charts, e.g., from several CALCOFI atlases according to desired point of view, or any additional dimensions to that of time.

The CALCOFI data upon which this atlas is based are published in the "Oceanic Observations of the Pacific" volumes, University of California Press.

The data have been collected**, processed and presented by the Data Collection and Processing Group (DCPG) of the Marine Life Research program at the University of California's Scripps Institution of Oceanography, as a contribution to the California Cooperative Oceanic Fisheries Investigations (CALCOFI) program.

* Sometimes written CCOFI or CalCOFI.

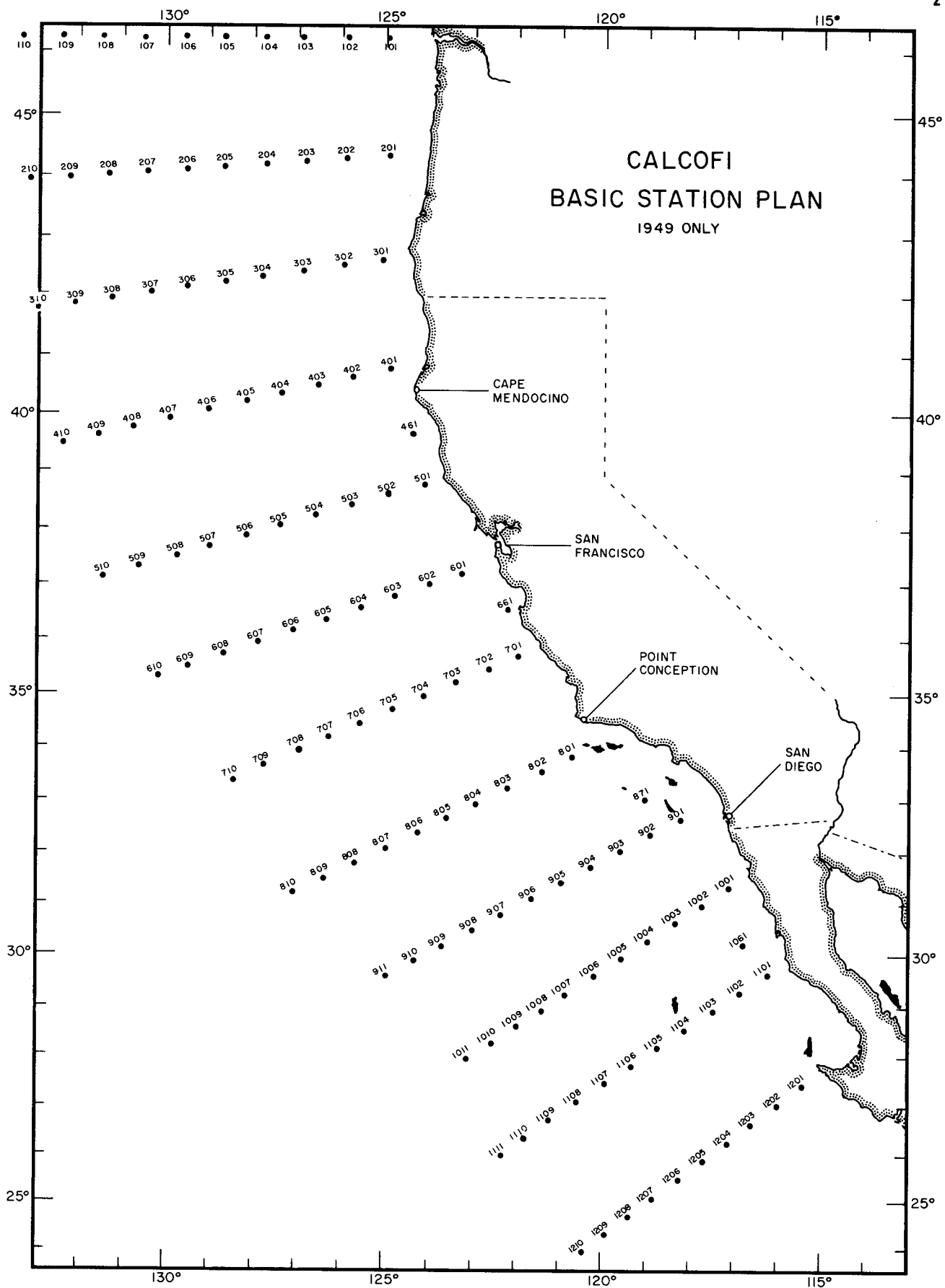
** The U. S. Bureau of Commercial Fisheries also participated in the collection and, to a lesser extent, the California Department of Fish and Game.



CALCOFI

BASIC STATION PLAN

SINCE 1950

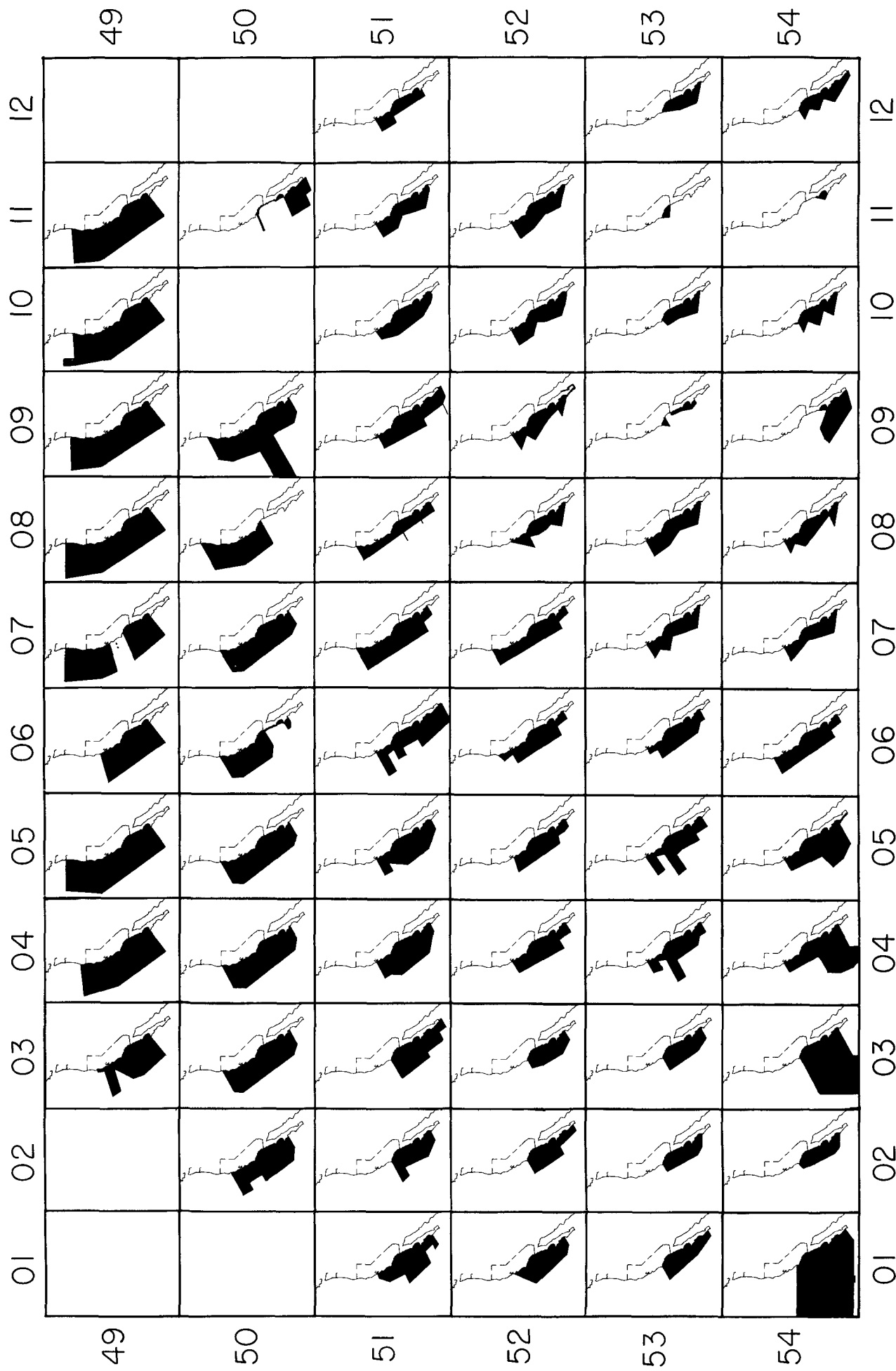


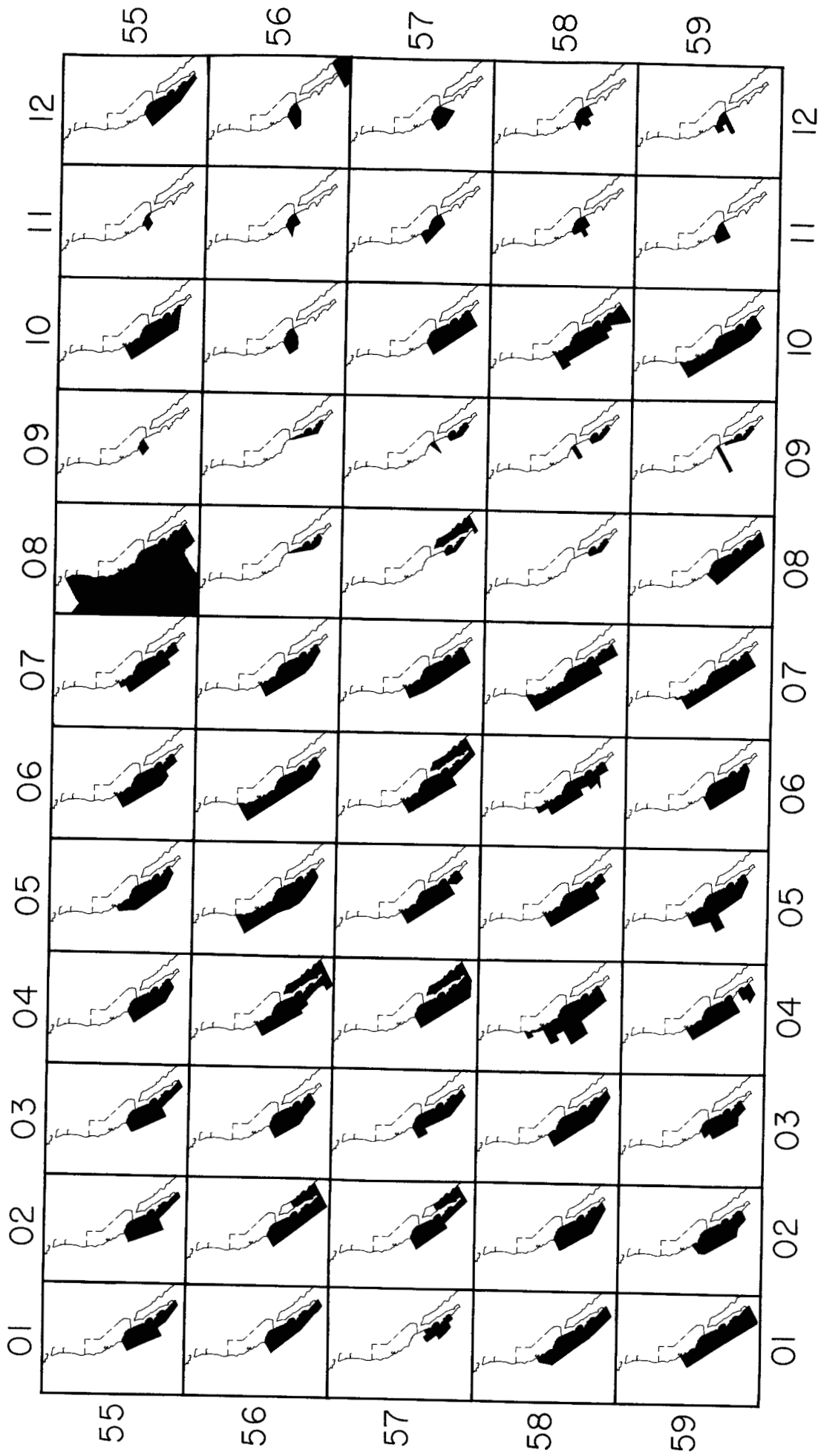
CALCOFI

BASIC STATION PLAN

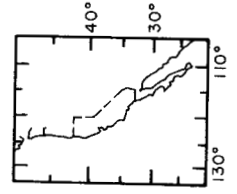
1949 ONLY

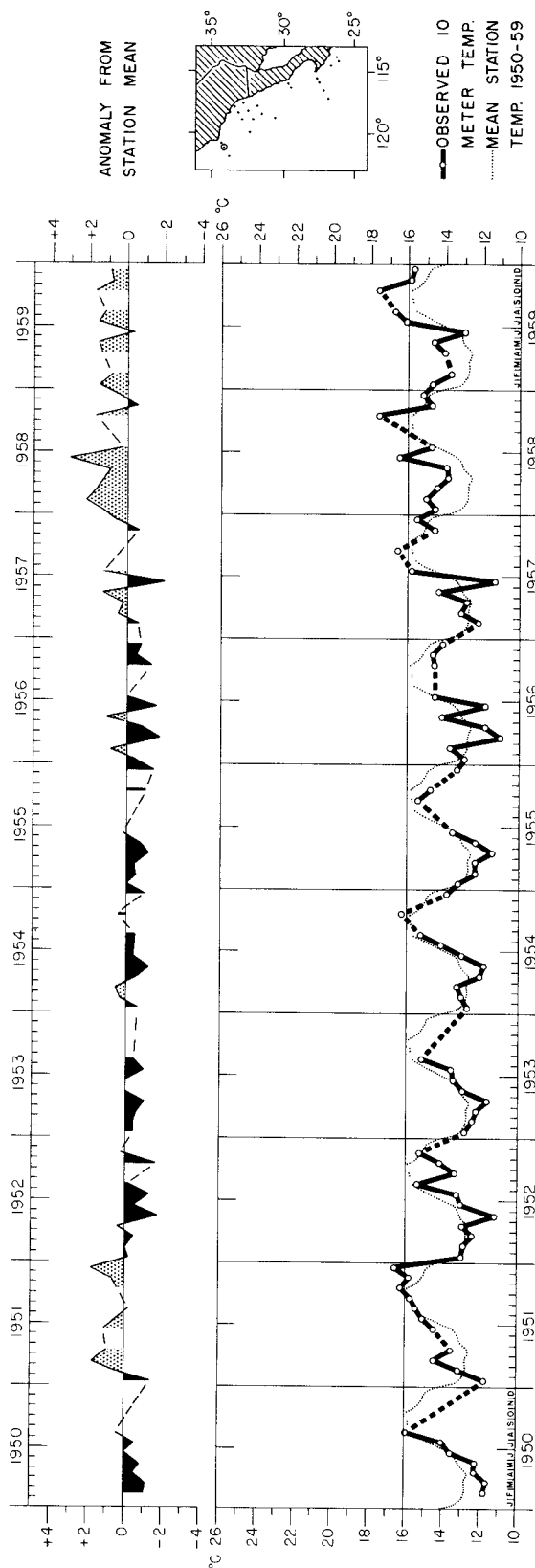
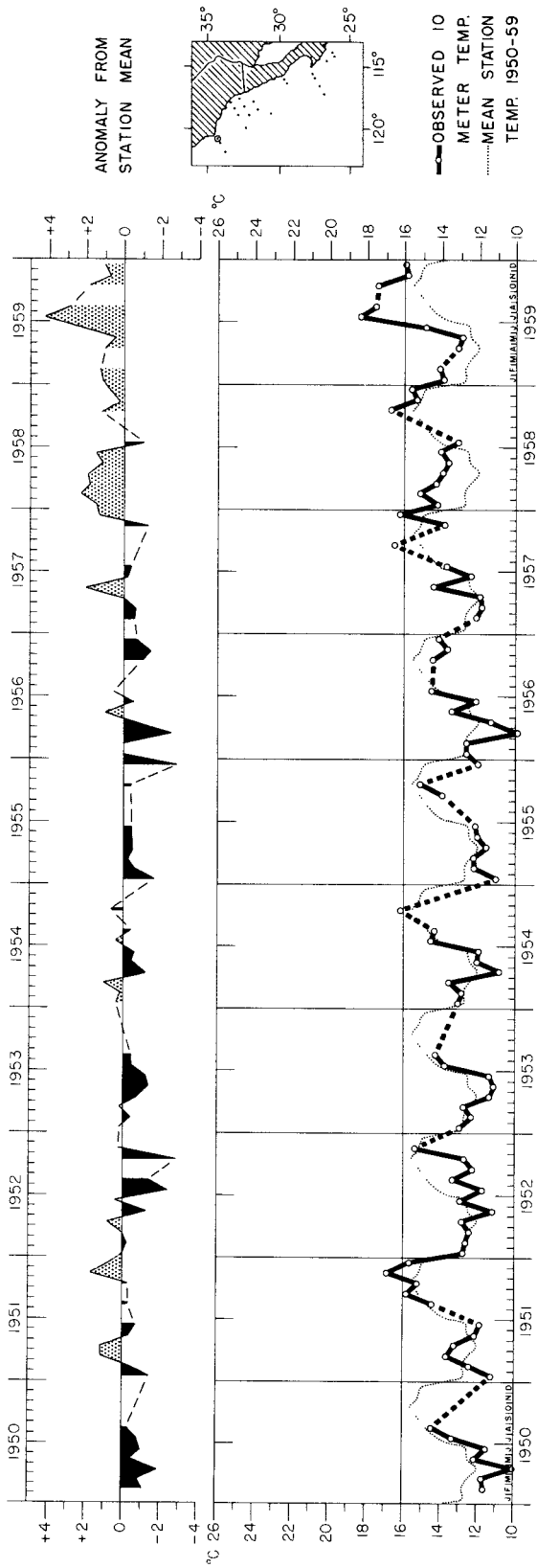
CALCOFI AREA INDEX — 1949 through 1959



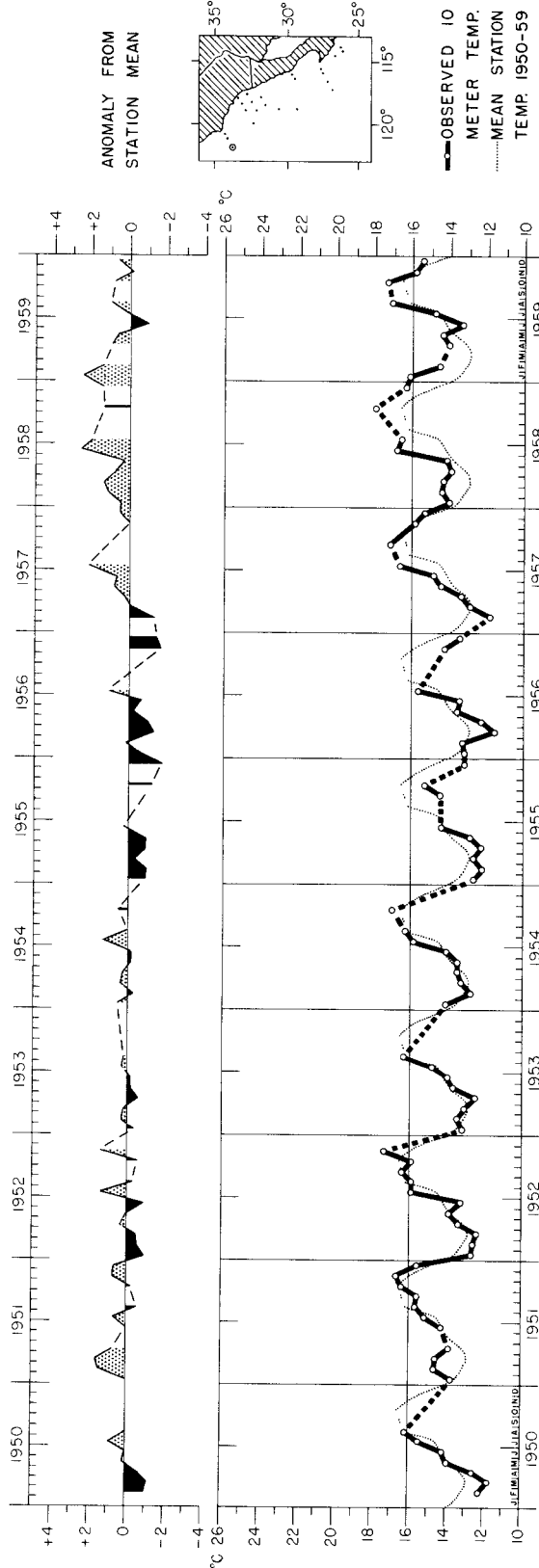


CALCOFI AREA INDEX — 1949 through 1959
 MONTHLY 10-METER TEMPERATURE AND SALINITY COVERAGE

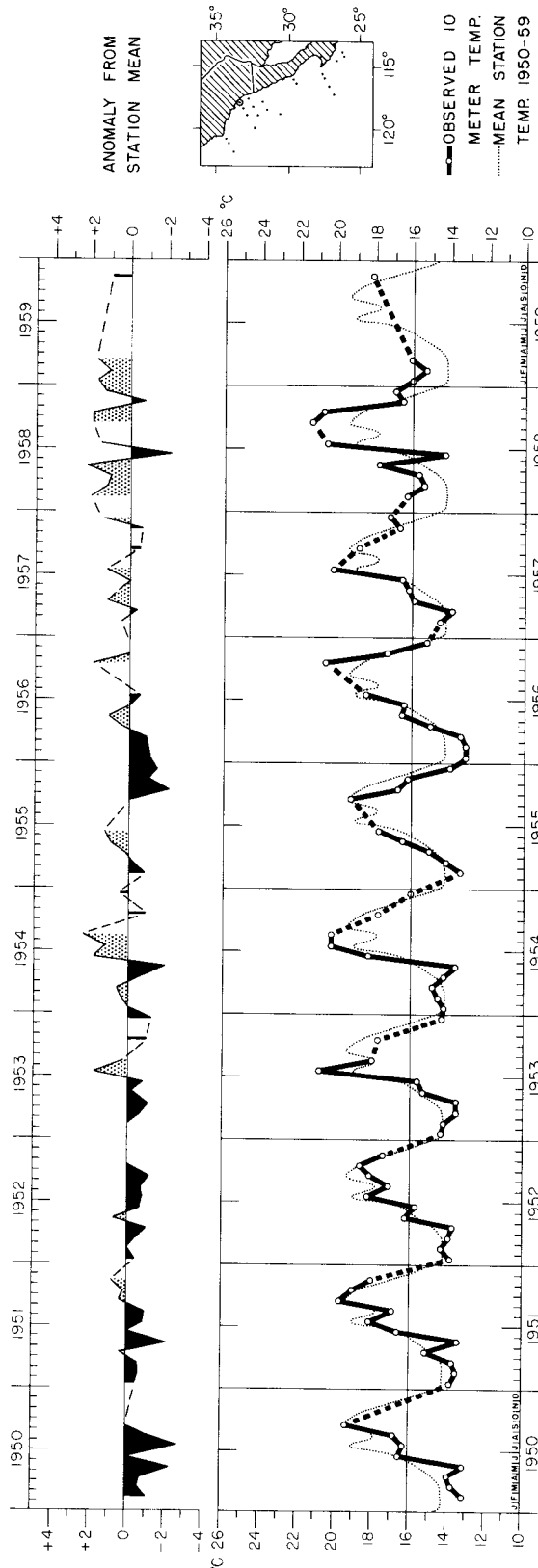




10m T
 80.55
 80.60

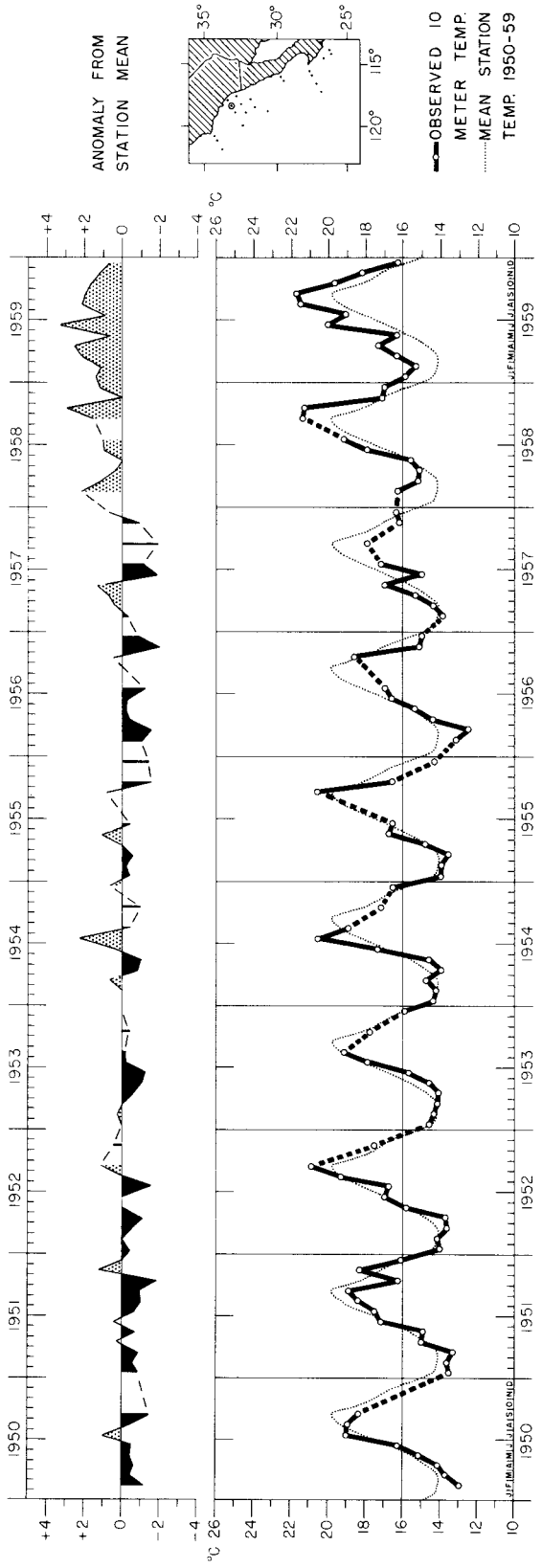


10 METER TEMPERATURE
 CALCOFI STATION 80.70
 DCPG 1959

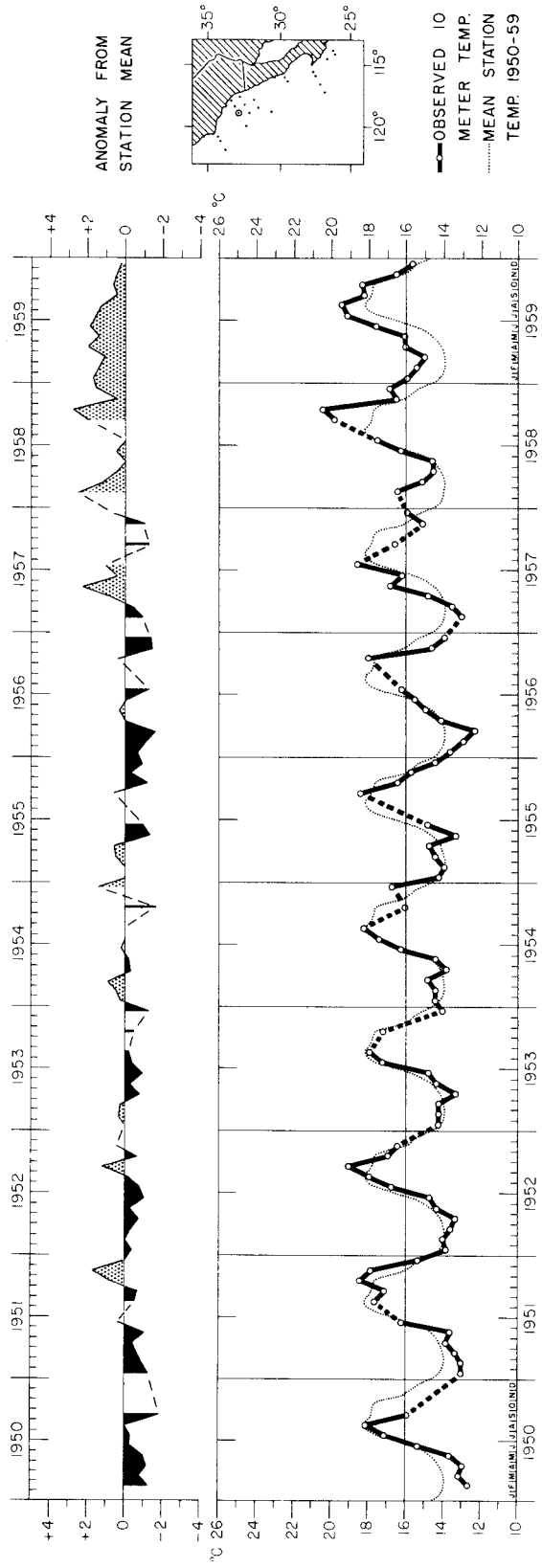


10 METER TEMPERATURE
 CALCOFI STATION 90.30
 DCPG 1959

10m T
 80.70
 90.30

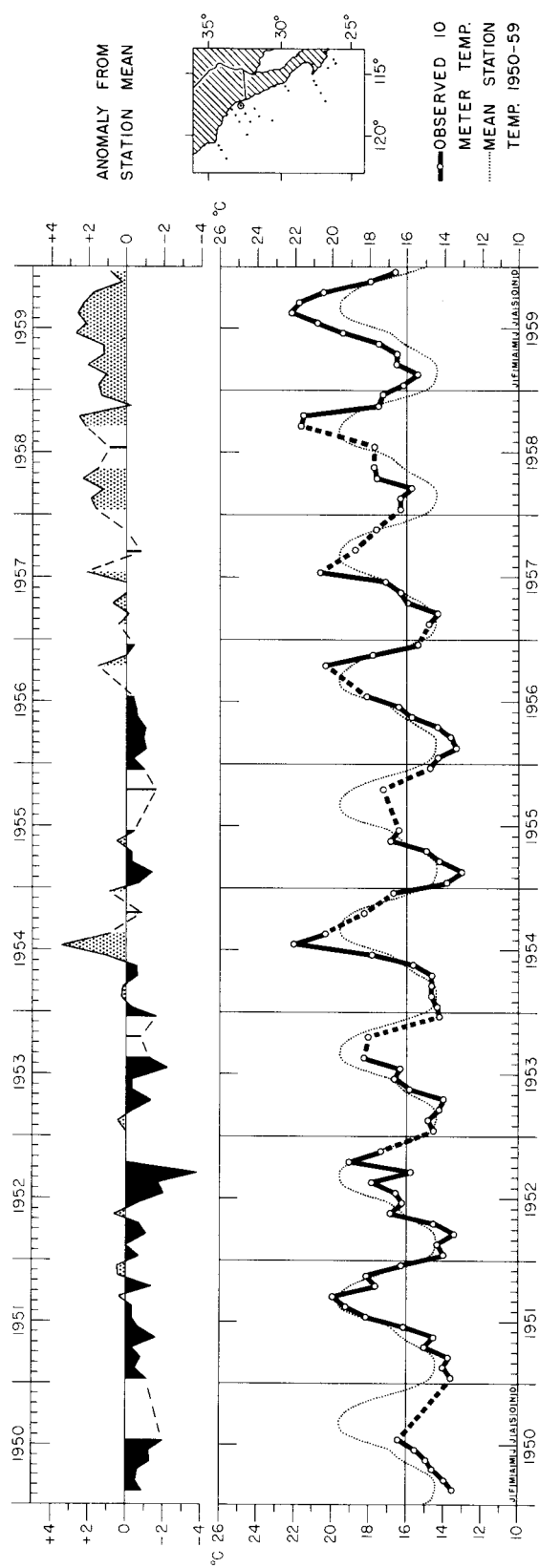
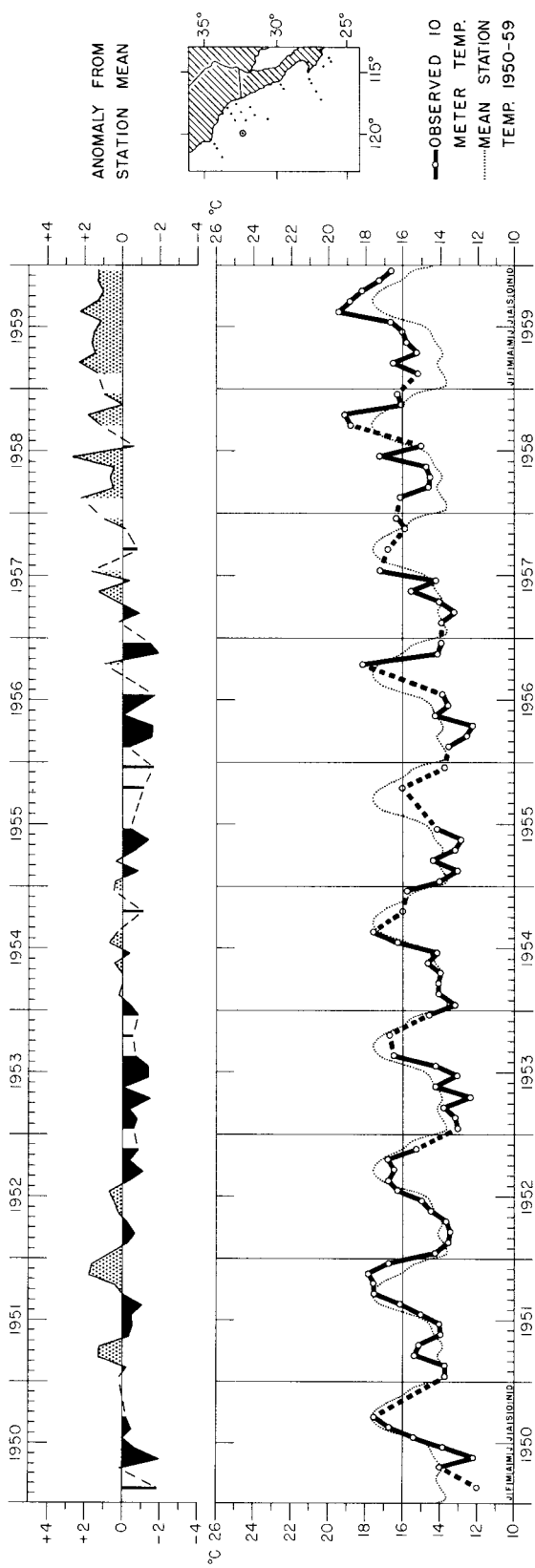


10 METER TEMPERATURE

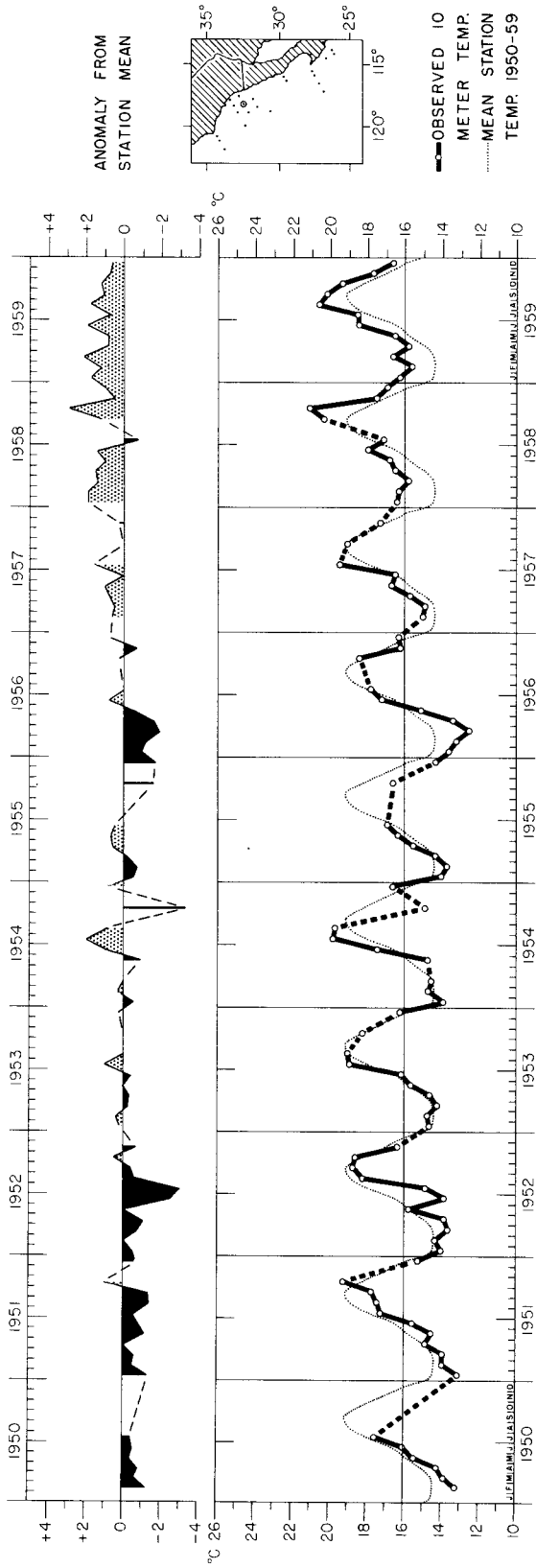


10 METER TEMPERATURE

10m T
90.37
90.45

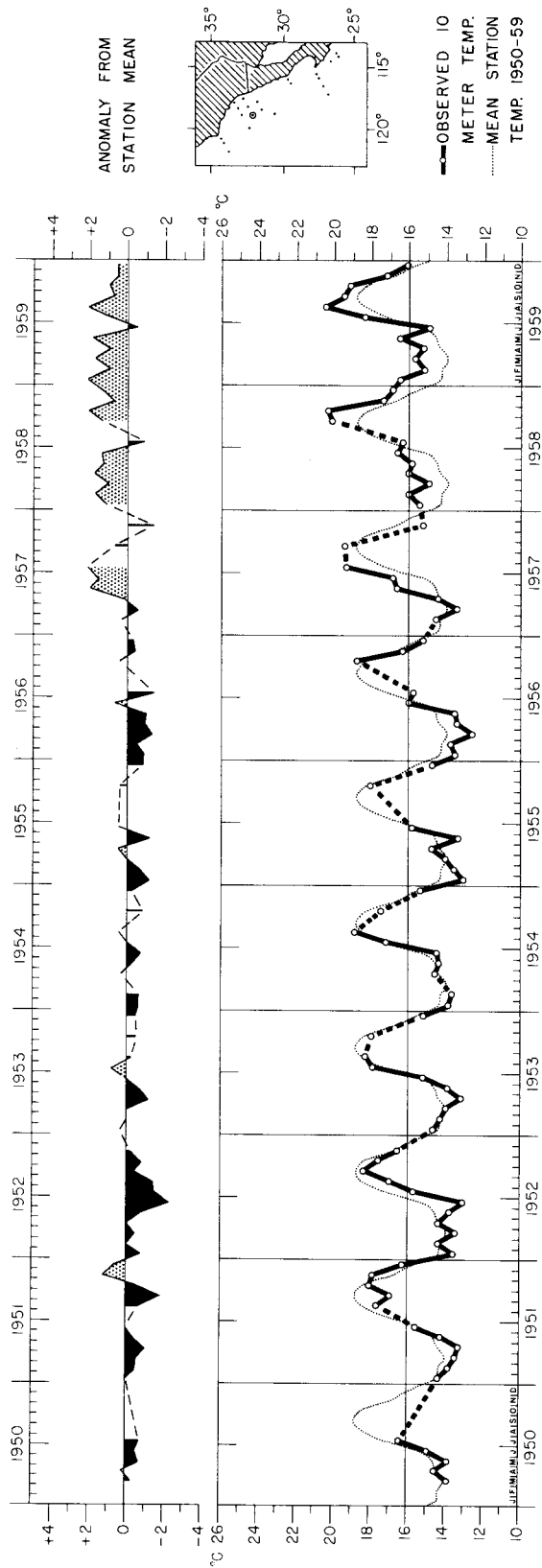


10m T
90.60
93.30



CALCOFI STATION 93.40

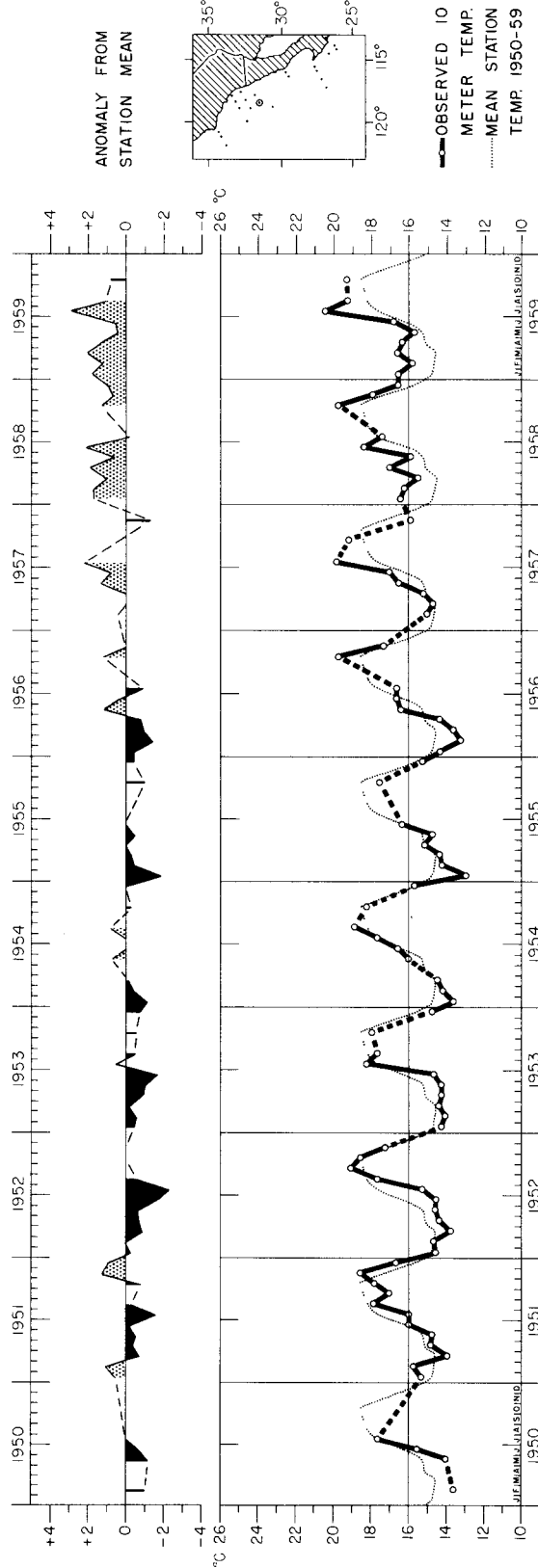
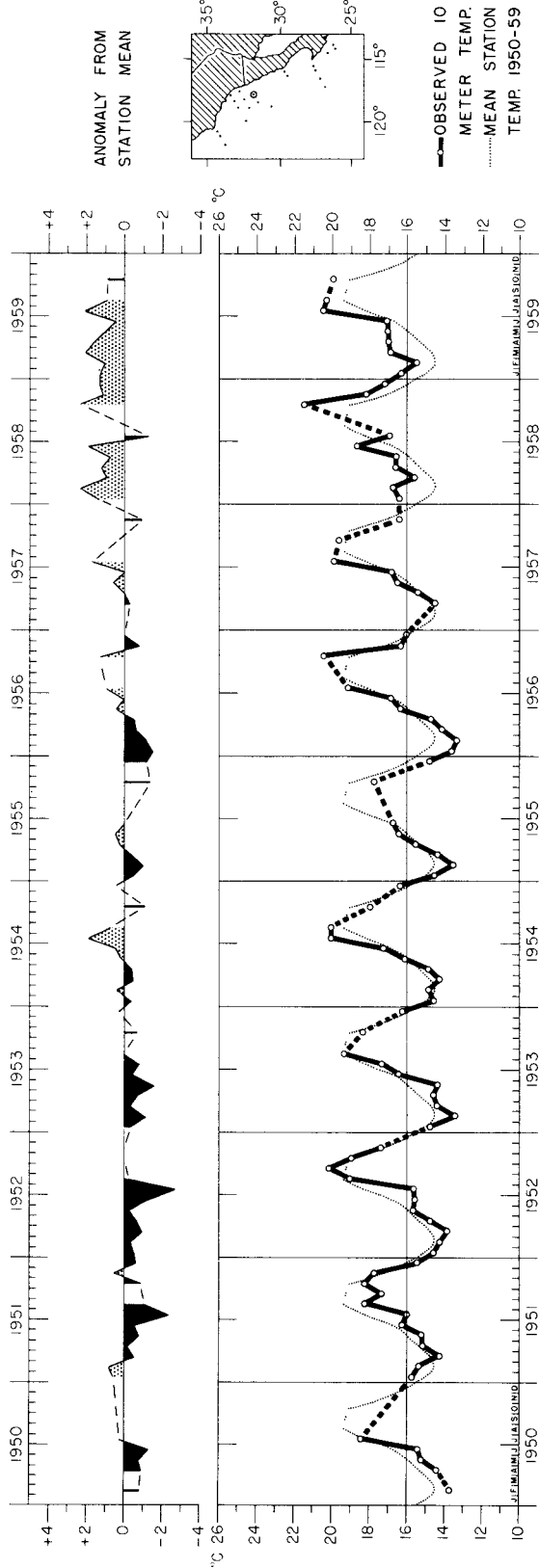
DCPG 1959



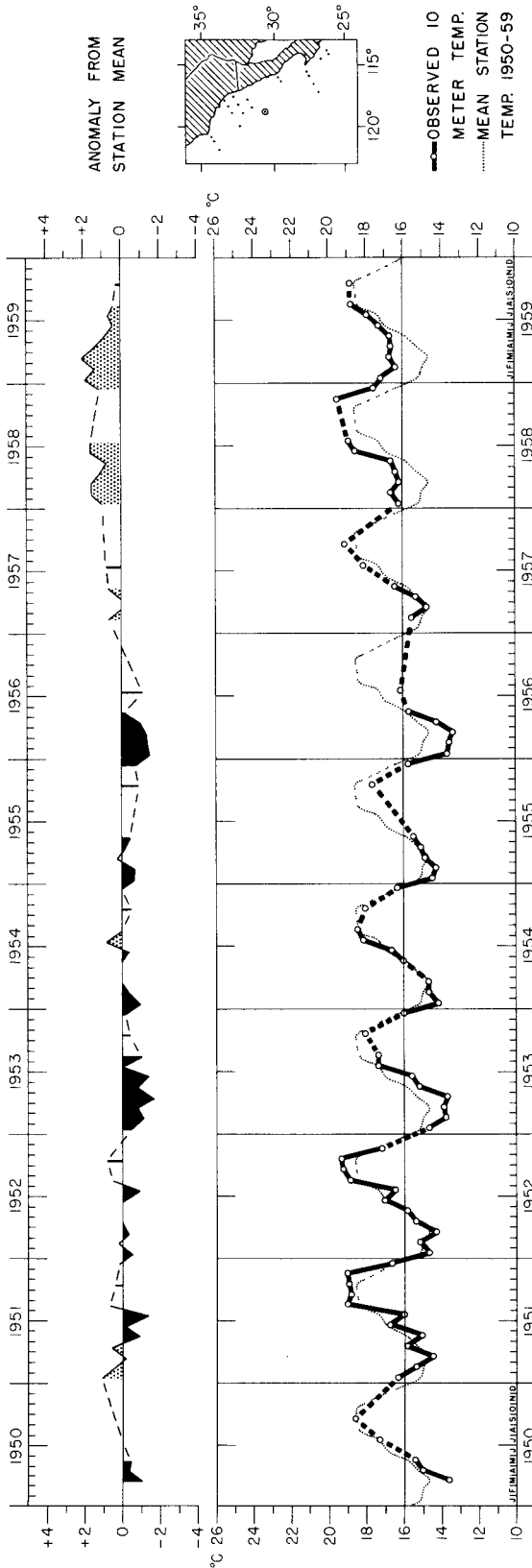
CALCOFI STATION 93.50

DCPG 1959

10m T
93.40
93.50

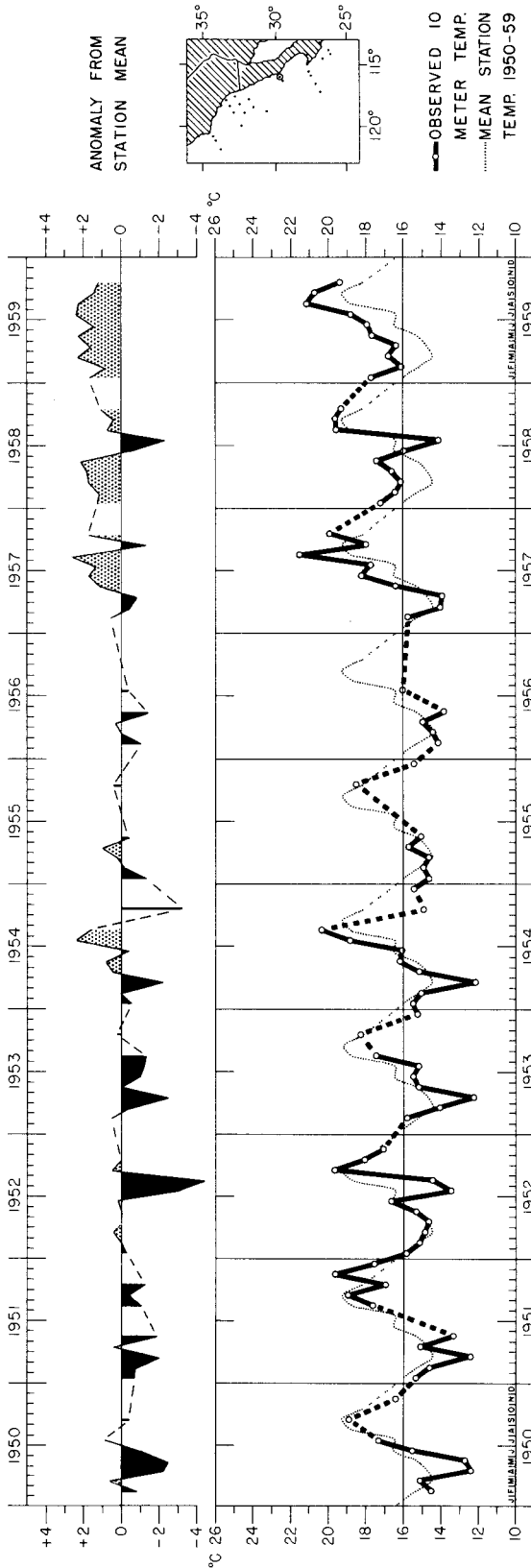


10m T
97.40
97.50



10 METER TEMPERATURE

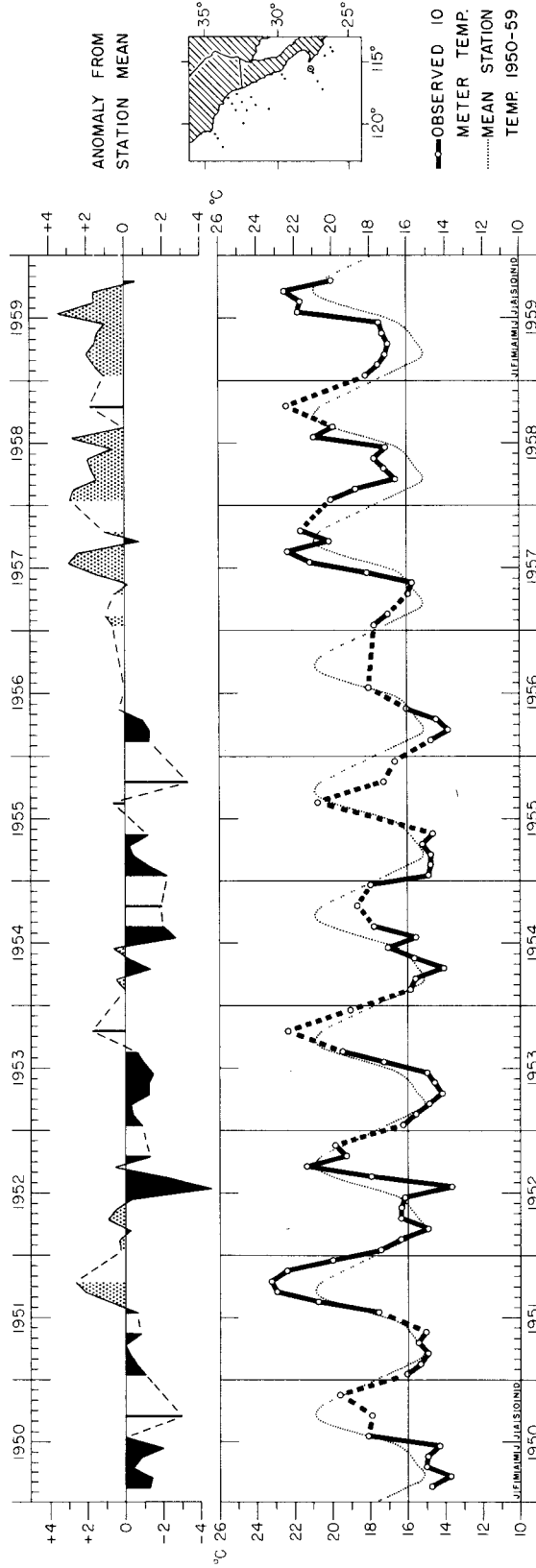
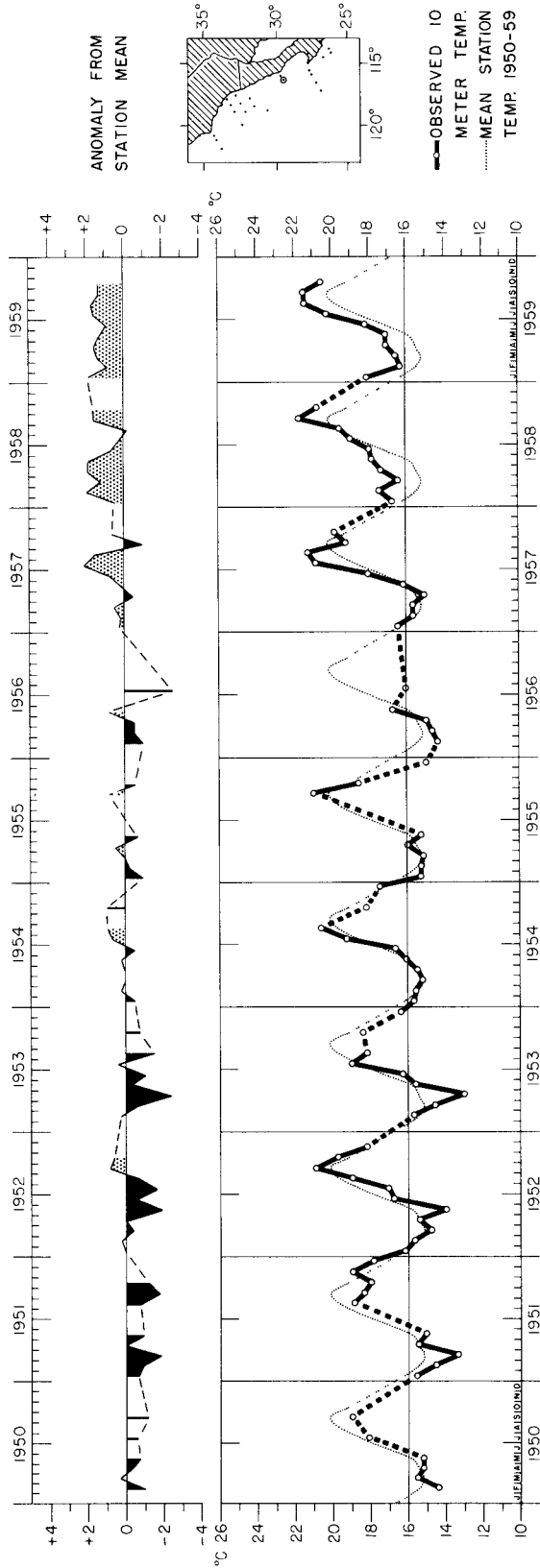
CALCOFI STATION 100.60



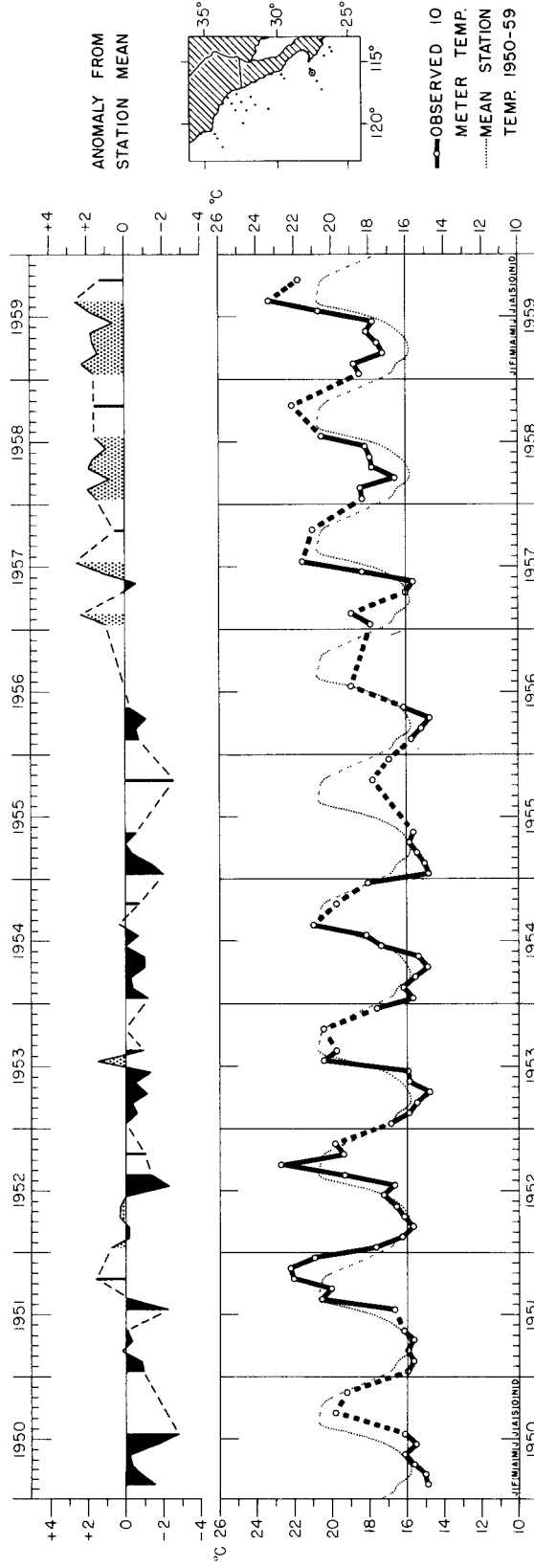
10 METER TEMPERATURE

CALCOFI STATION 110.35

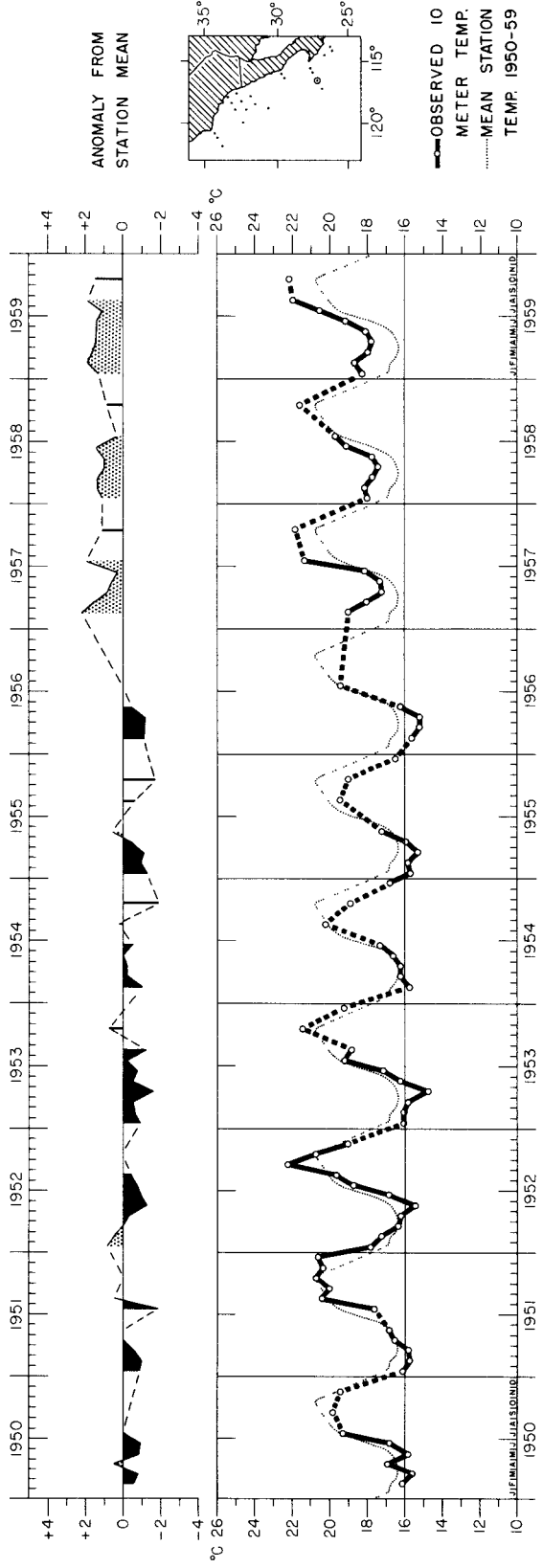
10m T
 100.60
 110.35



10m T
110.40
120.45

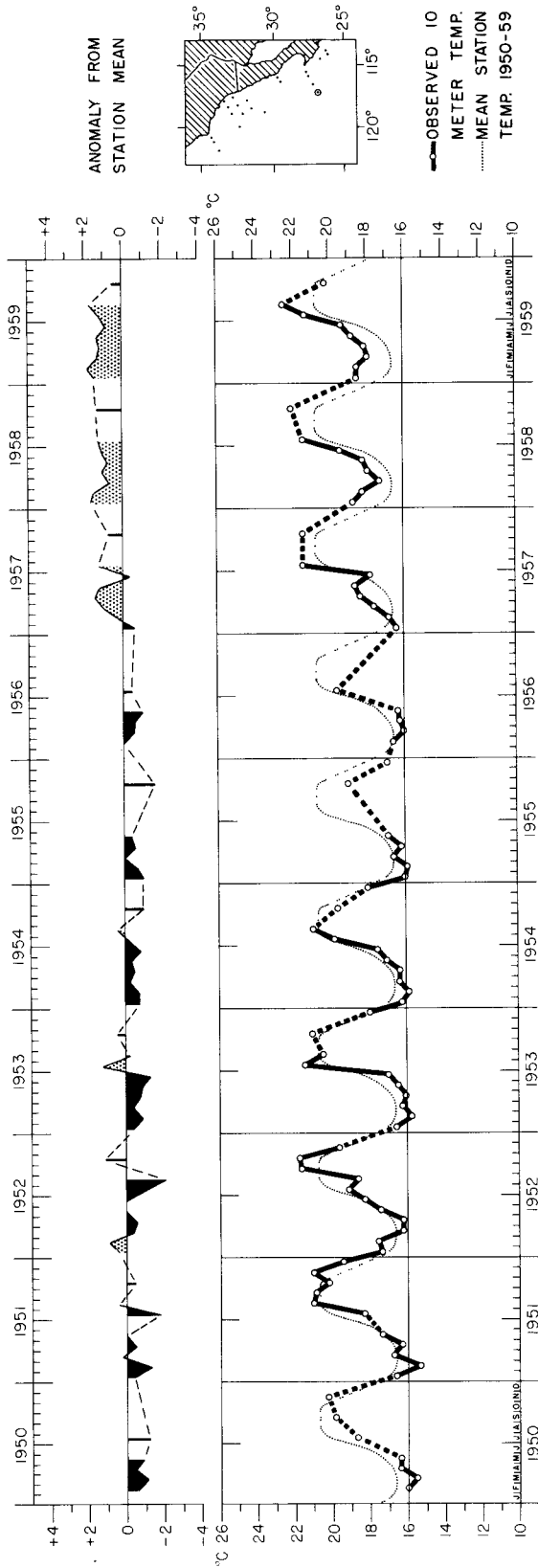


CALCOFI STATION 120.50



CALCOFI STATION 120.60

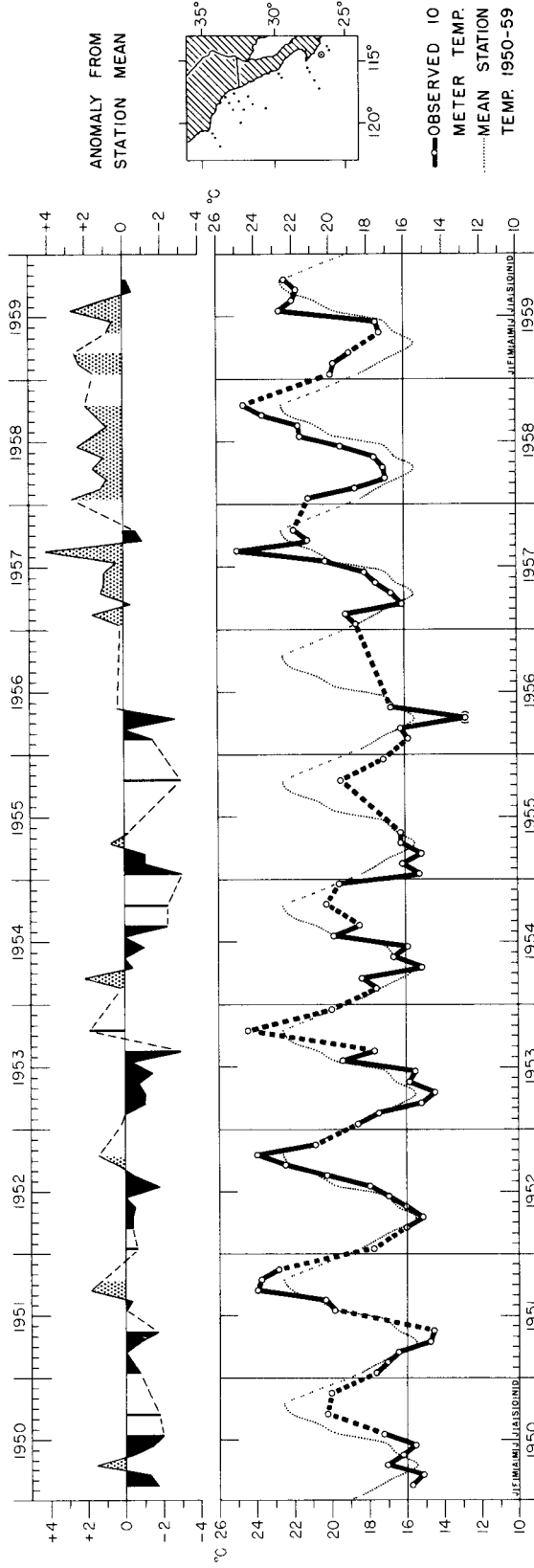
10m T
 120.50
 120.60



CALCOFI STATION 120.70

10 METER TEMPERATURE

DCPG 1959

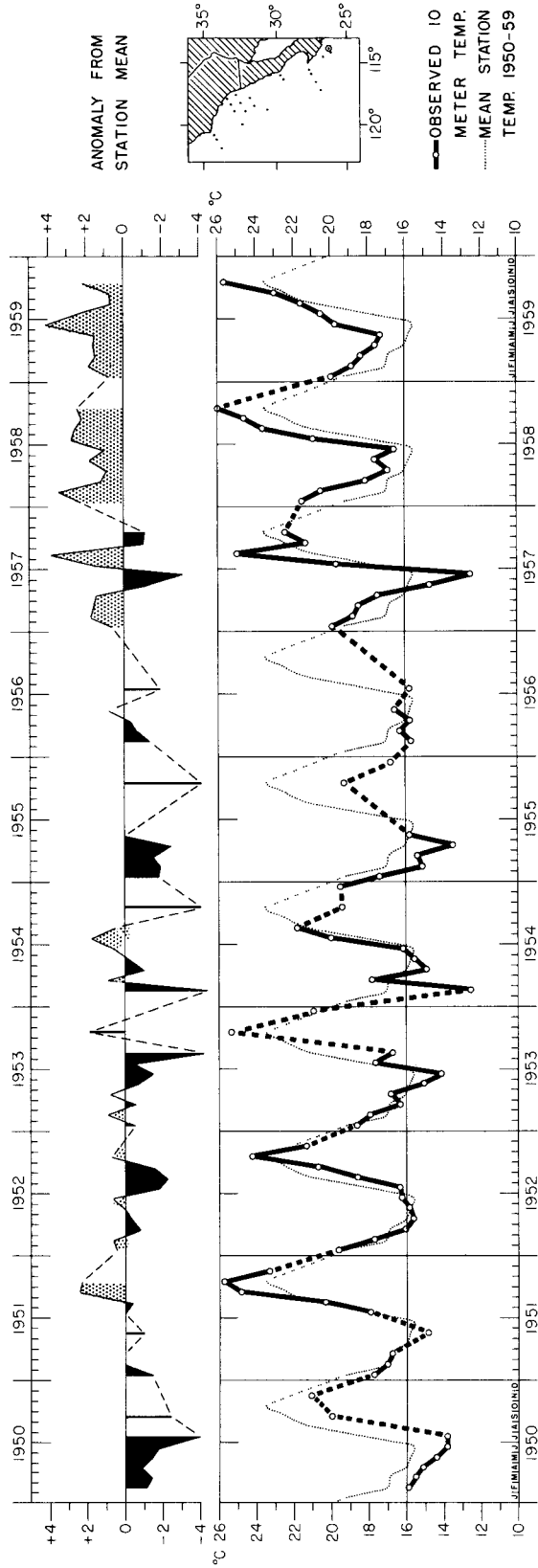


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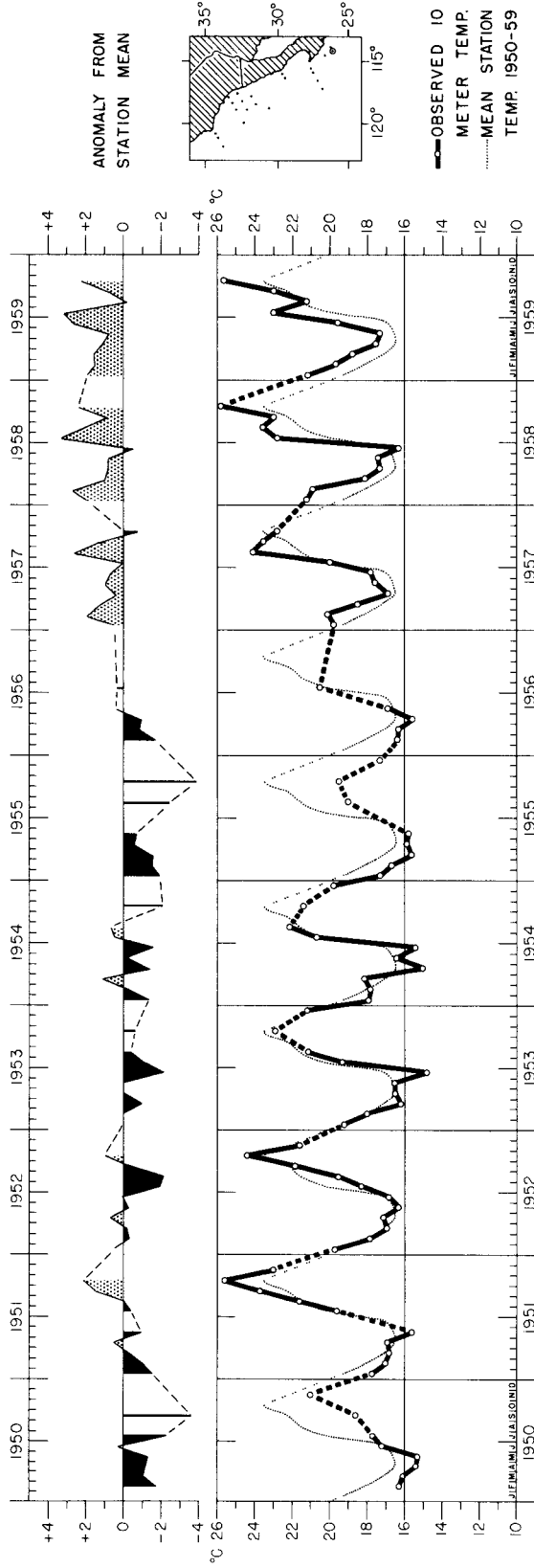
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DCPG 1959

10m T
120.70
127.40

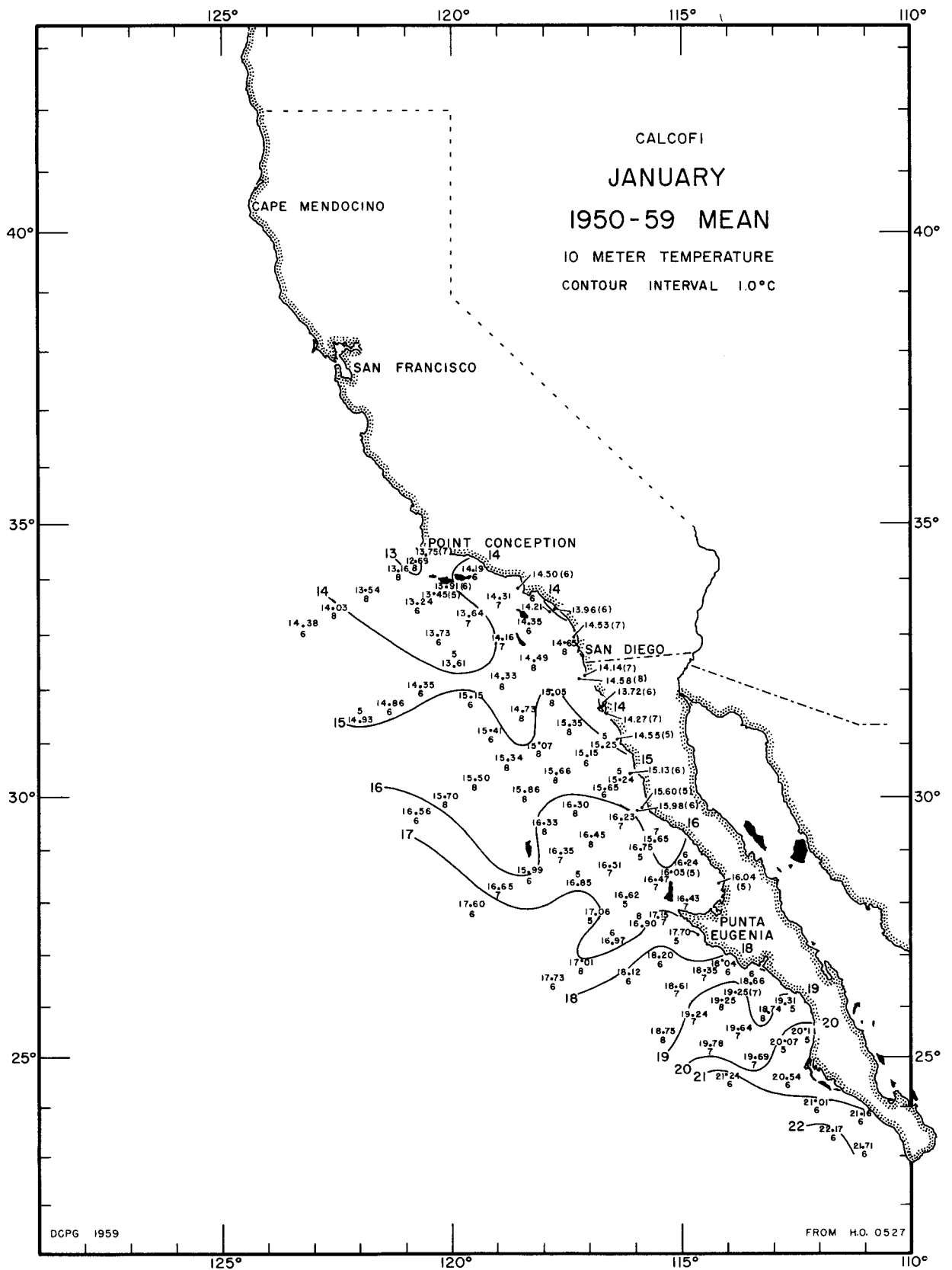


CALCOFI STATION 130.35

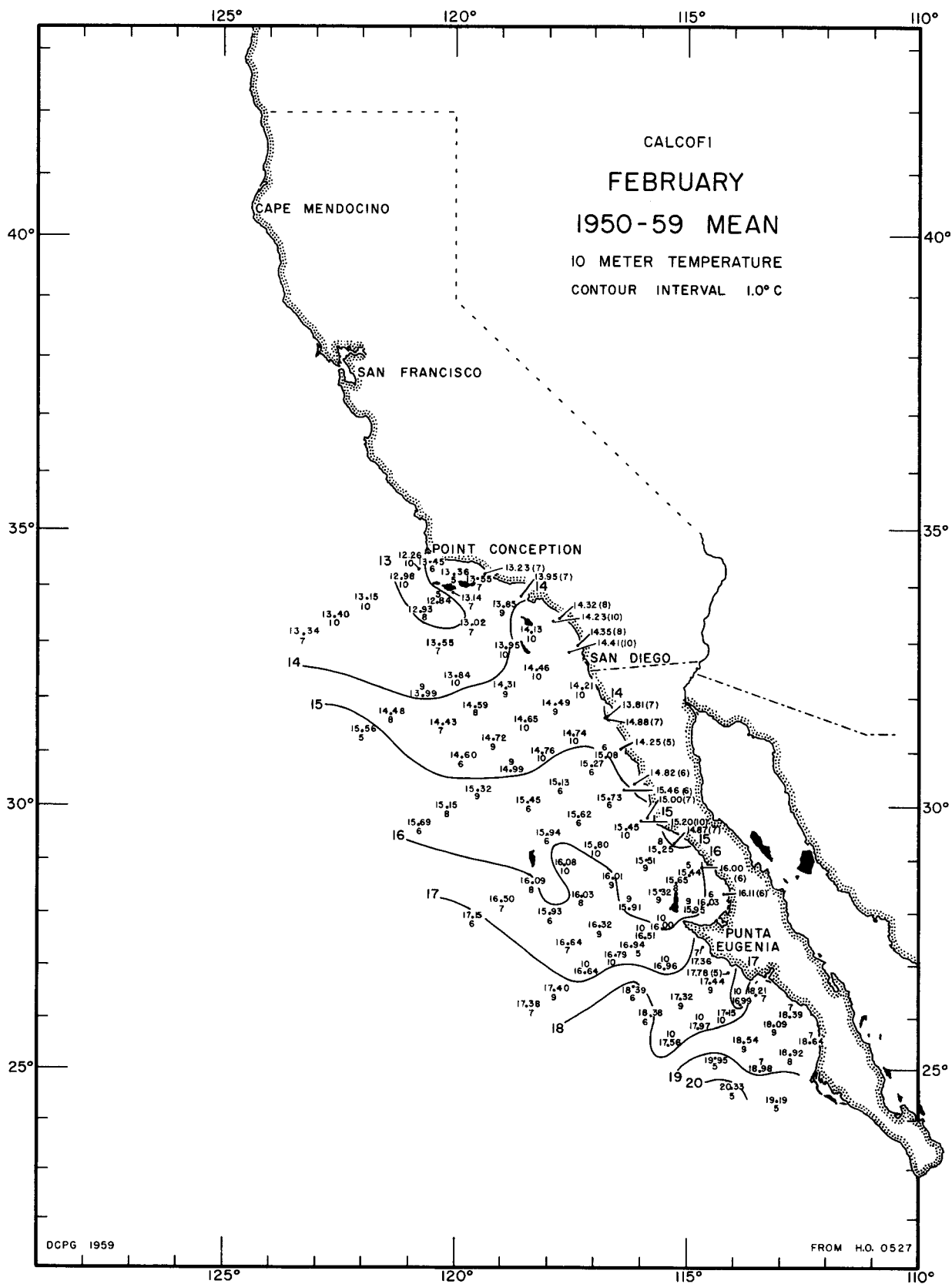


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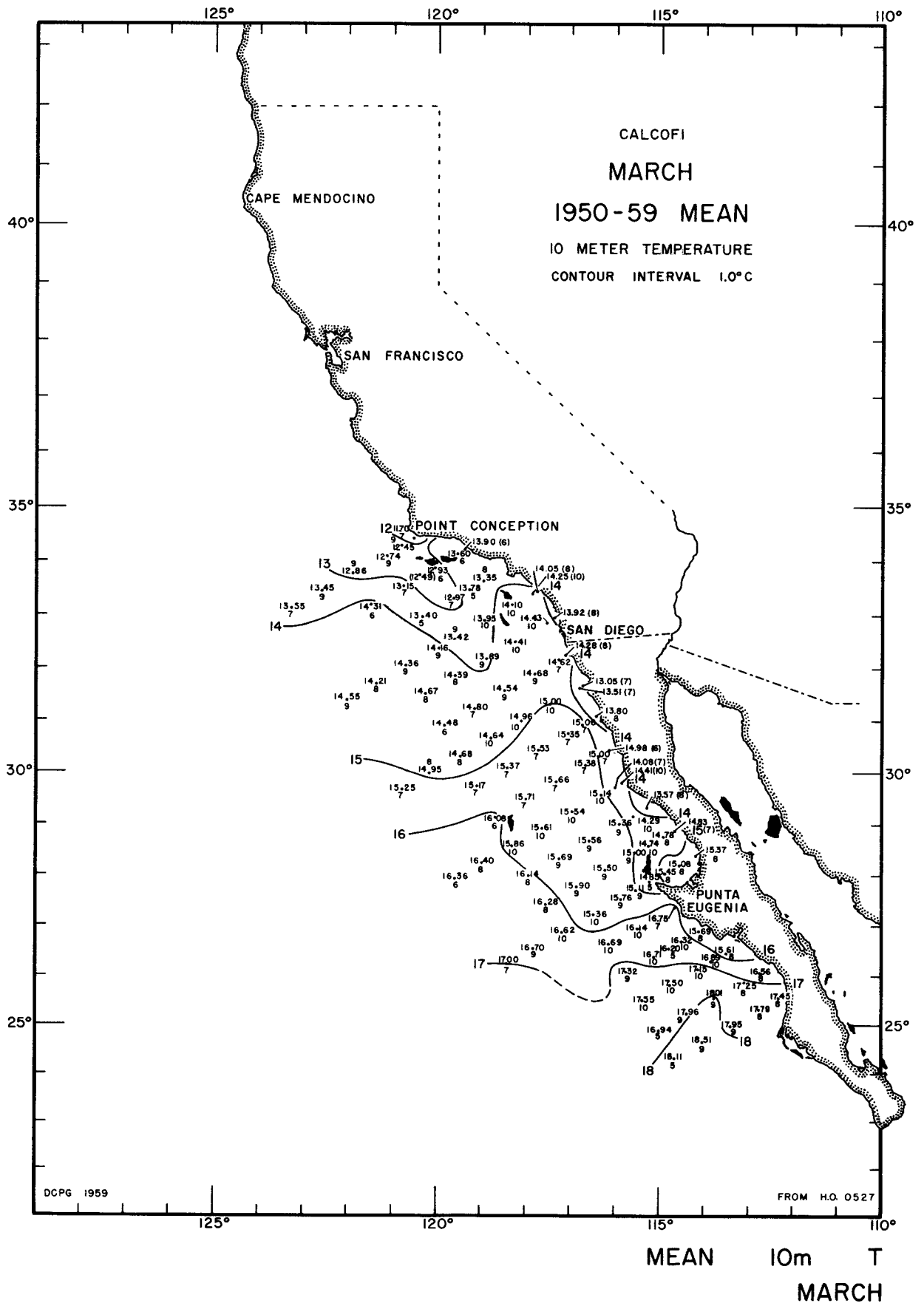
10m T
 130.35
 130.40

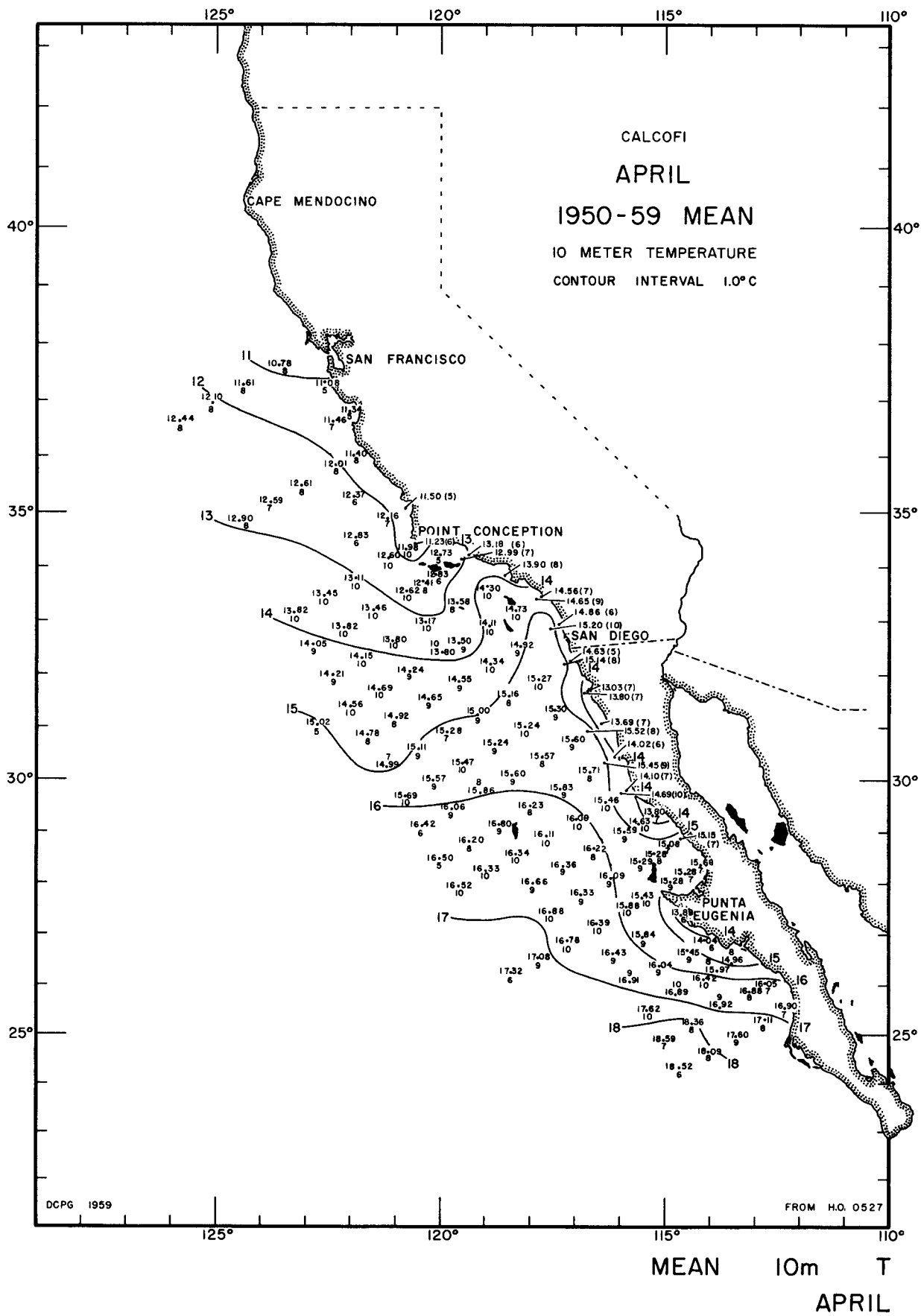


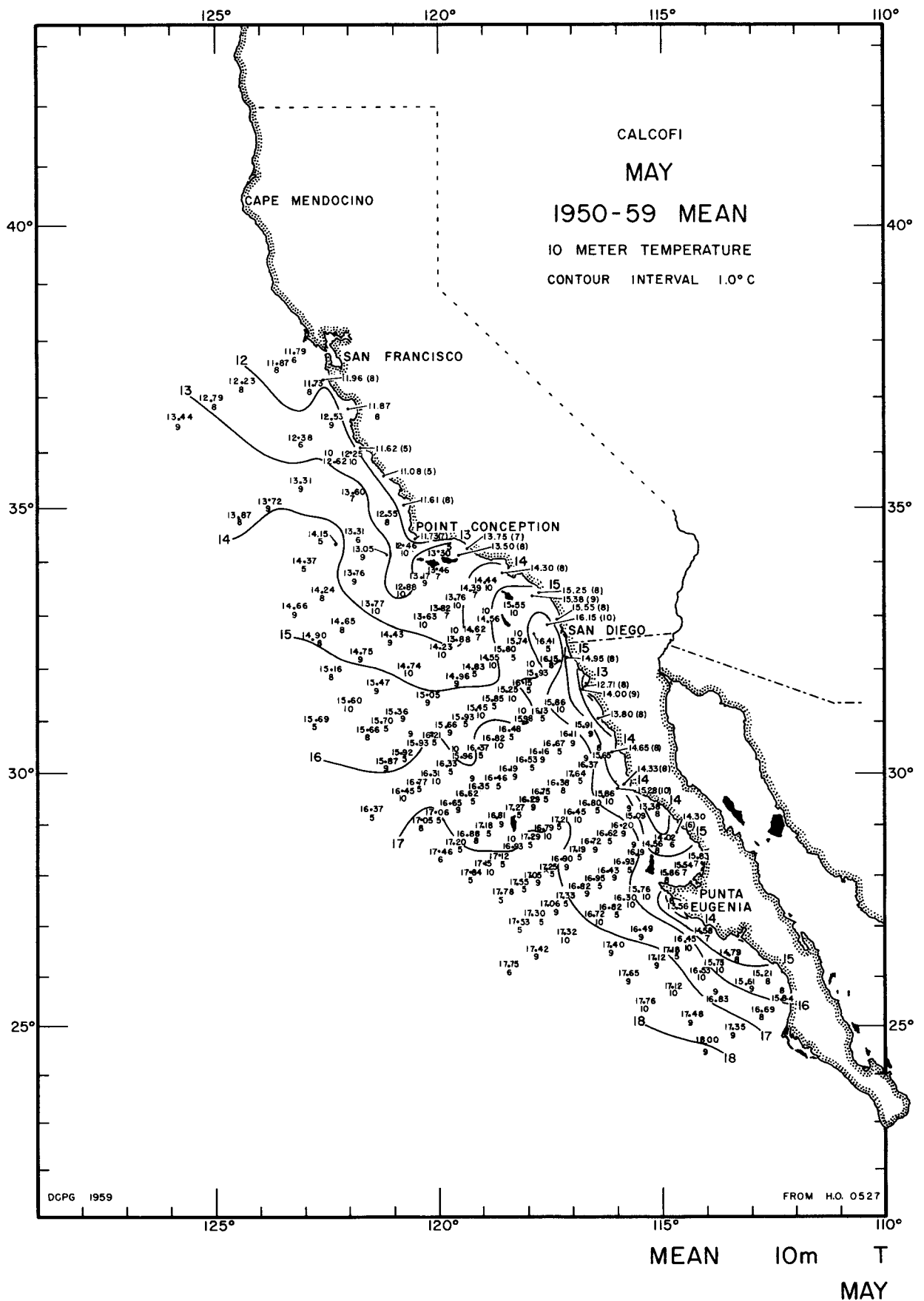
MEAN 10m T
 JANUARY

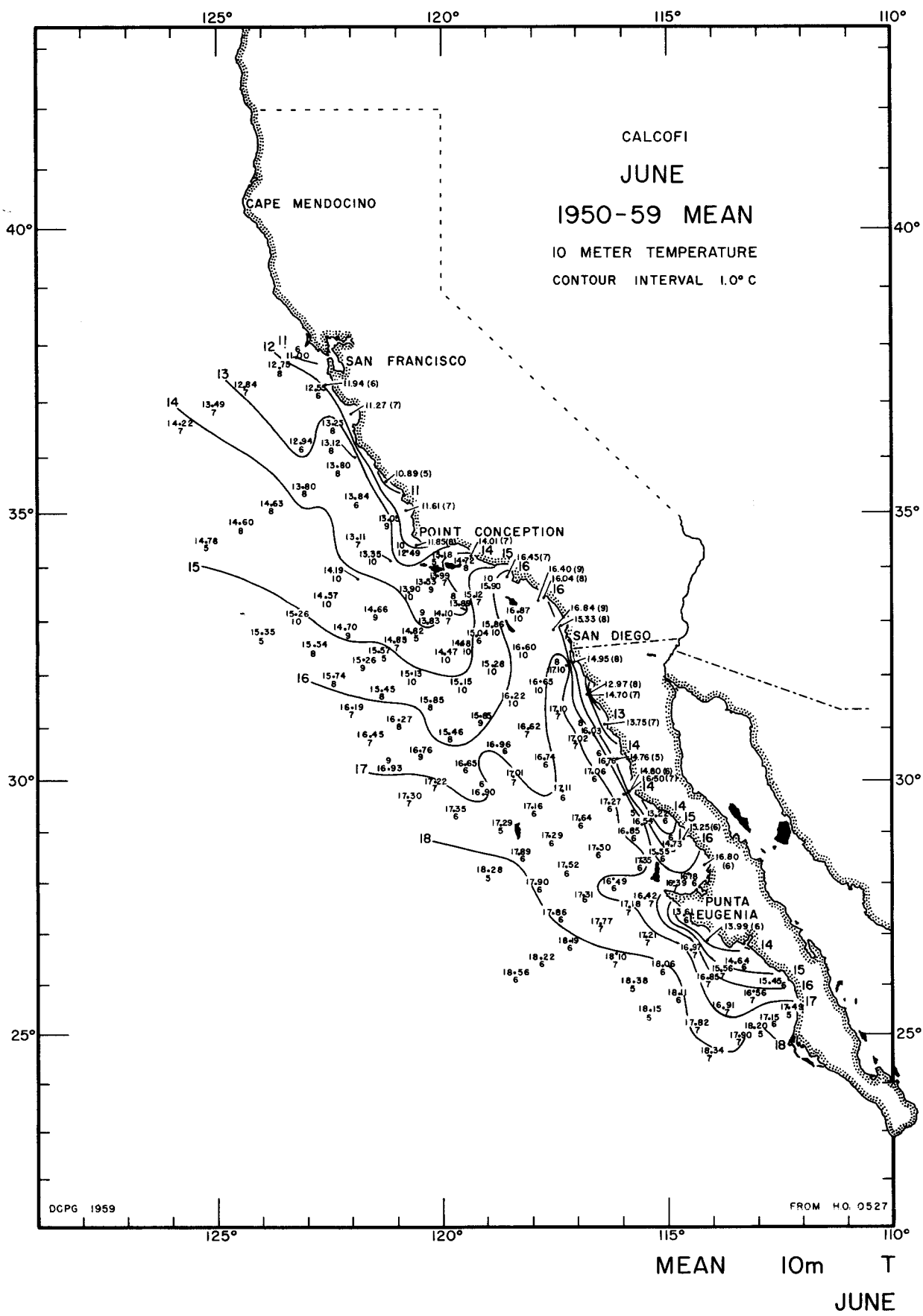


MEAN 10m T
 FEBRUARY









CALCOFI

JUNE

1950-59 MEAN

10 METER TEMPERATURE

CONTOUR INTERVAL 1.0° C

CAPE MENDOCINO

SAN FRANCISCO

POINT CONCEPTION

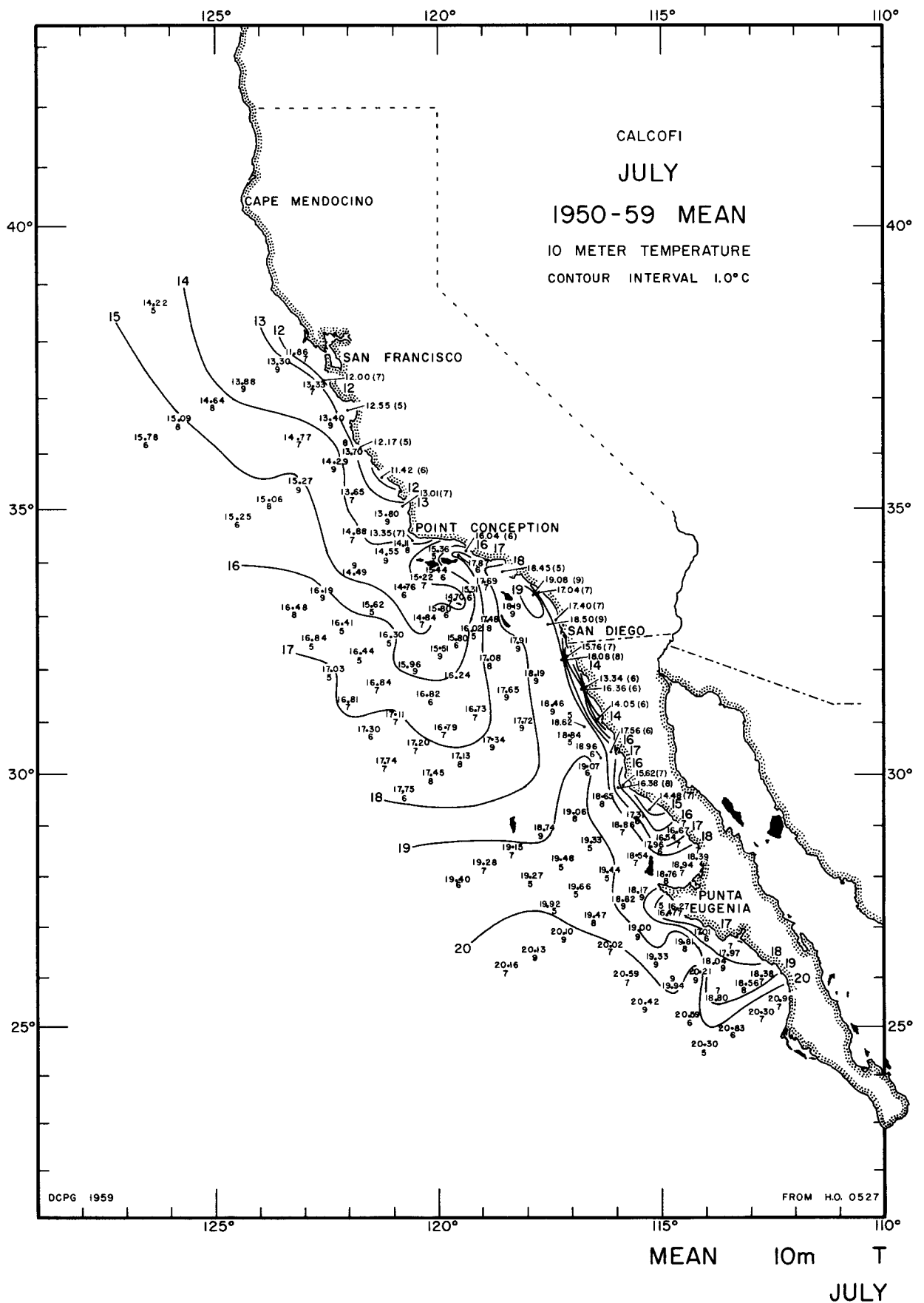
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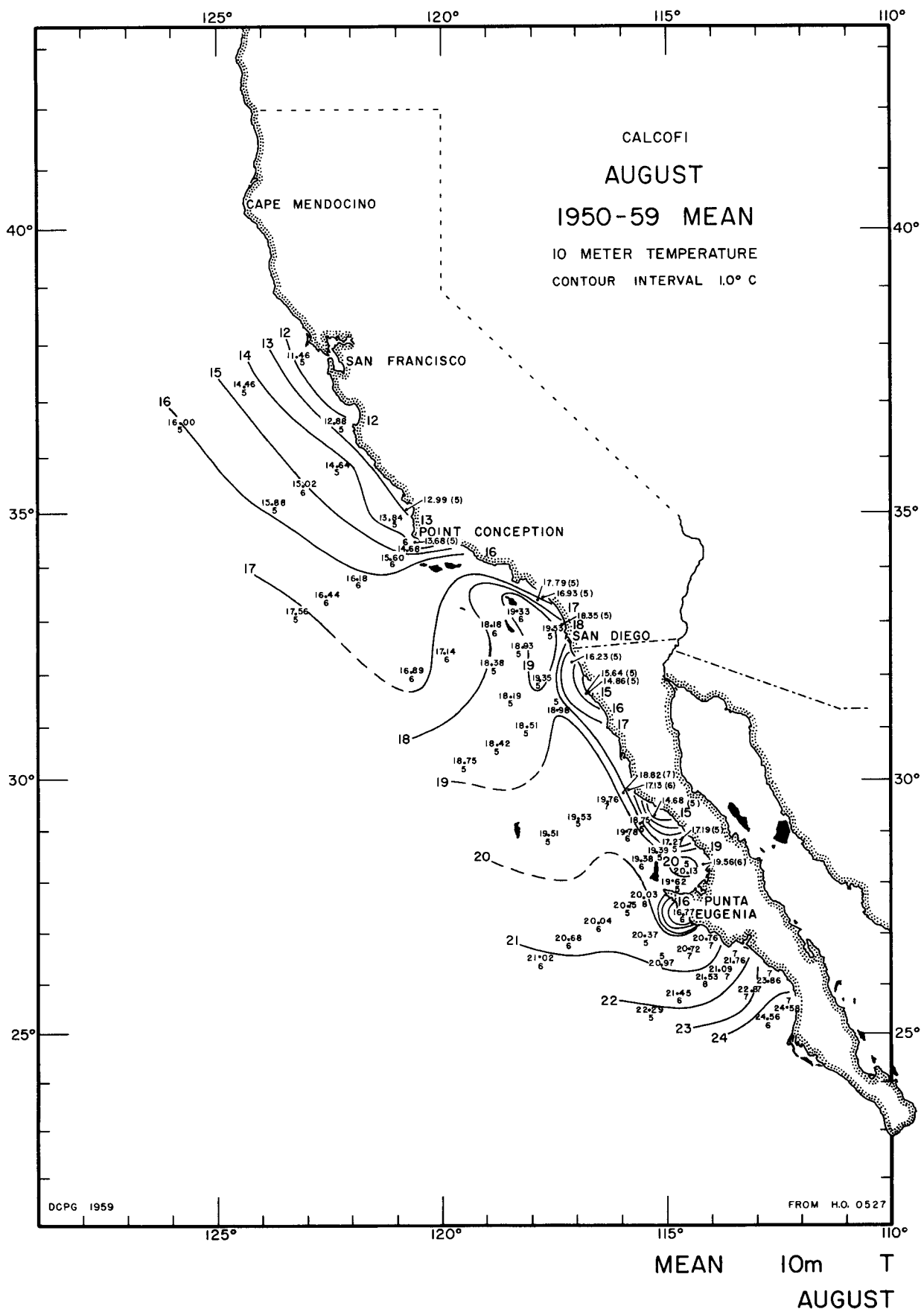
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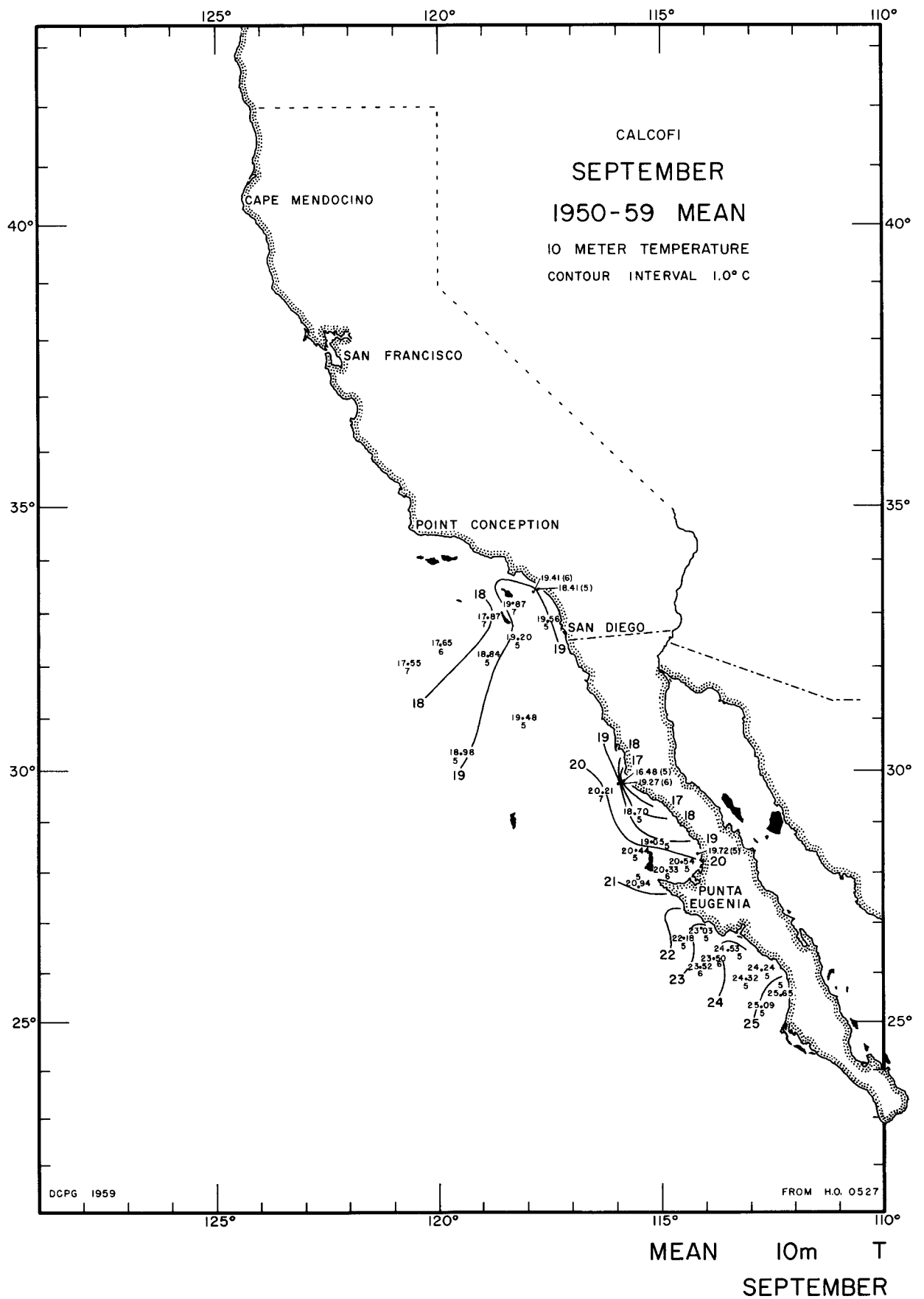
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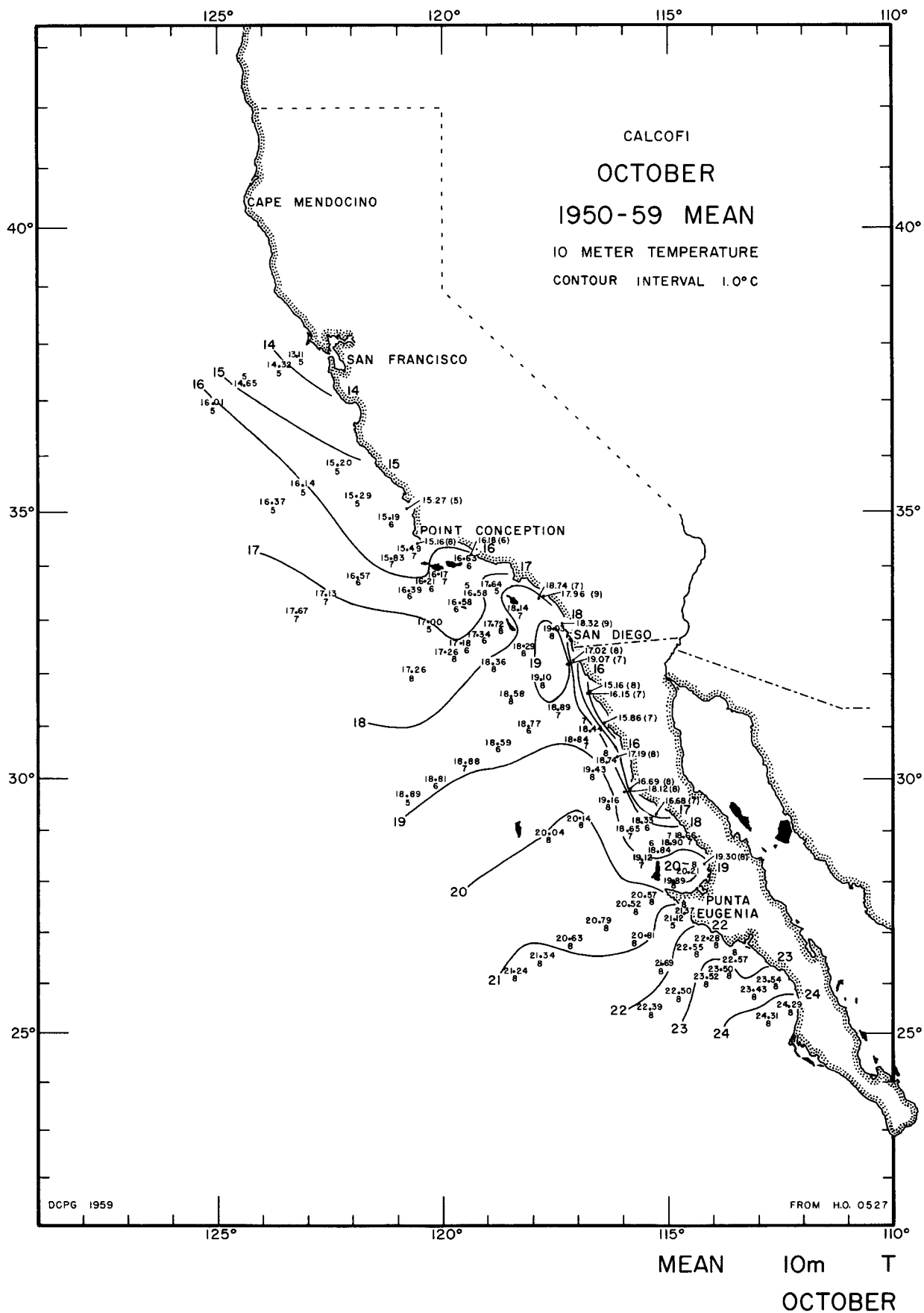
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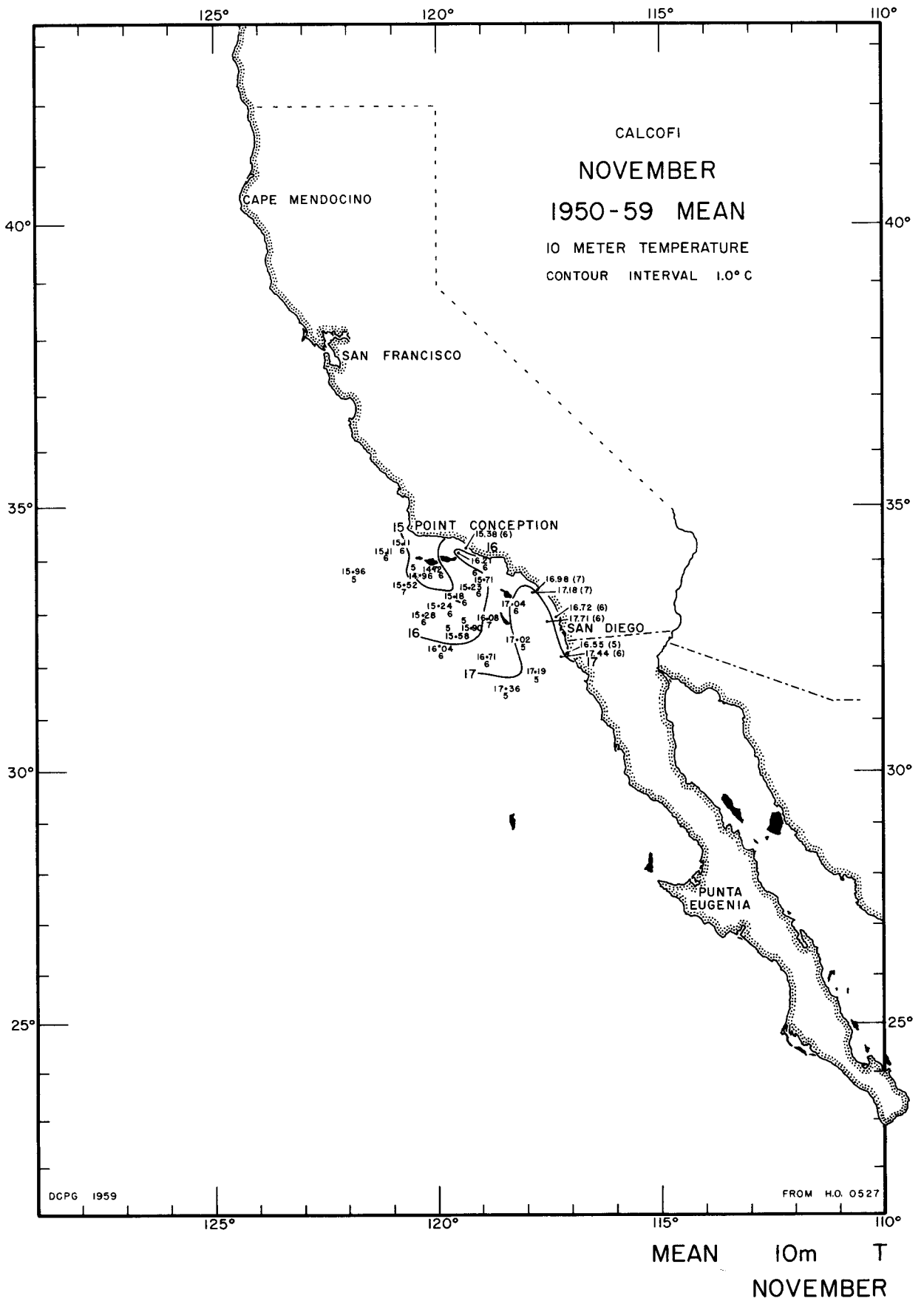
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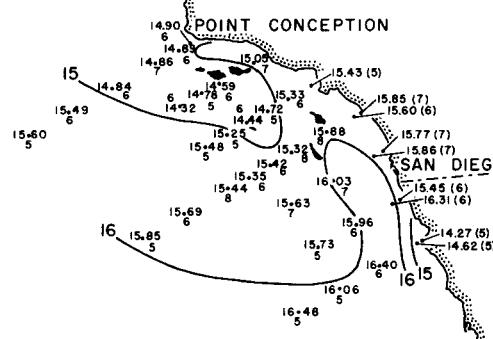
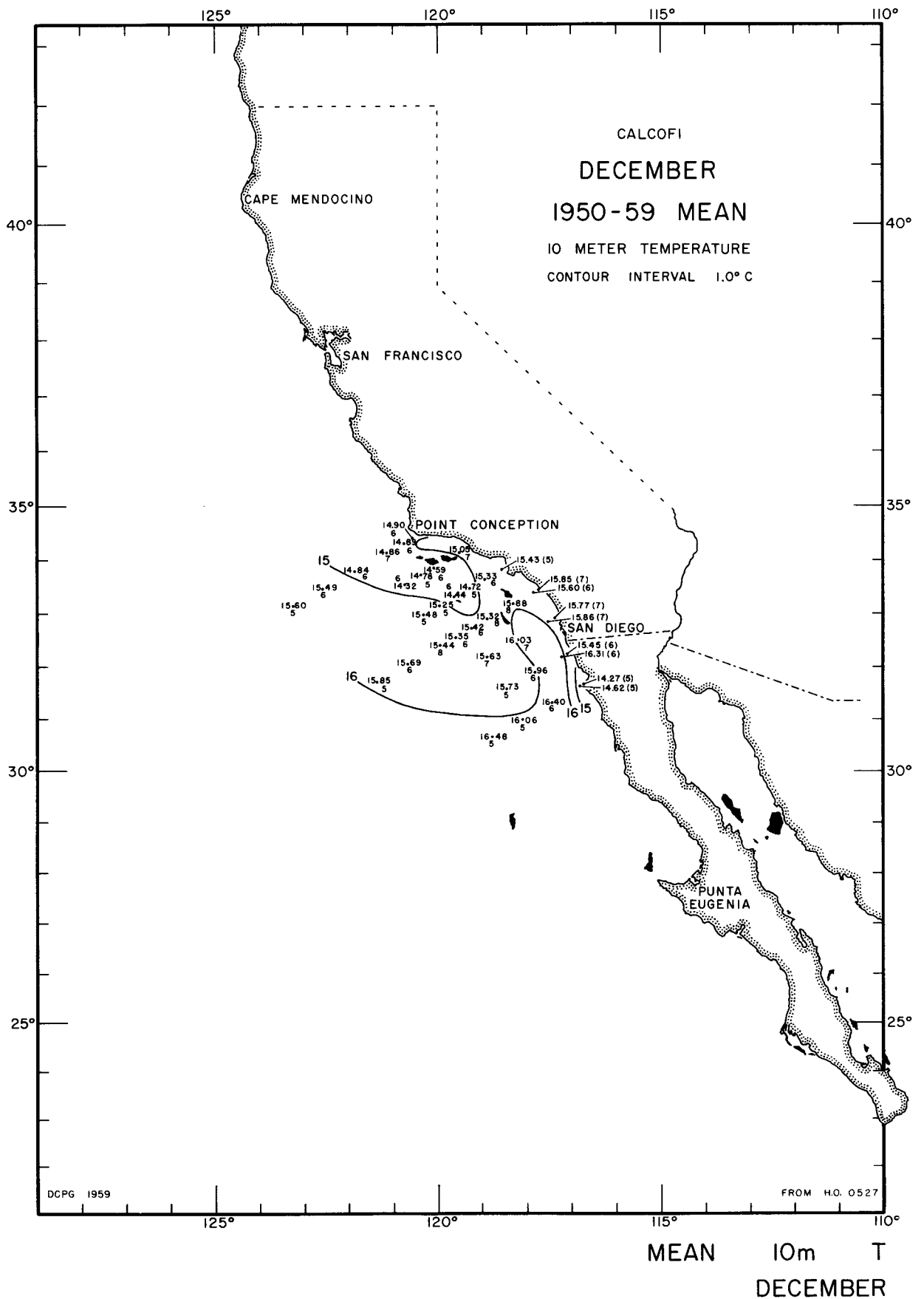


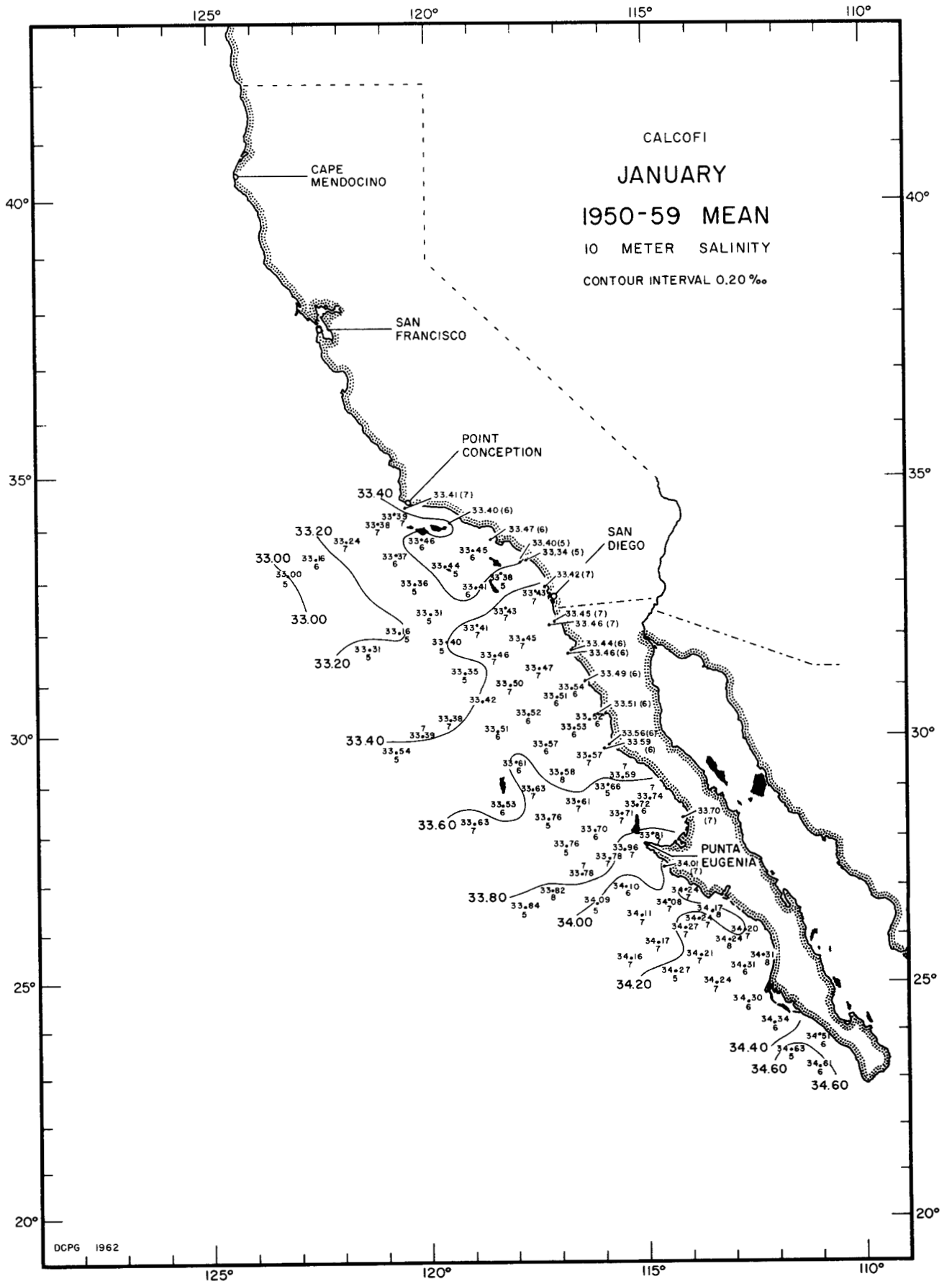






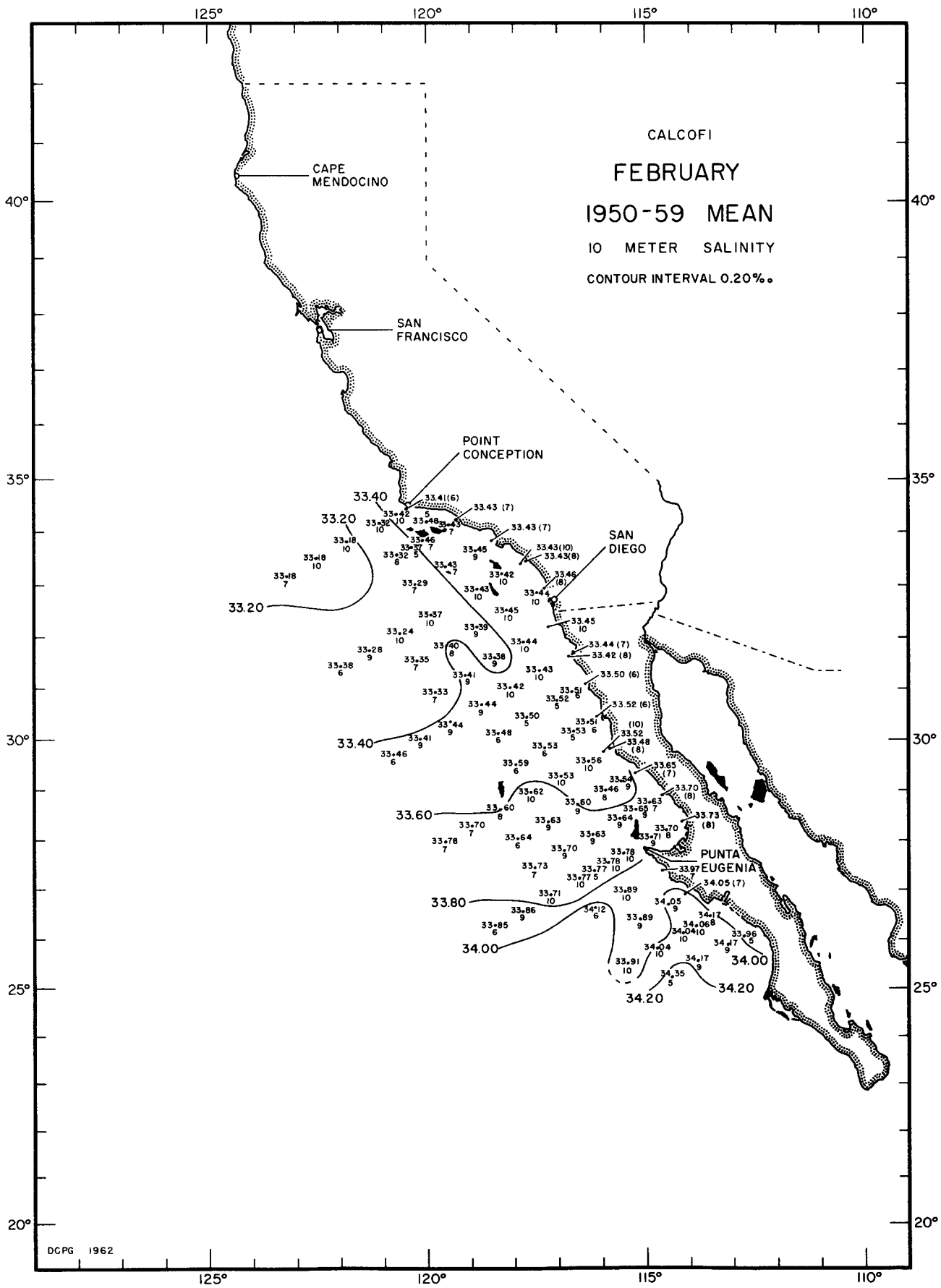






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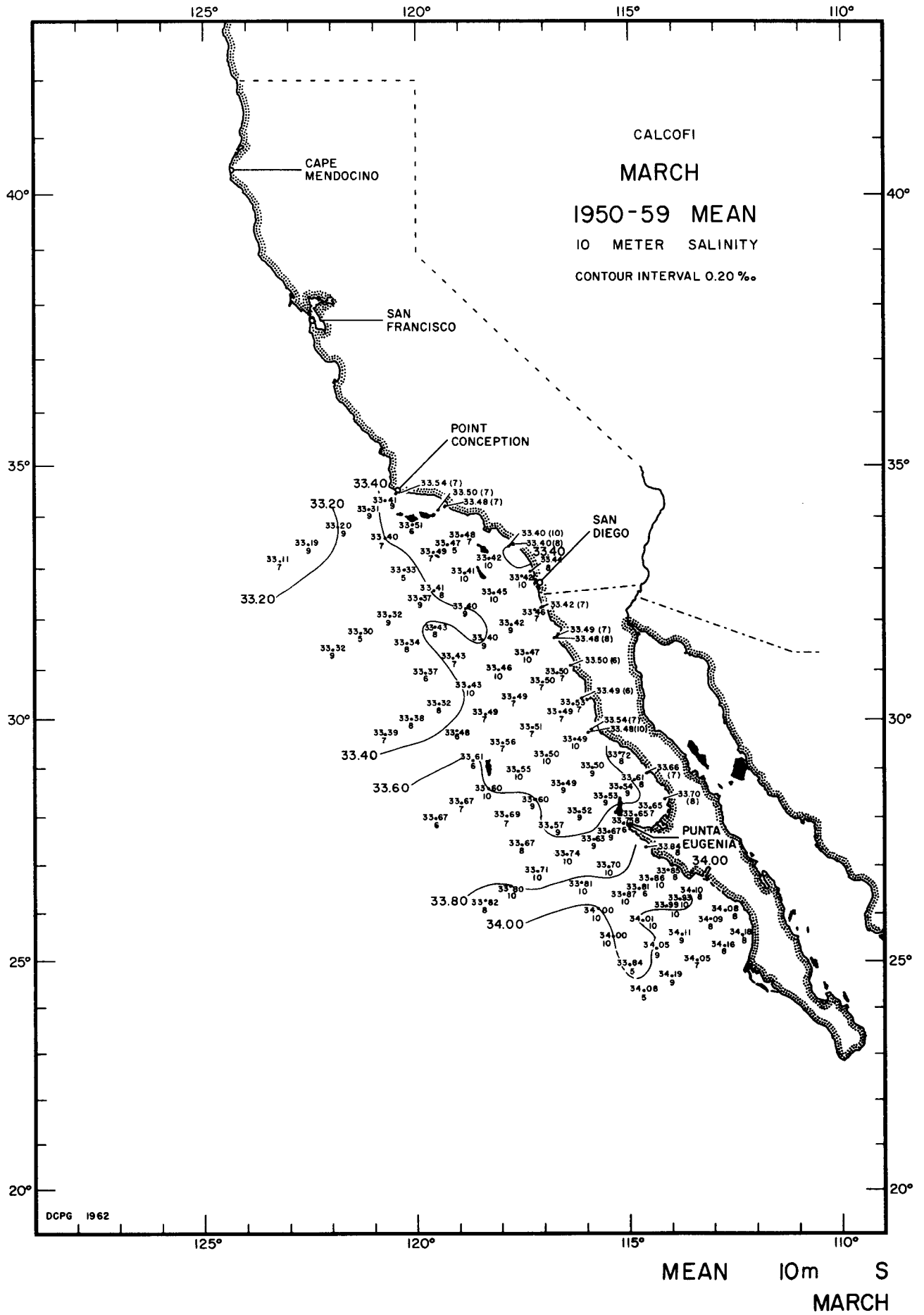
MEAN 10m S
JANUARY

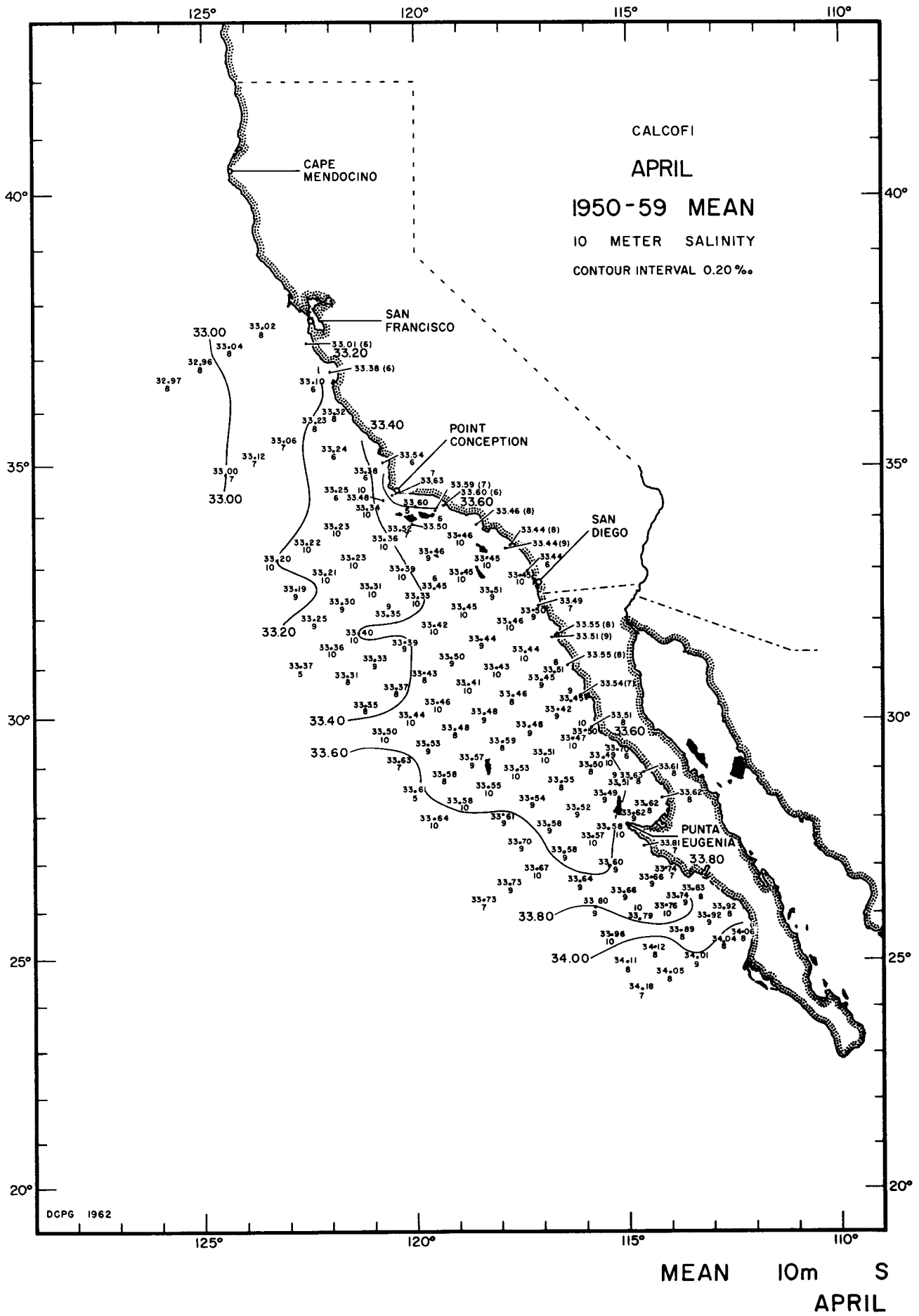


CALCOFI
FEBRUARY
1950-59 MEAN
10 METER SALINITY
CONTOUR INTERVAL 0.20‰

DCPG 1962

MEAN 10m S
FEBRUARY





CALCOFI

APRIL

1950-59 MEAN

10 METER SALINITY

CONTOUR INTERVAL 0.20‰

CAPE MENDOCINO

SAN FRANCISCO

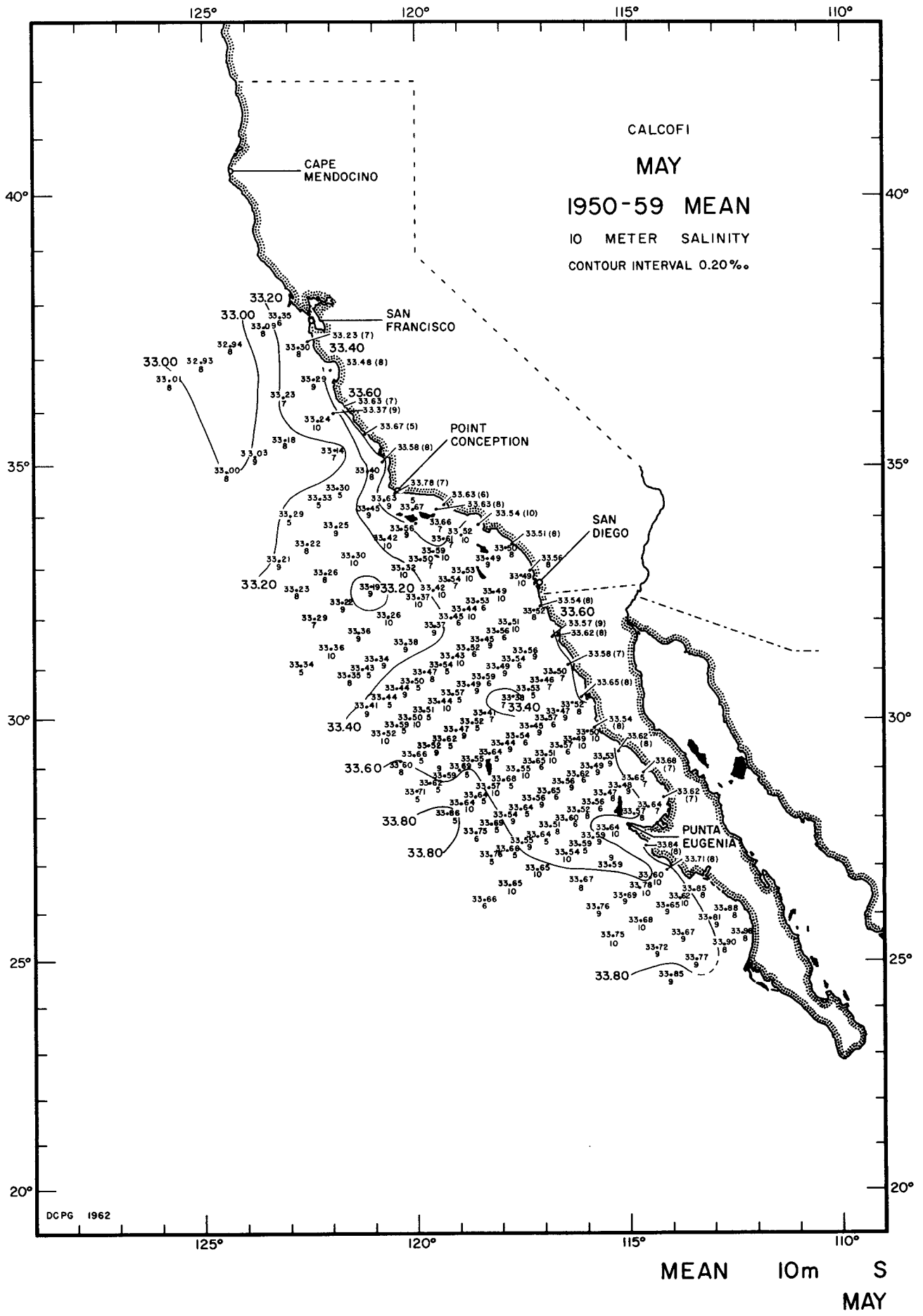
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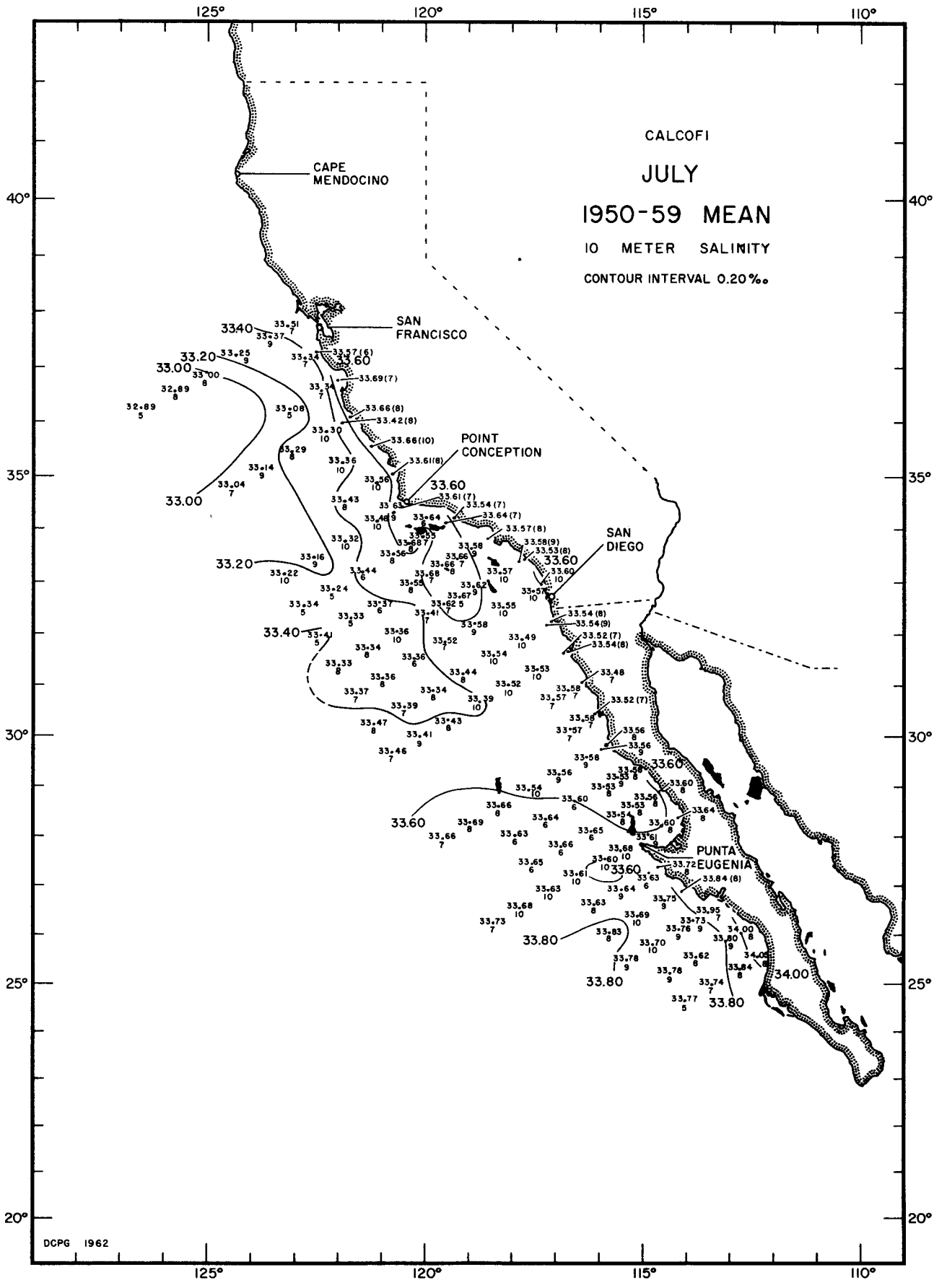
SAN DIEGO

PUNTA EUGENIA

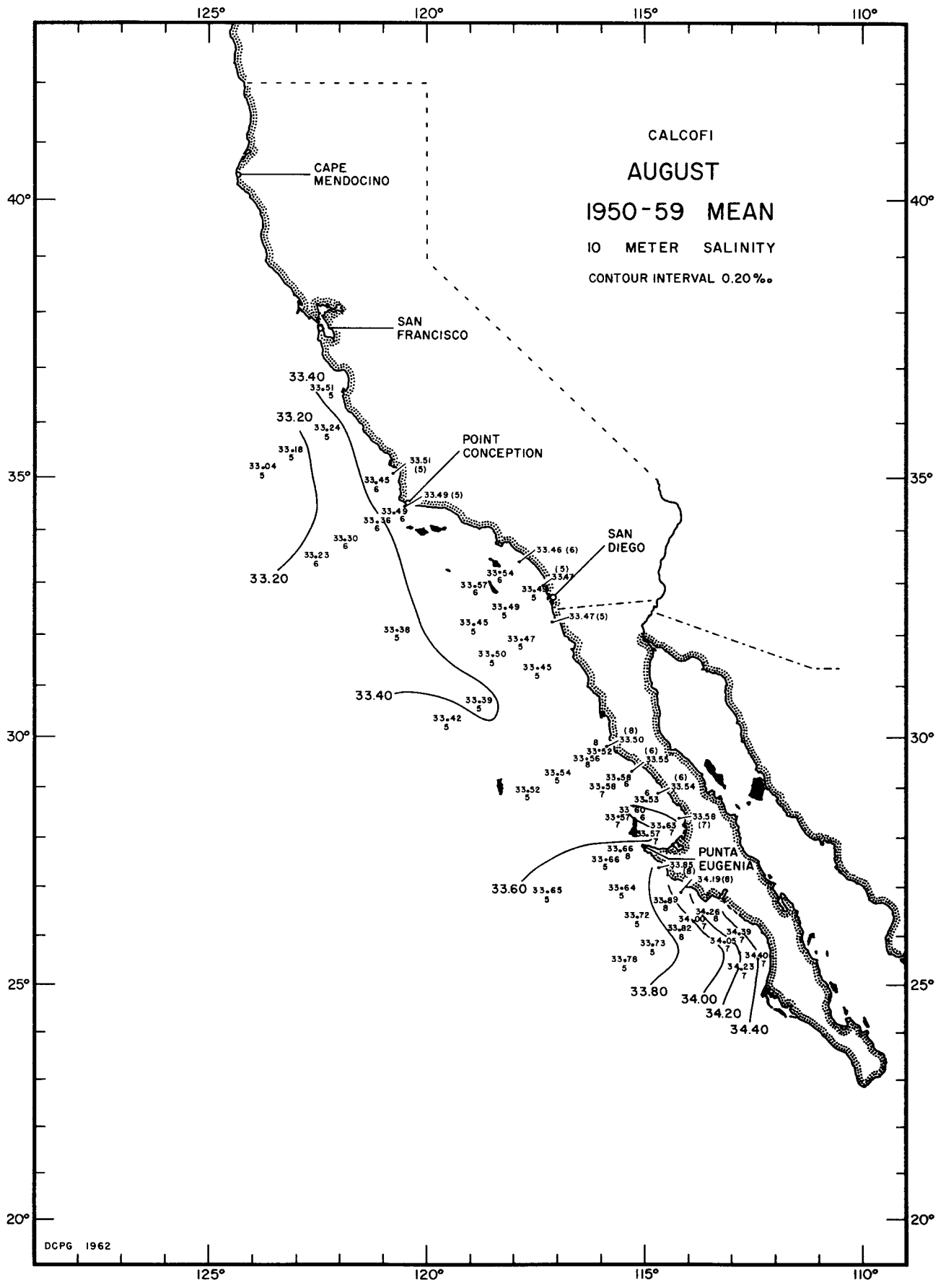
DCPG 1962

MEAN 10m S APRIL

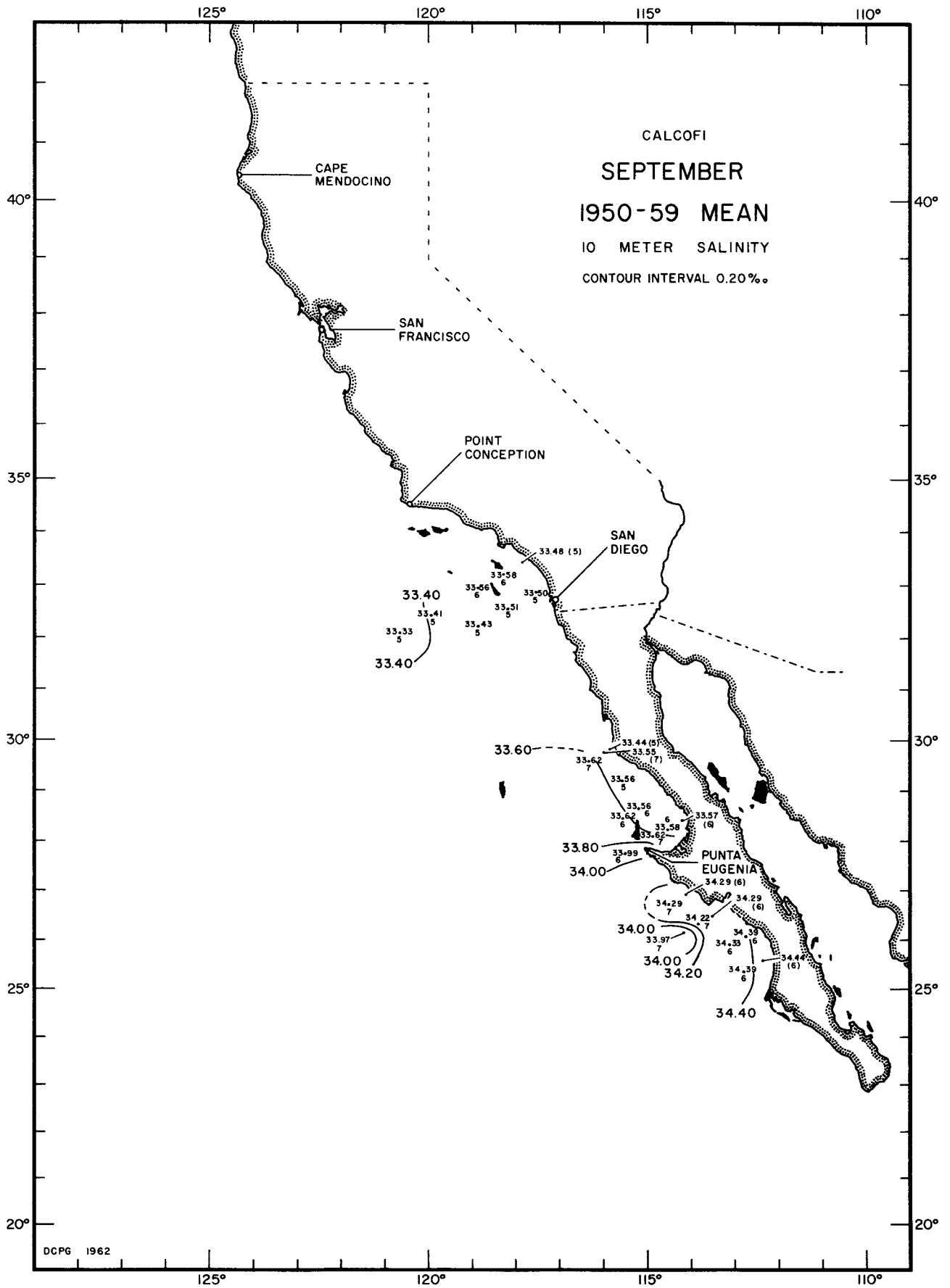




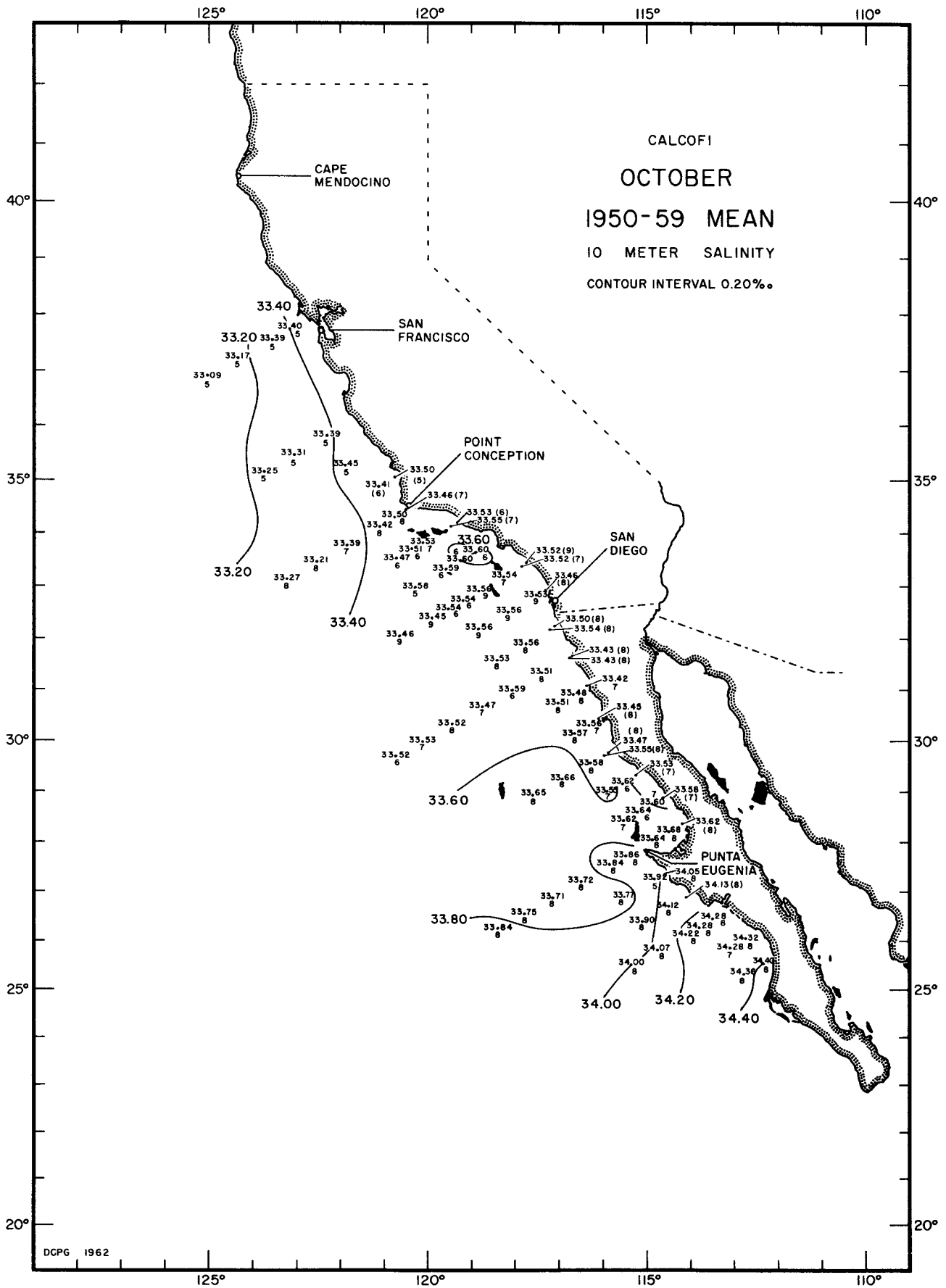
MEAN 10m S
 JULY



MEAN 10m S
 AUGUST

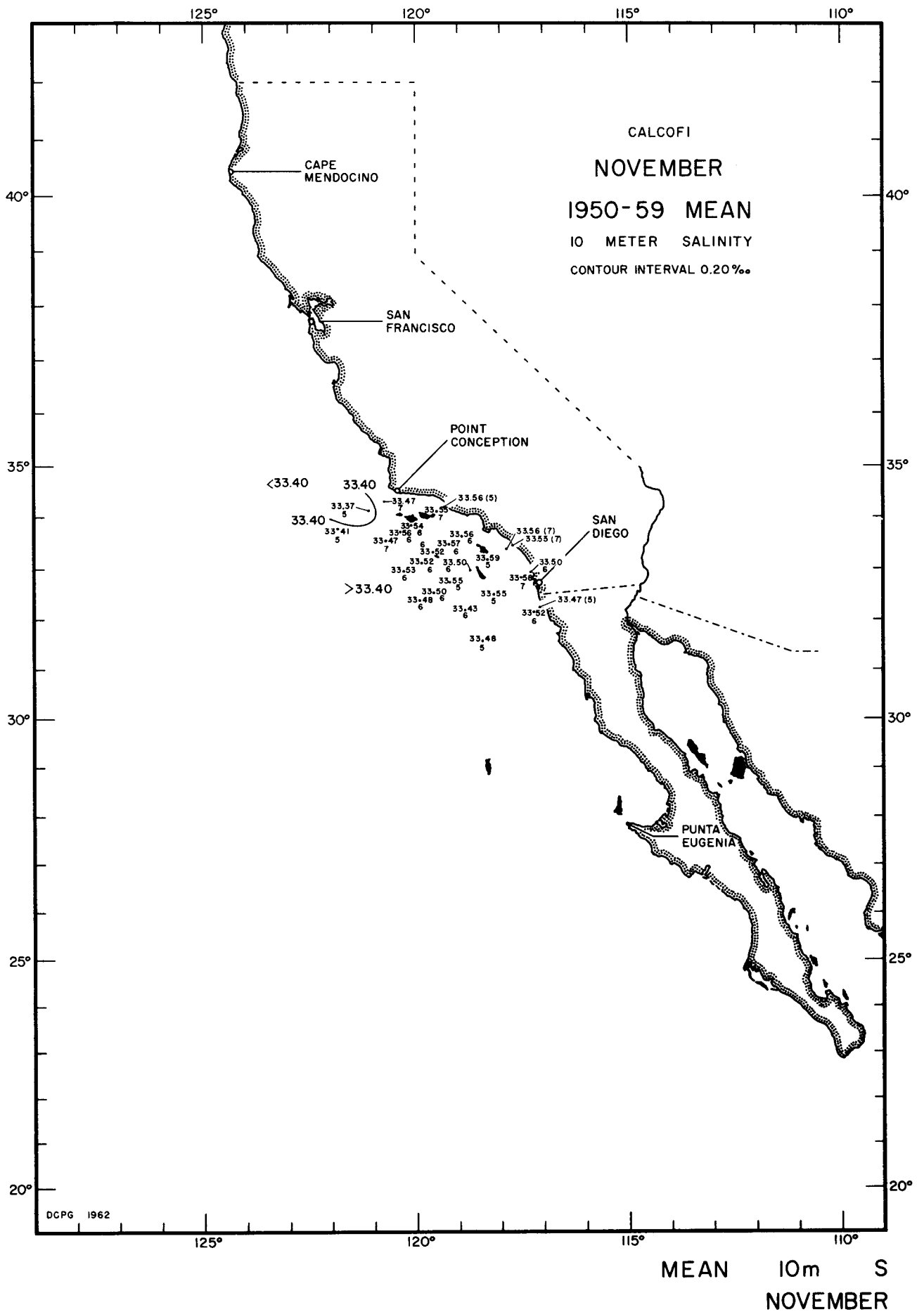


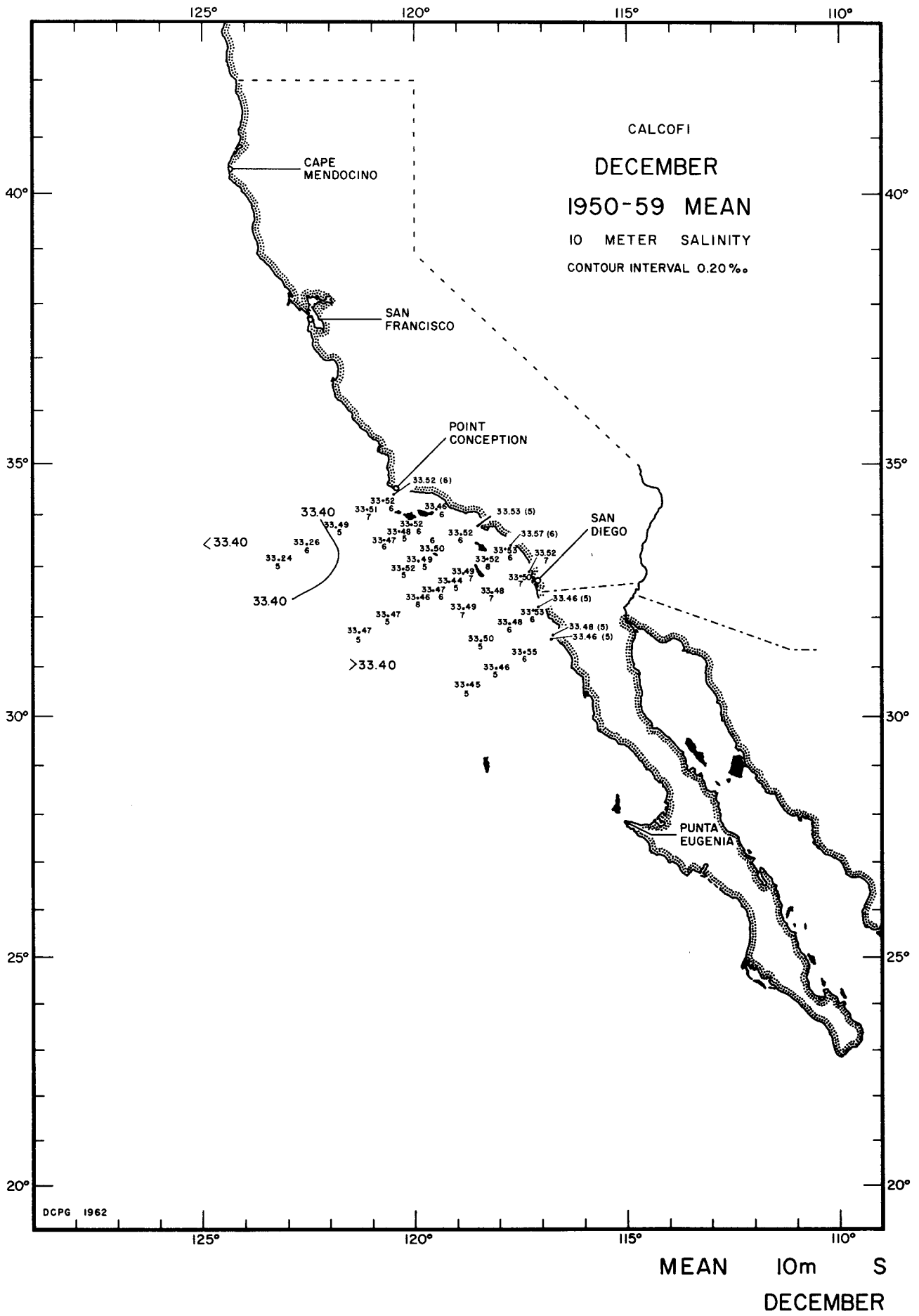
MEAN 10m S
 SEPTEMBER



CALCOFI
 OCTOBER
 1950-59 MEAN
 10 METER SALINITY
 CONTOUR INTERVAL 0.20‰

MEAN 10m S
 OCTOBER





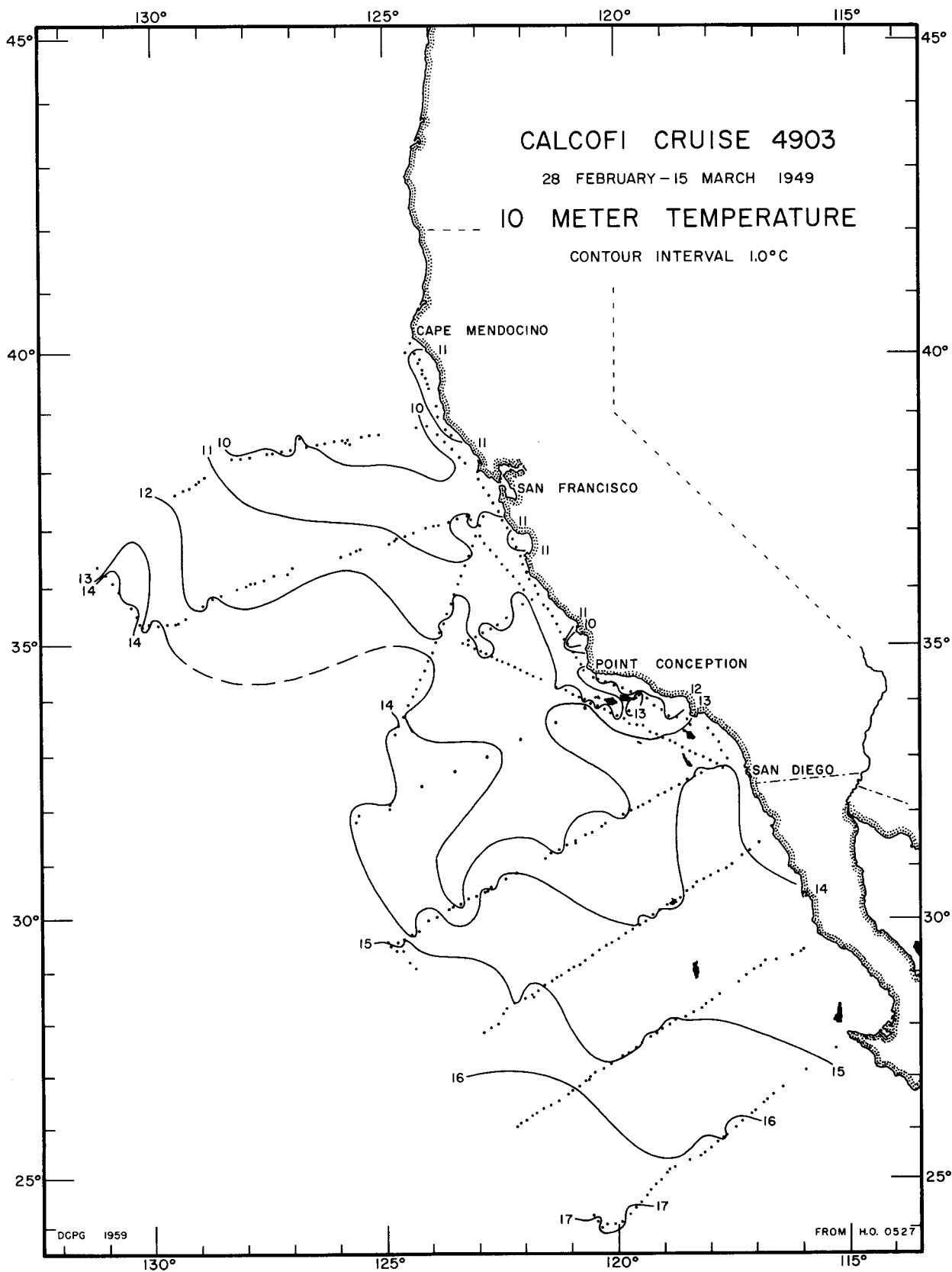
125° 120° 115° 110°

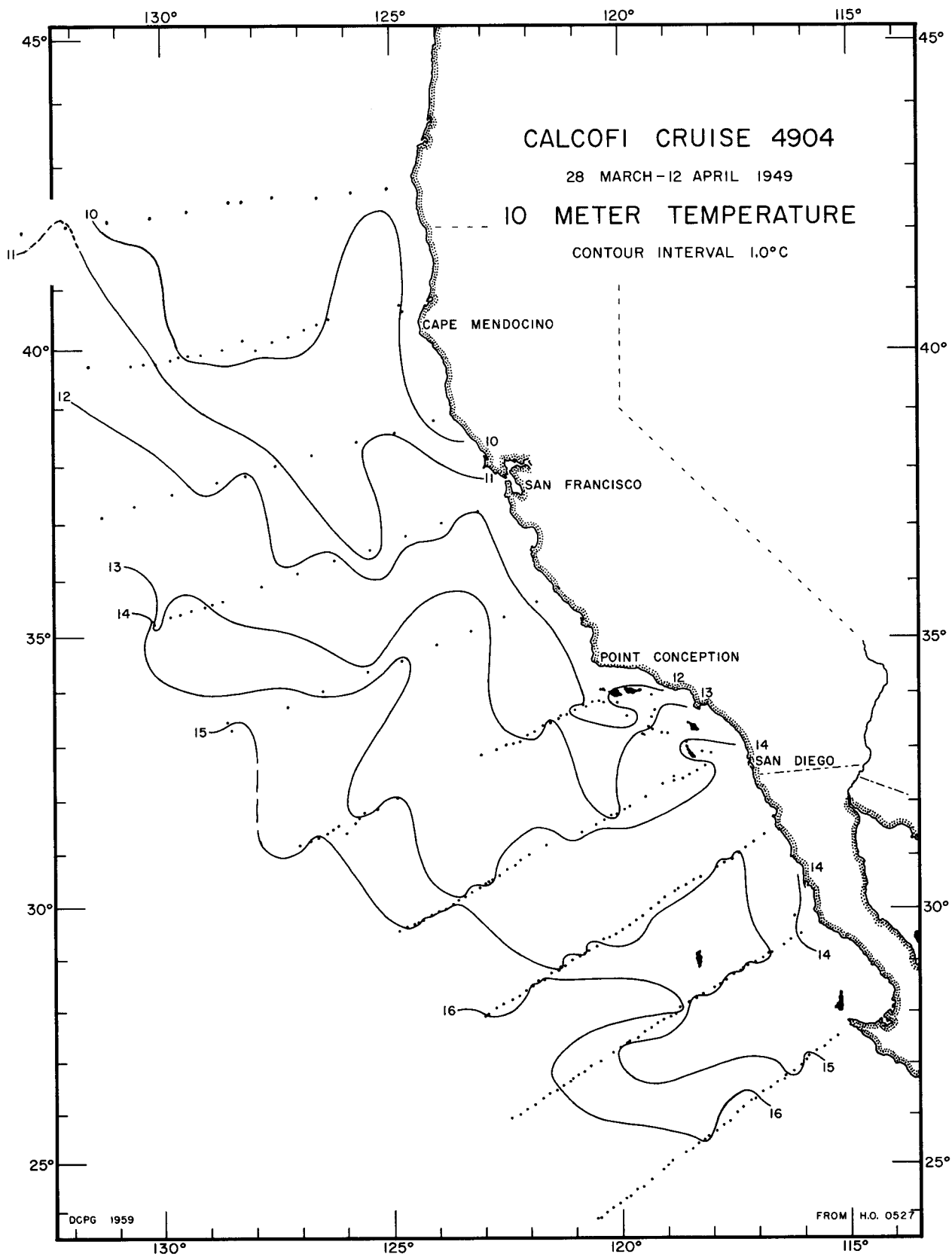
40°
35°
30°
25°
20°

40°
35°
30°
25°
20°

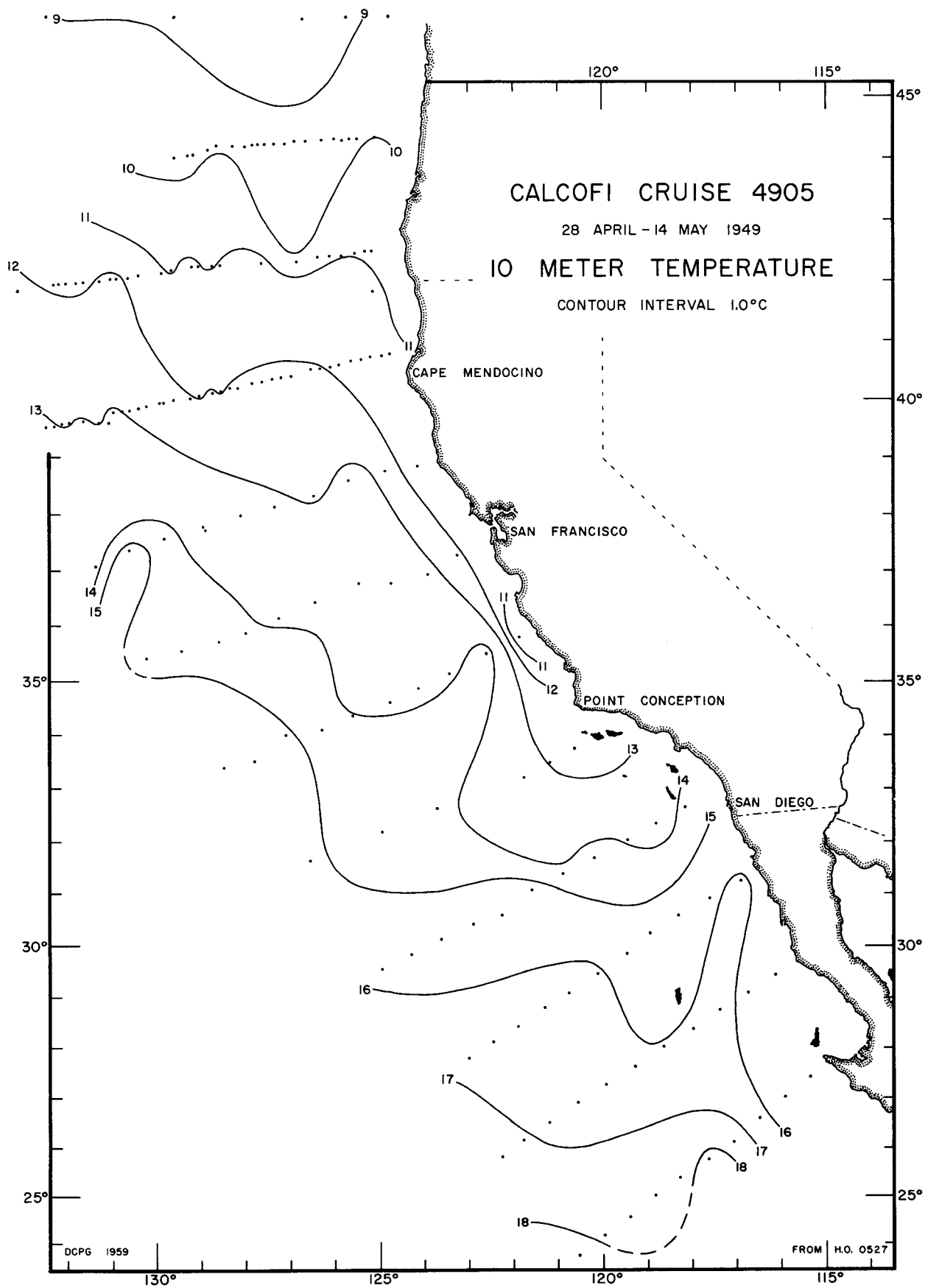
125° 120° 115° 110°

MEAN 10m S
DECEMBER

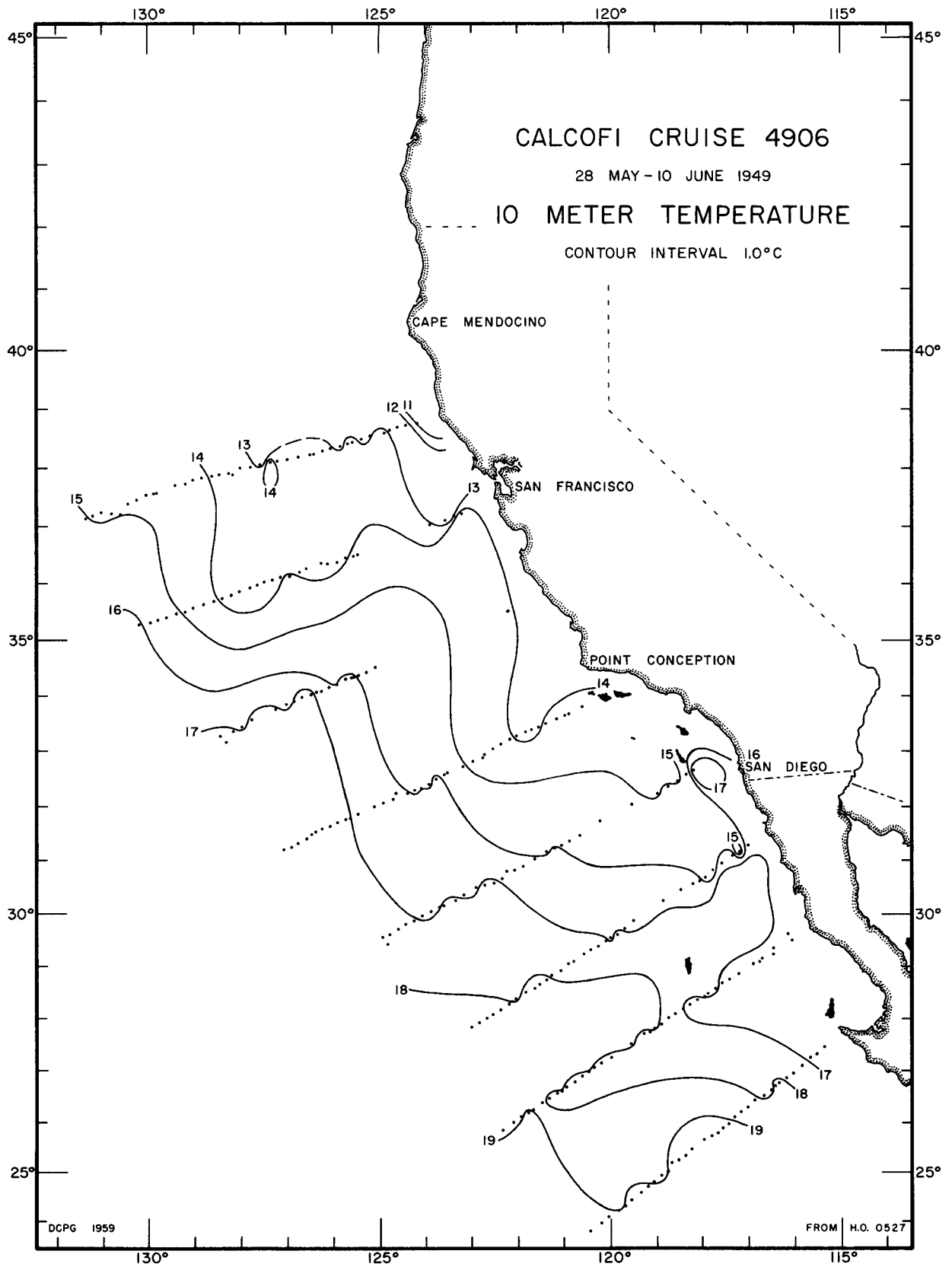




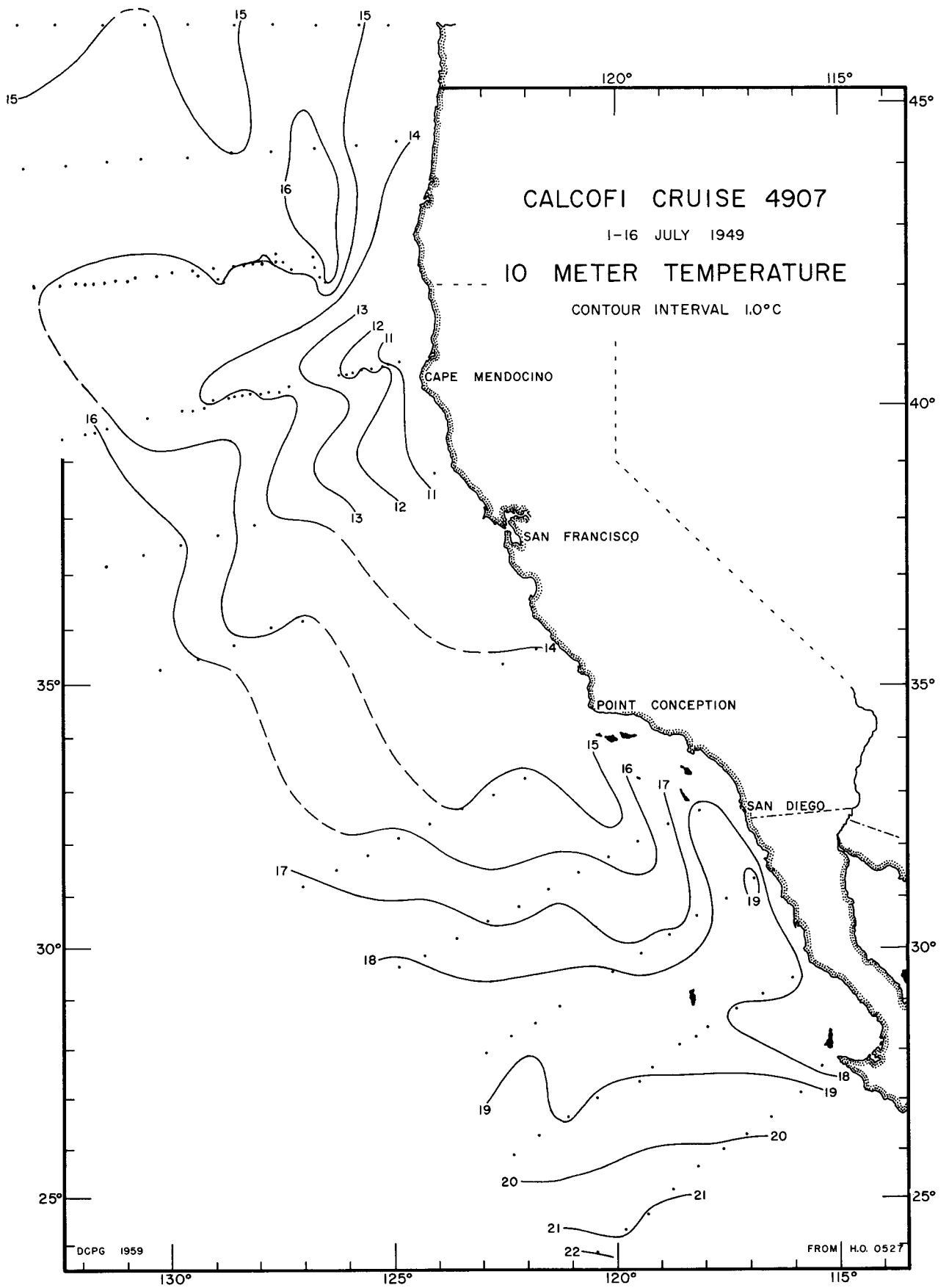
10m T
4904



10m T
4905



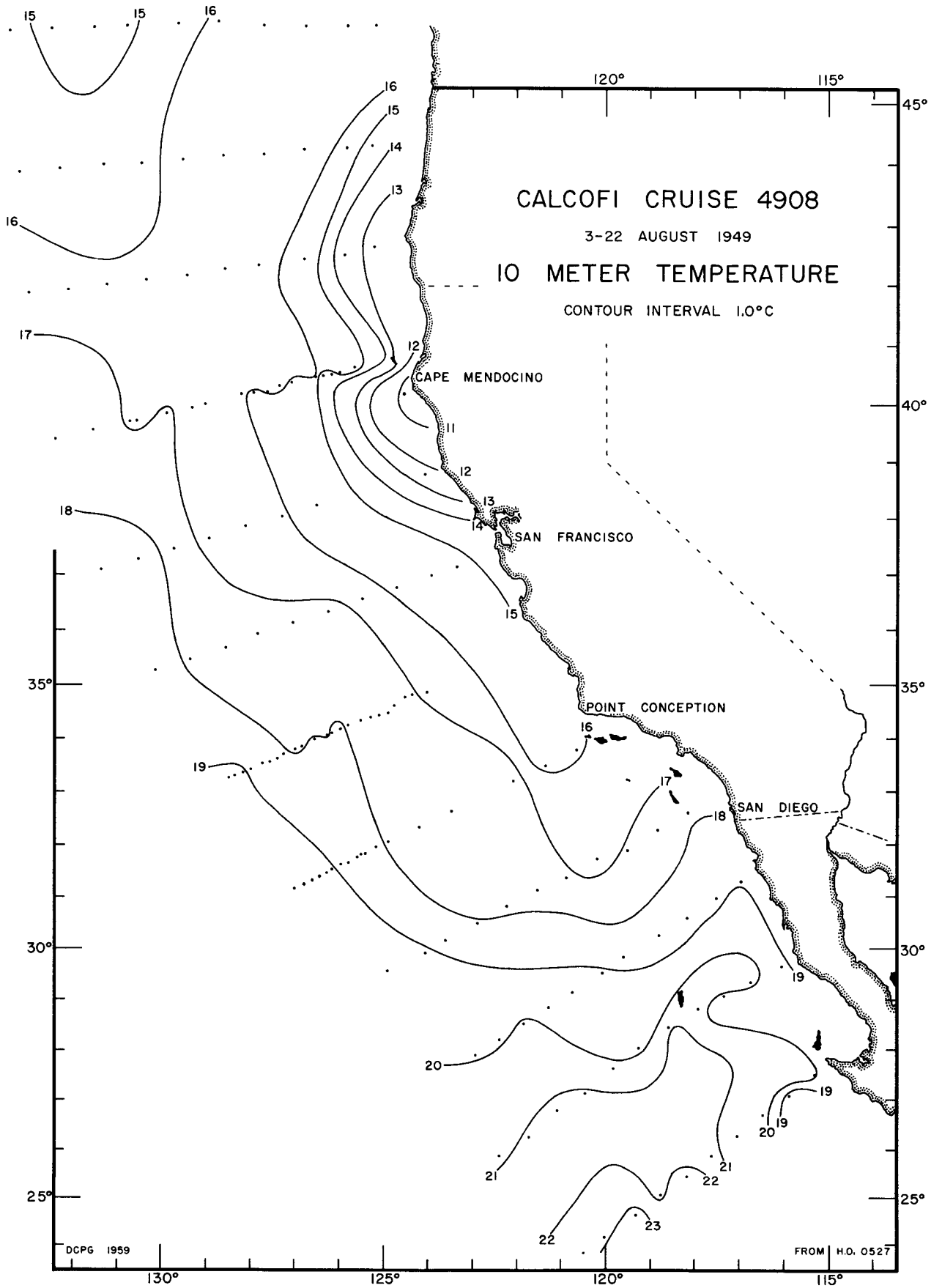
10m T
 4906



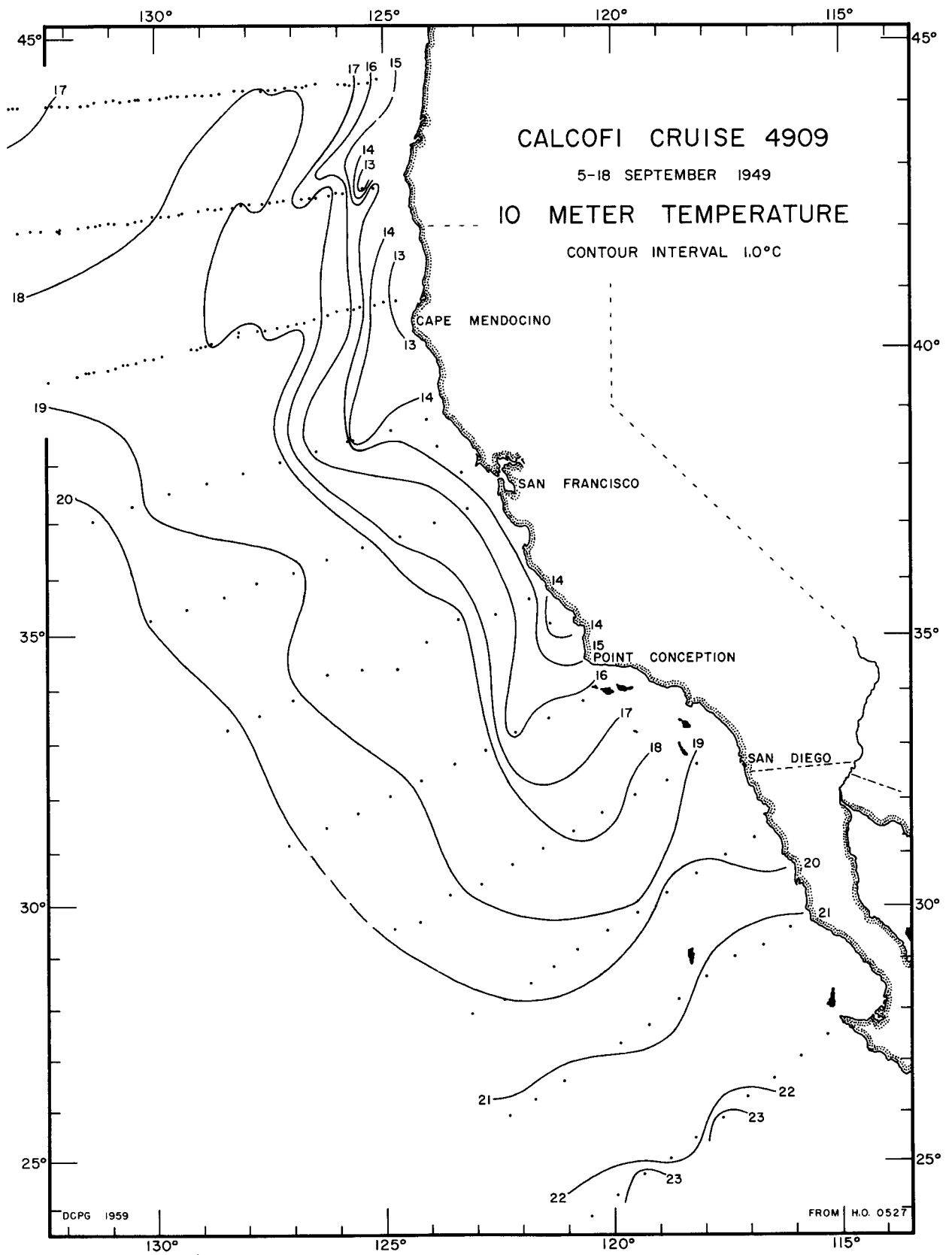
DCPG 1959

FROM H.O. 0527

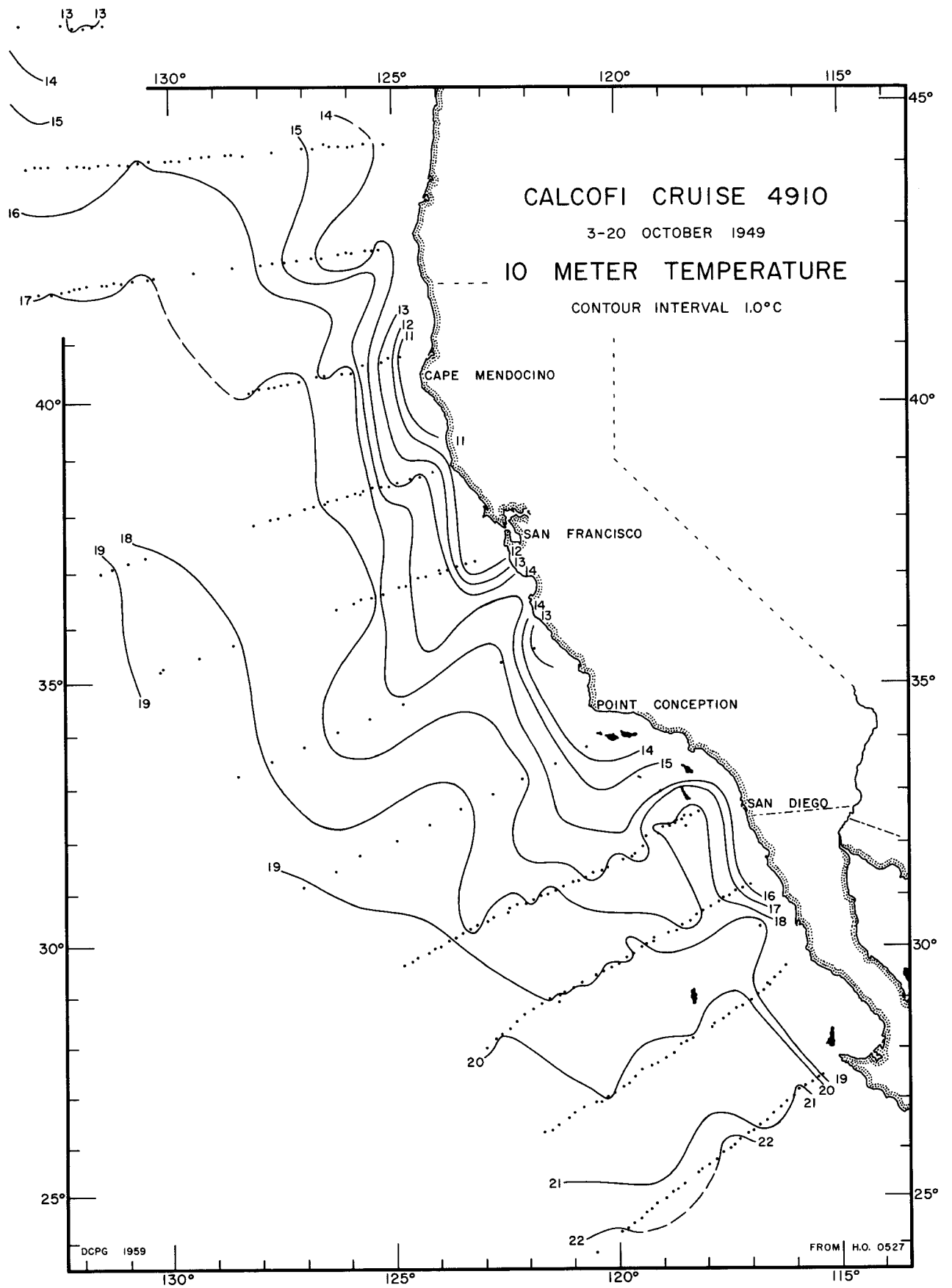
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4907



10m T
4908



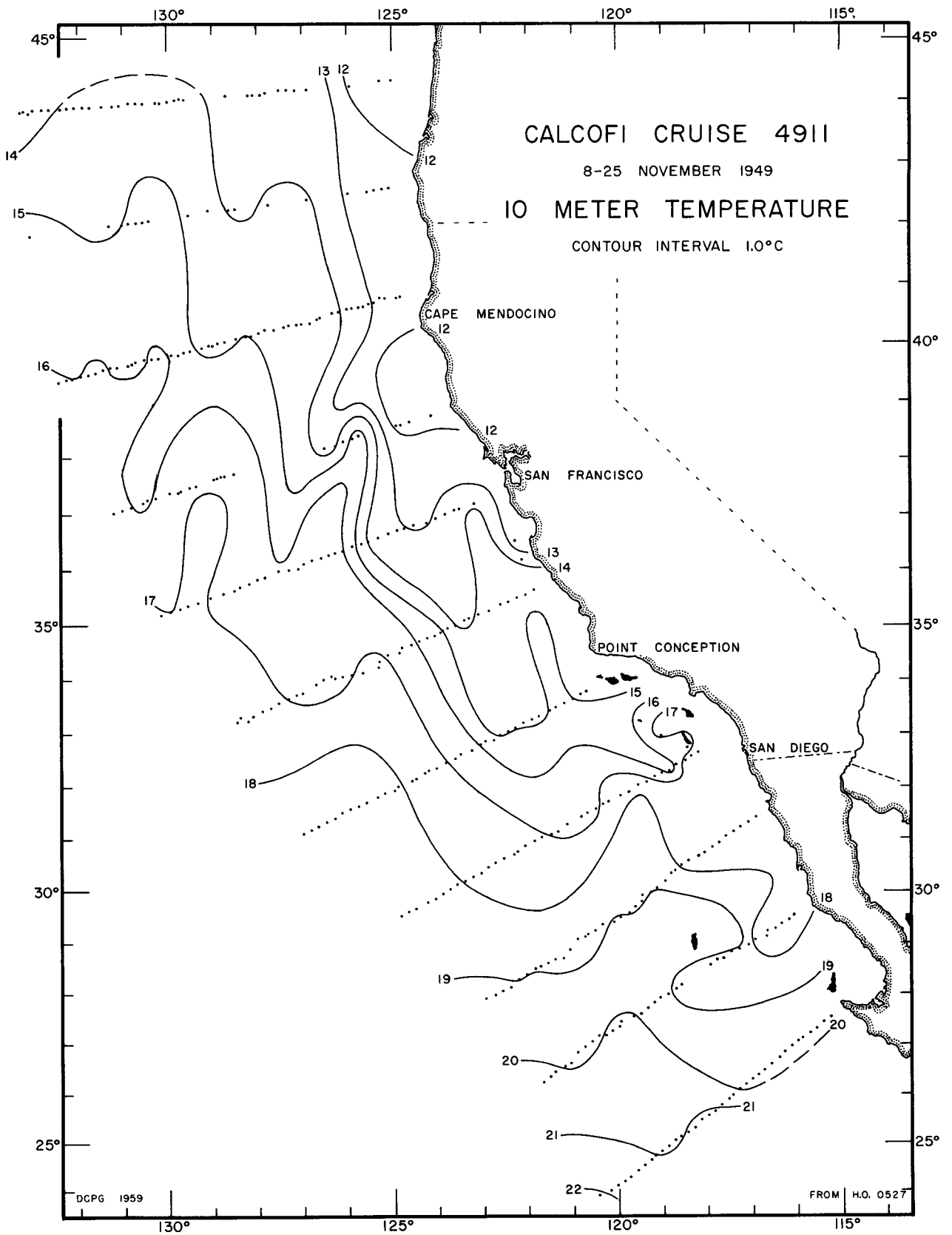
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4909



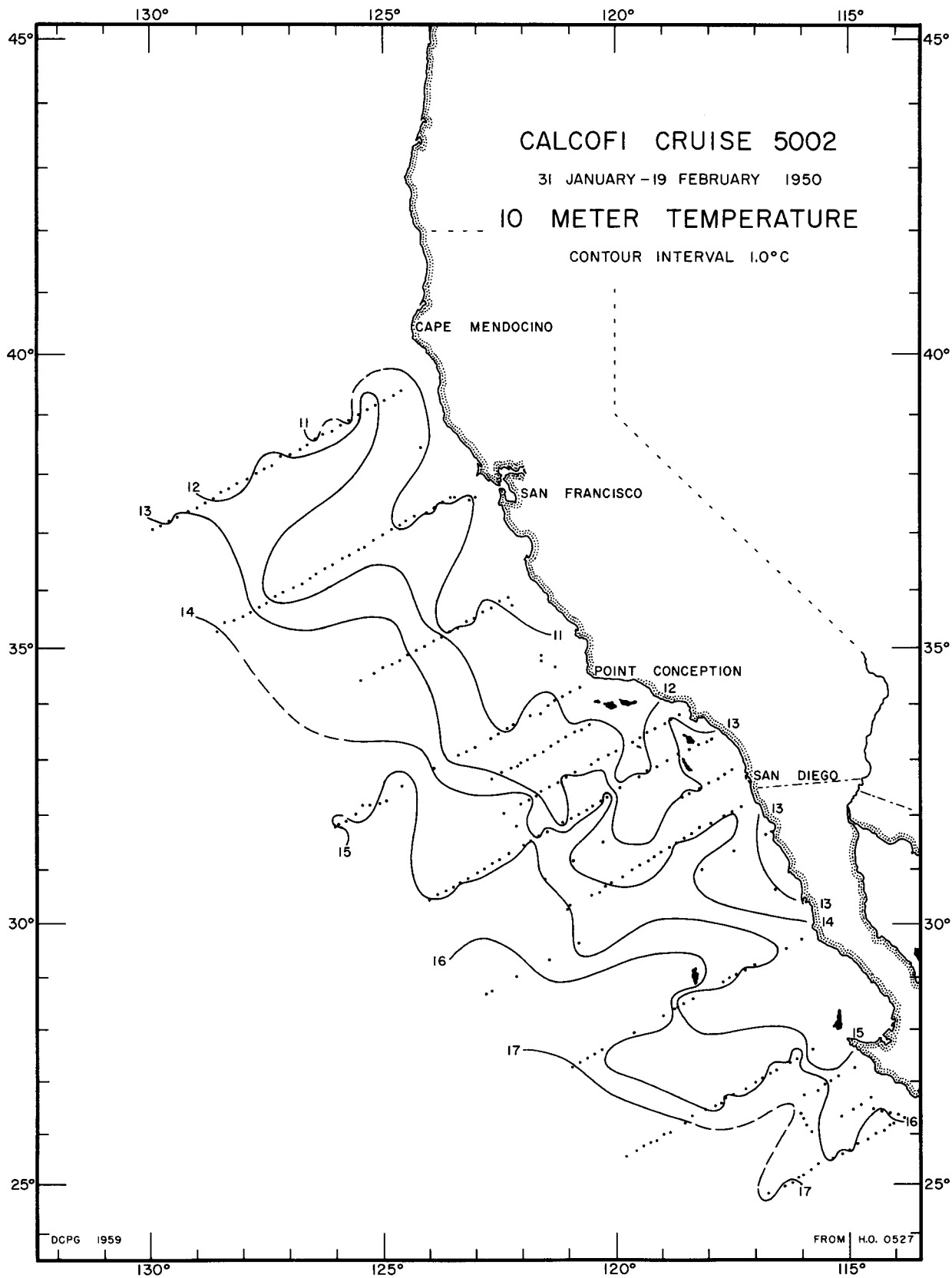
DCPG 1959

FROM H.O. 0527

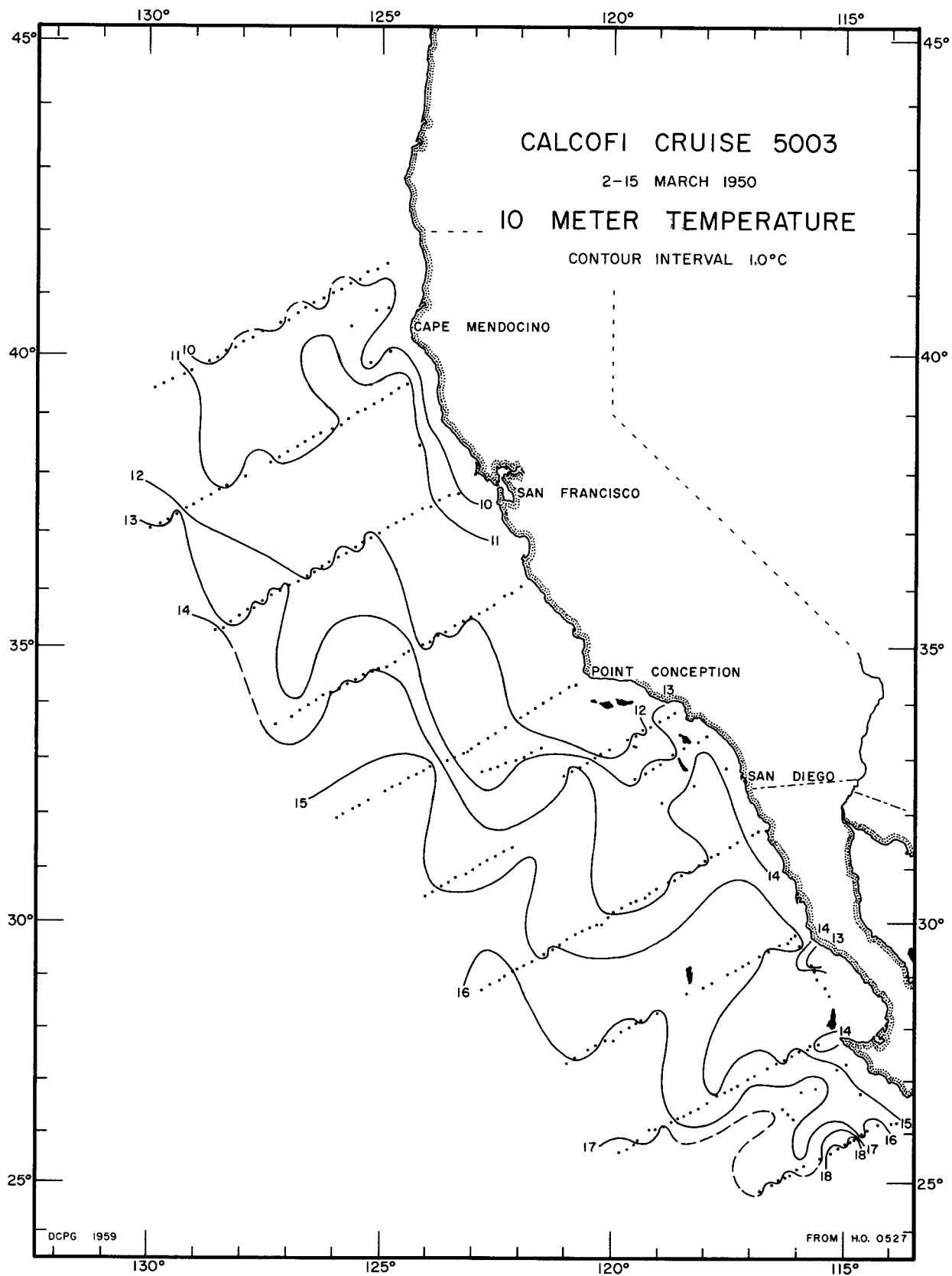
10m T
4910



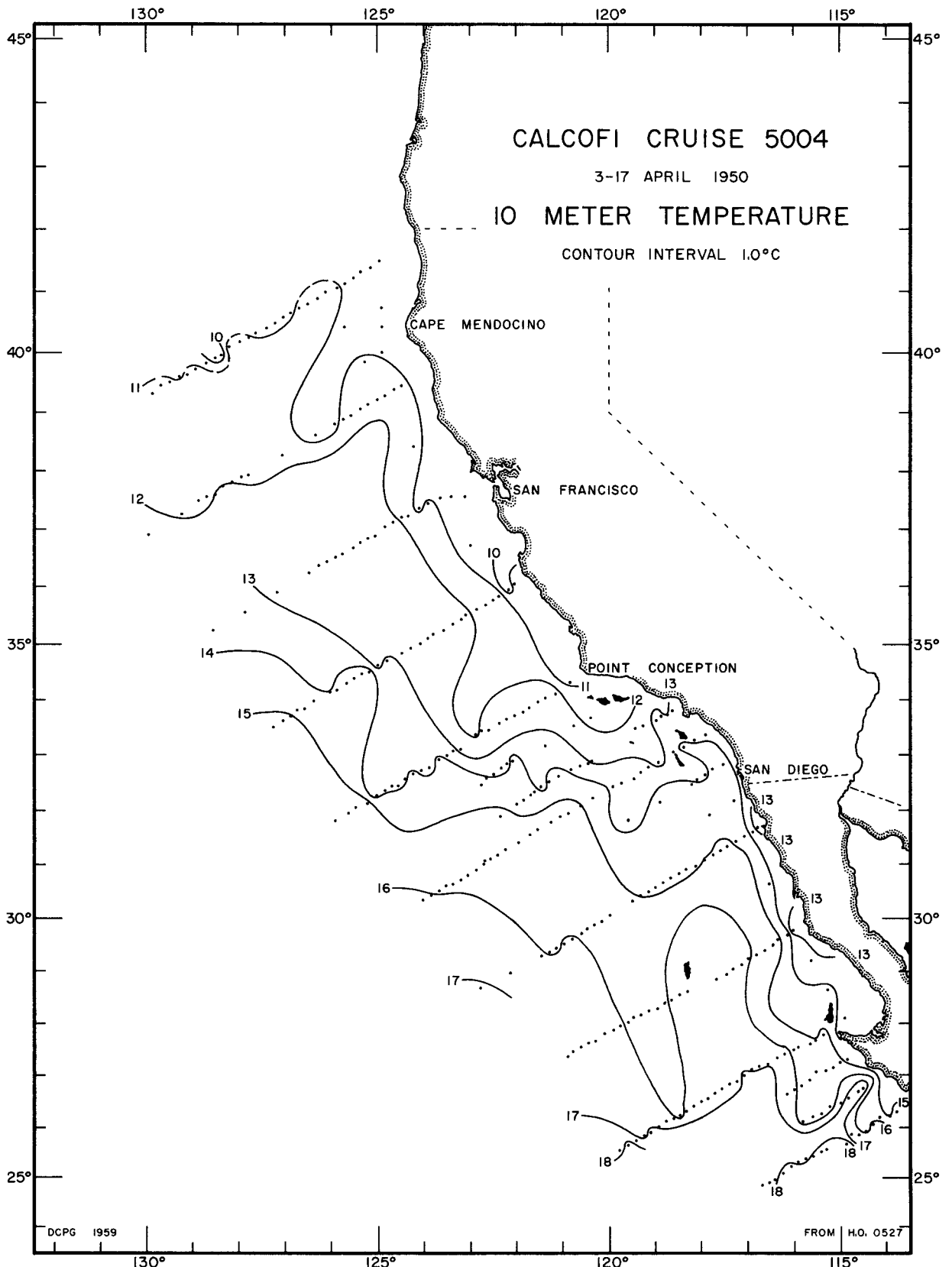
10m T
4911



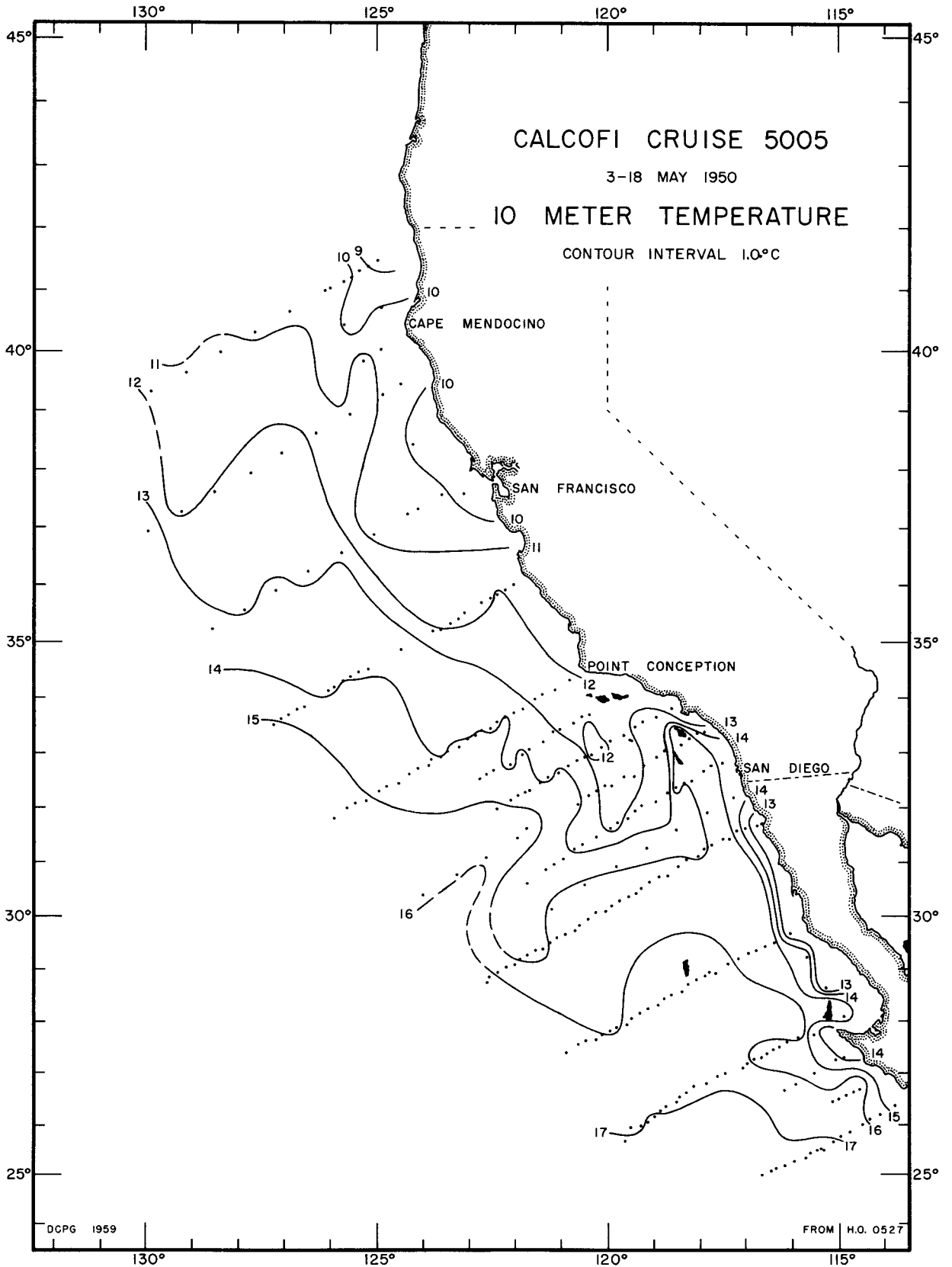
10m T
5002



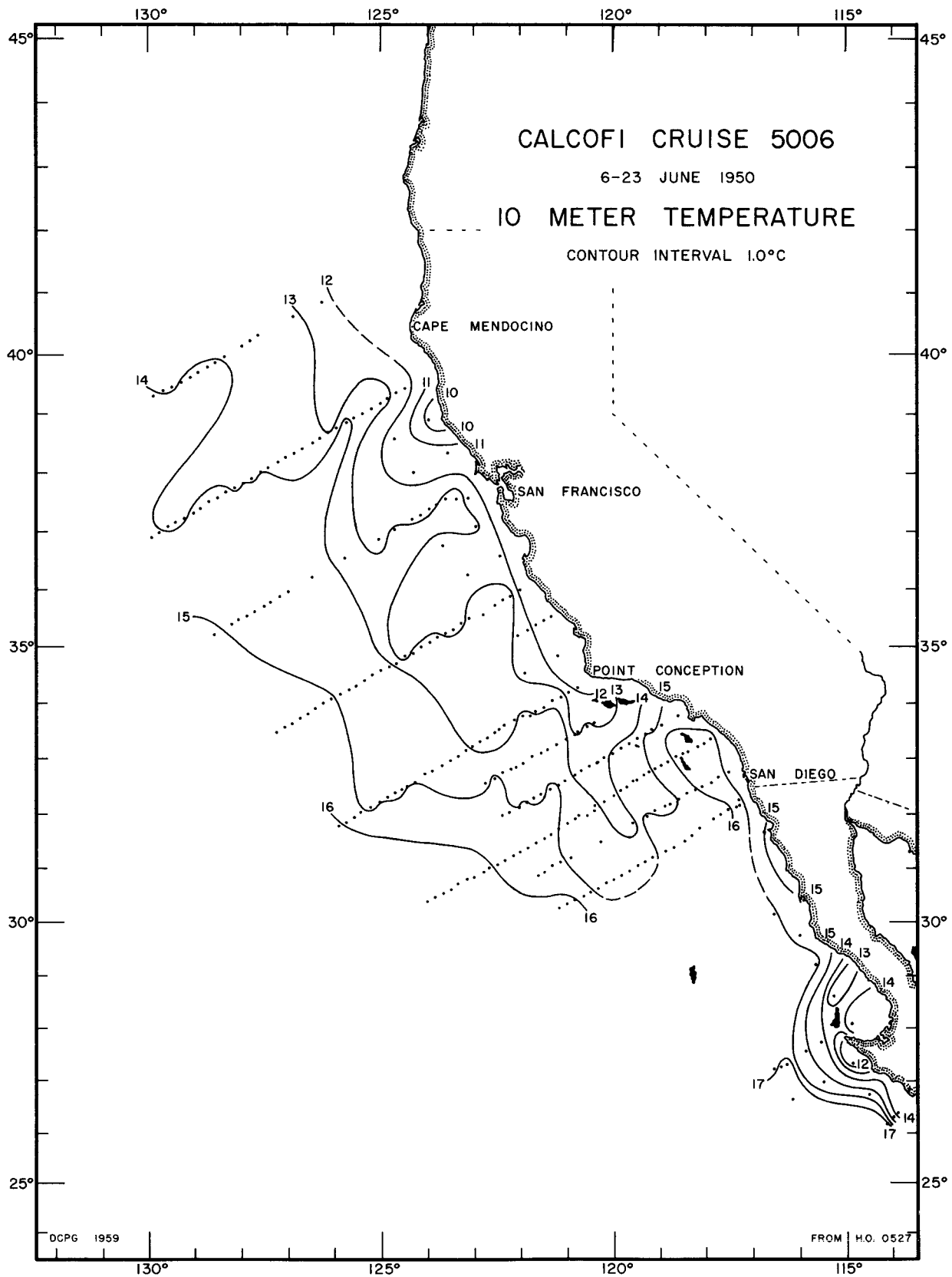
10m T
5003



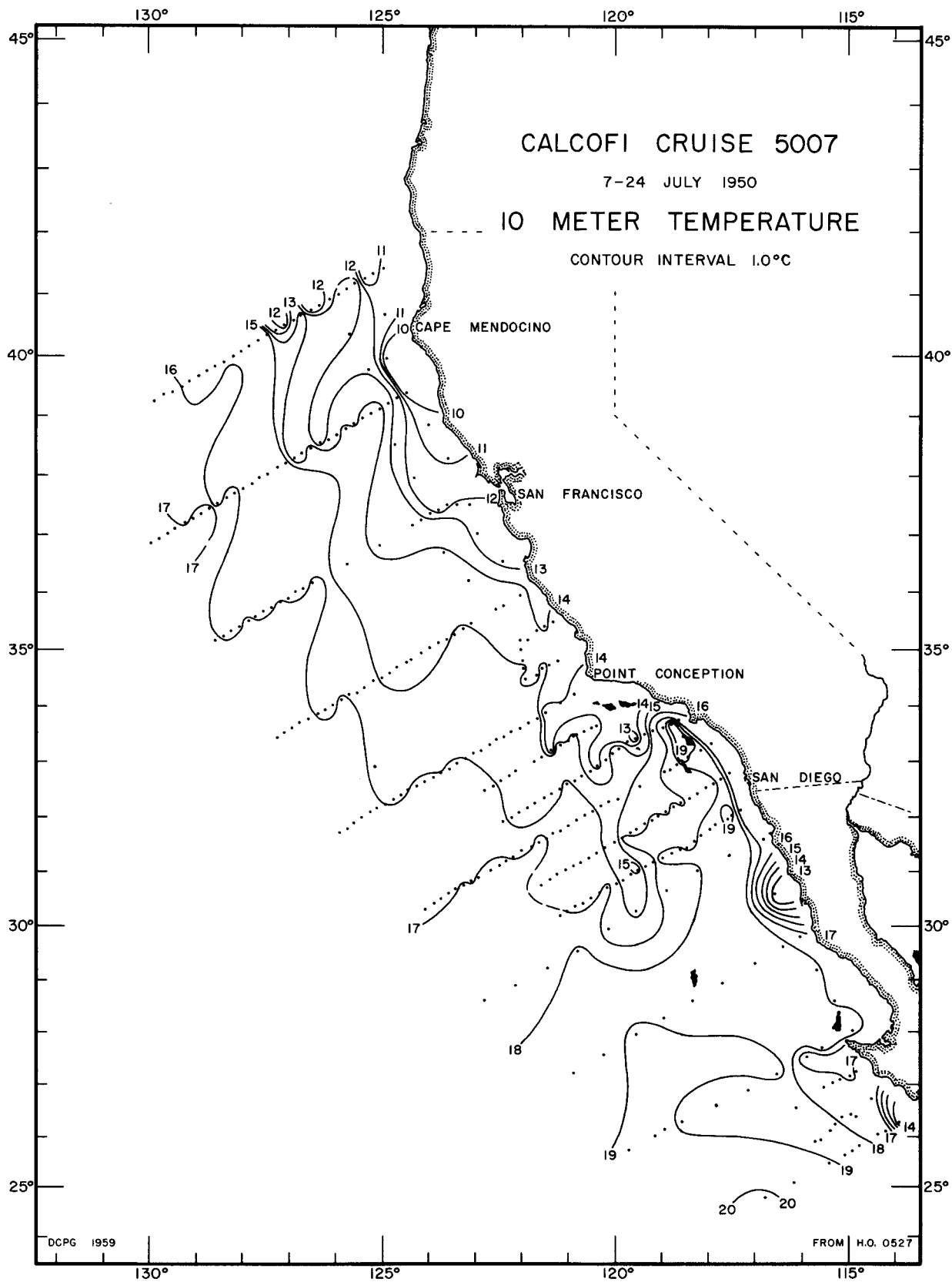
10m T
5004



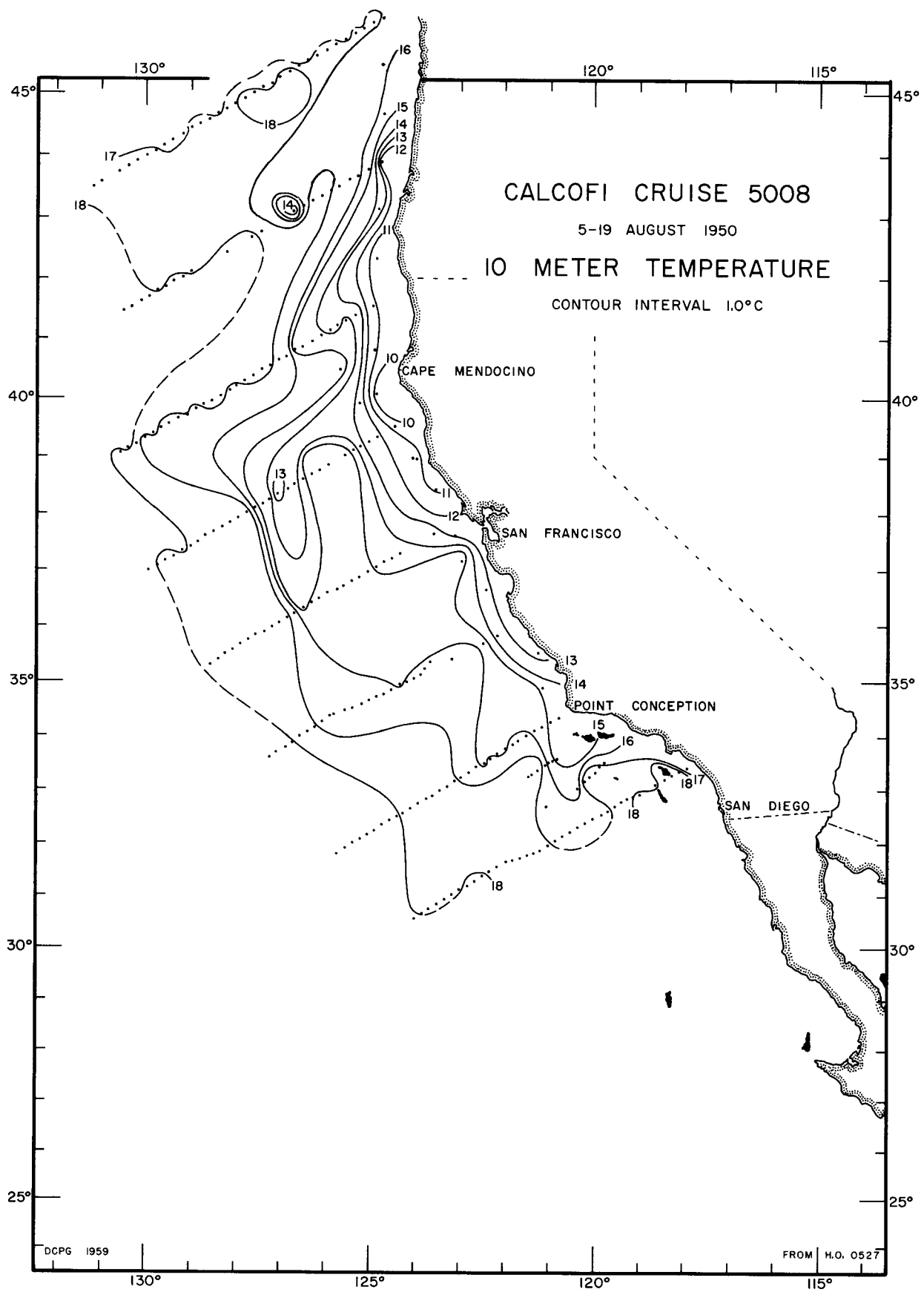
10m T
5005



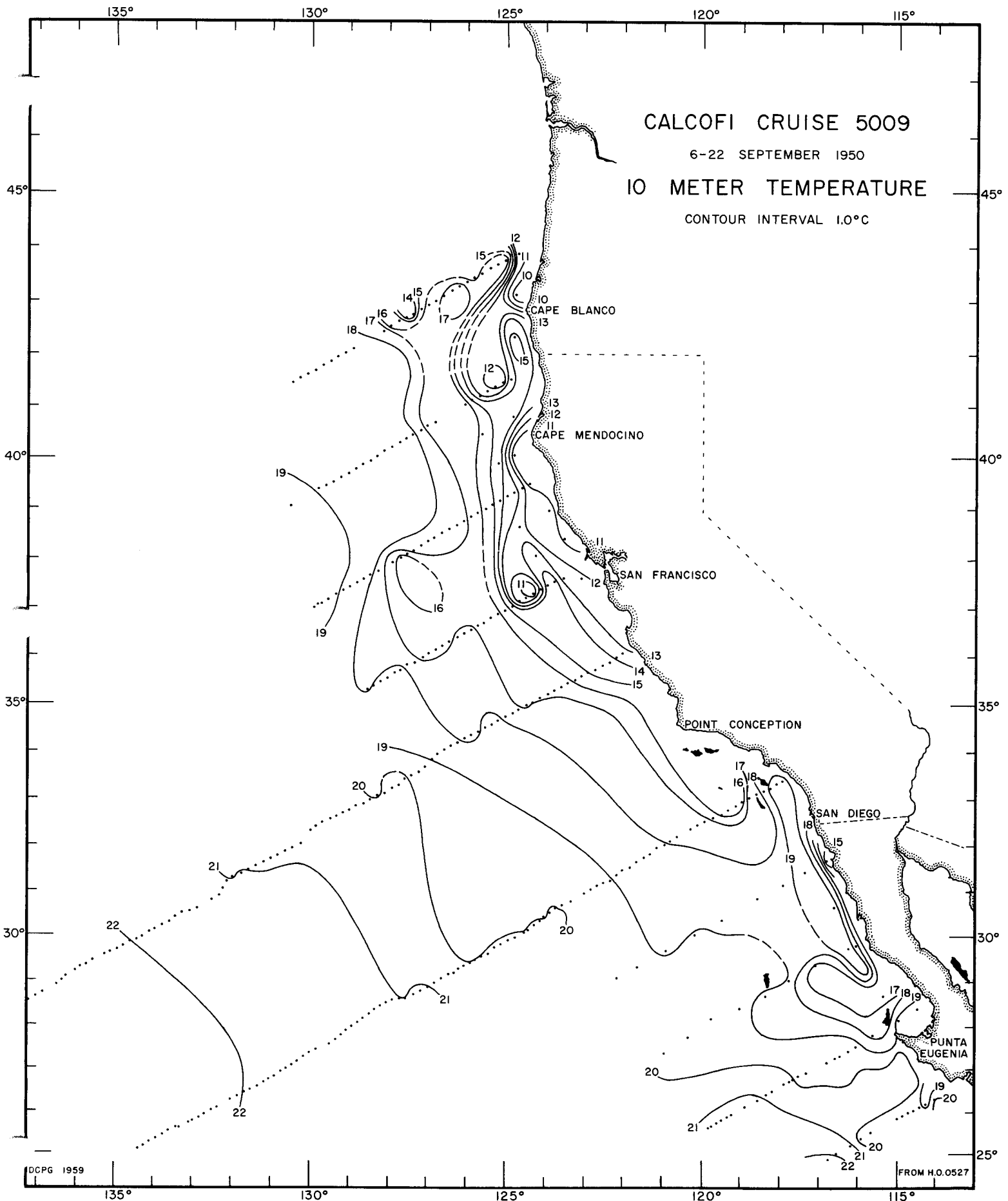
10m T
5006



10m T
5007



10m T
5008

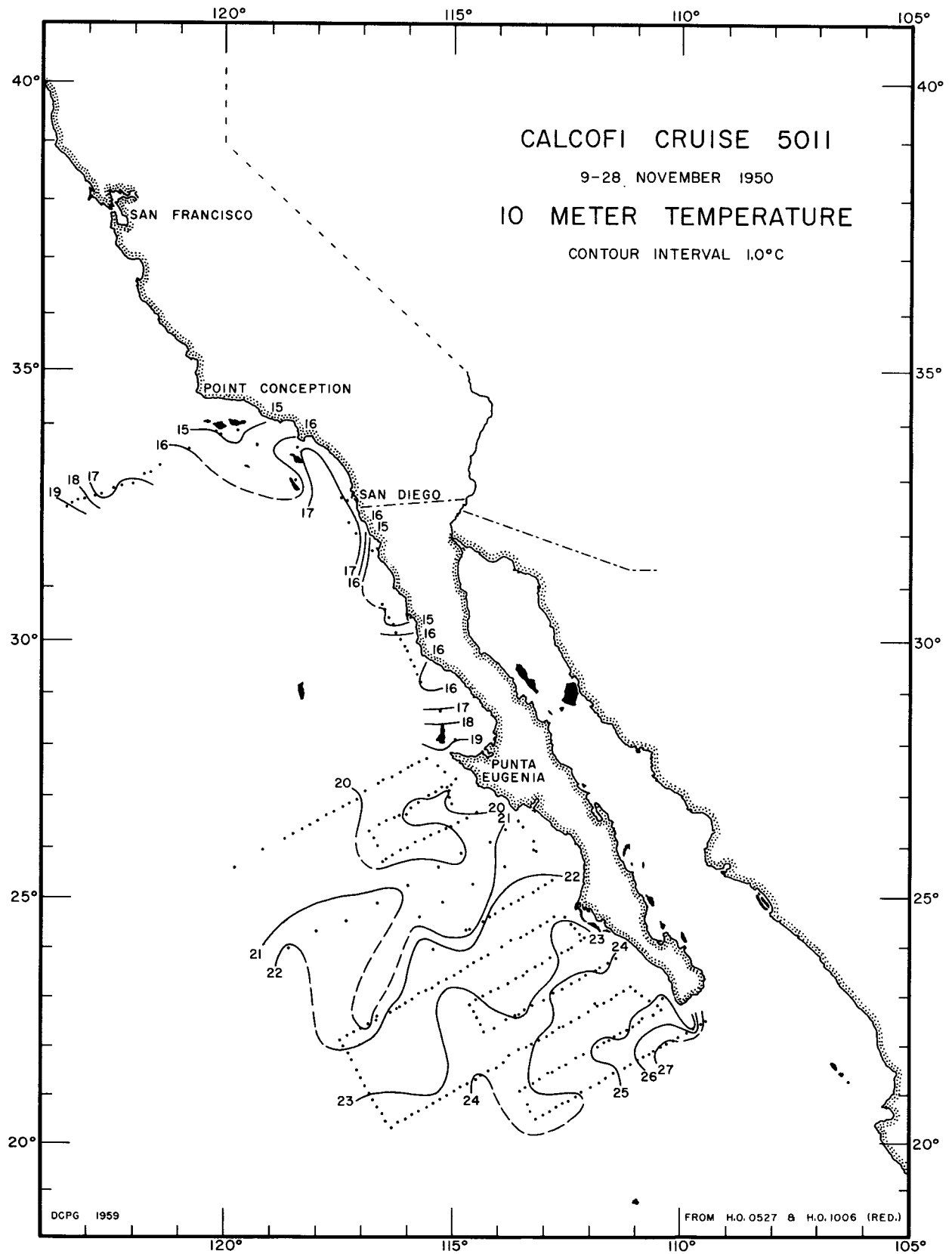


CALCOFI CRUISE 5009

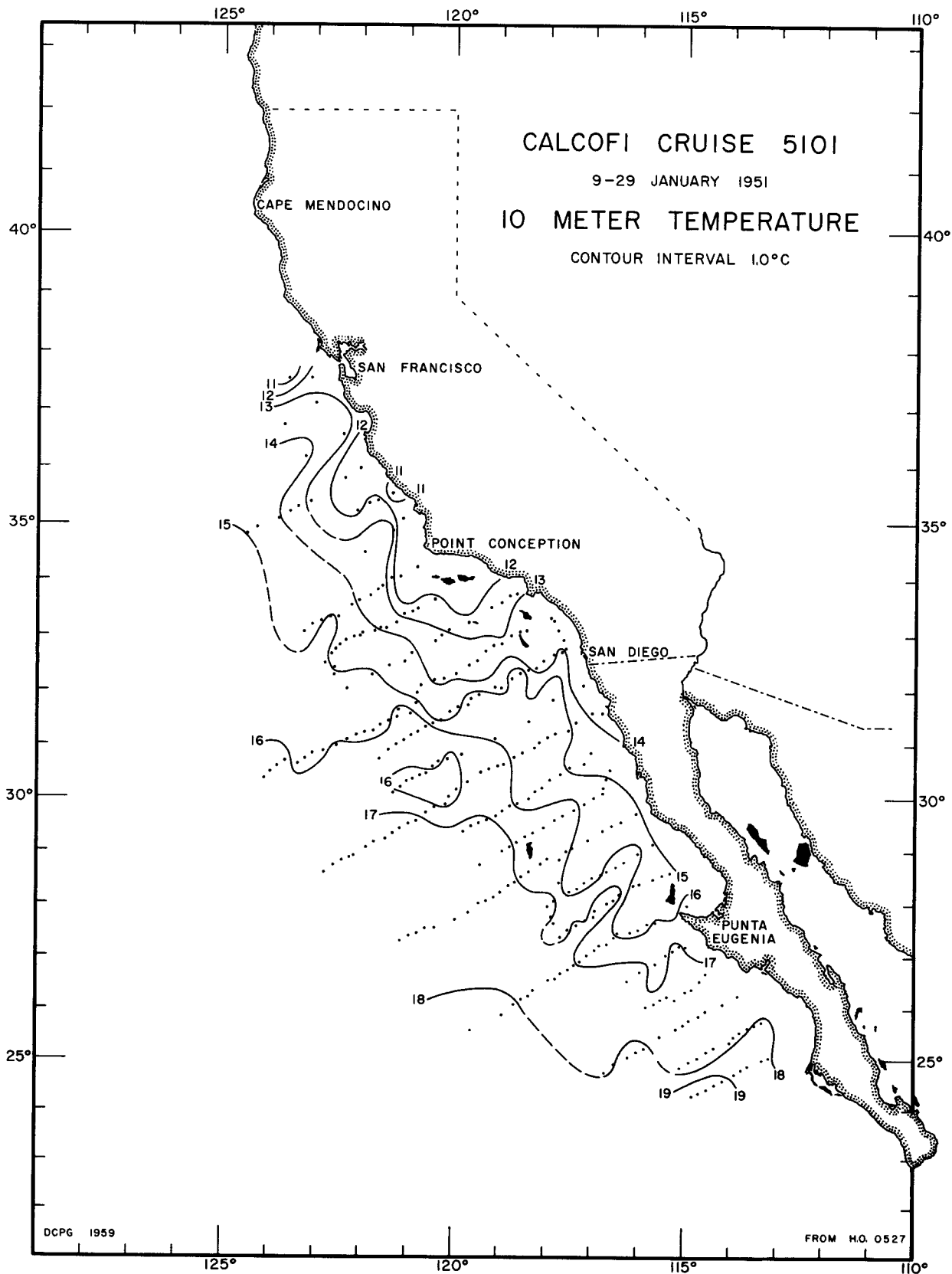
6-22 SEPTEMBER 1950

10 METER TEMPERATURE

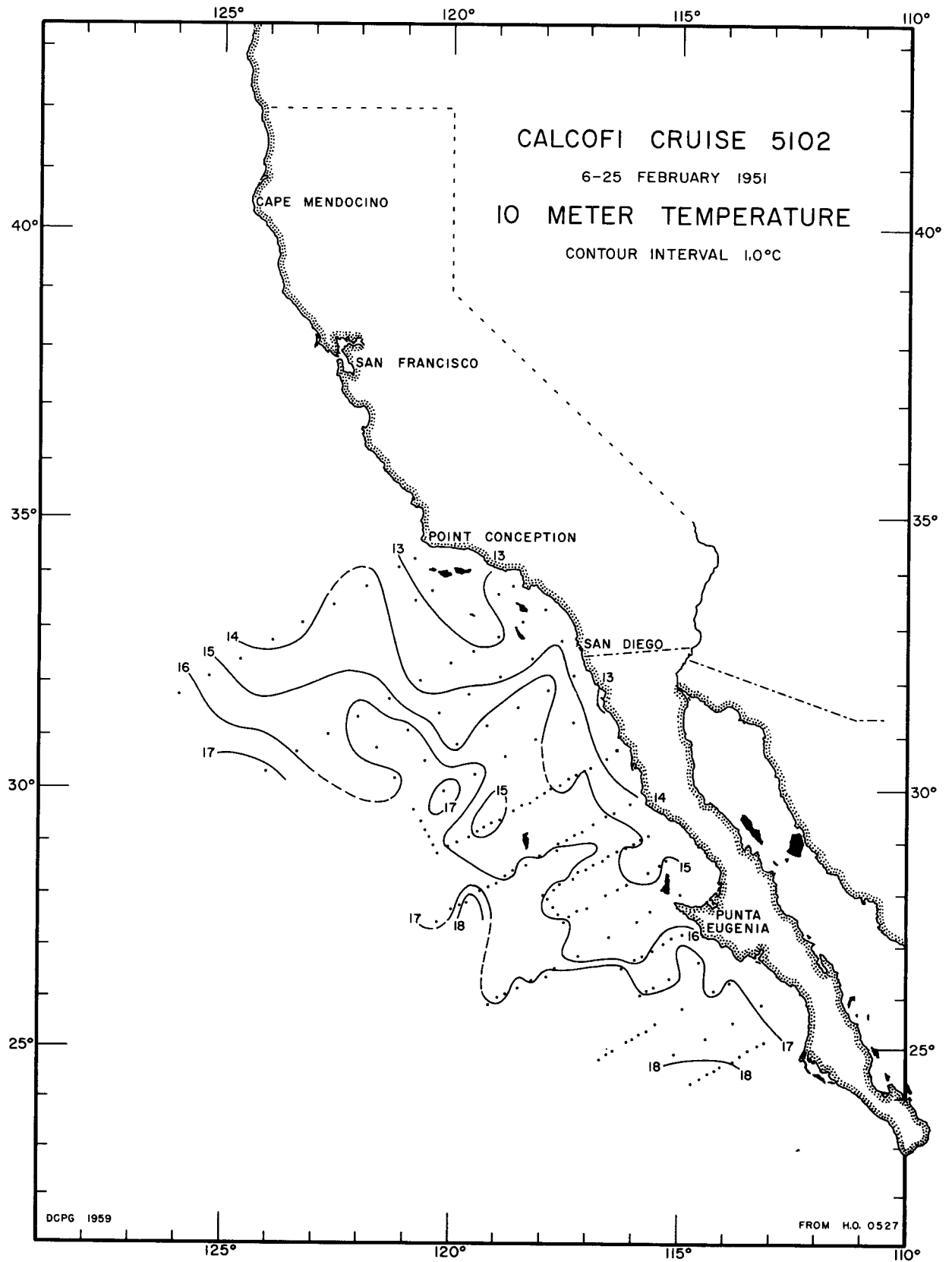
CONTOUR INTERVAL 1.0°C



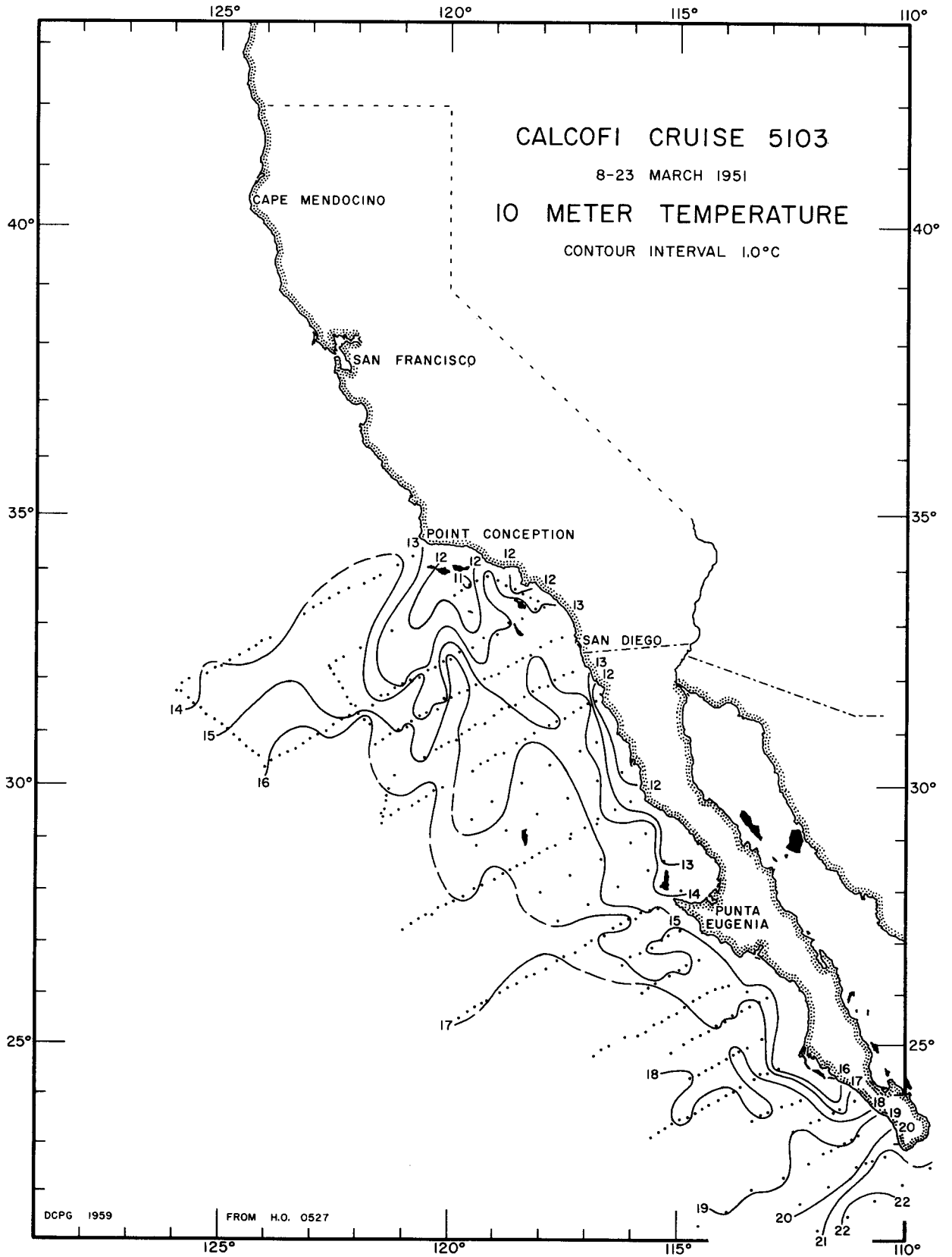
10m T
5011



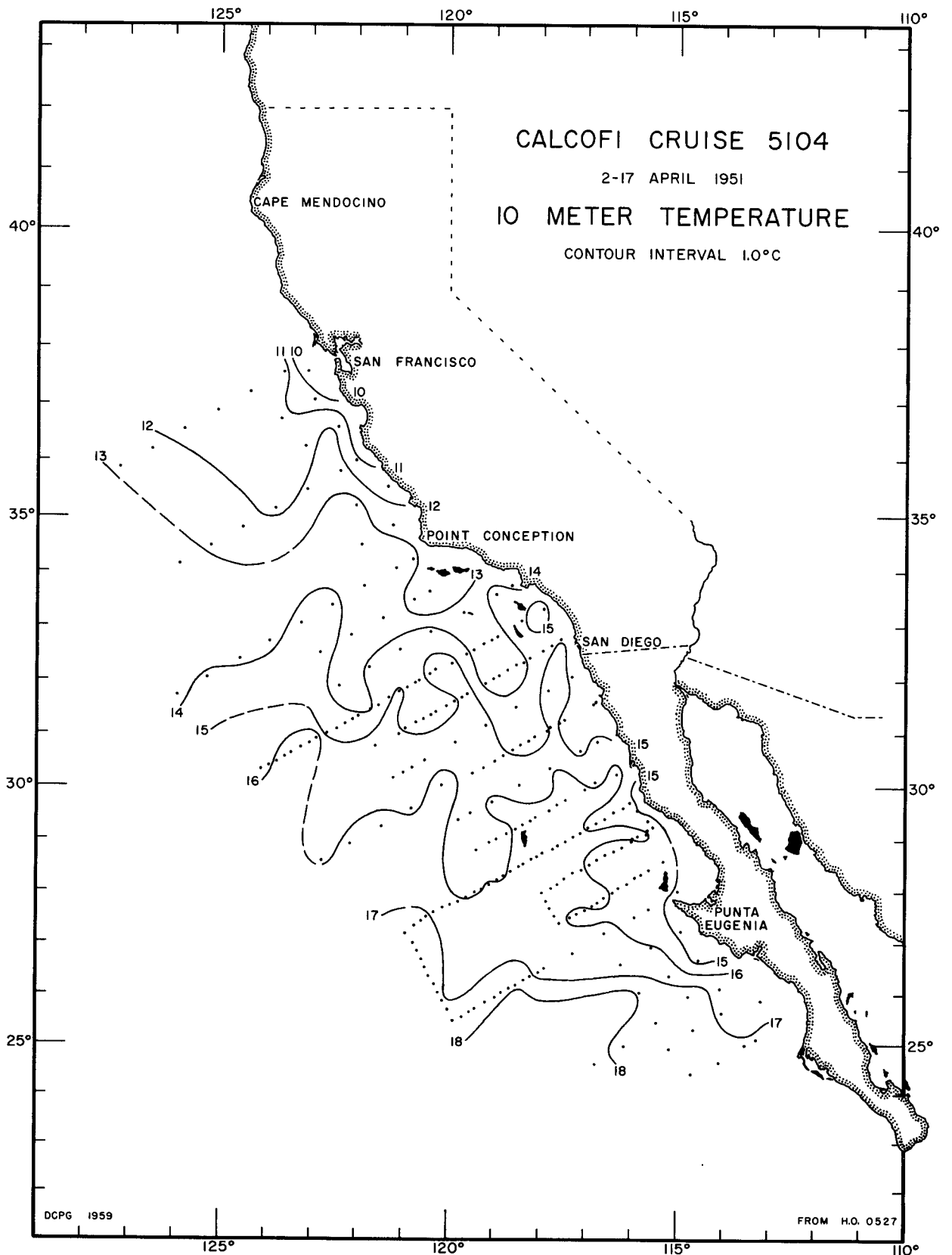
10m T
5101



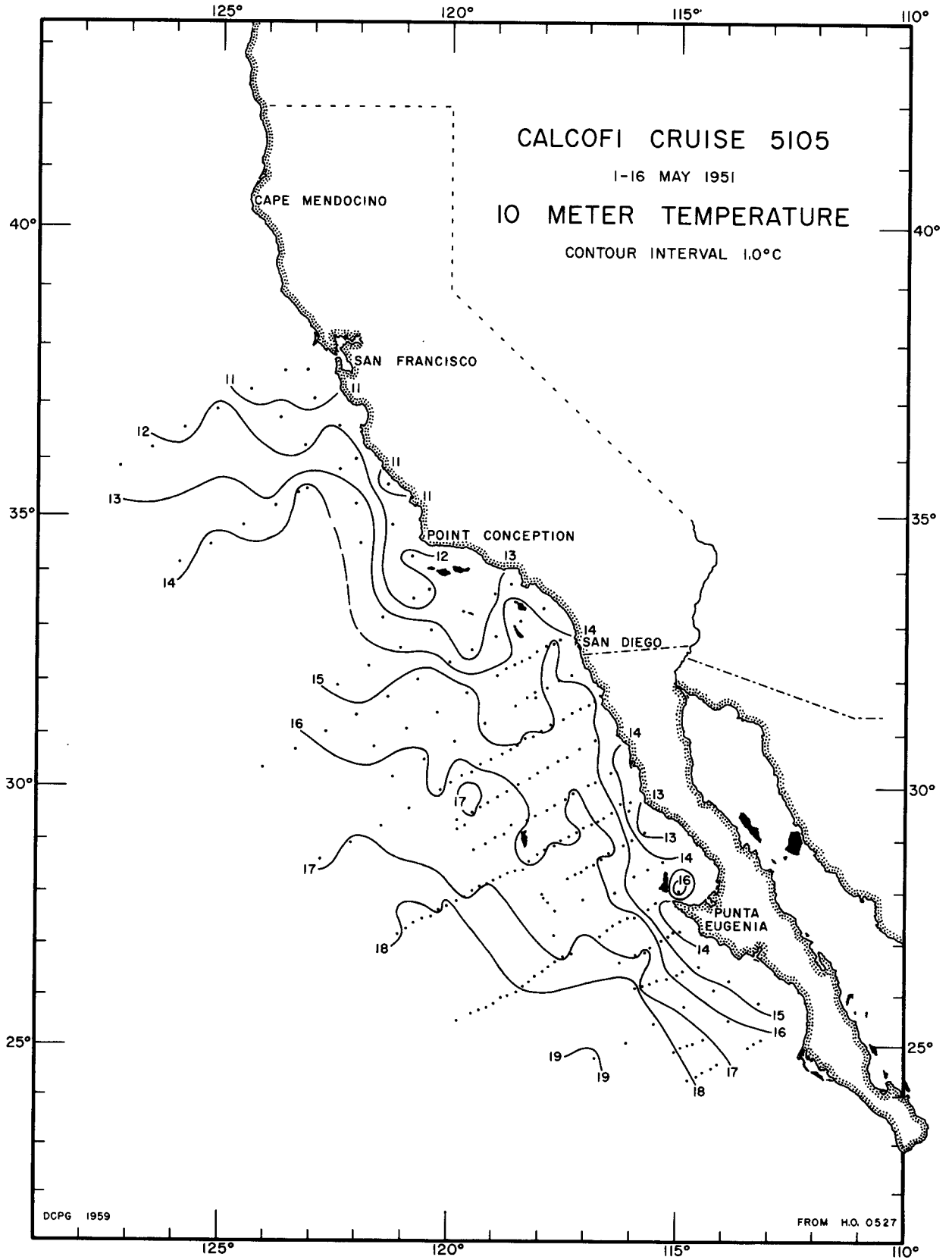
10m T
5102



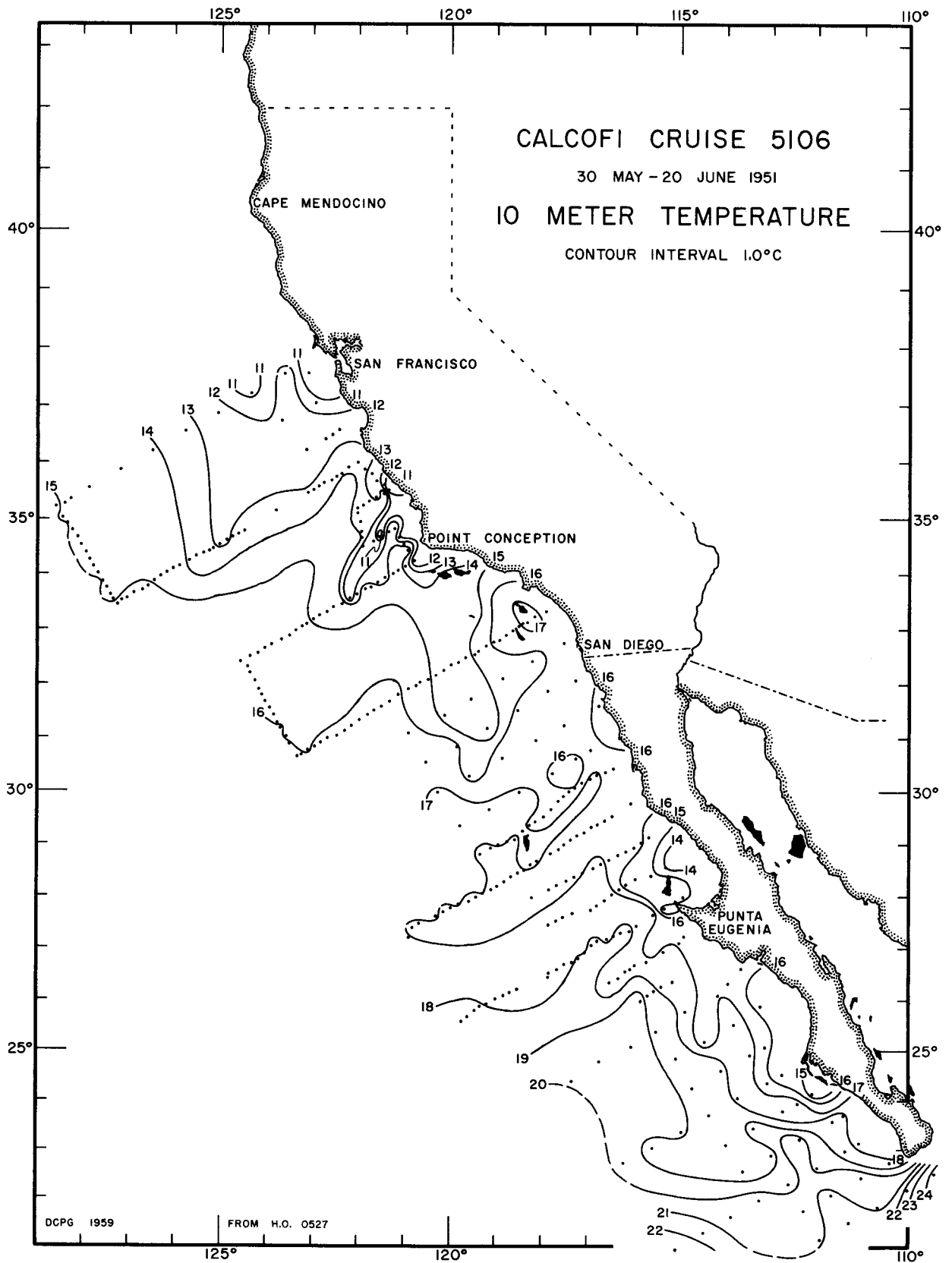
10m T
5103



10m T
5104

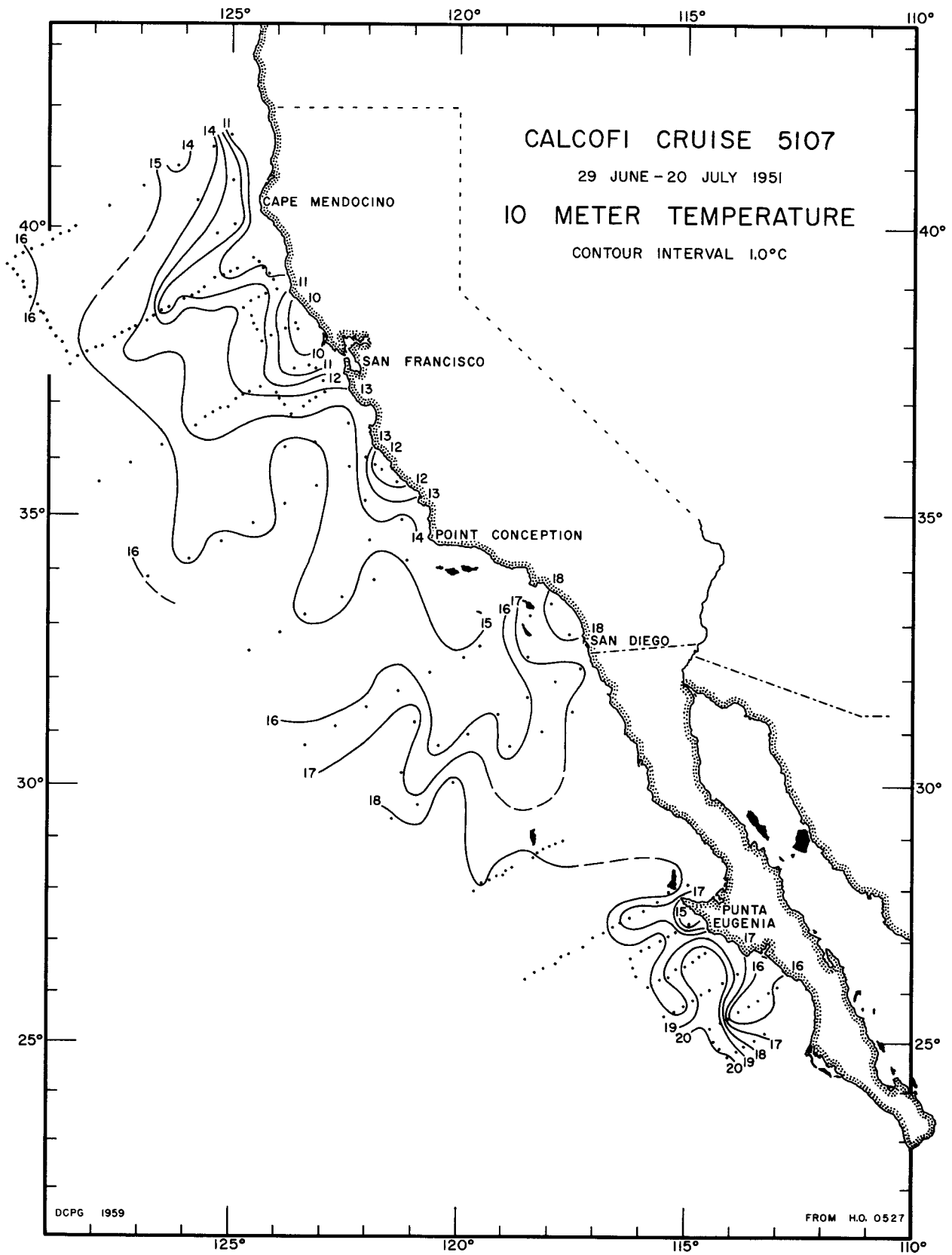


10m T
5105

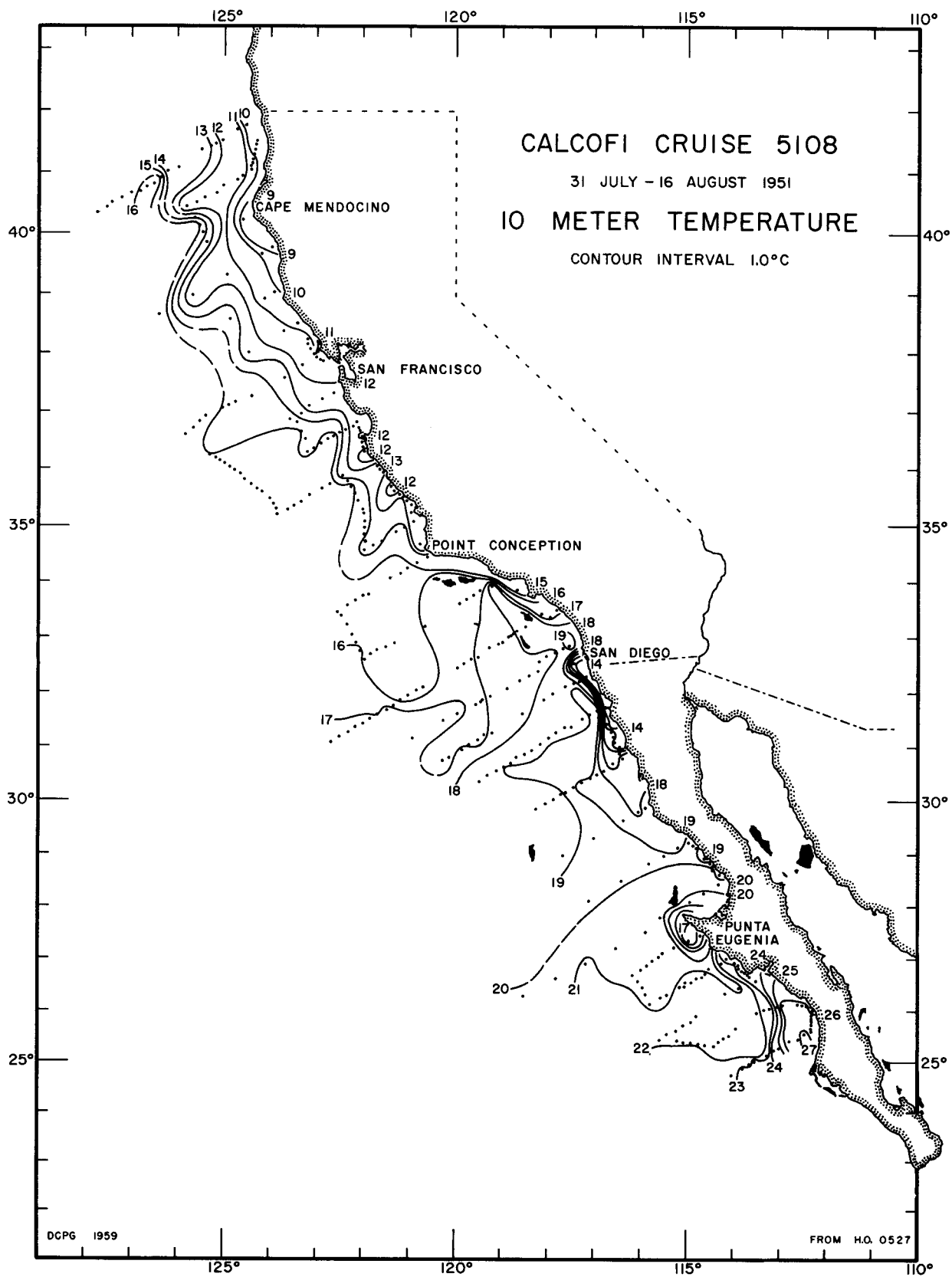


CALCOFI CRUISE 5106
 30 MAY - 20 JUNE 1951
 10 METER TEMPERATURE
 CONTOUR INTERVAL 1.0°C

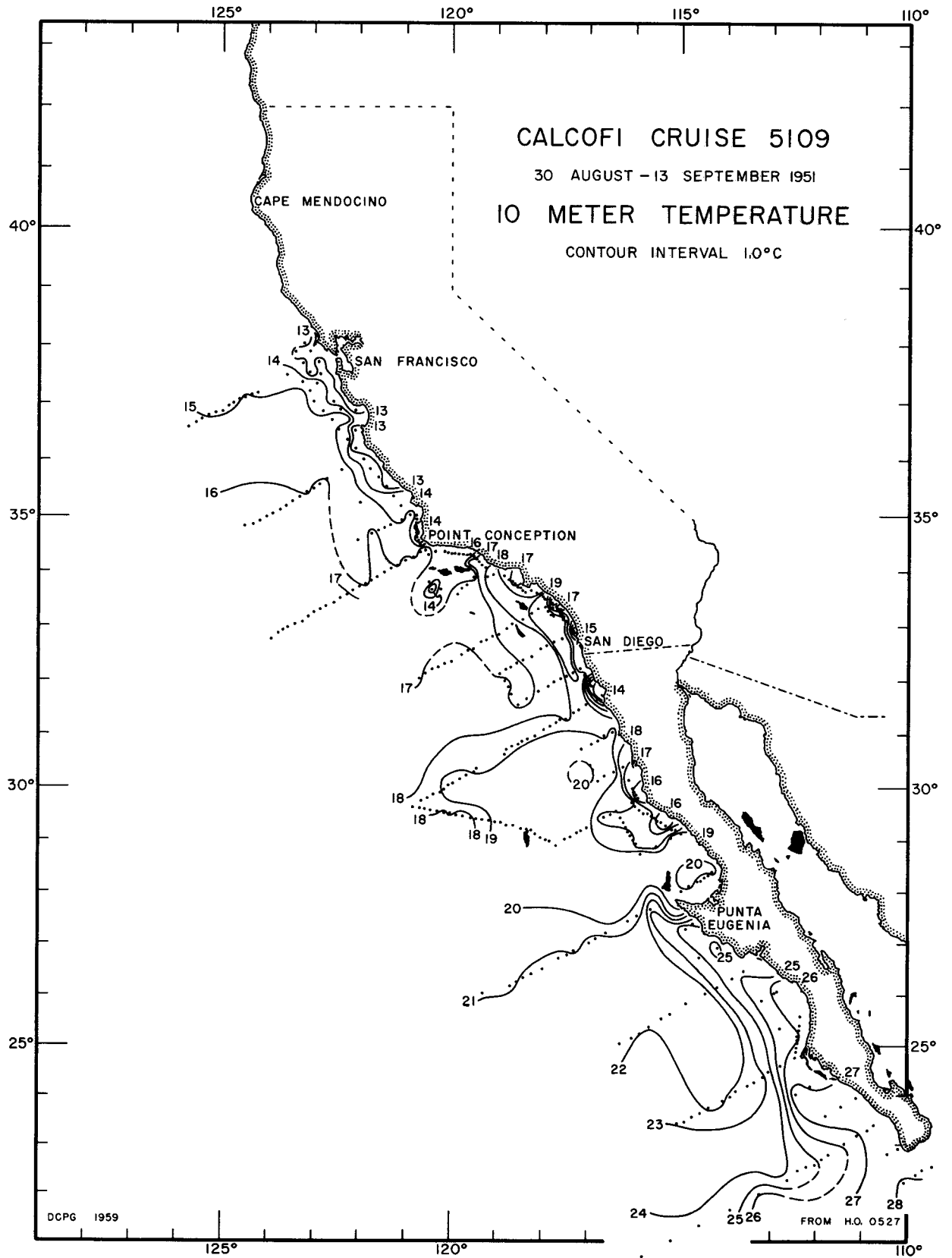
10m T
 5106



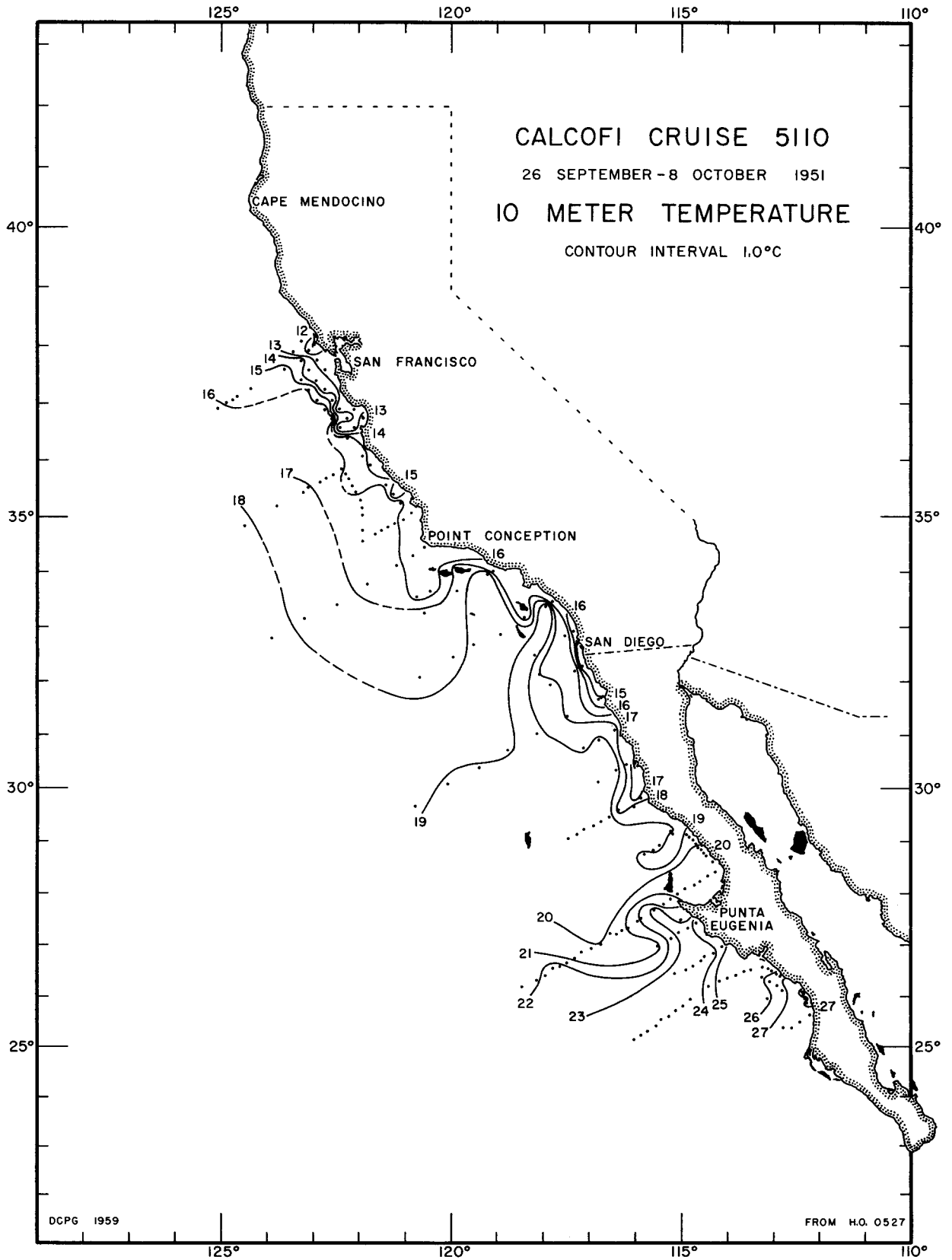
10m T
5107



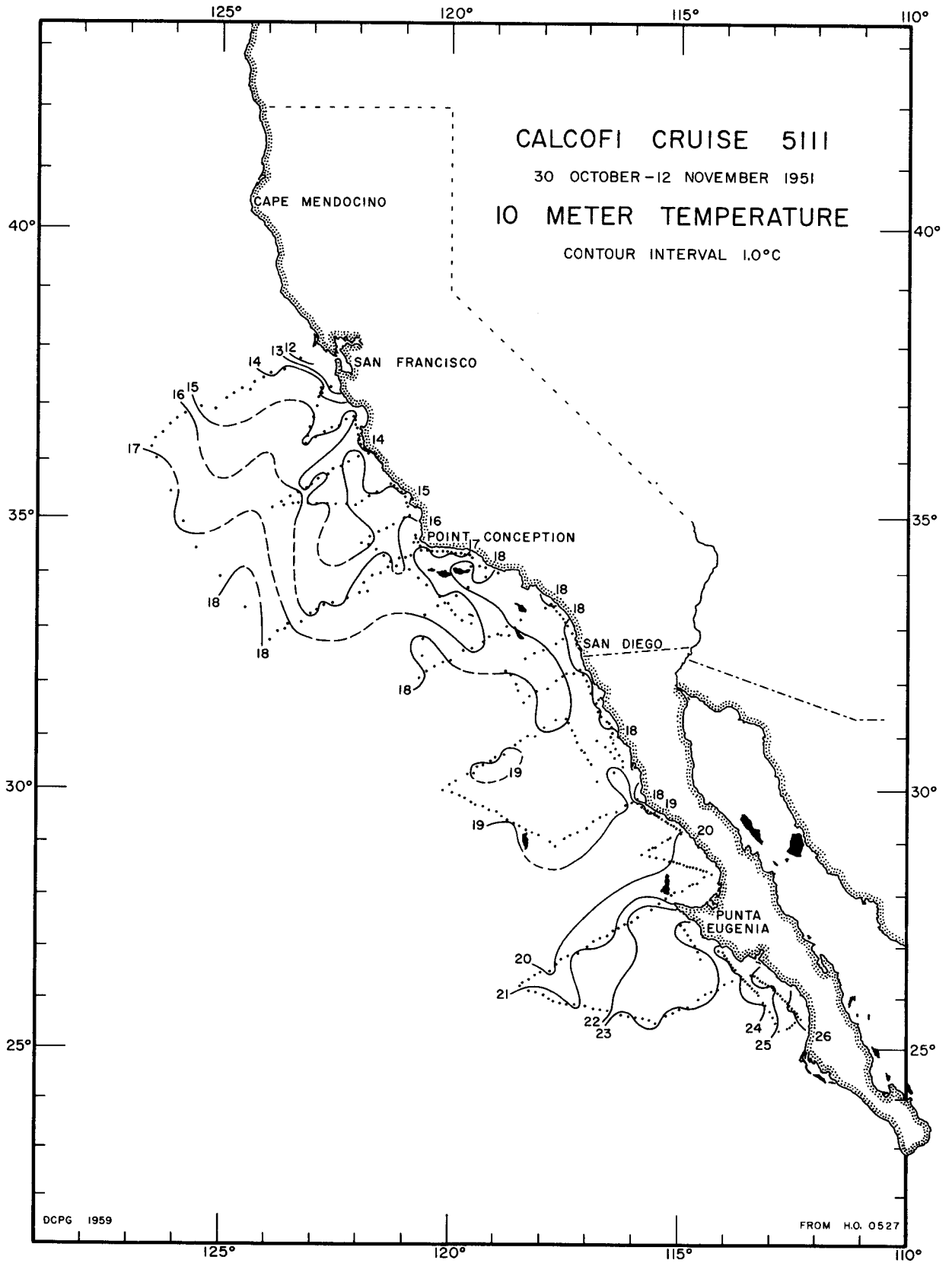
10m T
 5108



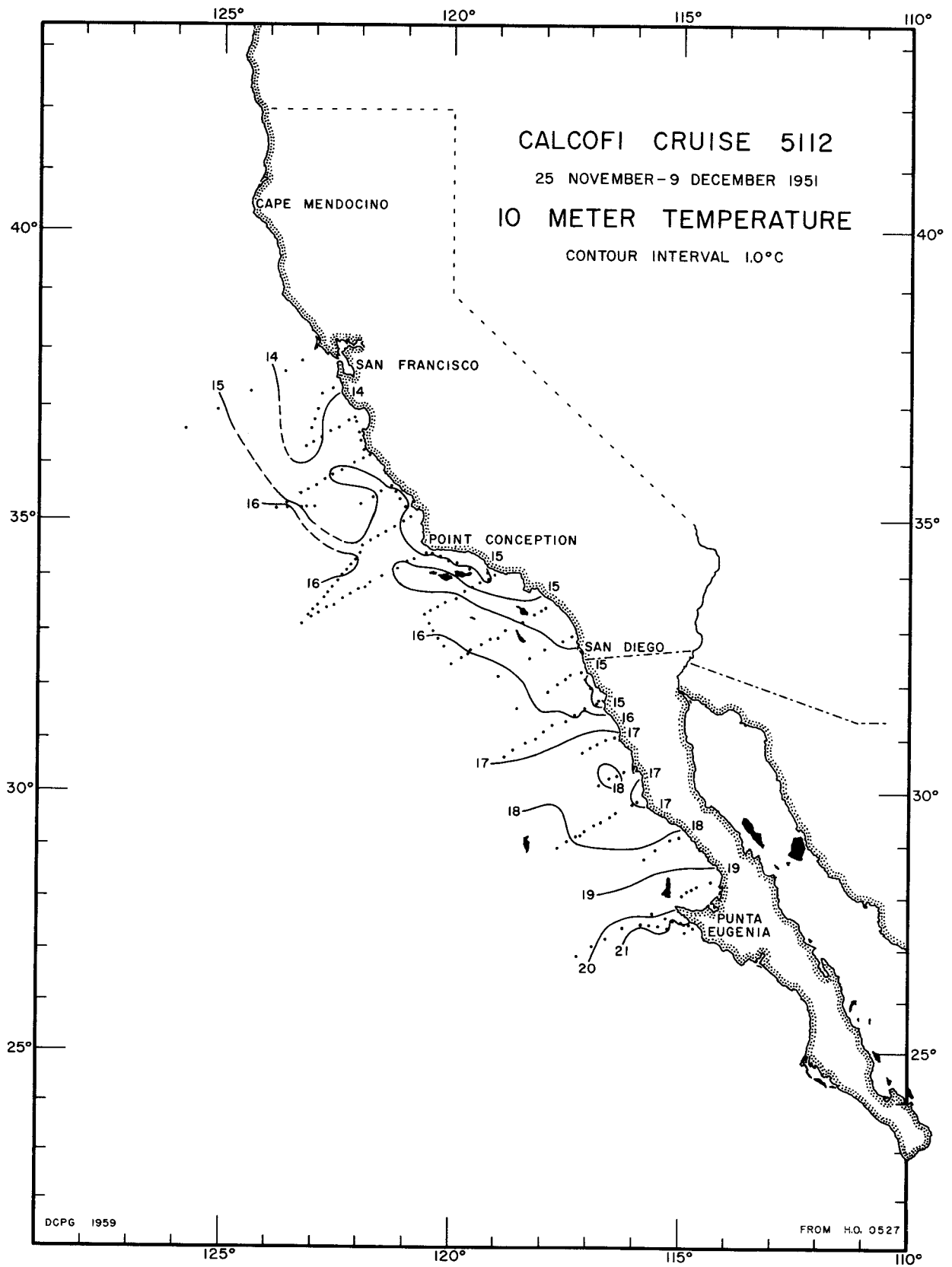
10m T
 5109



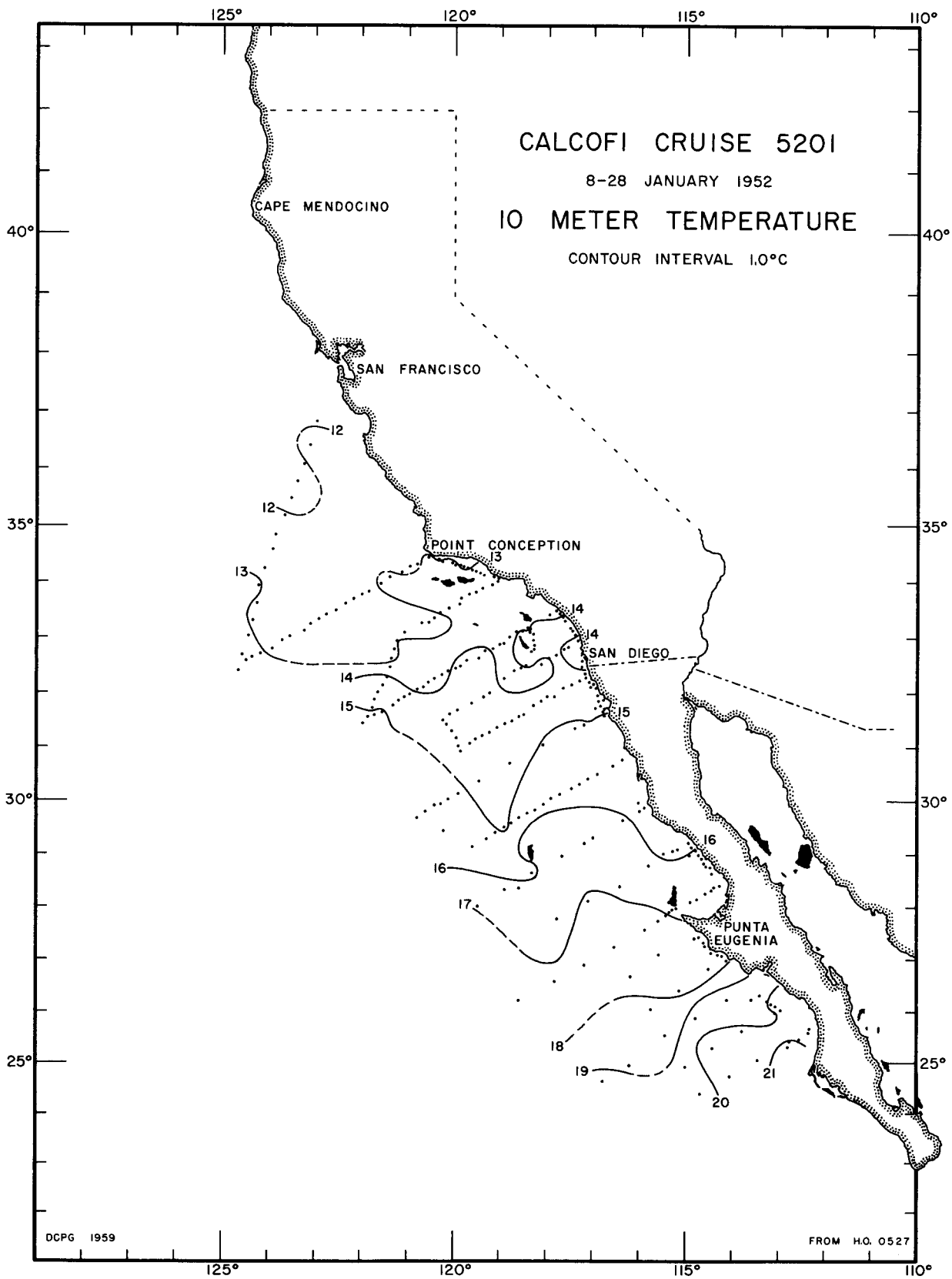
10m T
 5110



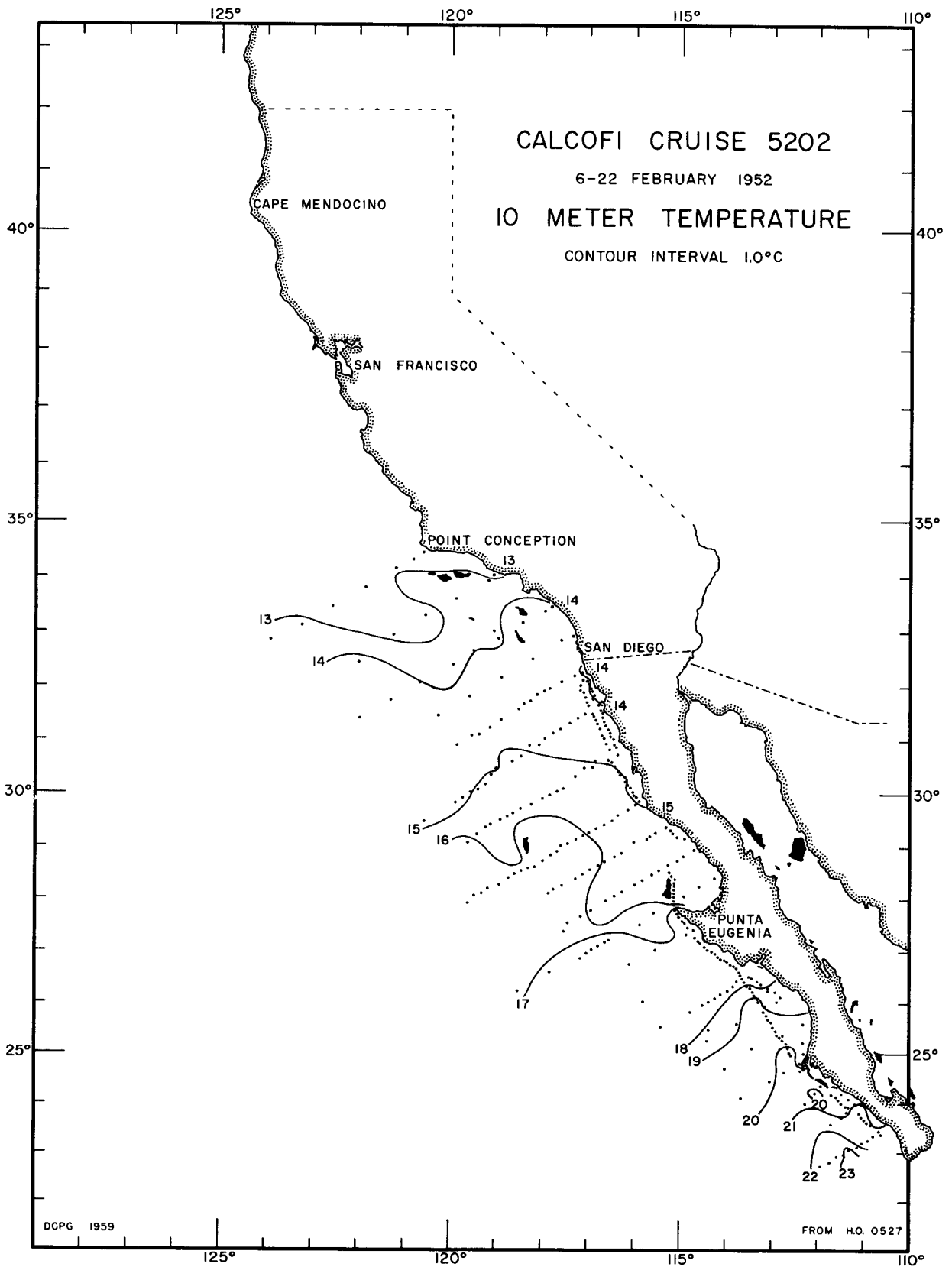
10m T
5111



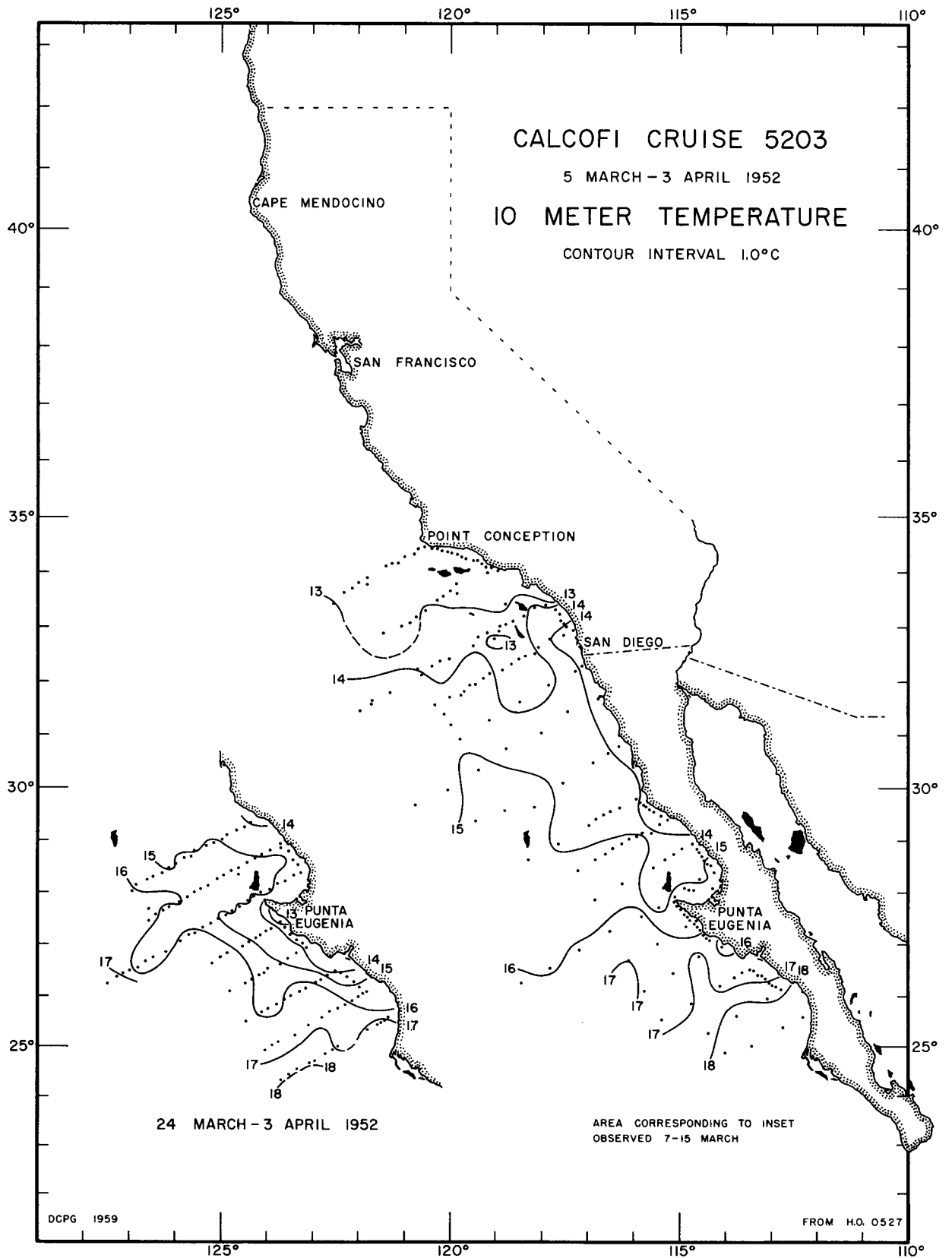
10m T
5112



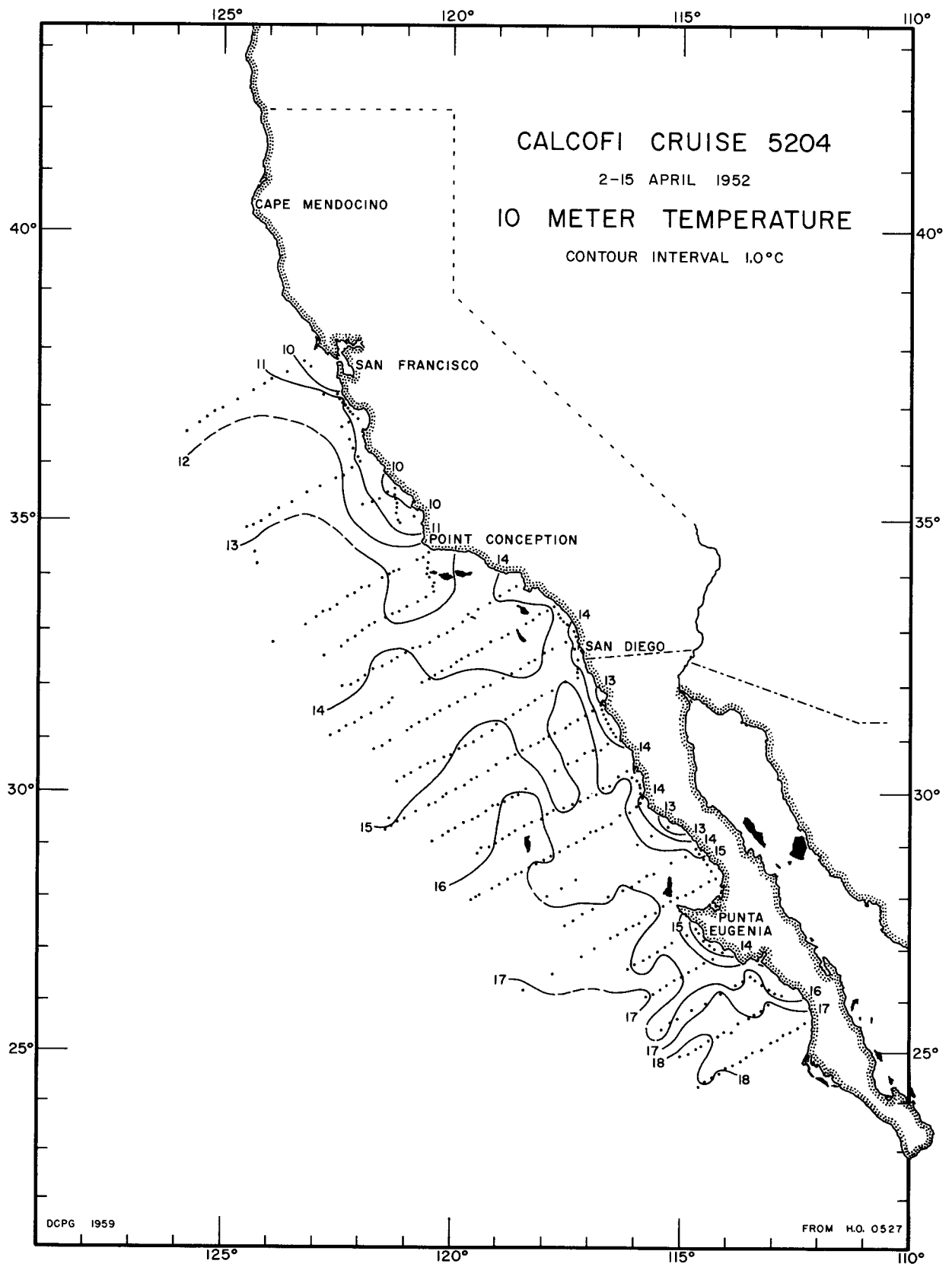
10m T
5201



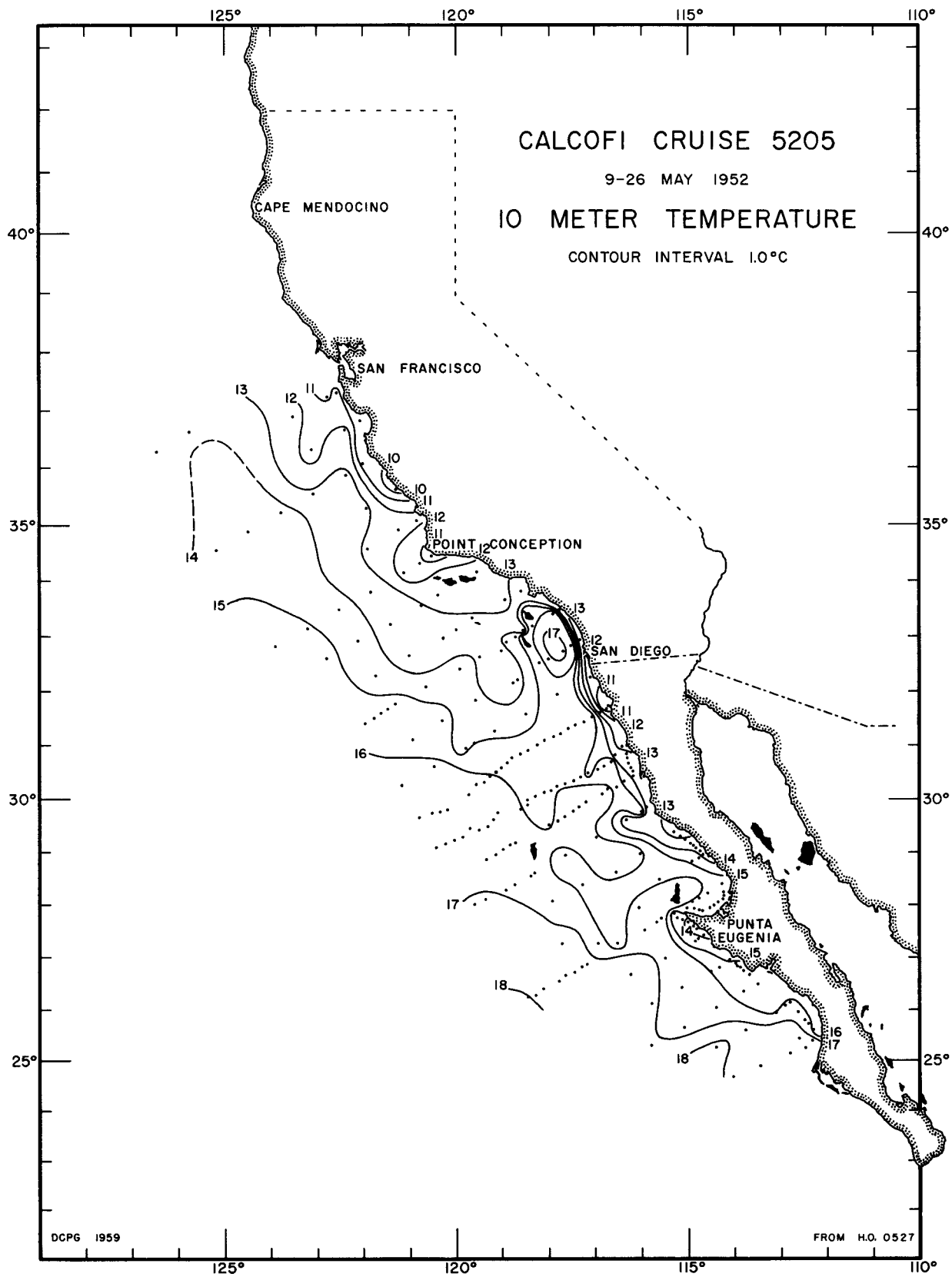
10m T
5202



10m T
 5203



10m T
5204



CALCOFI CRUISE 5205

9-26 MAY 1952

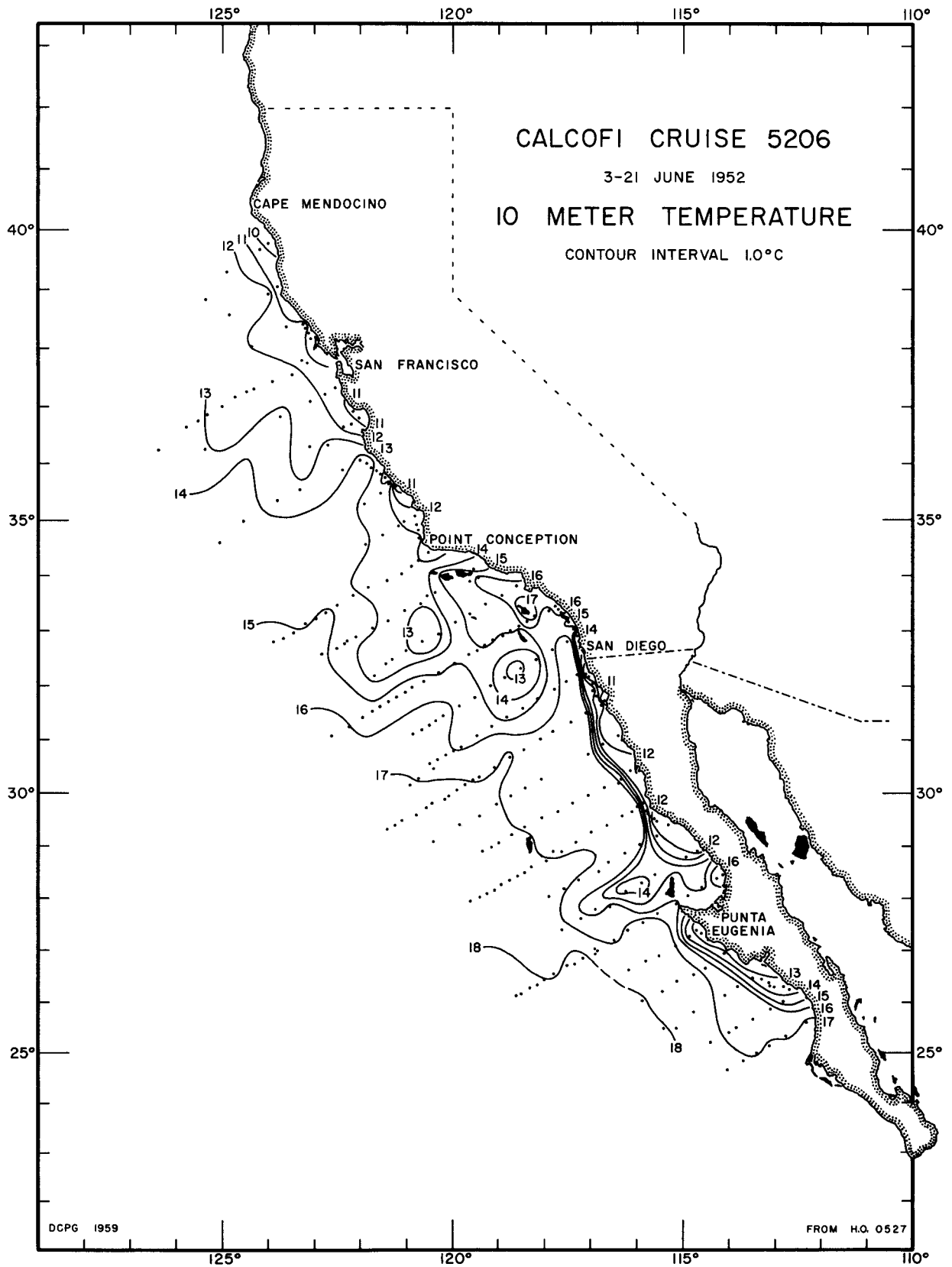
10 METER TEMPERATURE

CONTOUR INTERVAL 1.0°C

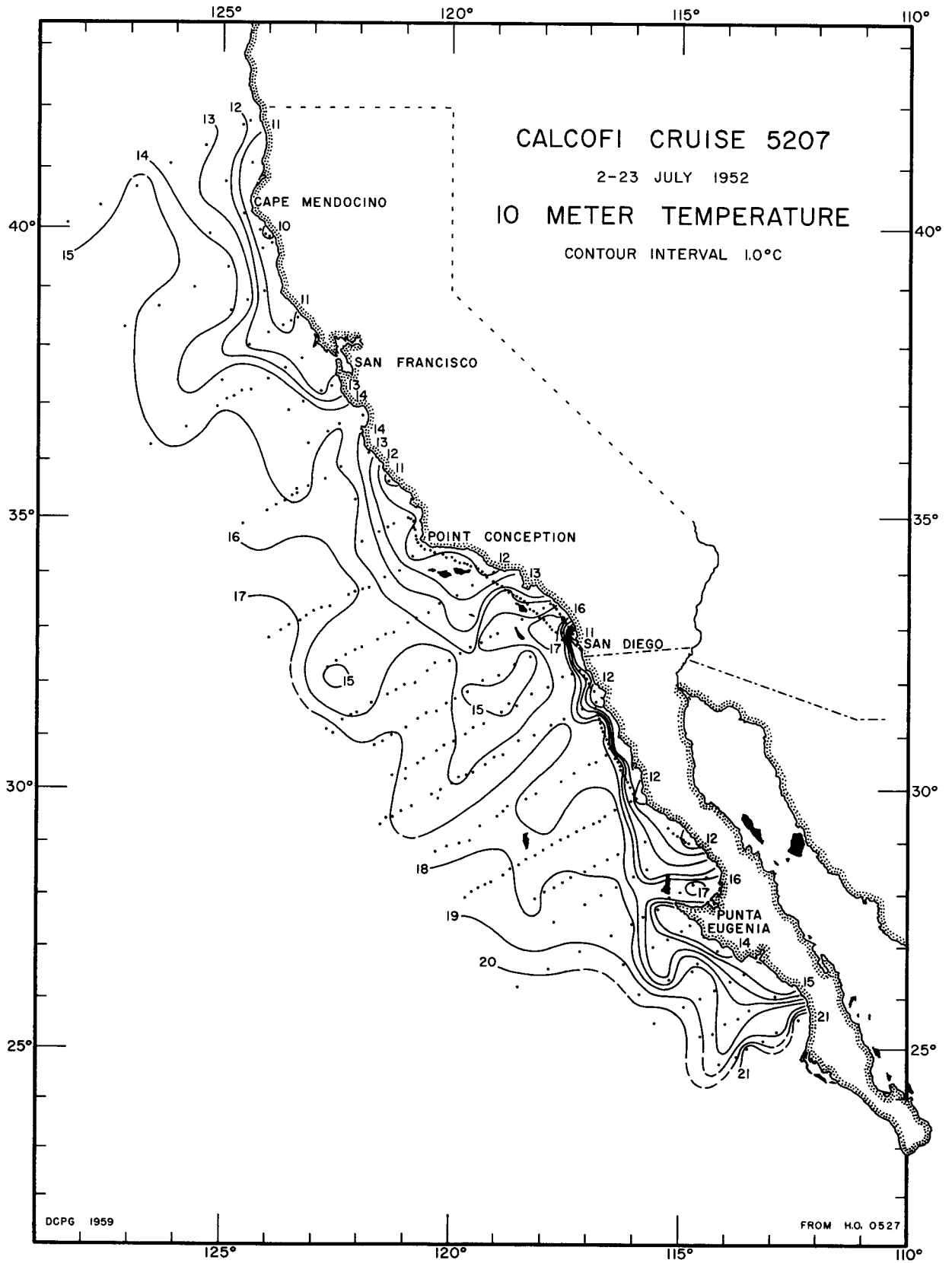
DCPG 1959

FROM H.O. 0527

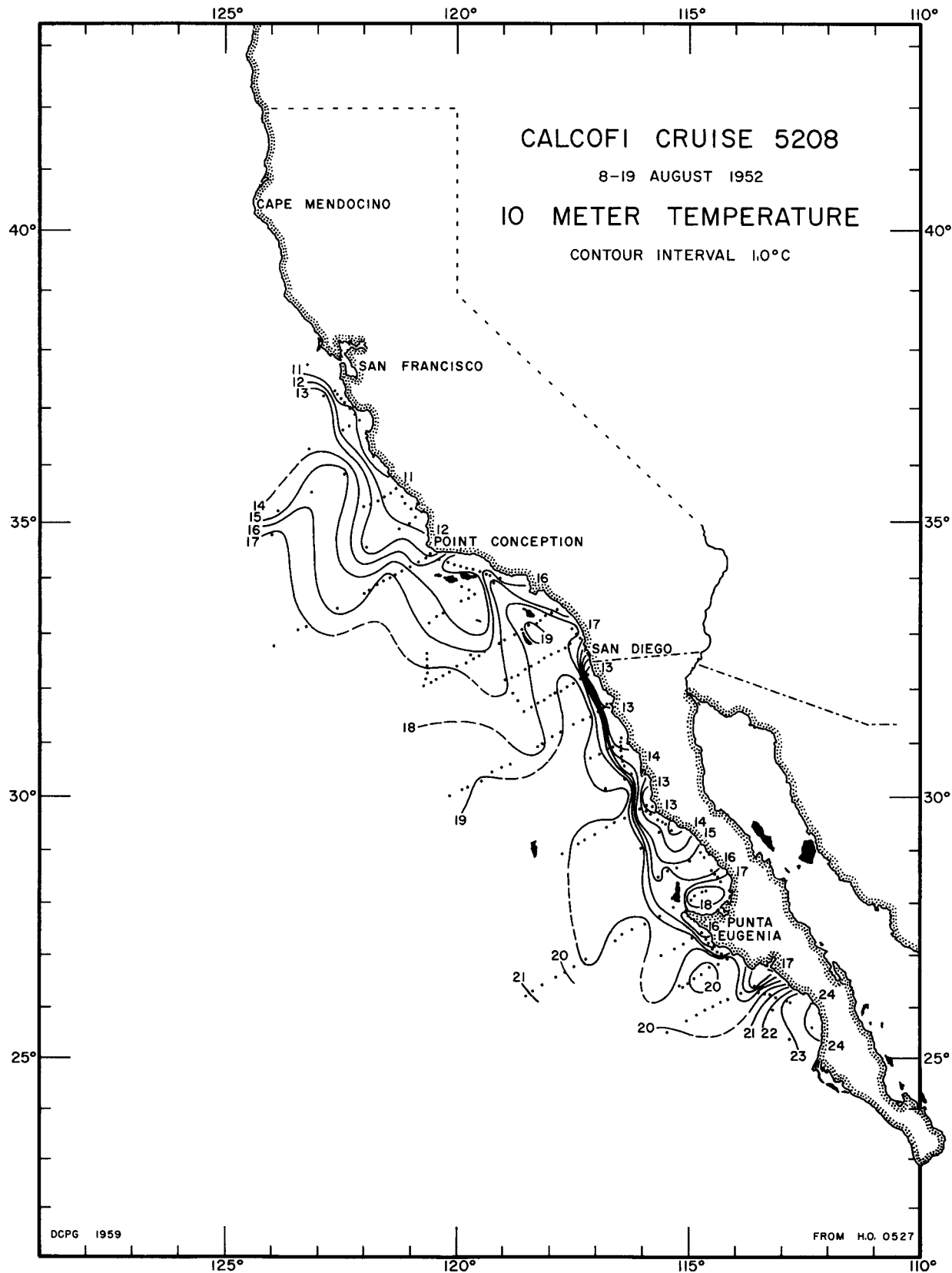
10m T
5205



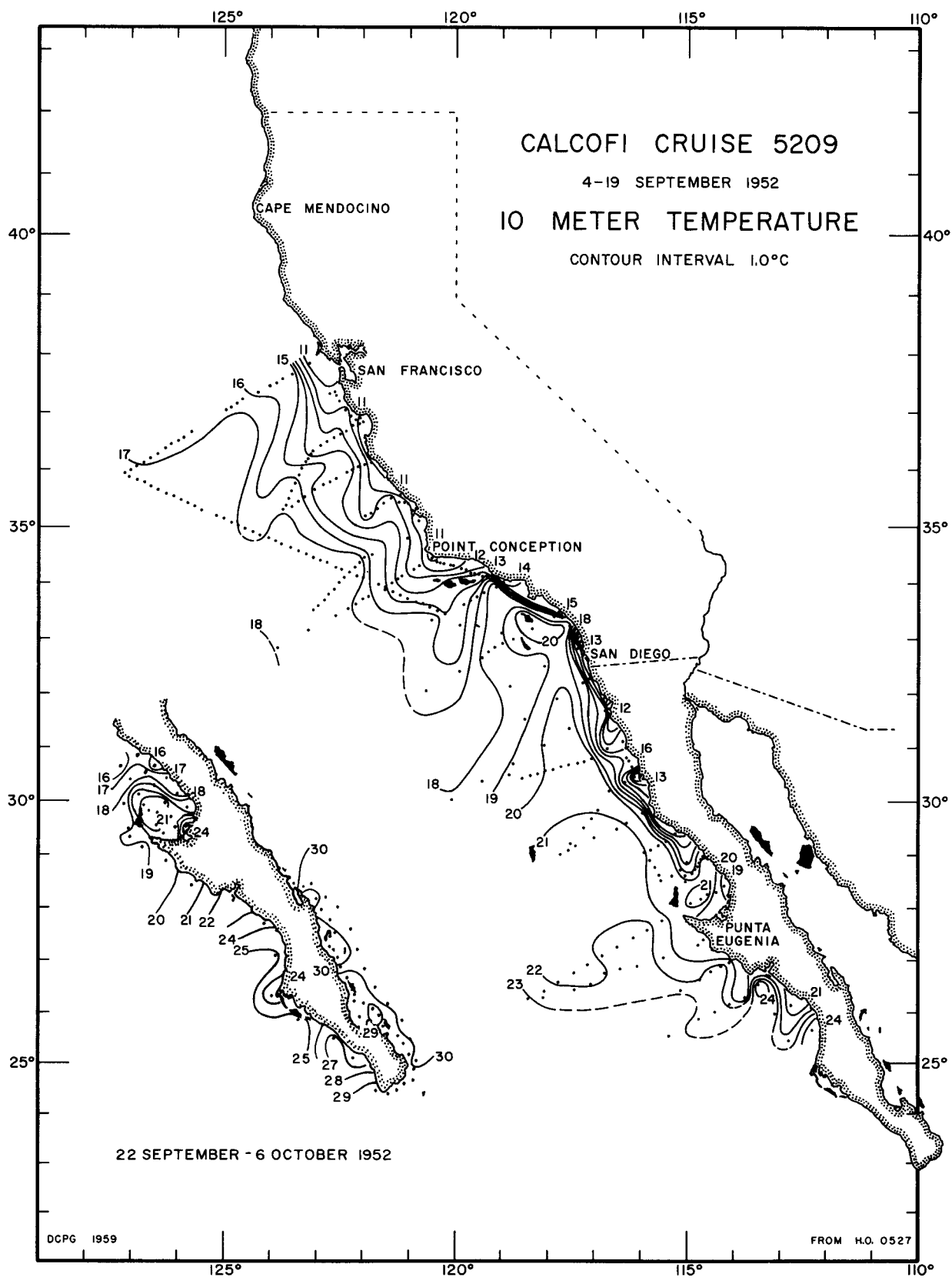
10m T
5206



10m T
5207



10m T
5208



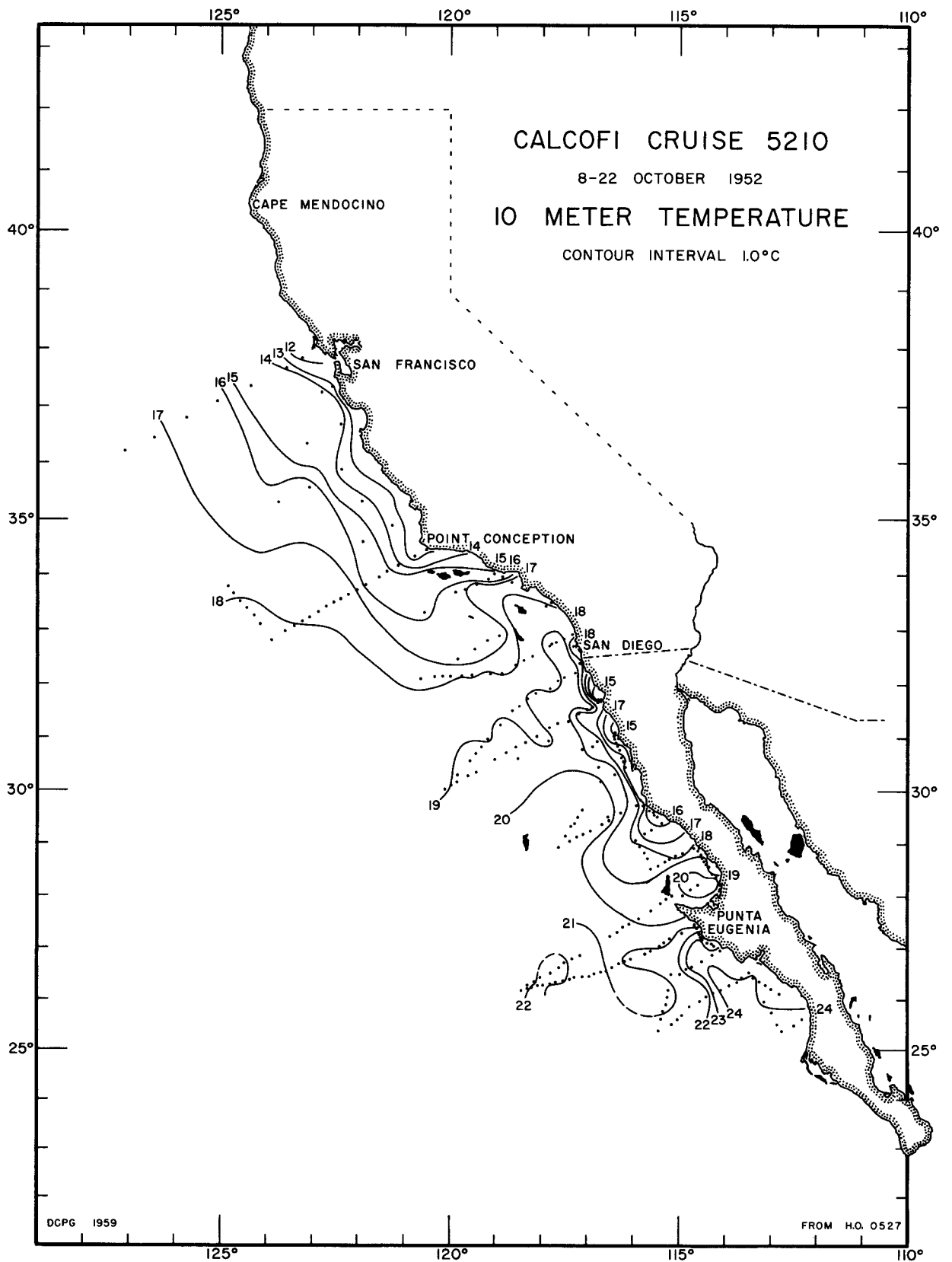
CALCOFI CRUISE 5209
4-19 SEPTEMBER 1952
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C

22 SEPTEMBER - 6 OCTOBER 1952

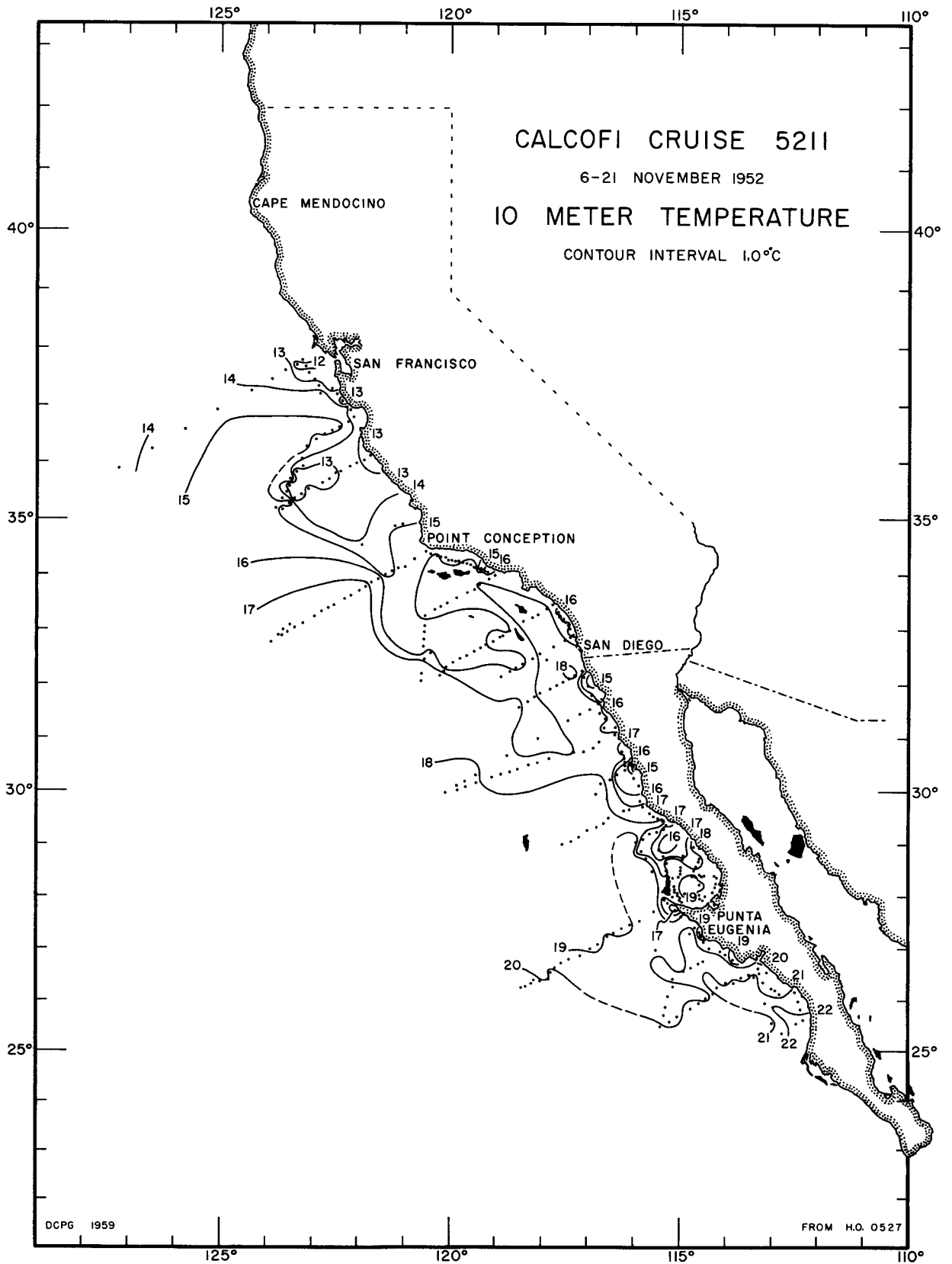
DCPG 1959

FROM H.O. 0527

10m T
5209



10m T
5210



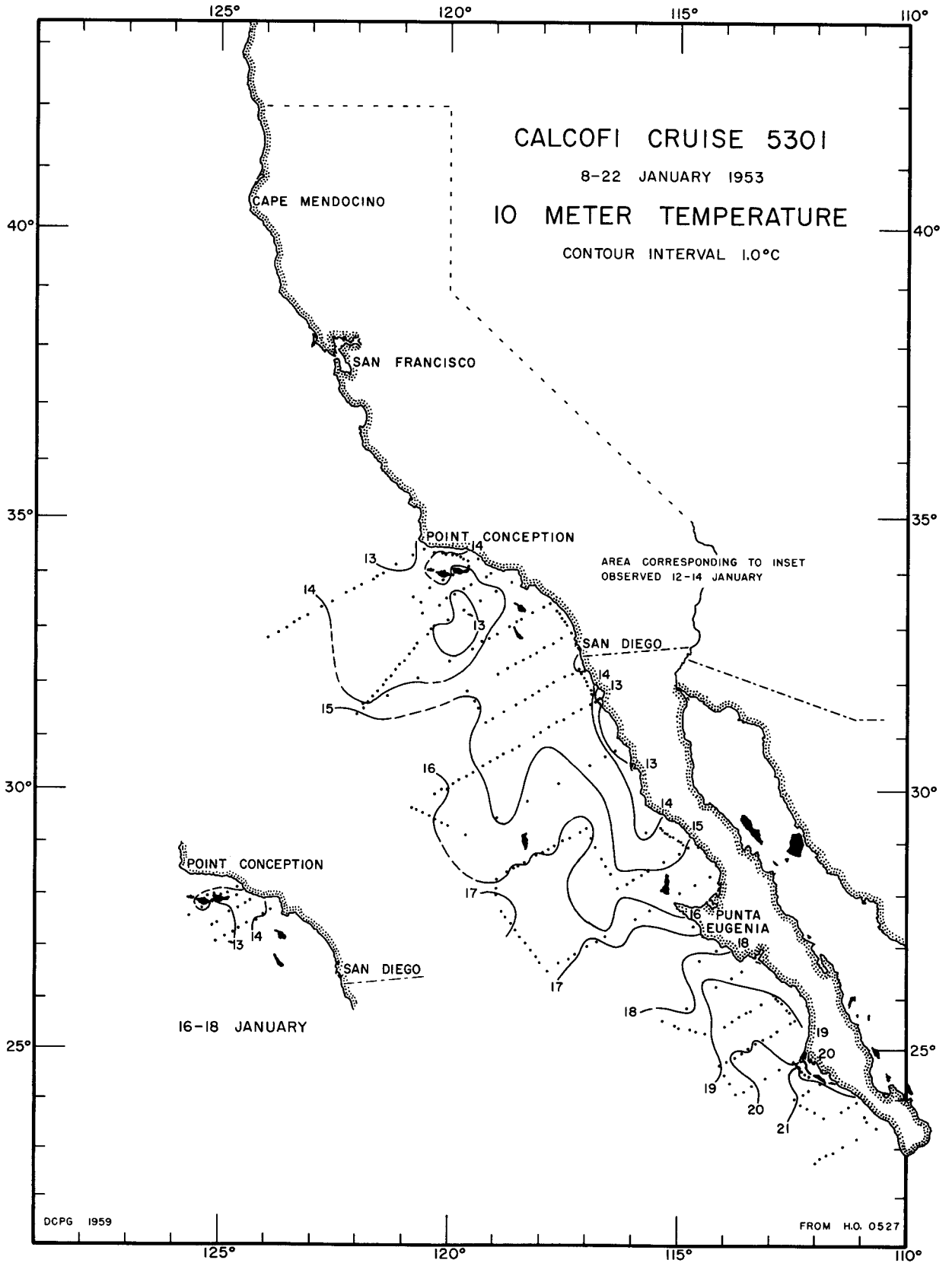
CALCOFI CRUISE 5211

6-21 NOVEMBER 1952

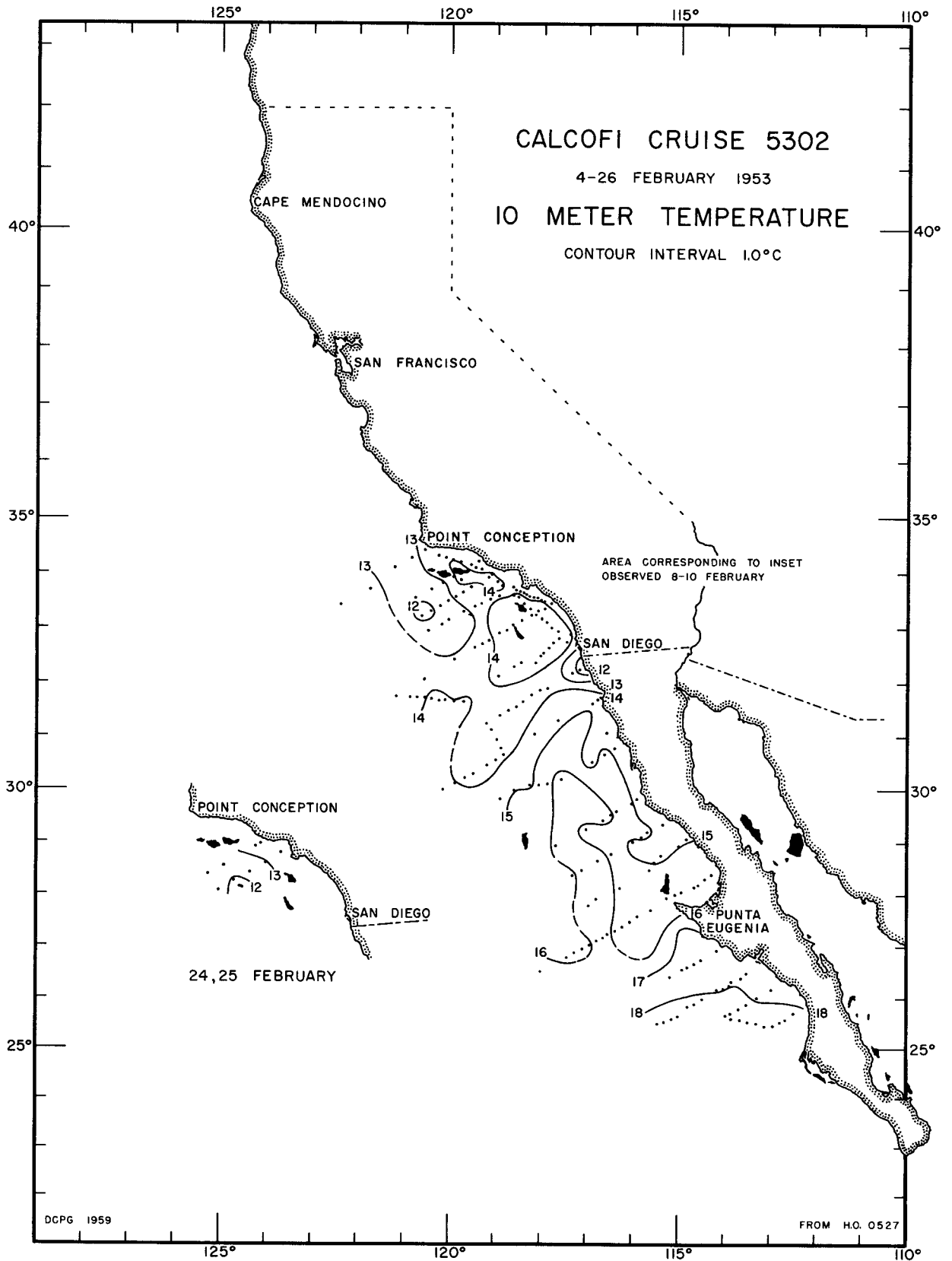
10 METER TEMPERATURE

CONTOUR INTERVAL 1.0°C

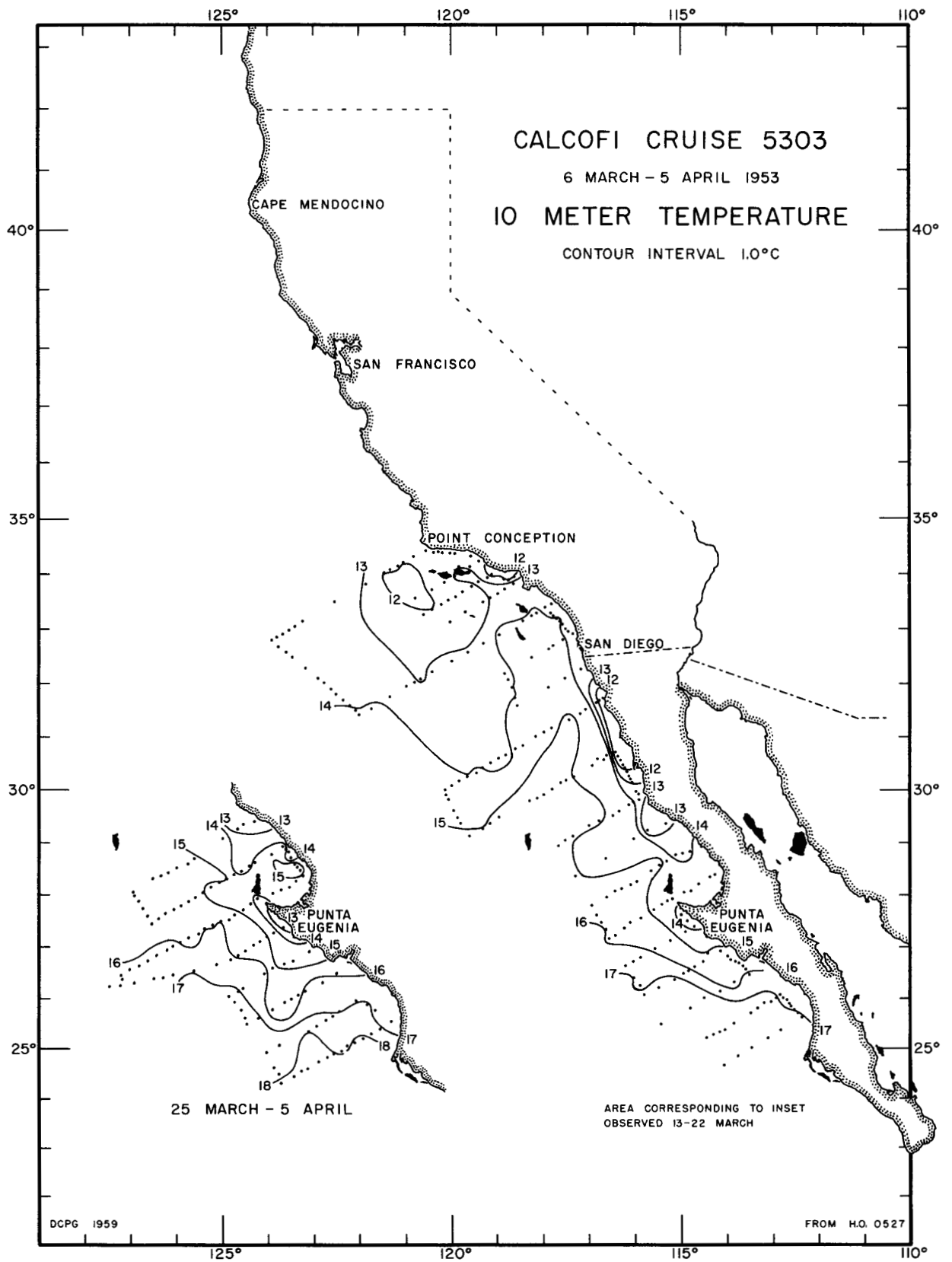
10m T
5211



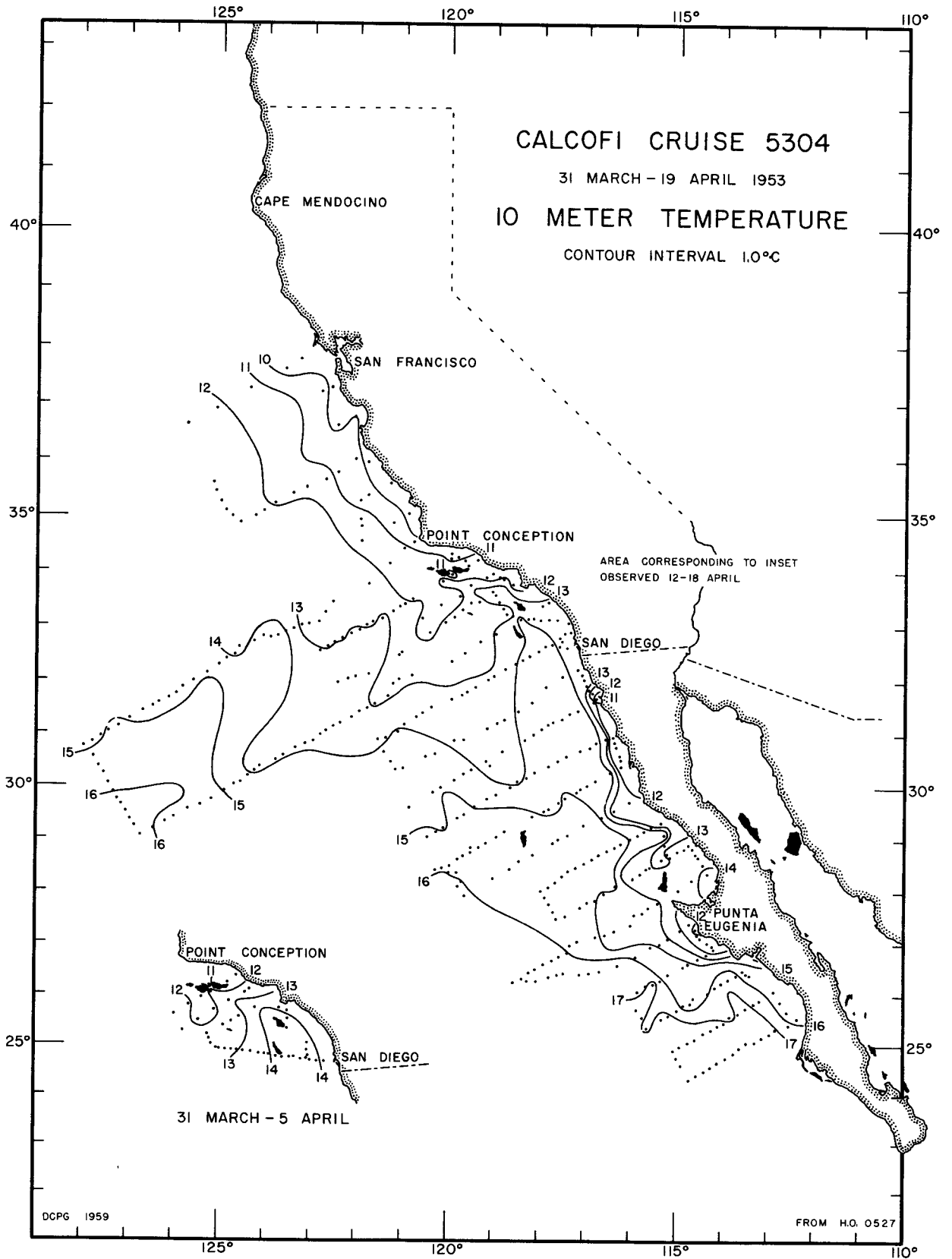
10m T
 5301



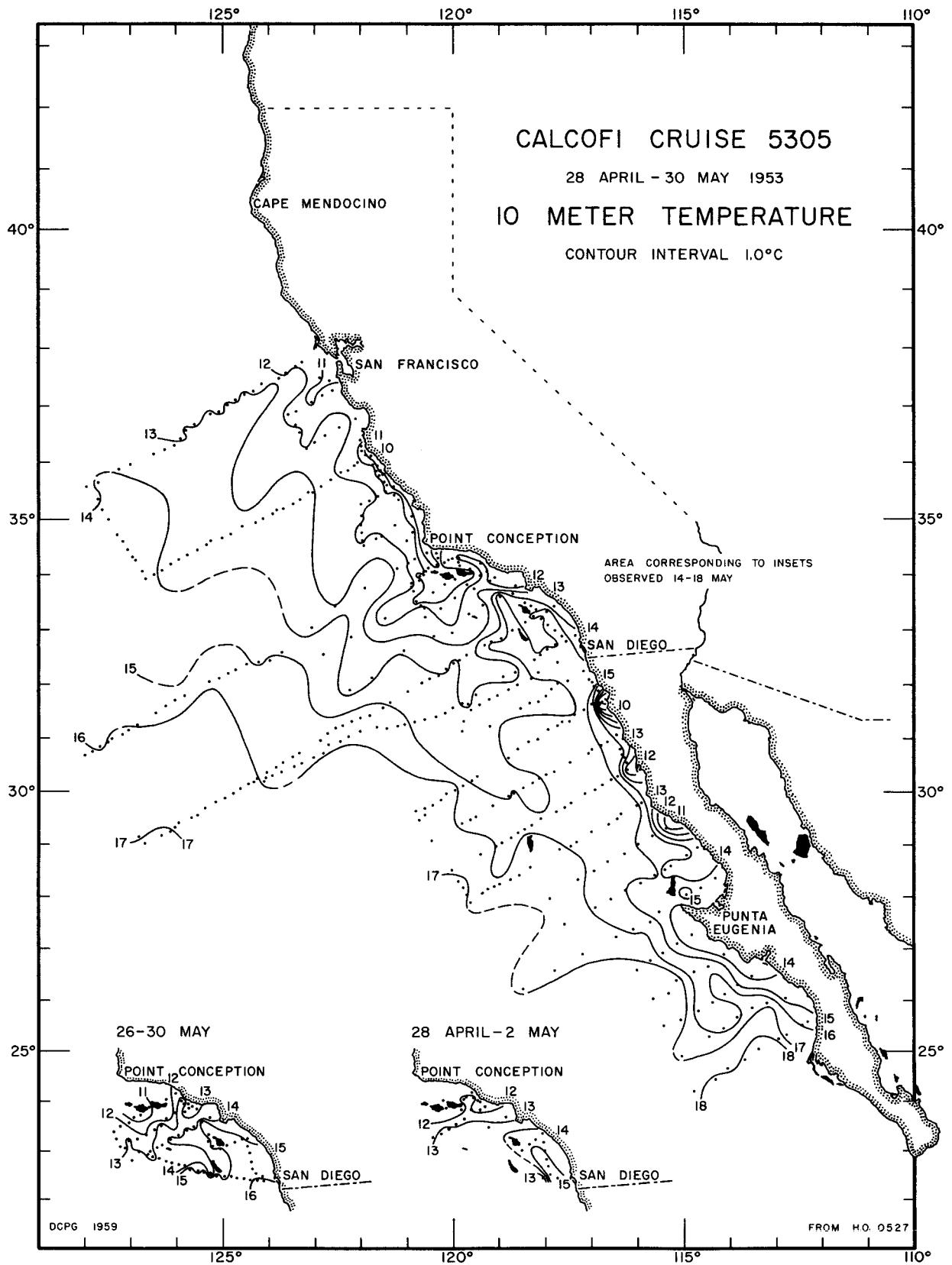
10m T
 5302



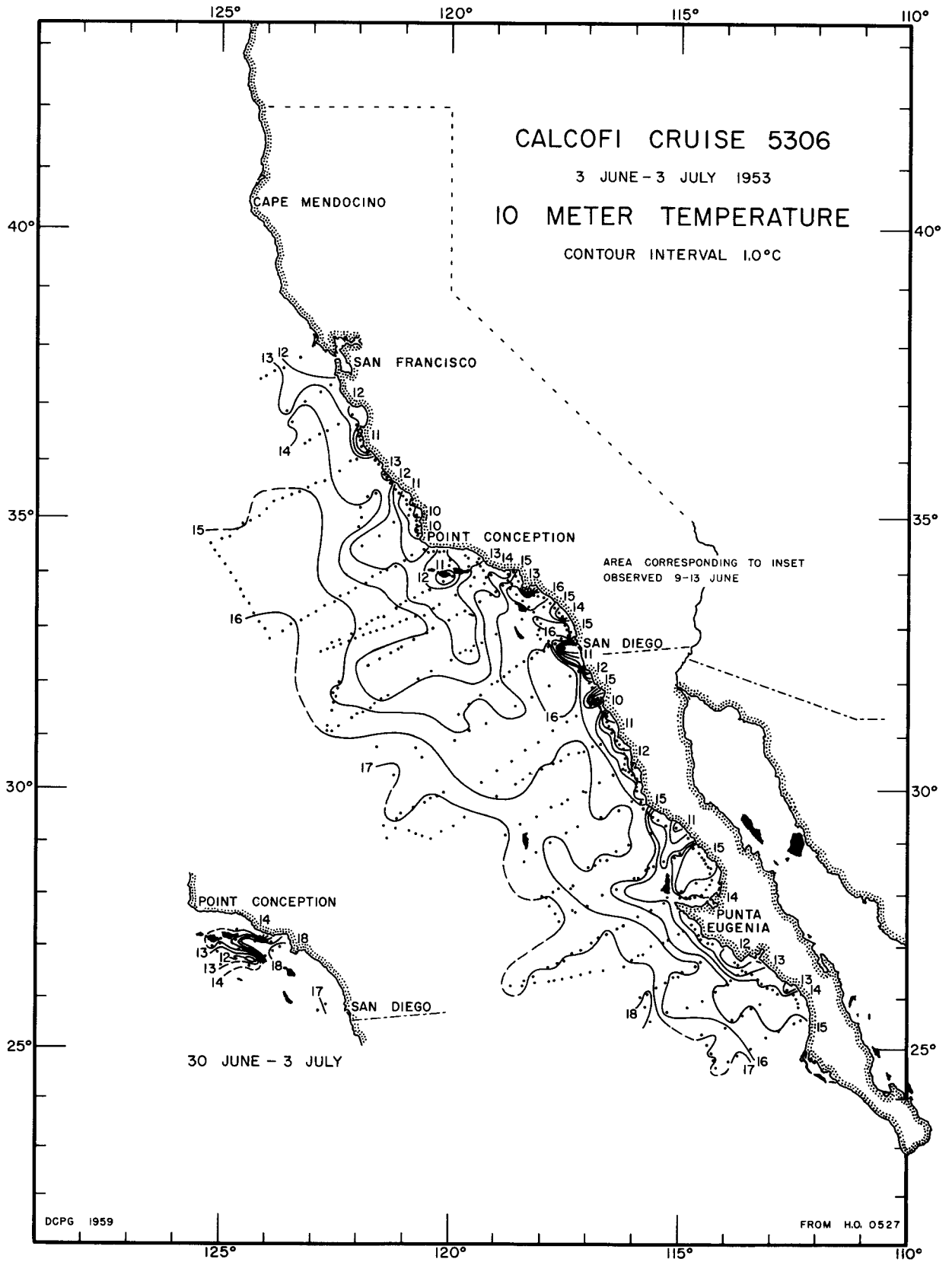
10m T
5303



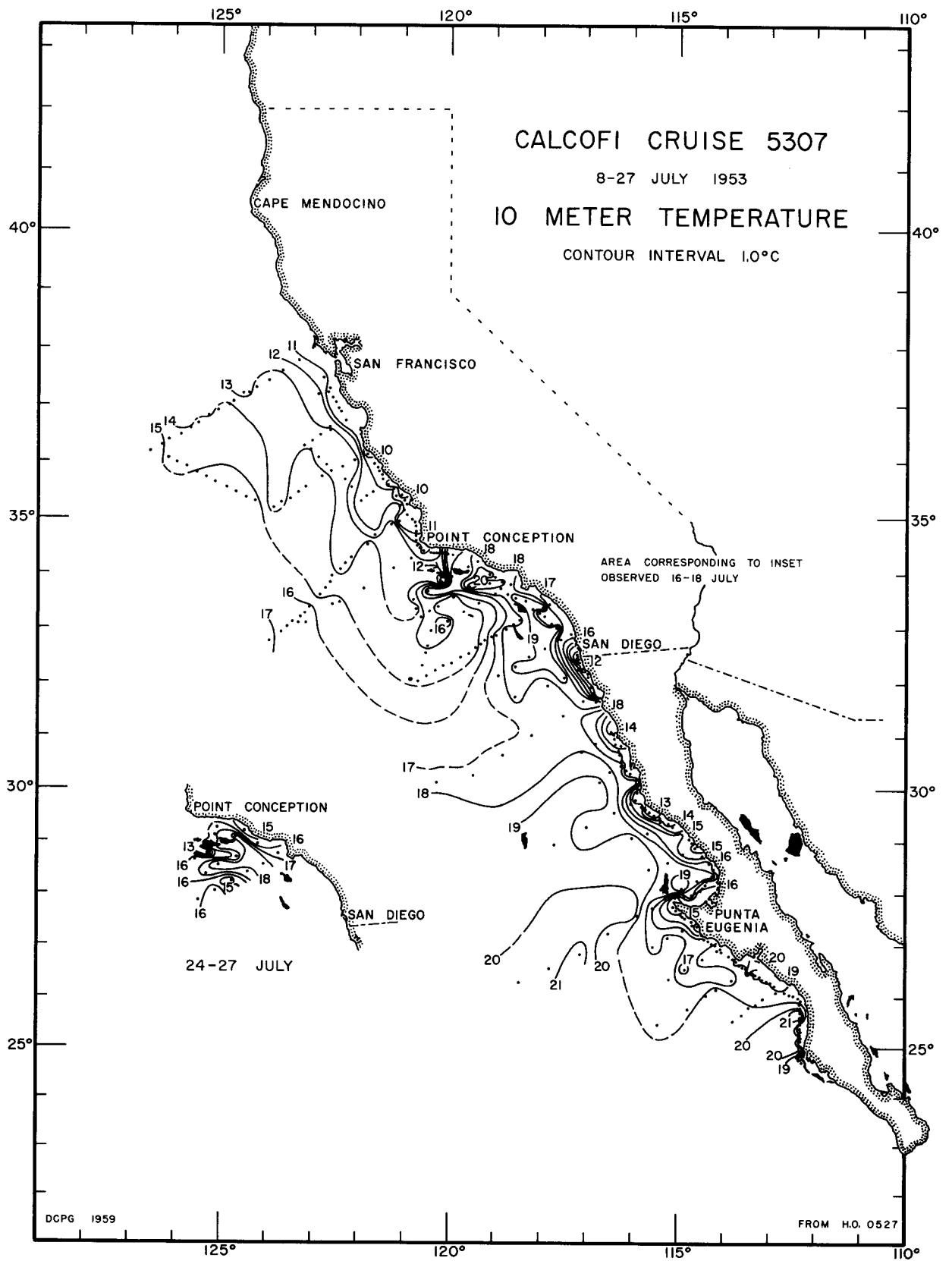
10m T
 5304



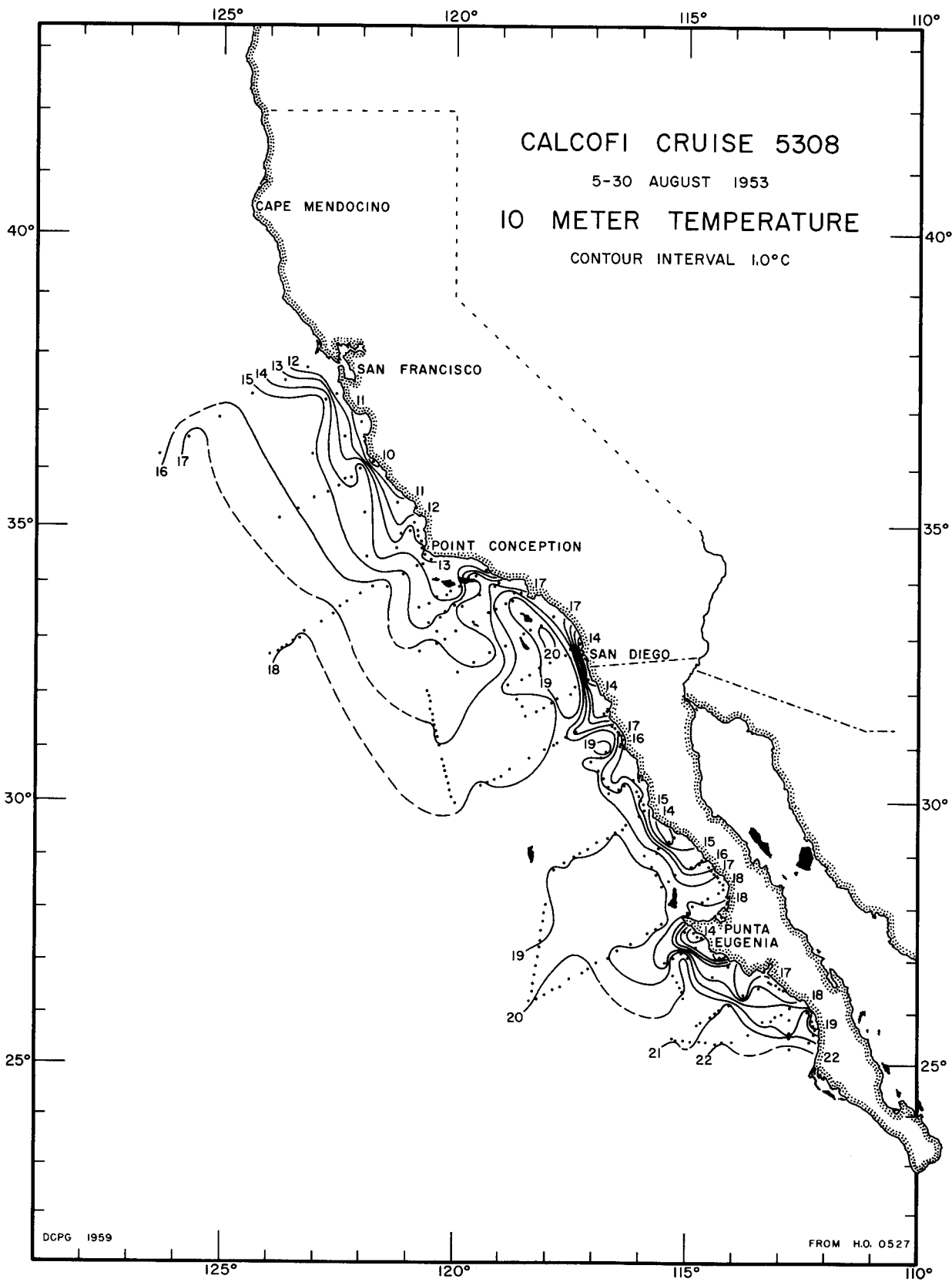
10m T
 5305



10m T
 5306



10m T
 5307



CALCOFI CRUISE 5308

5-30 AUGUST 1953

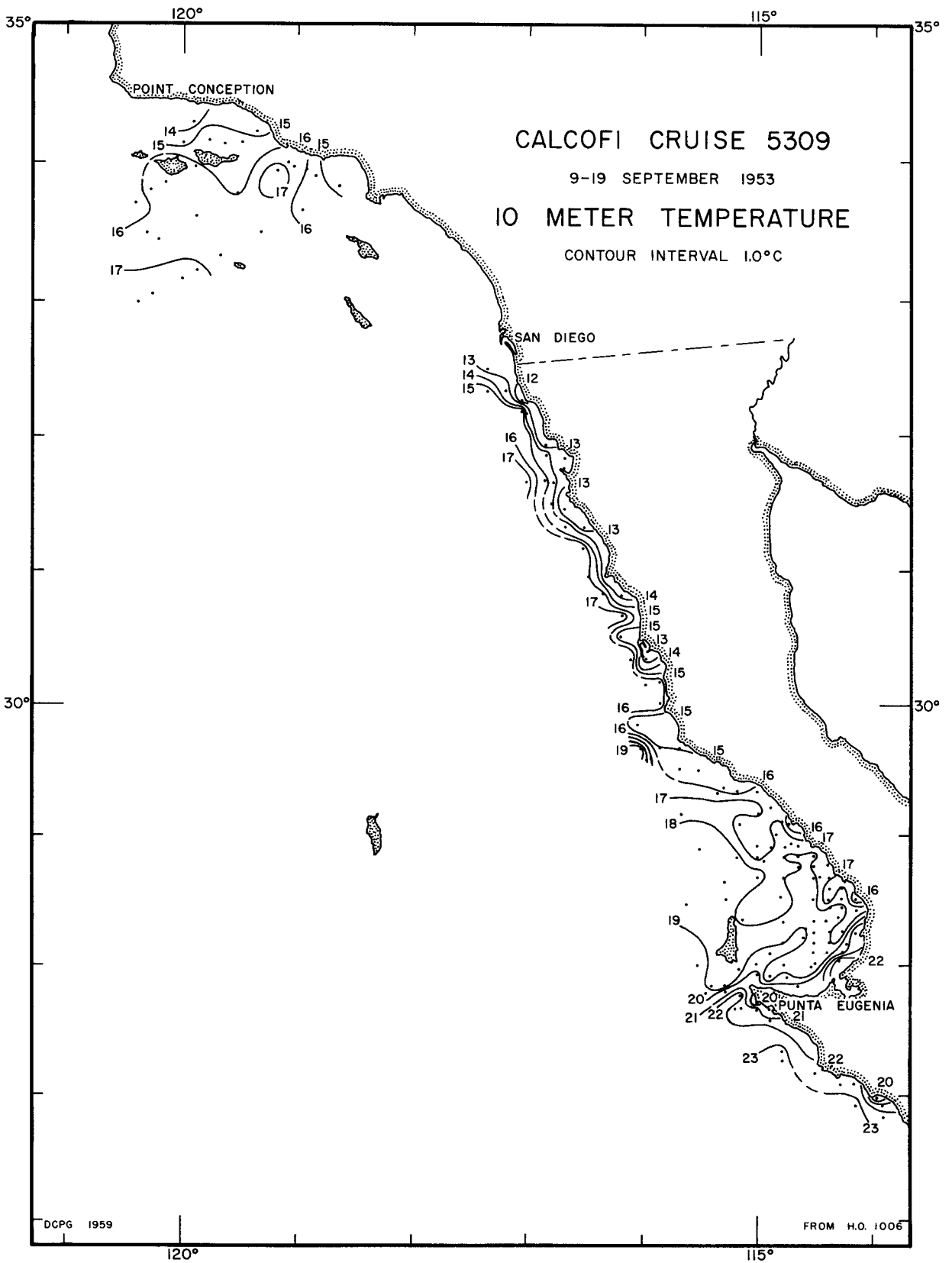
10 METER TEMPERATURE

CONTOUR INTERVAL 1.0°C

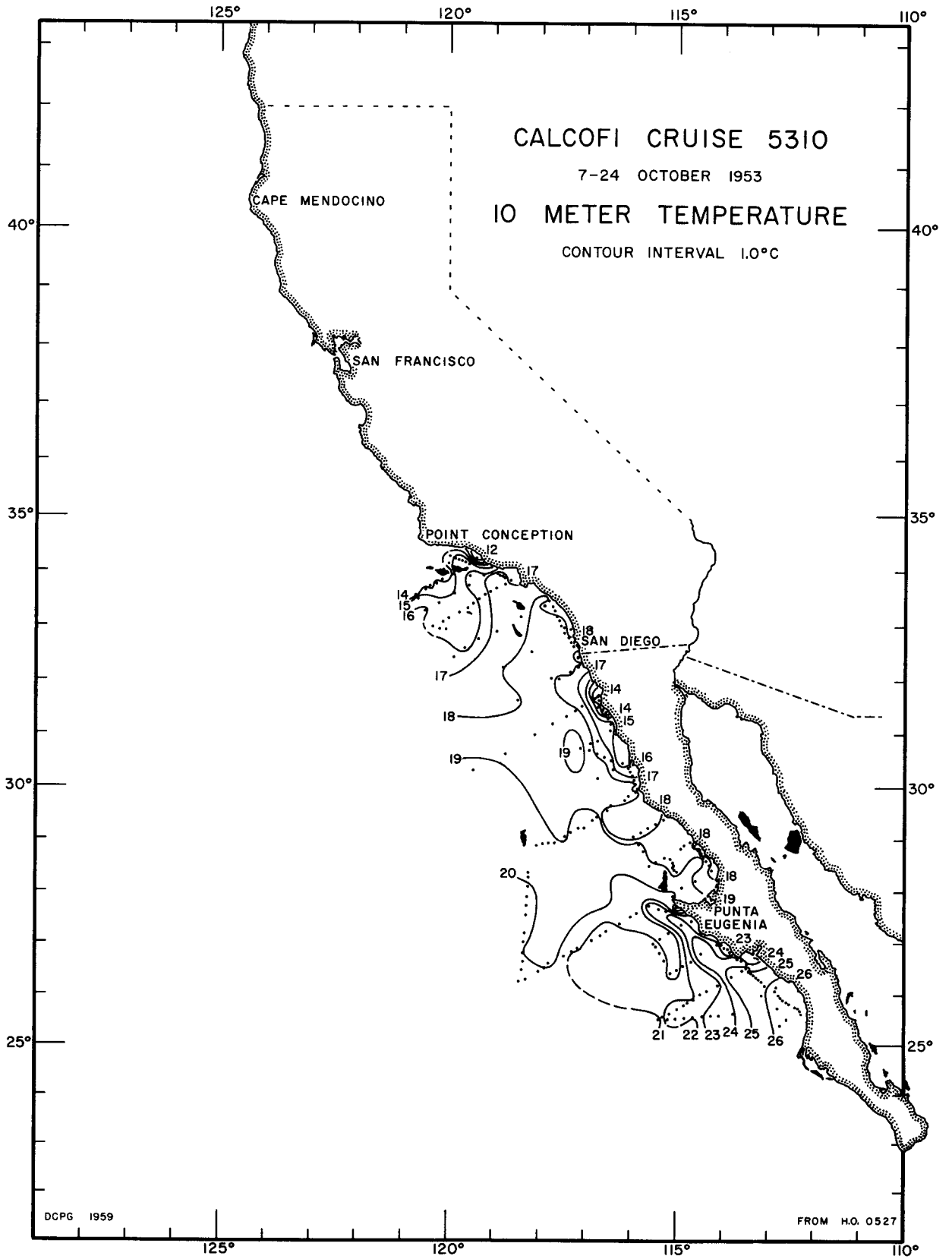
DCPG 1959

FROM H.O. 0527

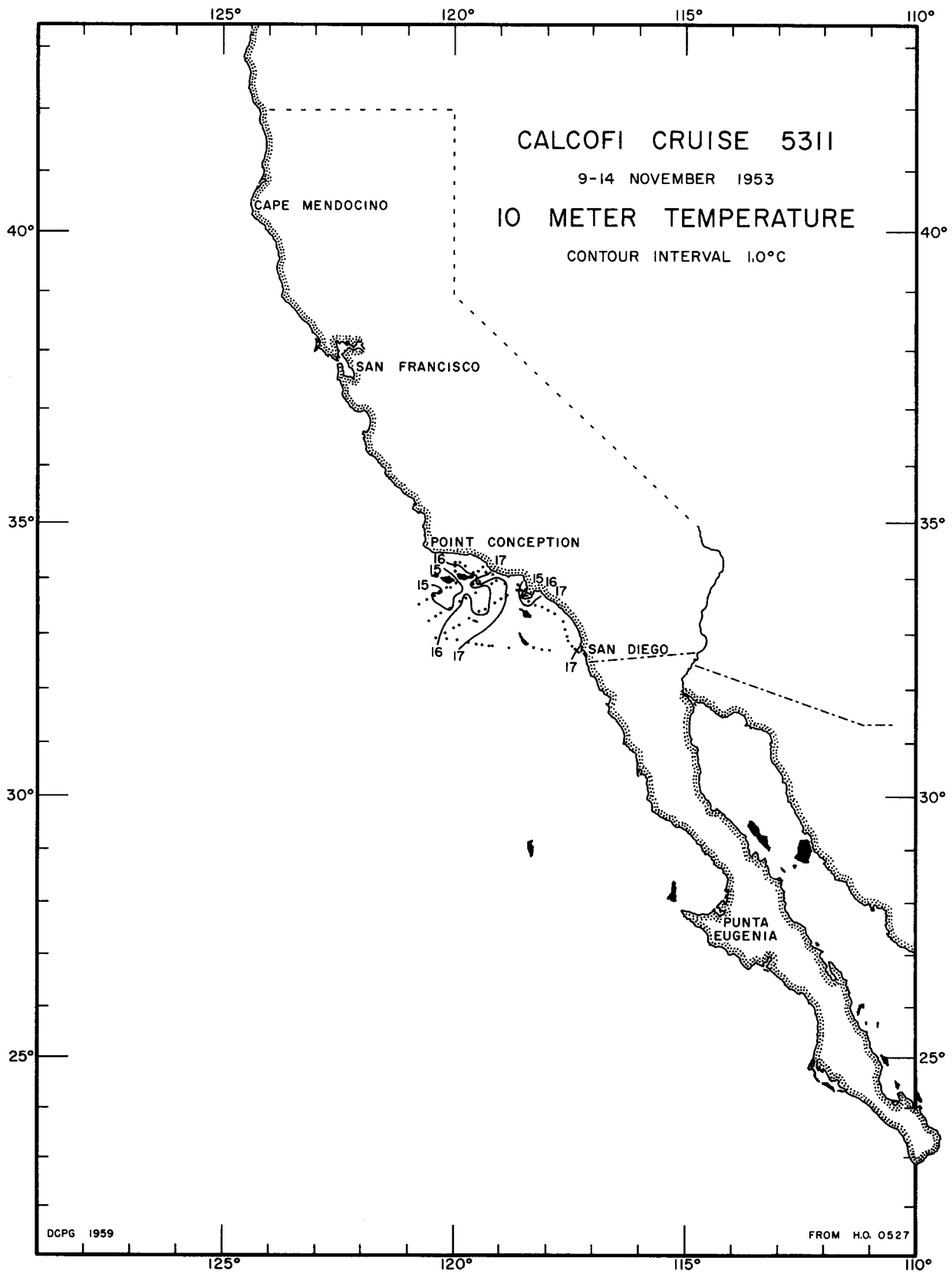
10m T
5308



10m T
5309



10m T
5310



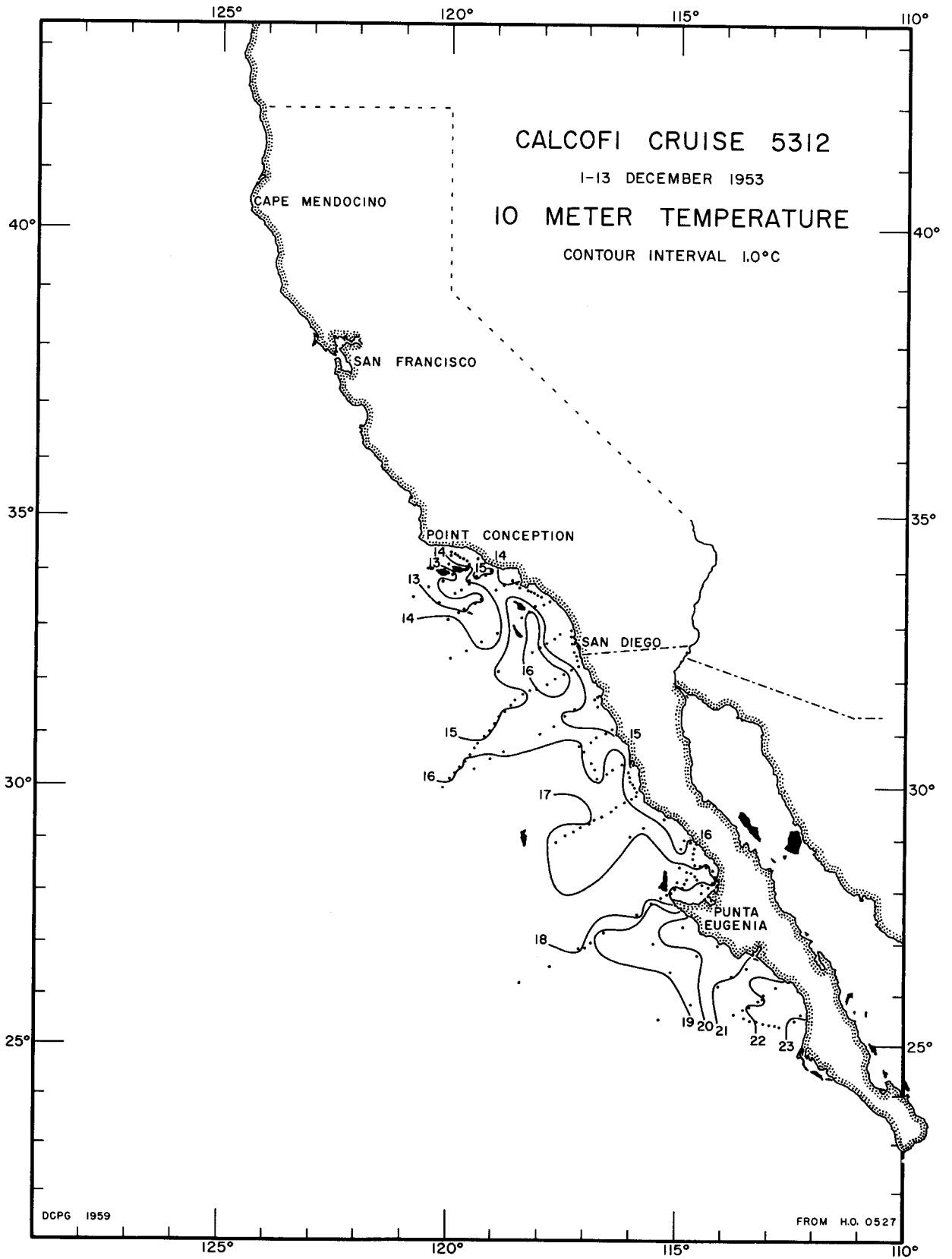
CALCOFI CRUISE 5311

9-14 NOVEMBER 1953

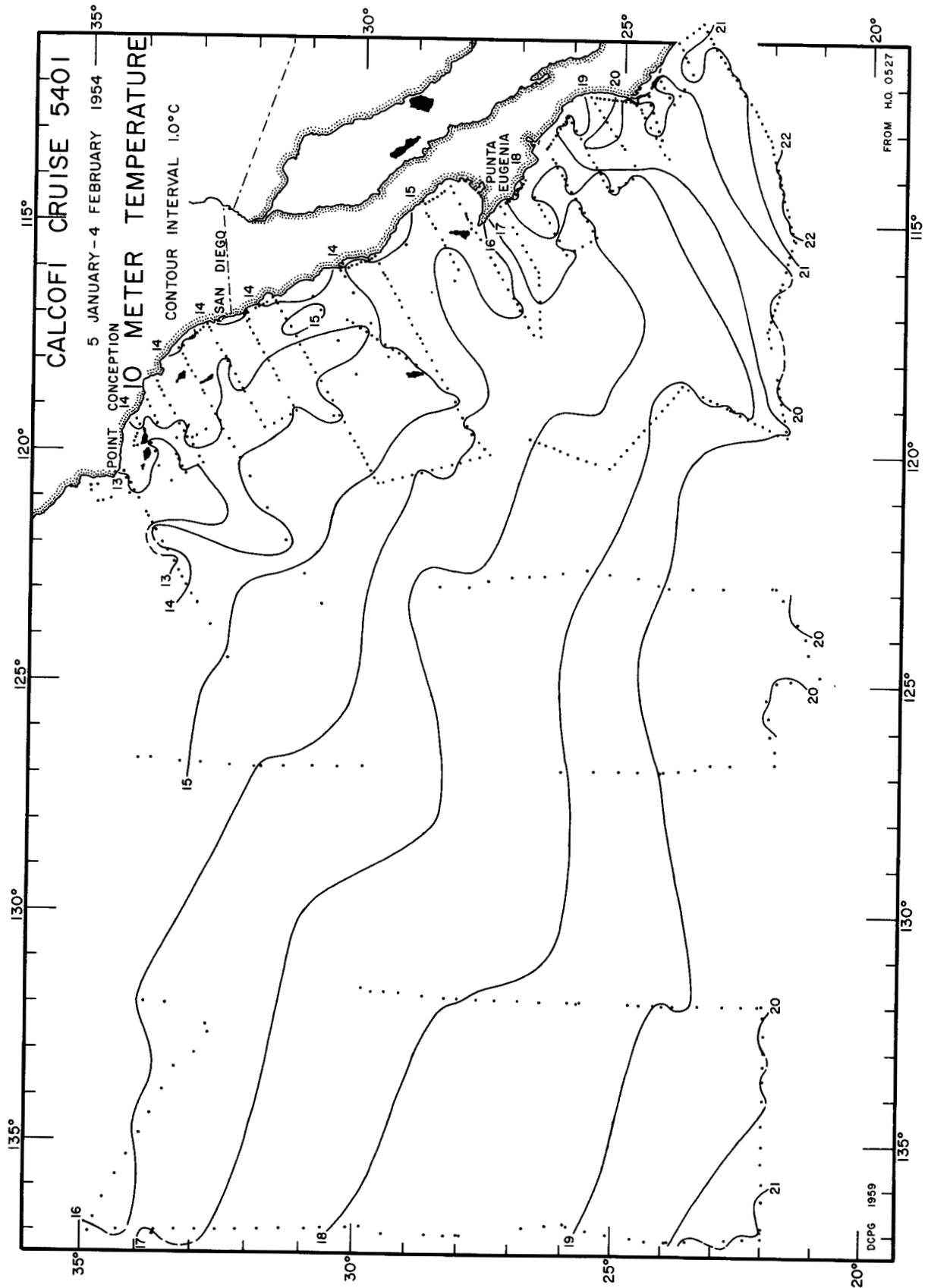
10 METER TEMPERATURE

CONTOUR INTERVAL 1.0°C

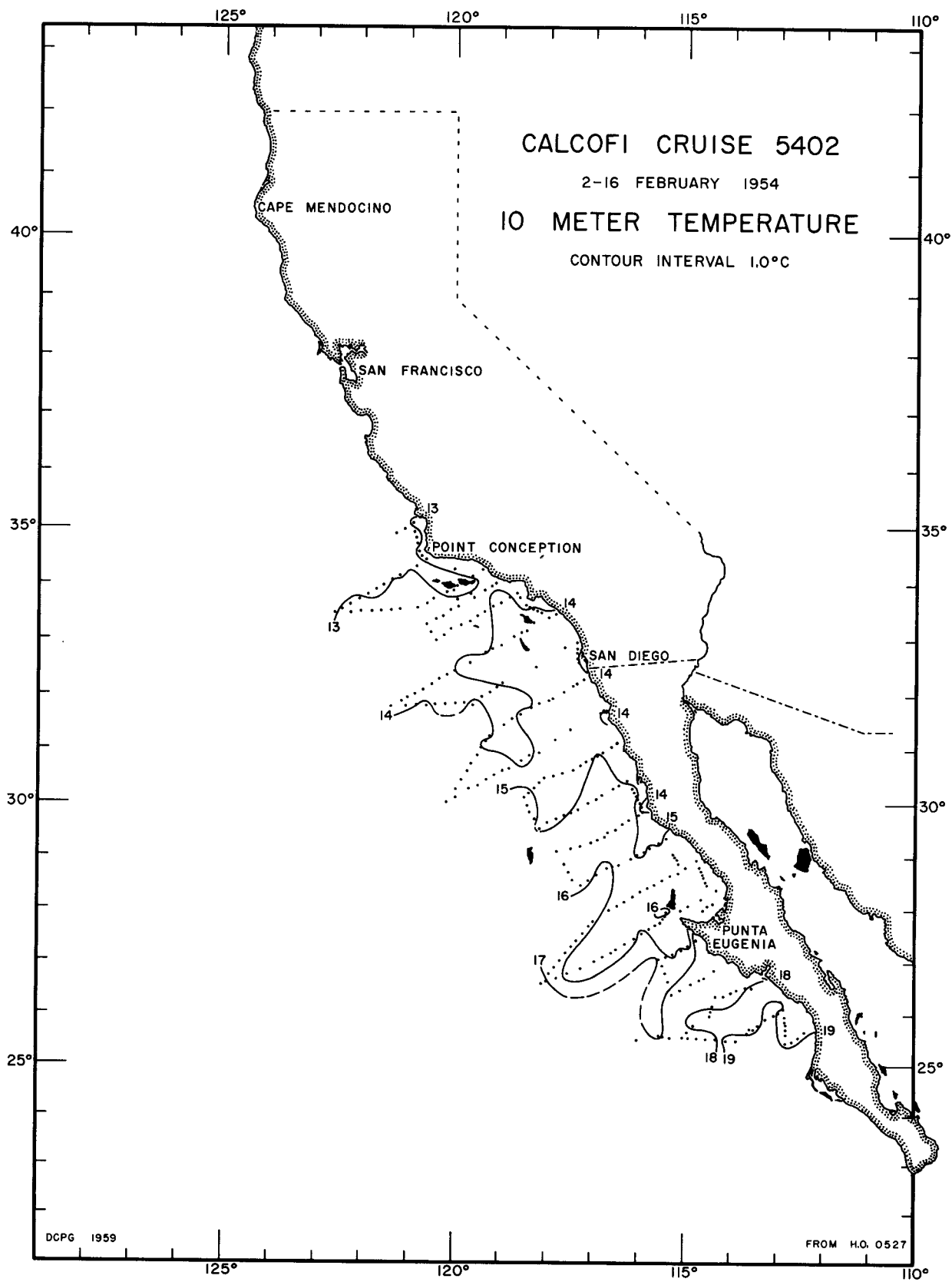
10m T
5311



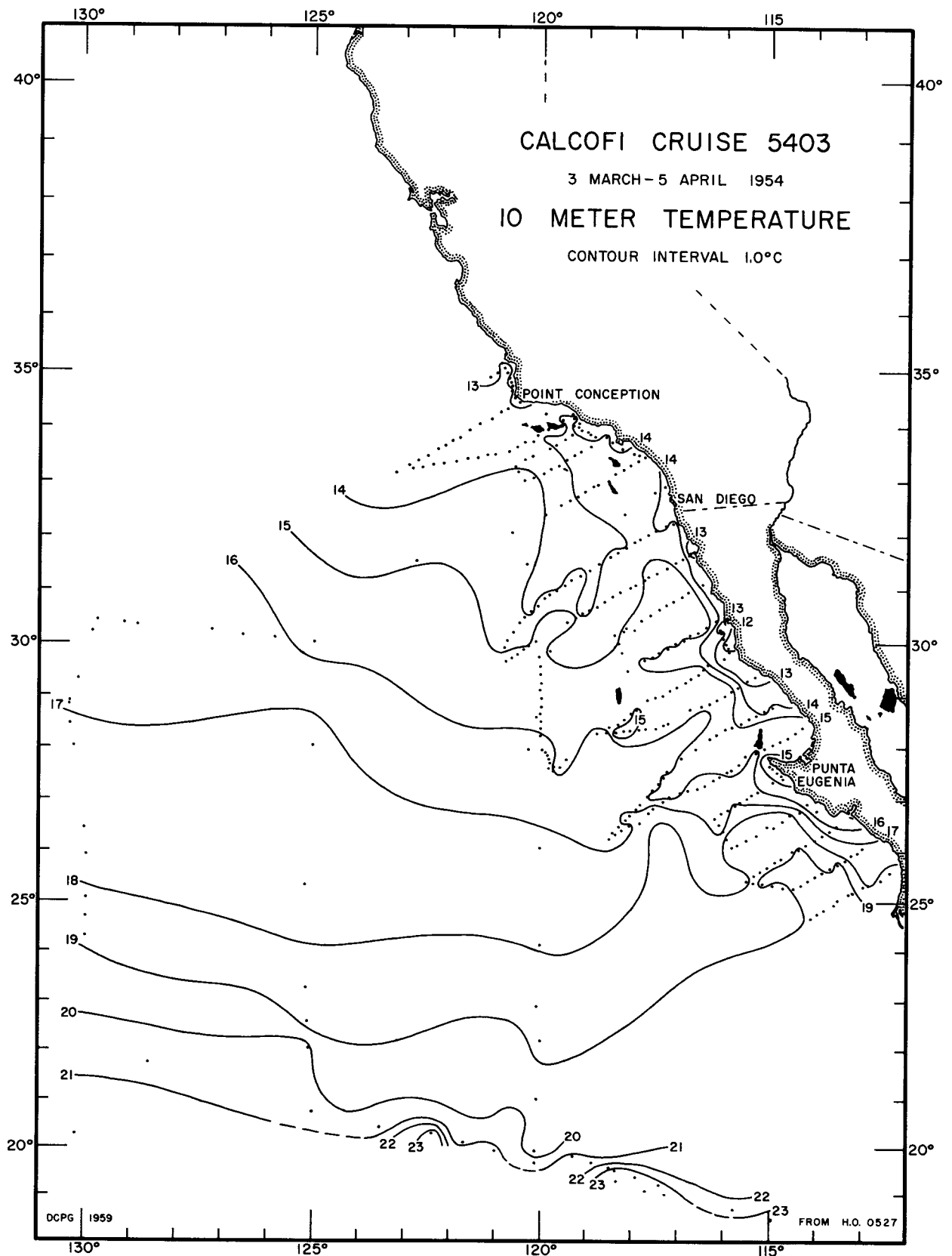
10m T
5312



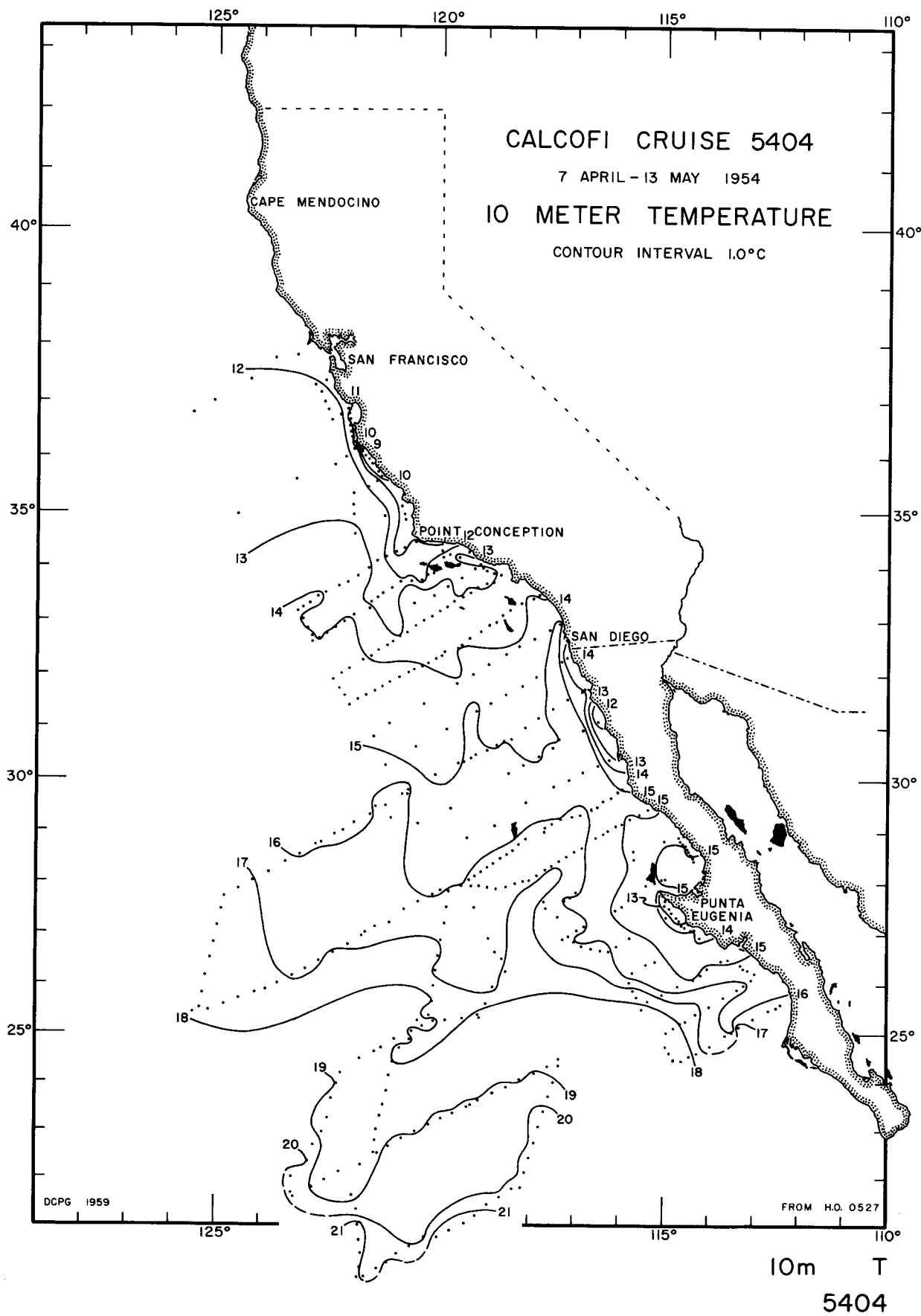
10m T
 5401

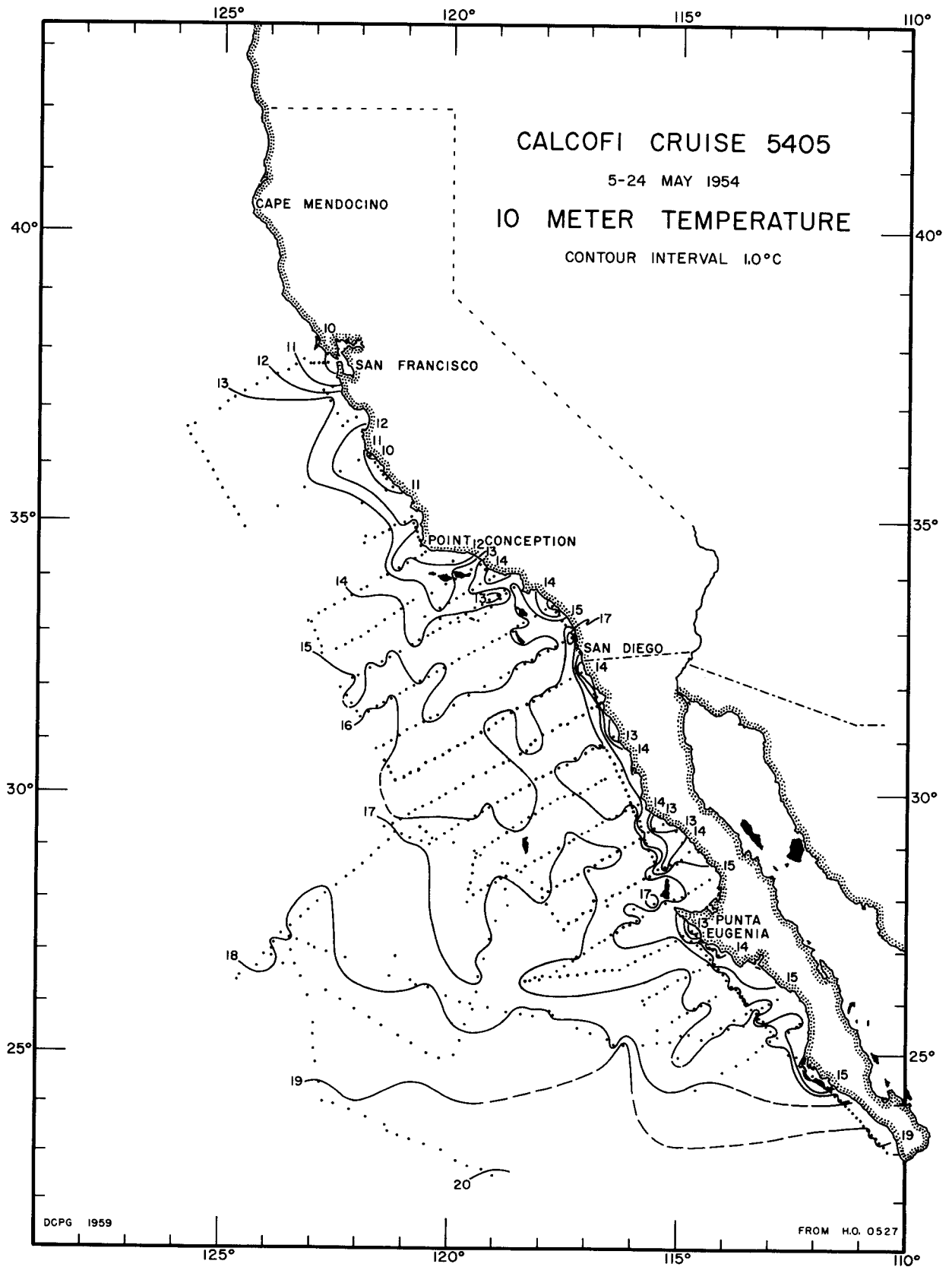


10m T
5402

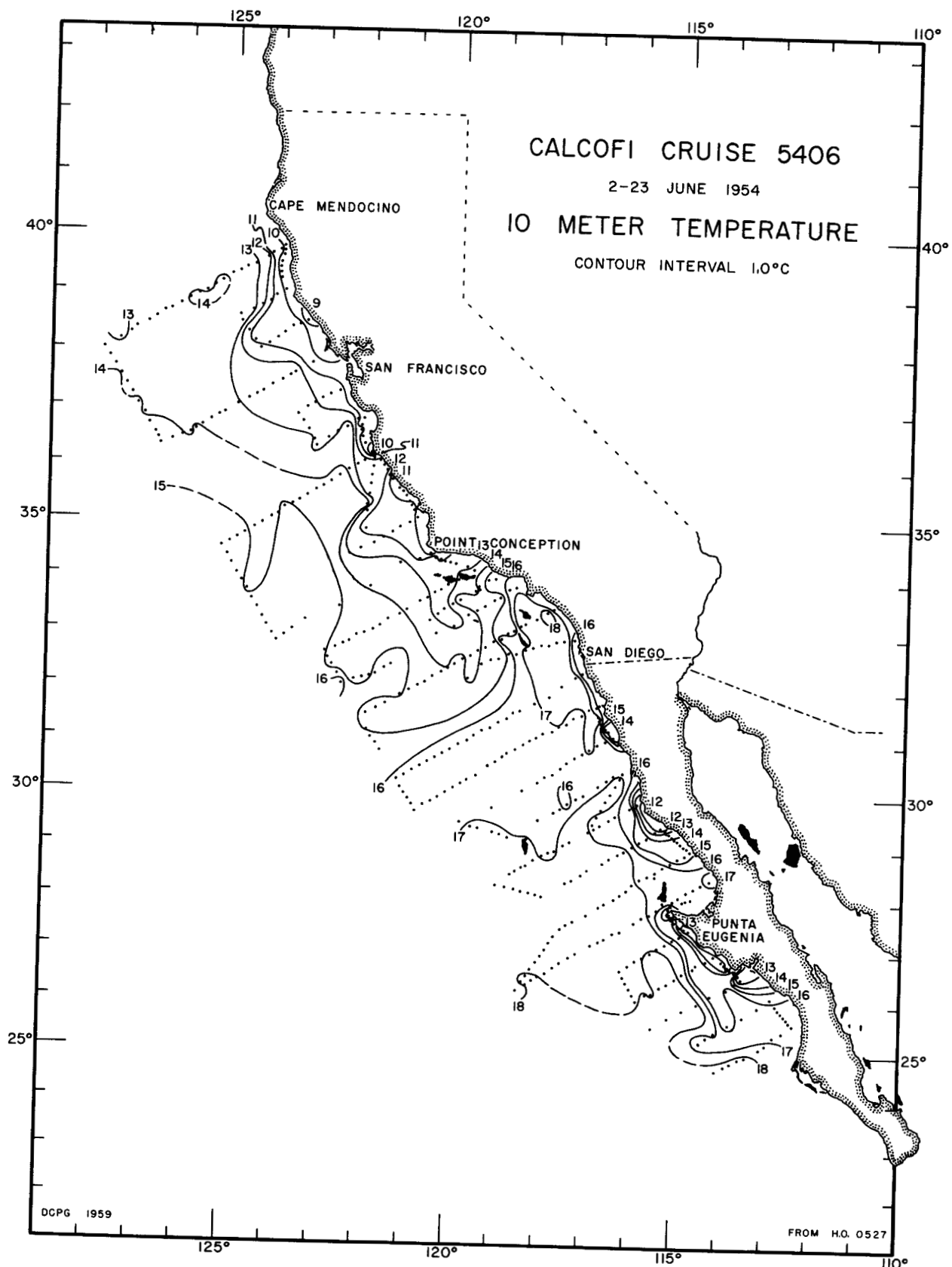


10m T
 5403

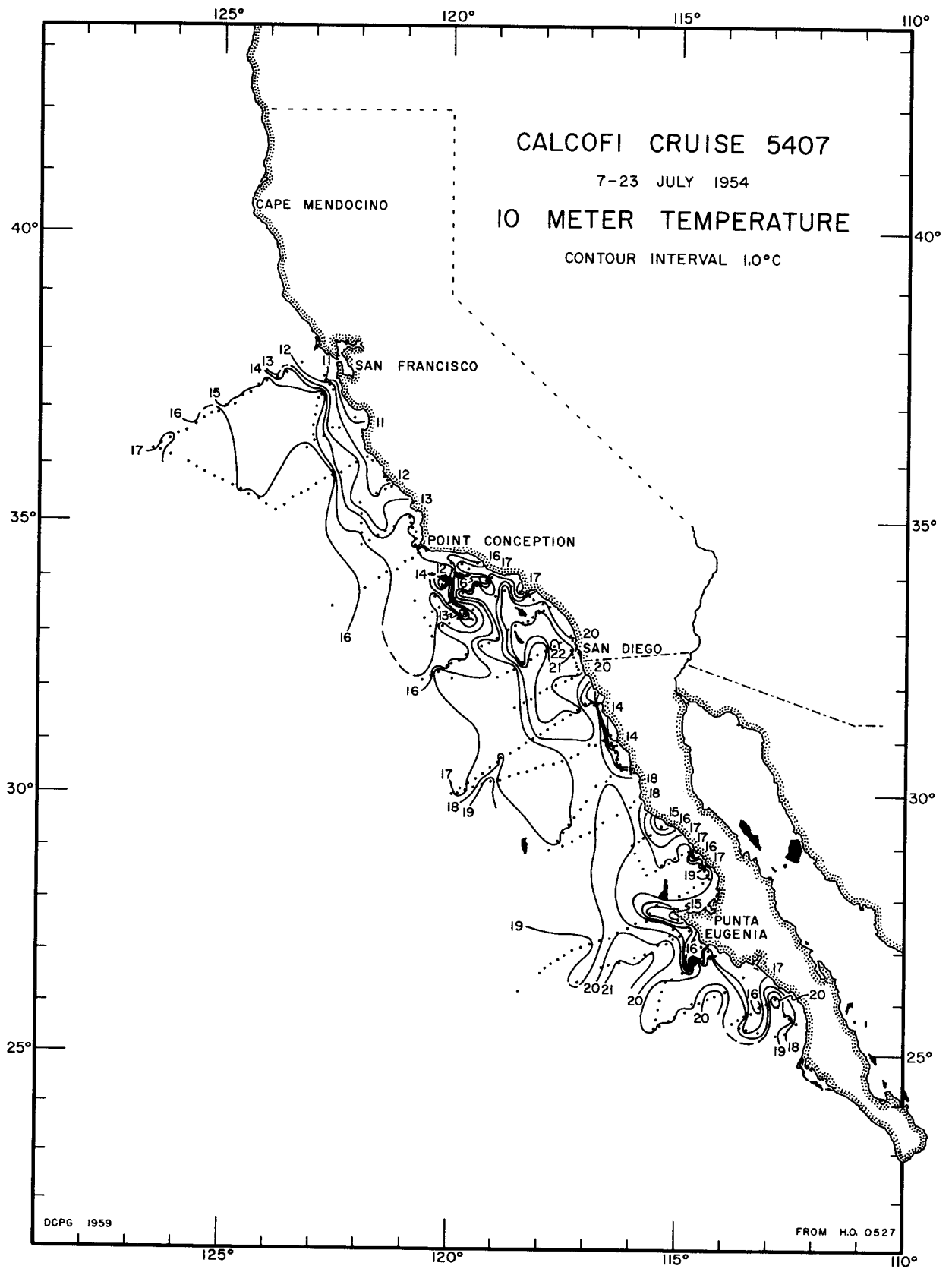




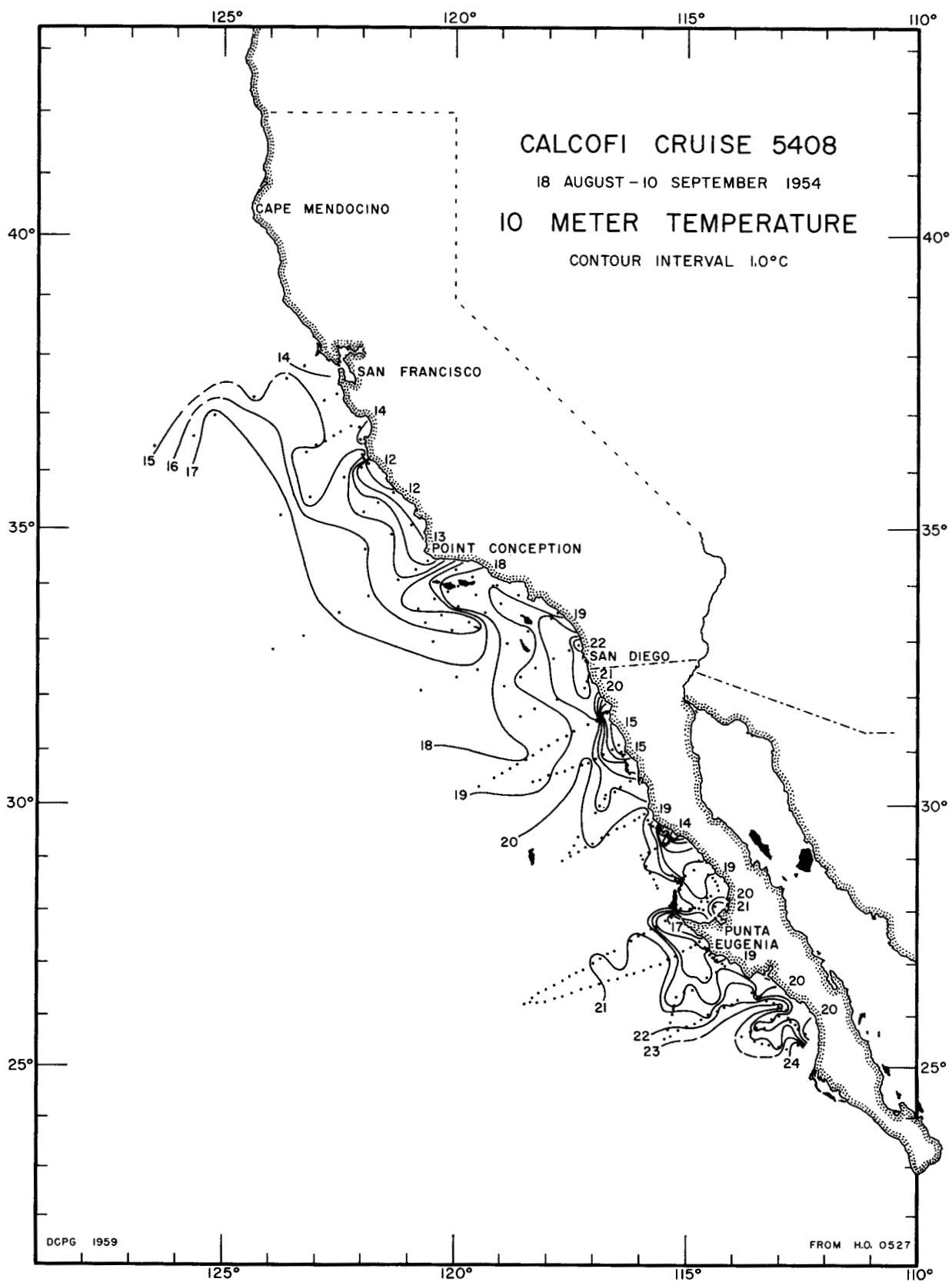
10m T
5405



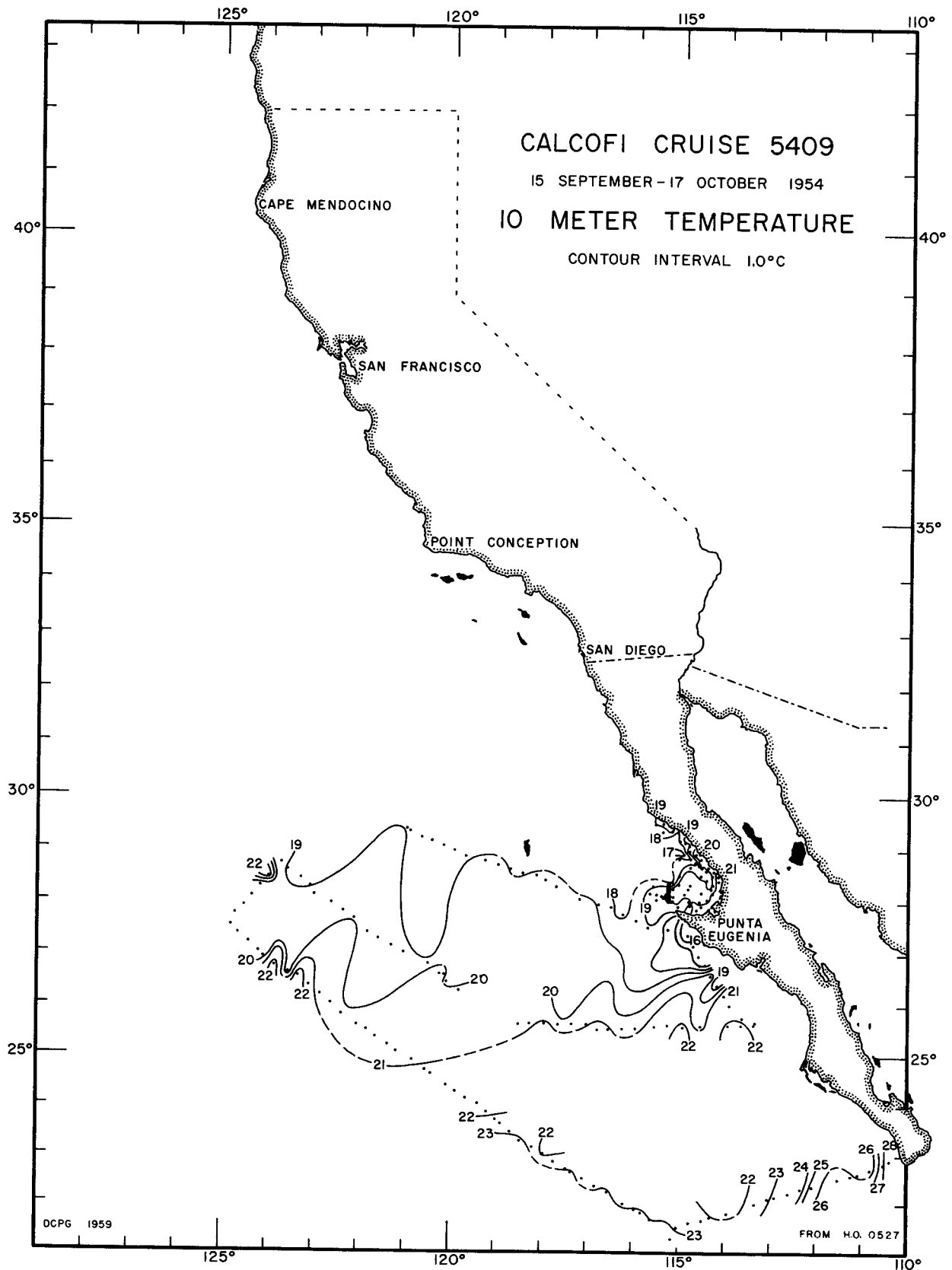
10m T
5406



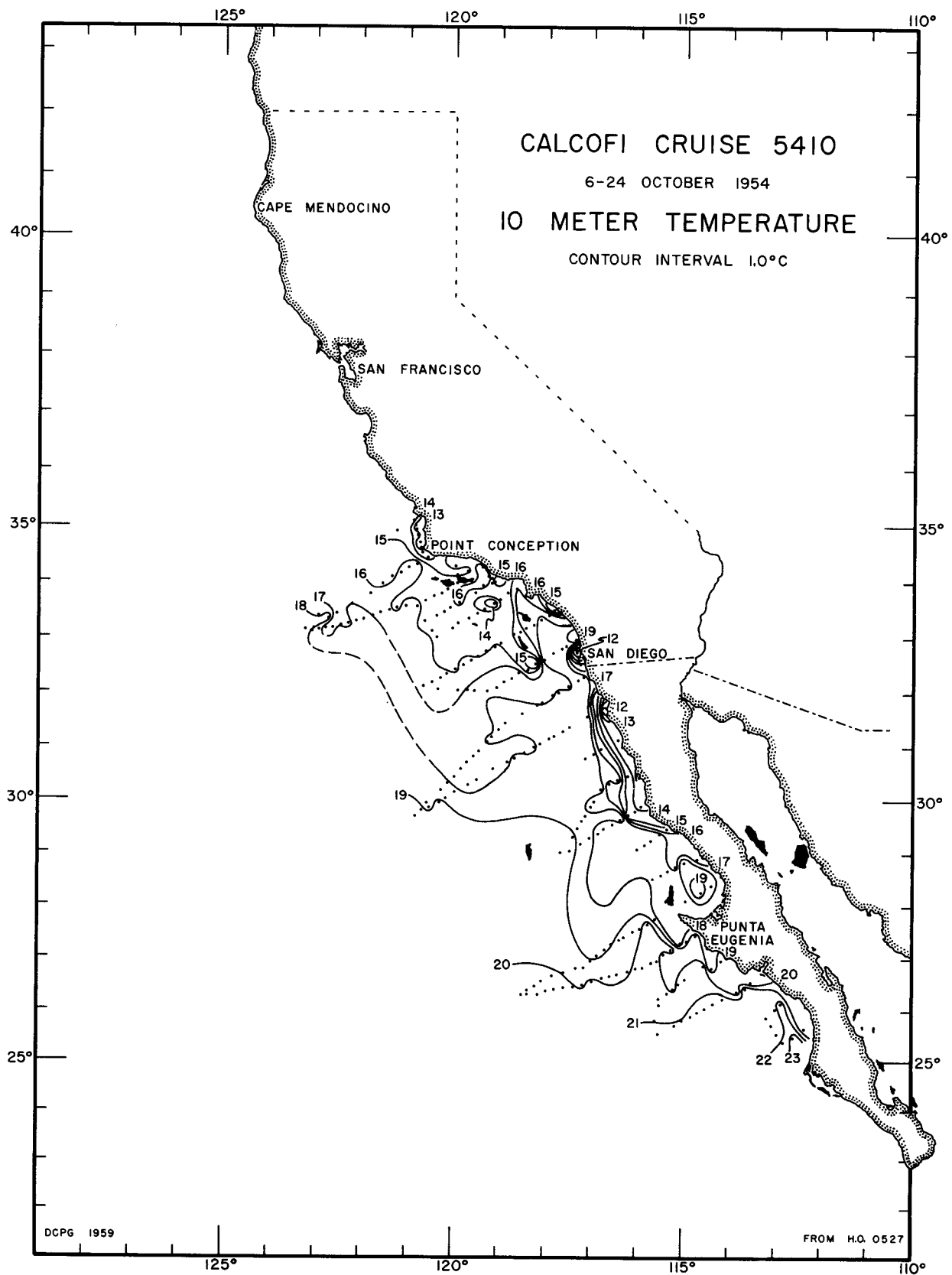
10m T
5407



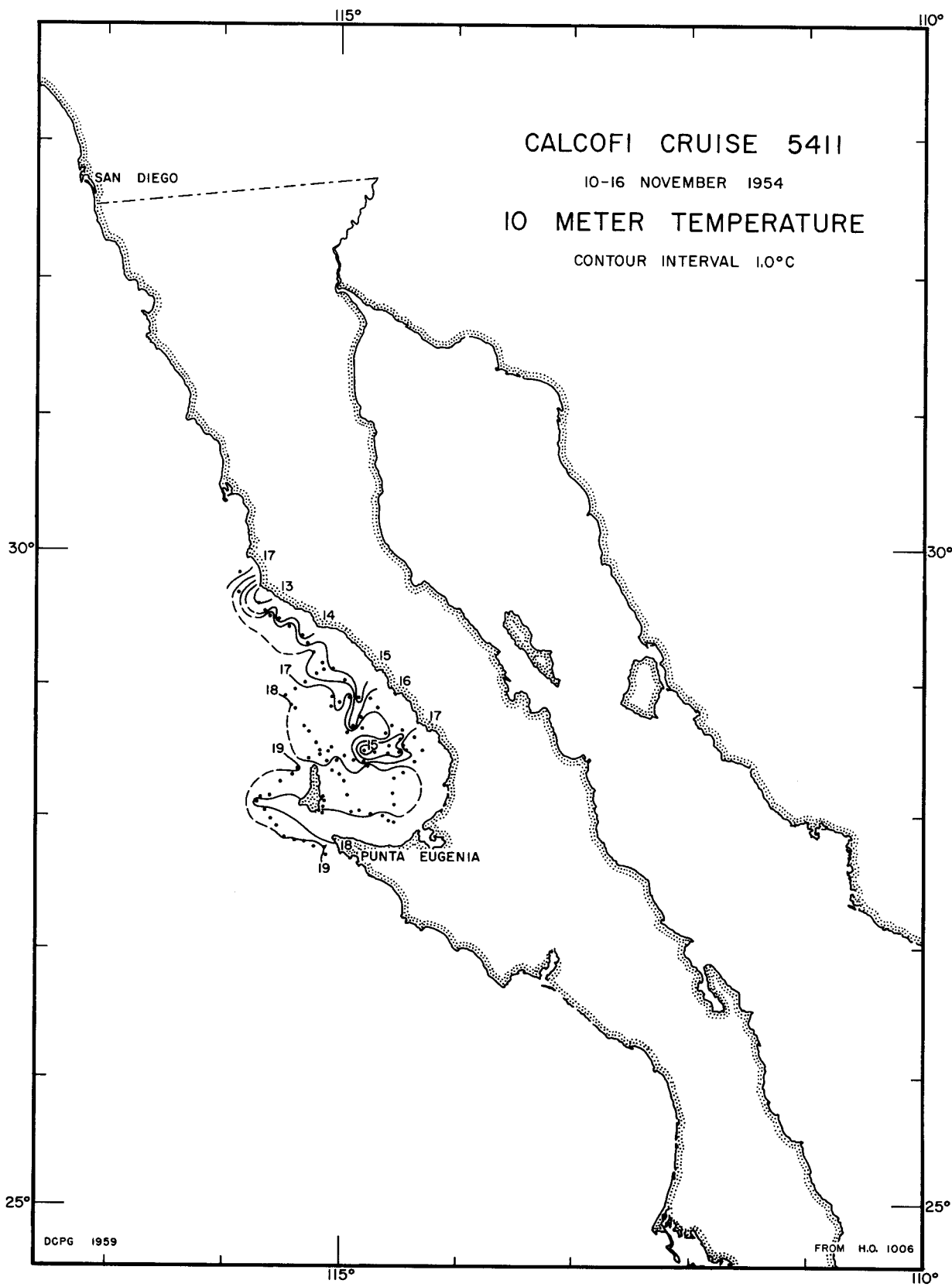
10m T
5408



10m T
5409



10m T
5410



CALCOFI CRUISE 5411

10-16 NOVEMBER 1954

10 METER TEMPERATURE

CONTOUR INTERVAL 1.0°C

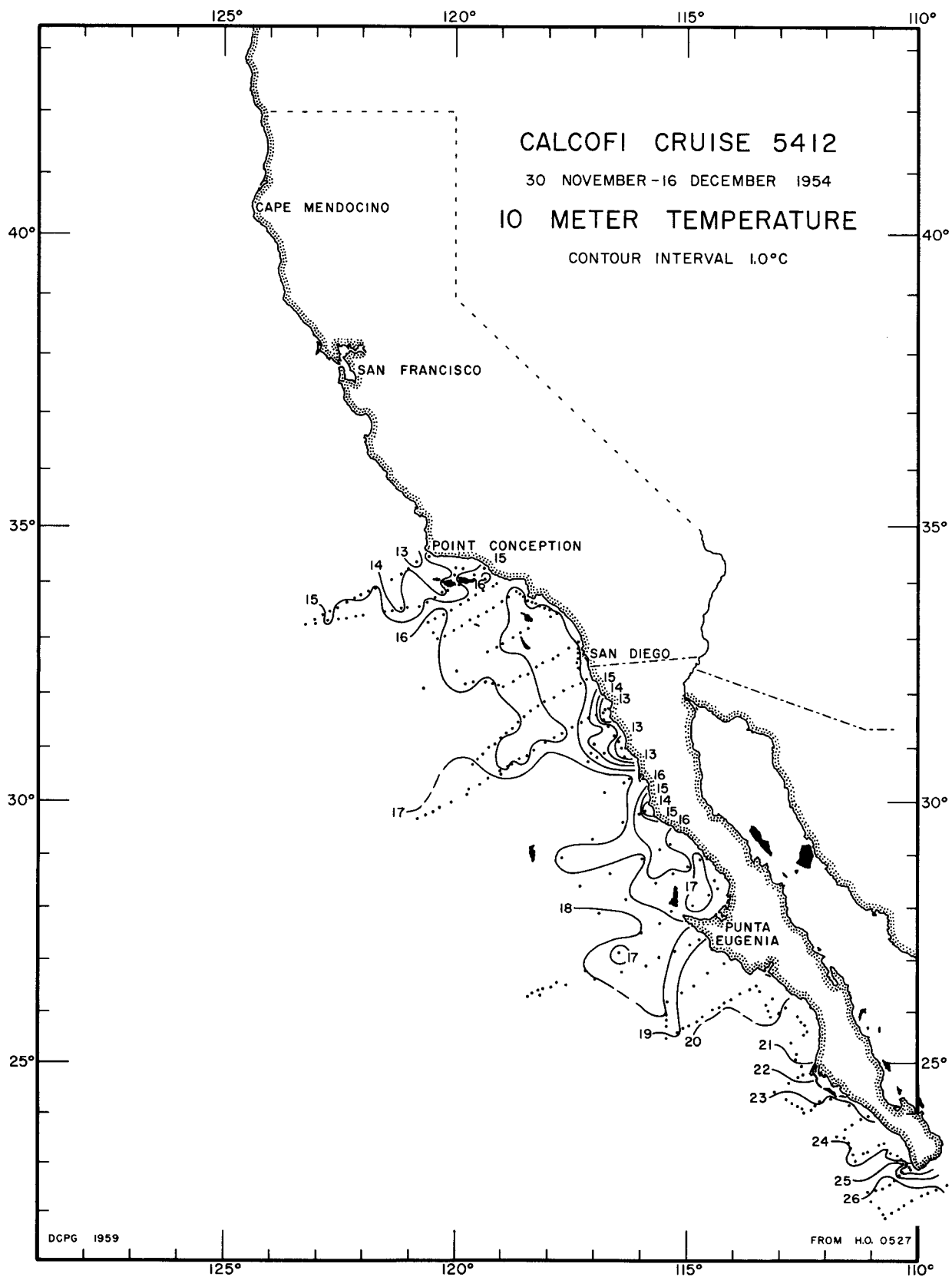
SAN DIEGO

PUNTA EUGENIA

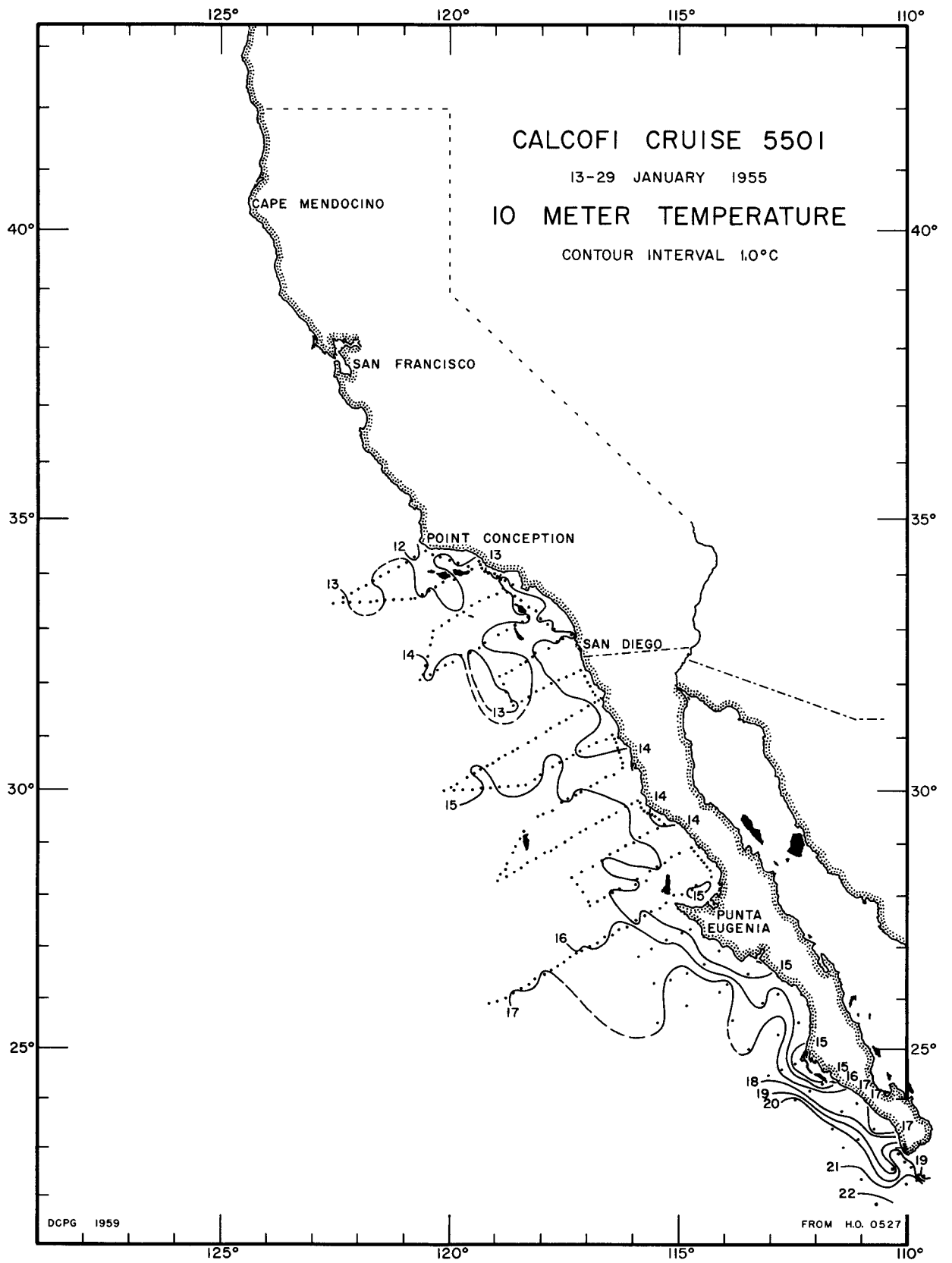
DCPG 1959

FROM H.O. 1006

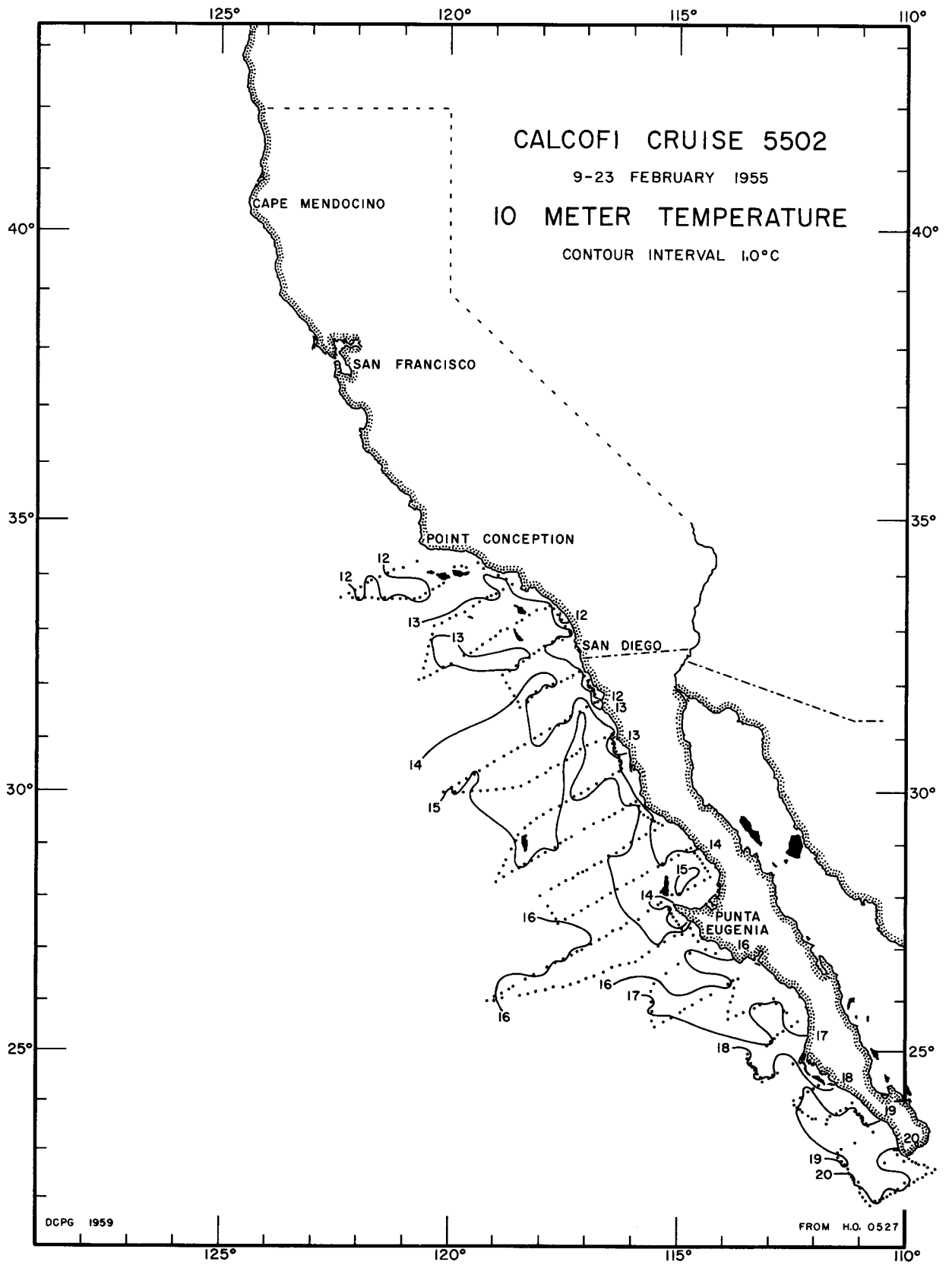
10m T
5411



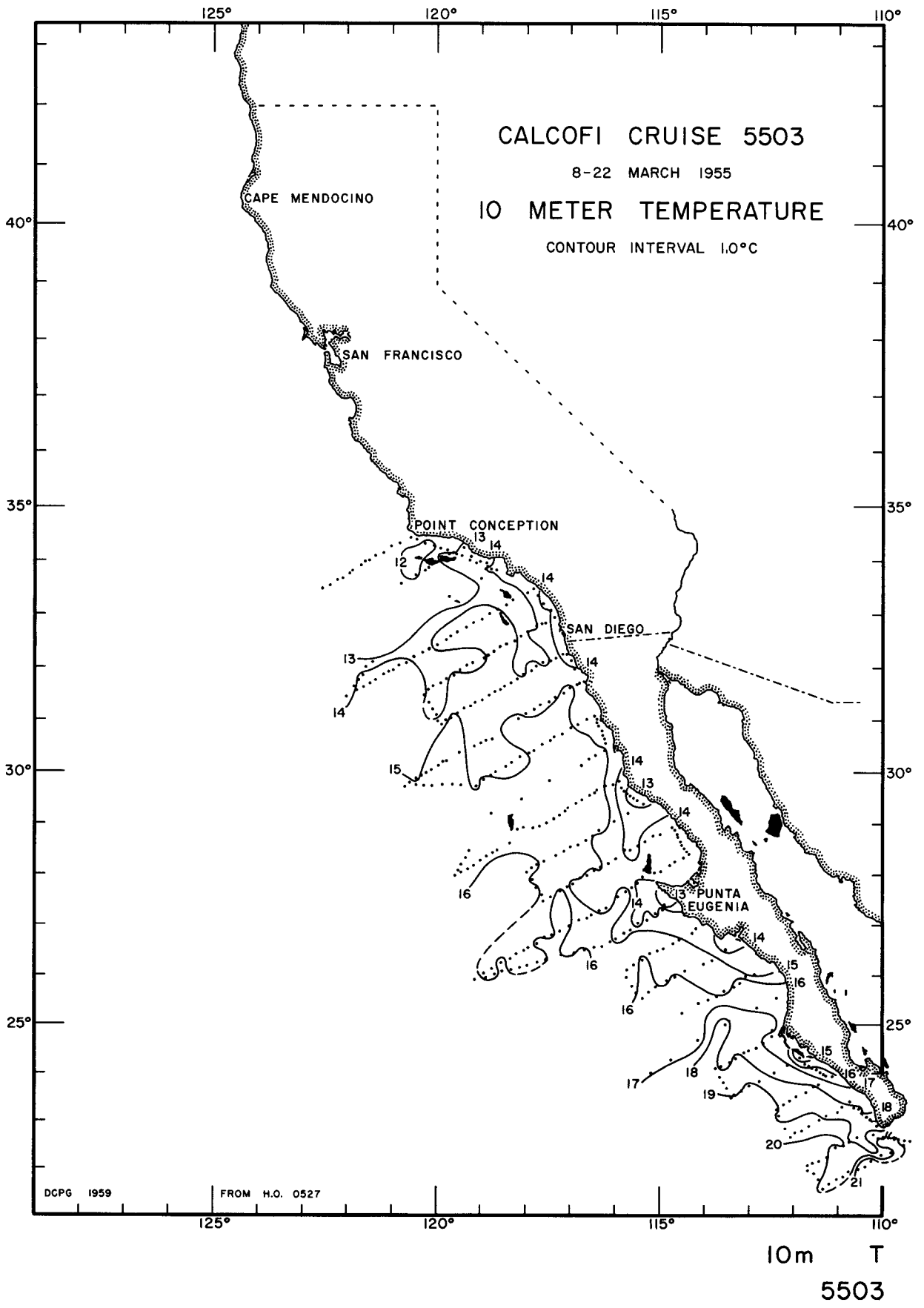
10m T
5412

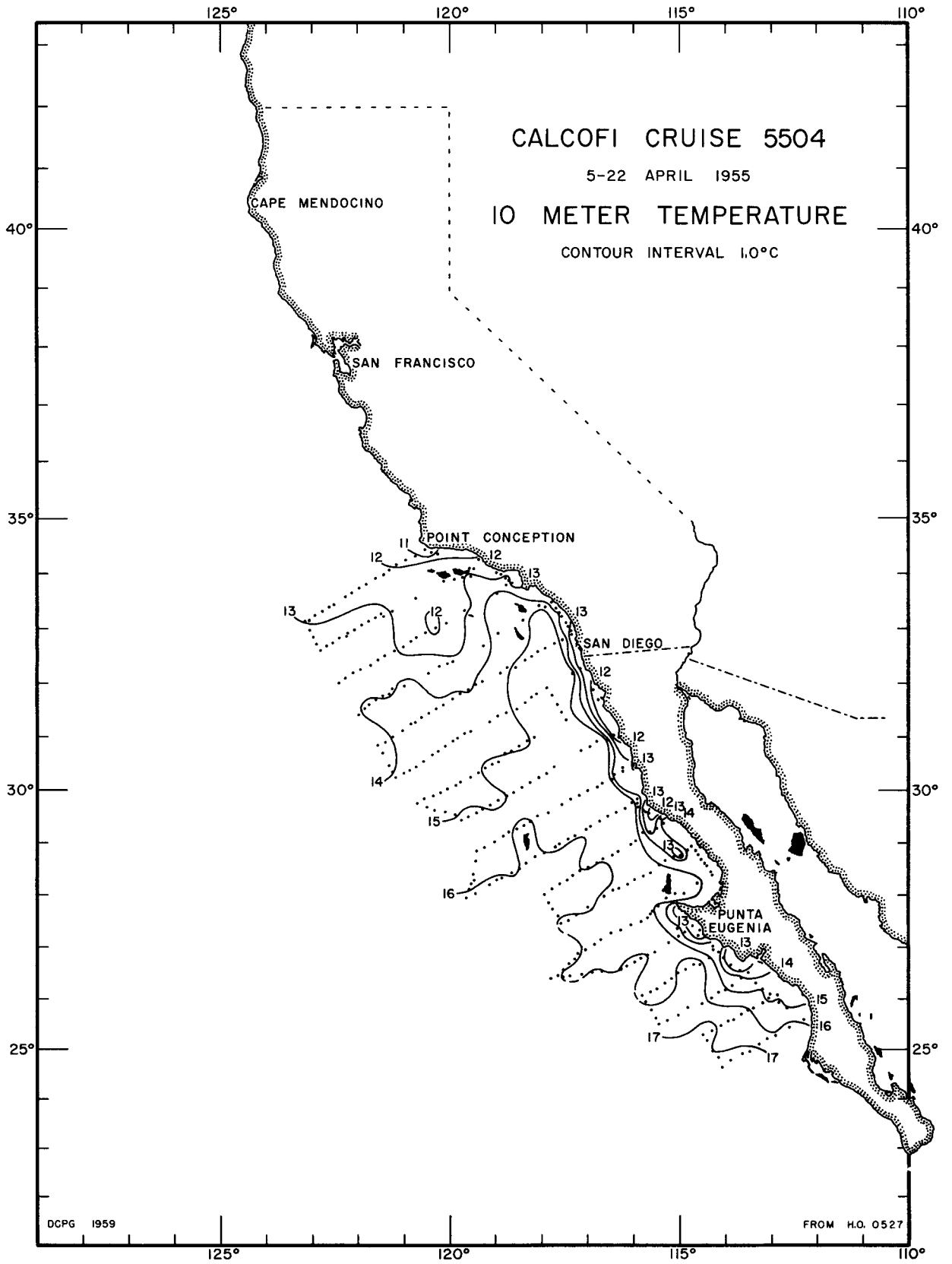


10m T
5501

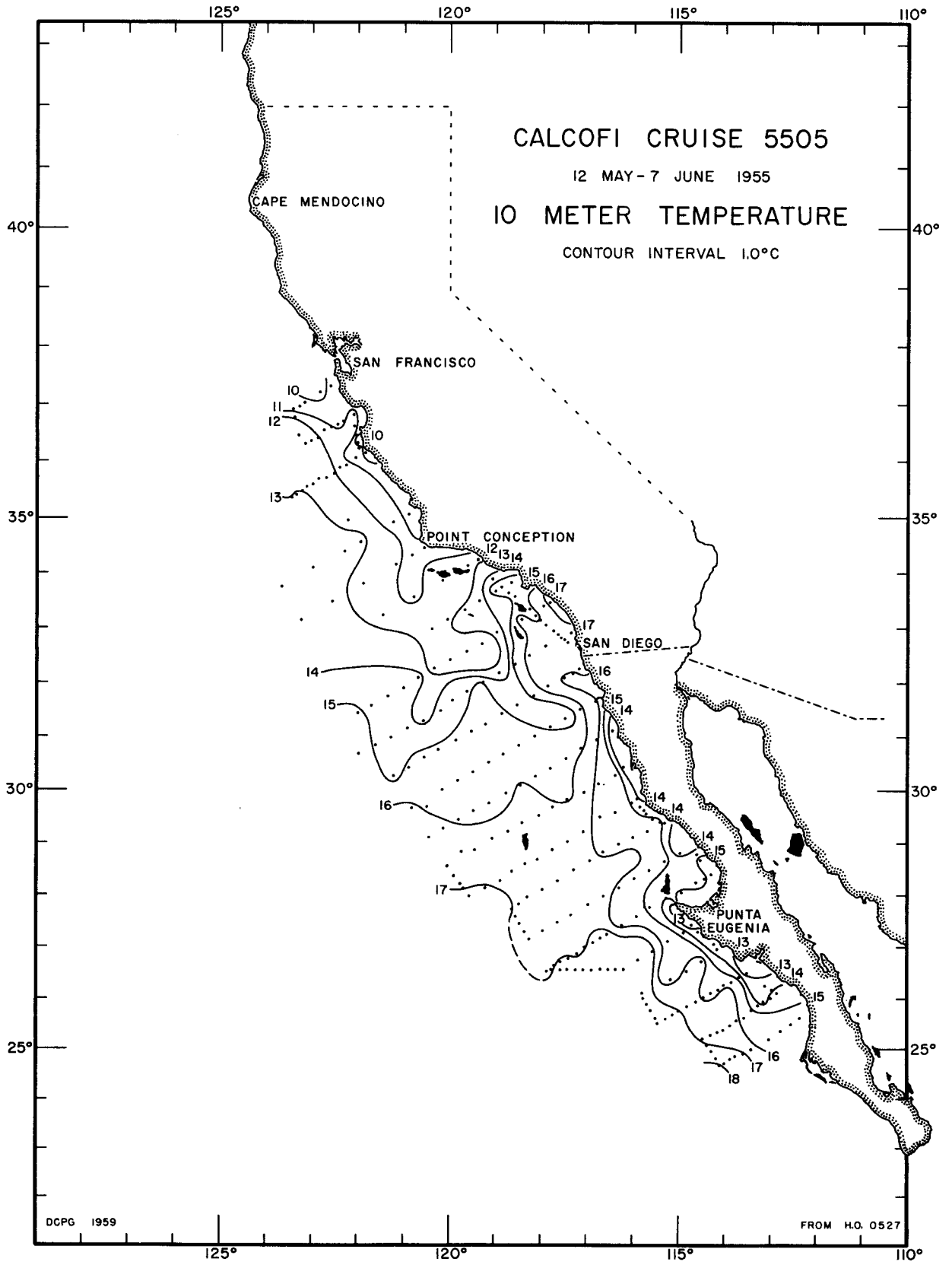


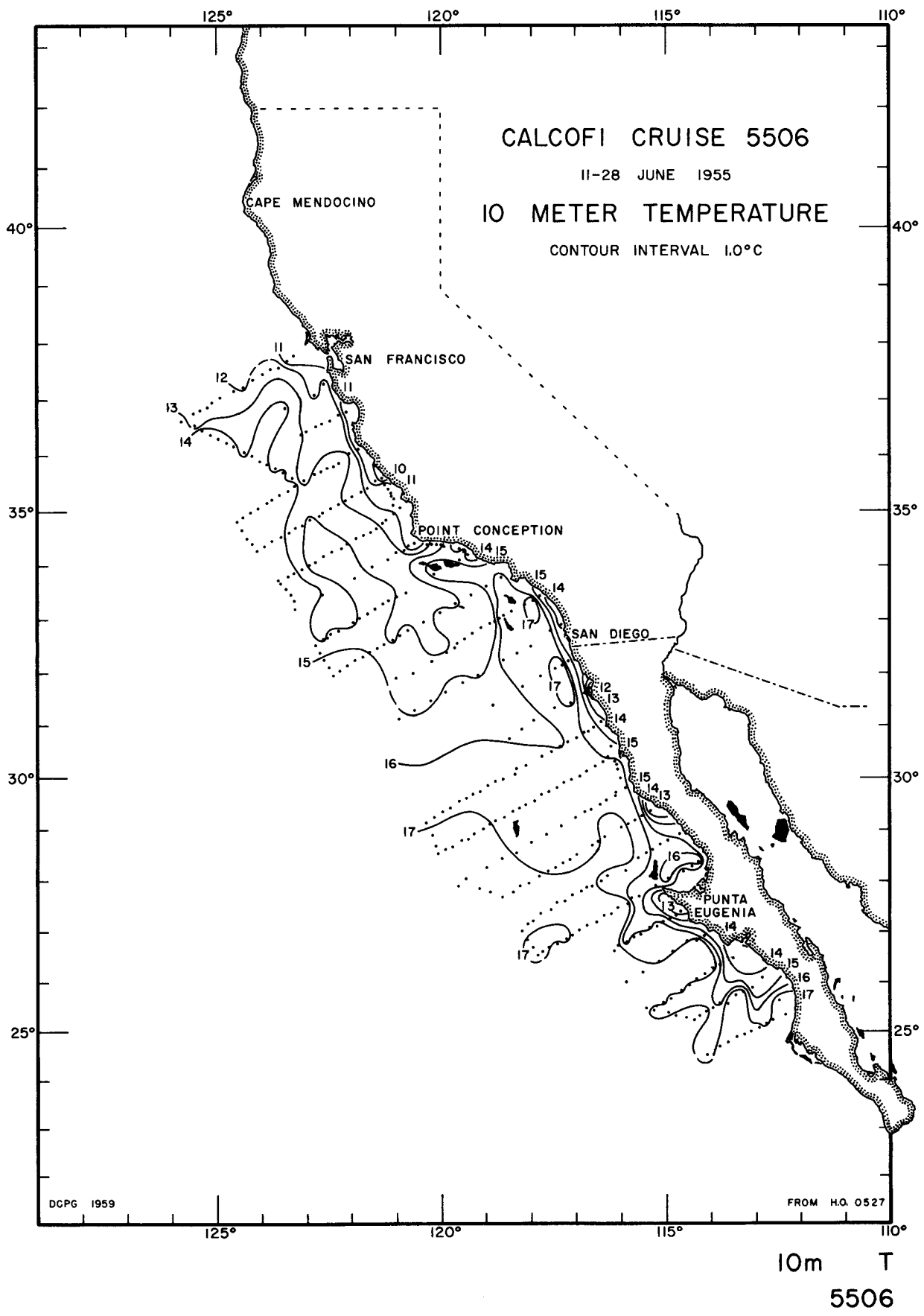
10m T
5502

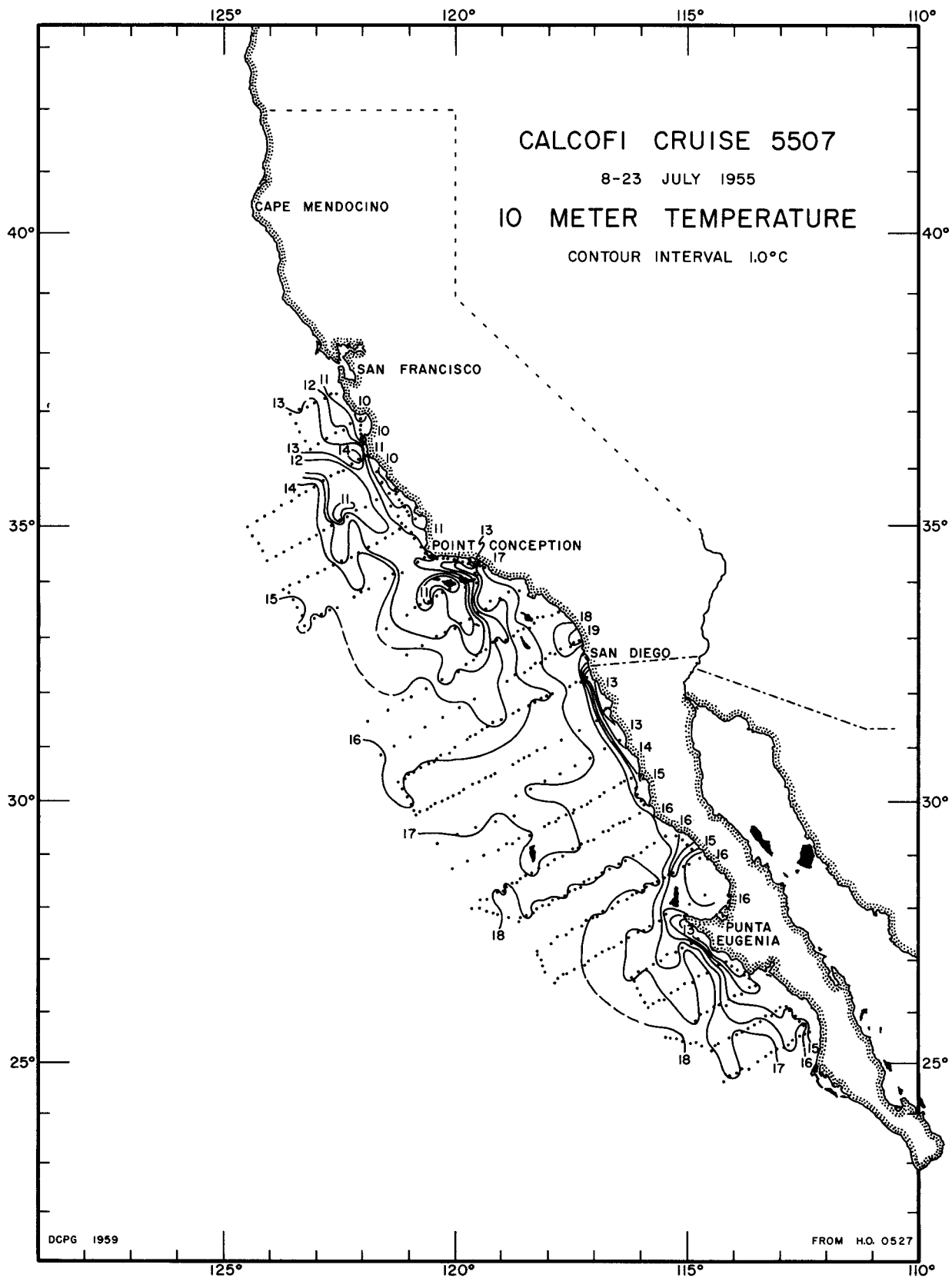


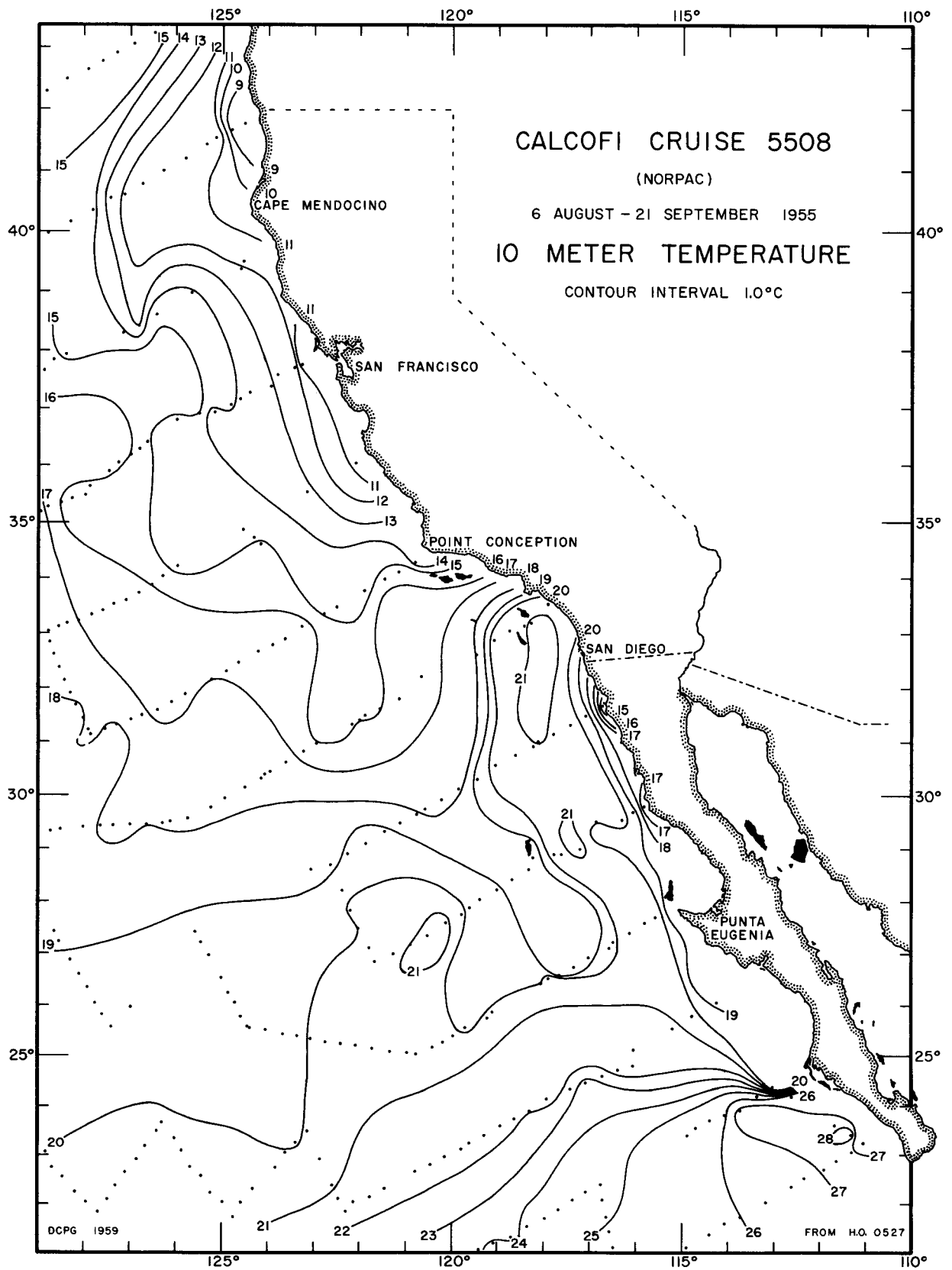


10m T
5504





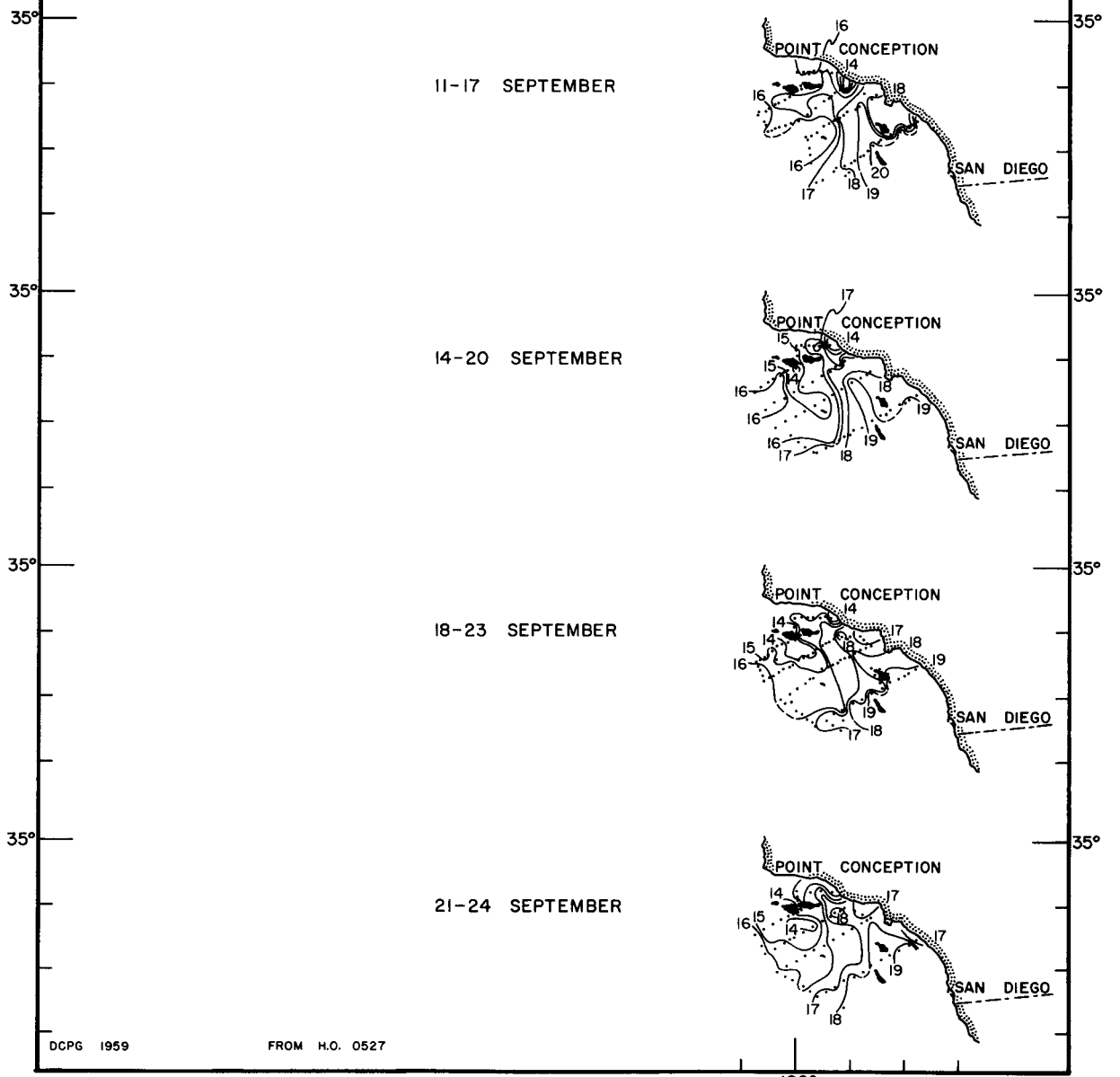




10m T
5508

120°

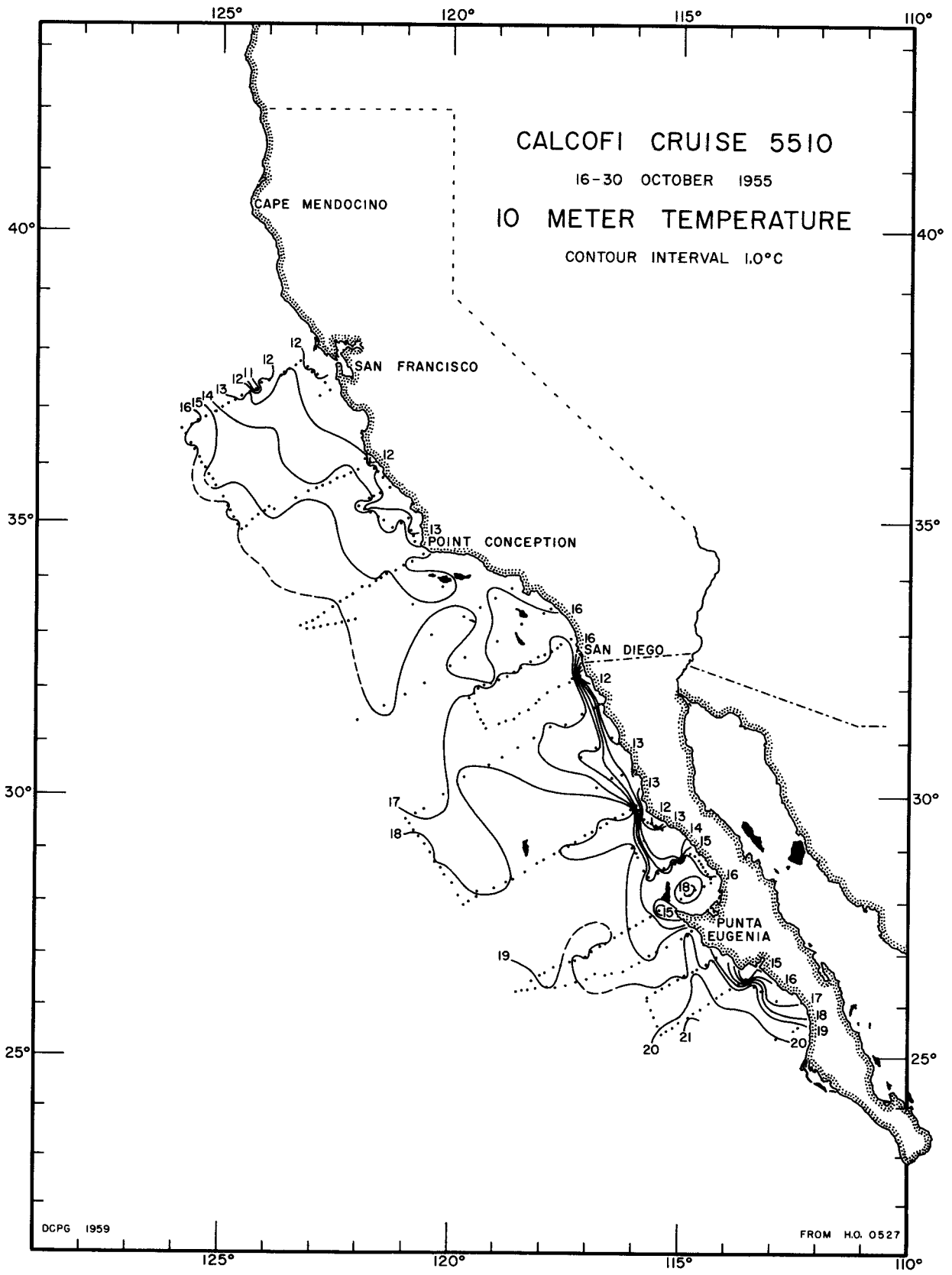
CALCOFI CRUISE 5509
11-24 SEPTEMBER 1955
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C



DCPG 1959

FROM H.O. 0527

10m T
5509



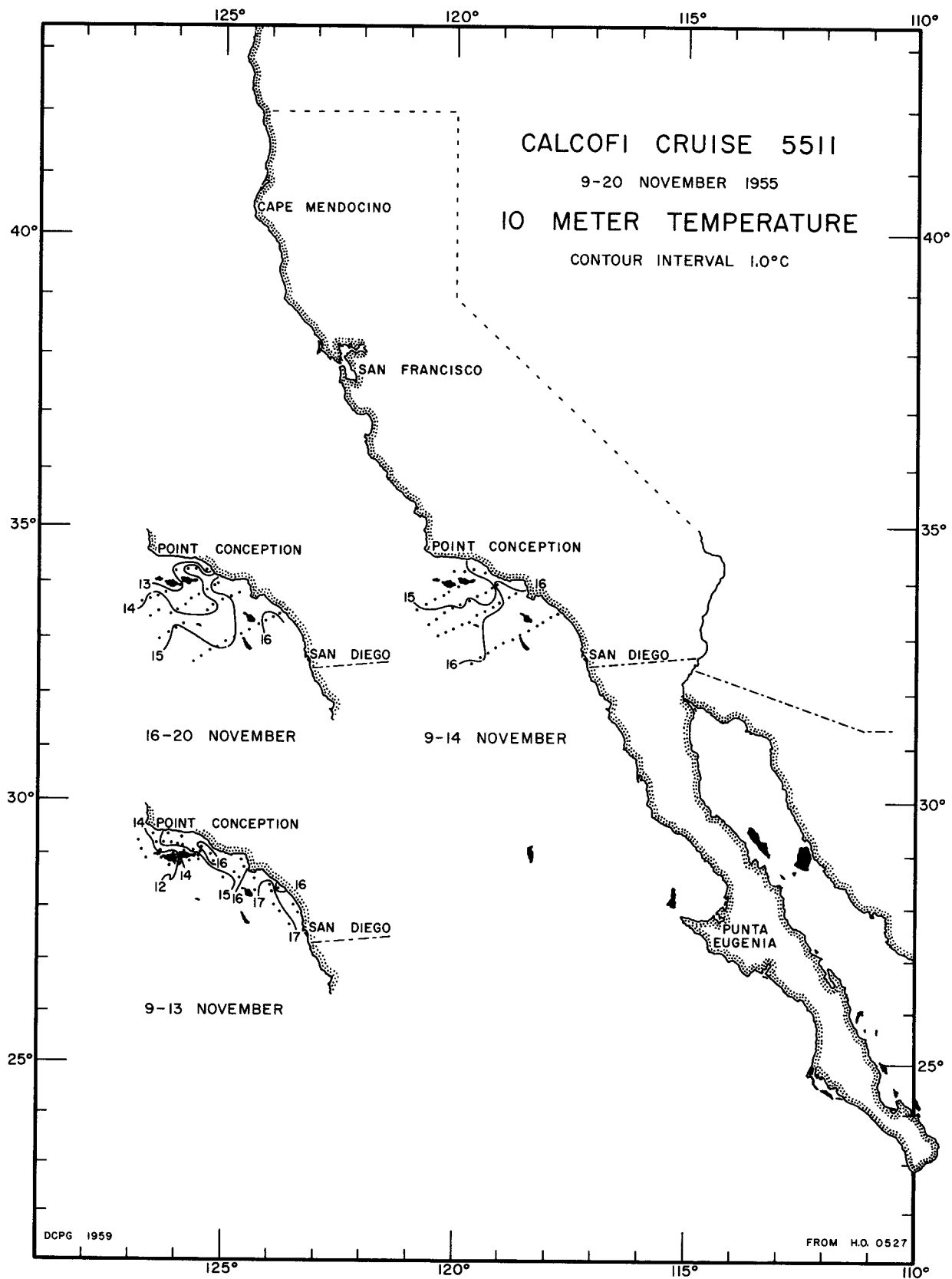
CALCOFI CRUISE 5510

16-30 OCTOBER 1955

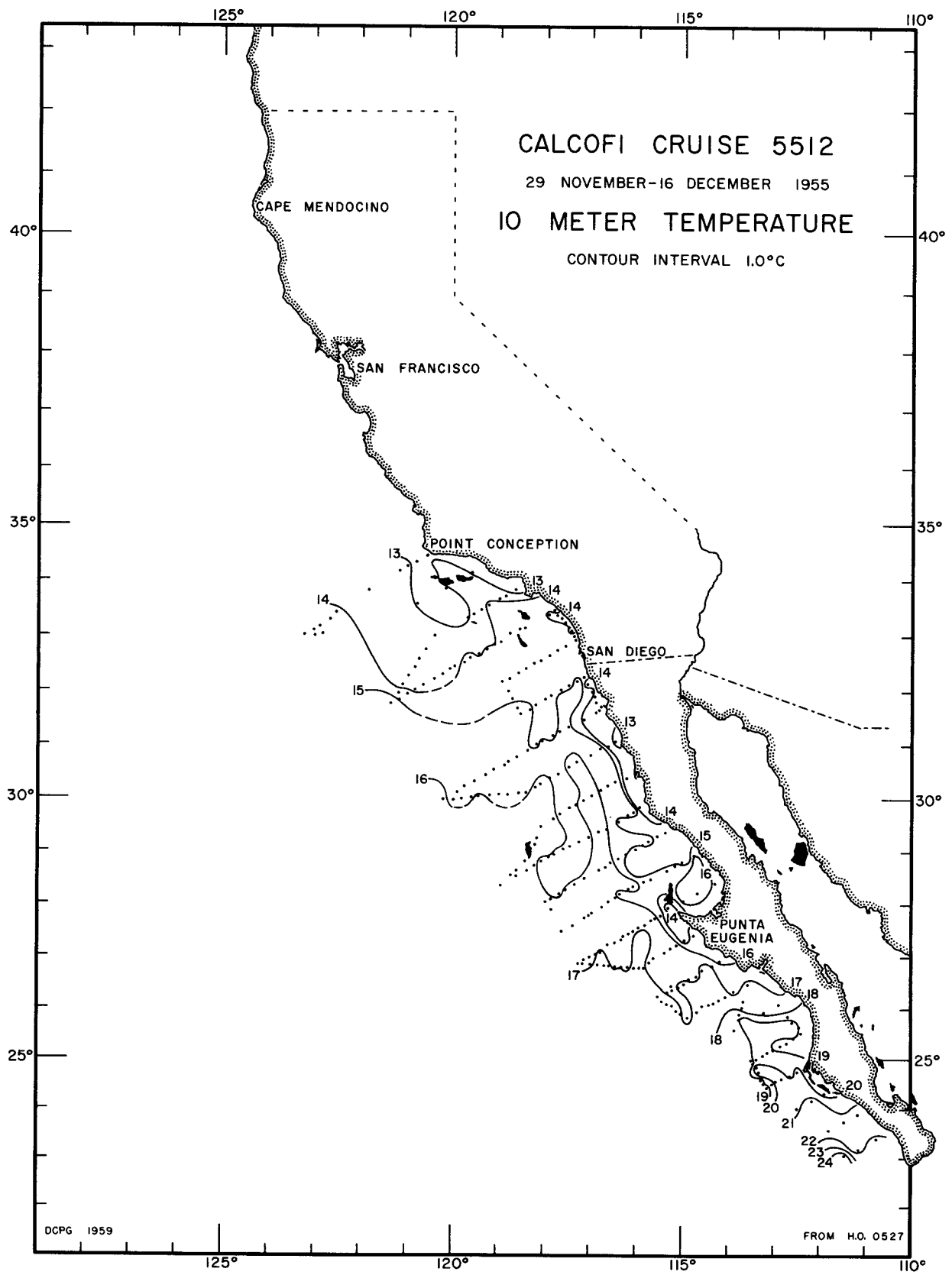
10 METER TEMPERATURE

CONTOUR INTERVAL 1.0°C

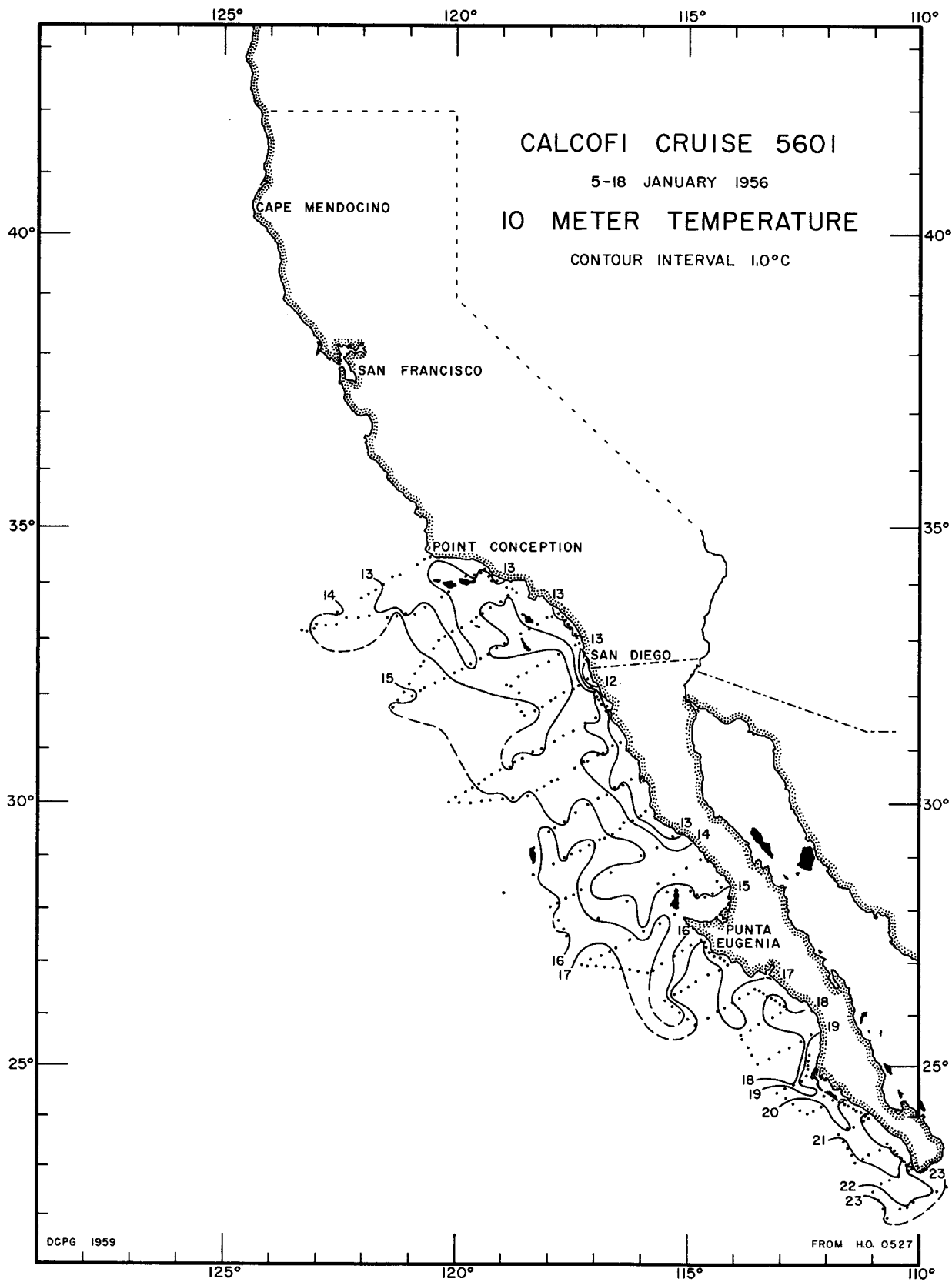
10m T
5510



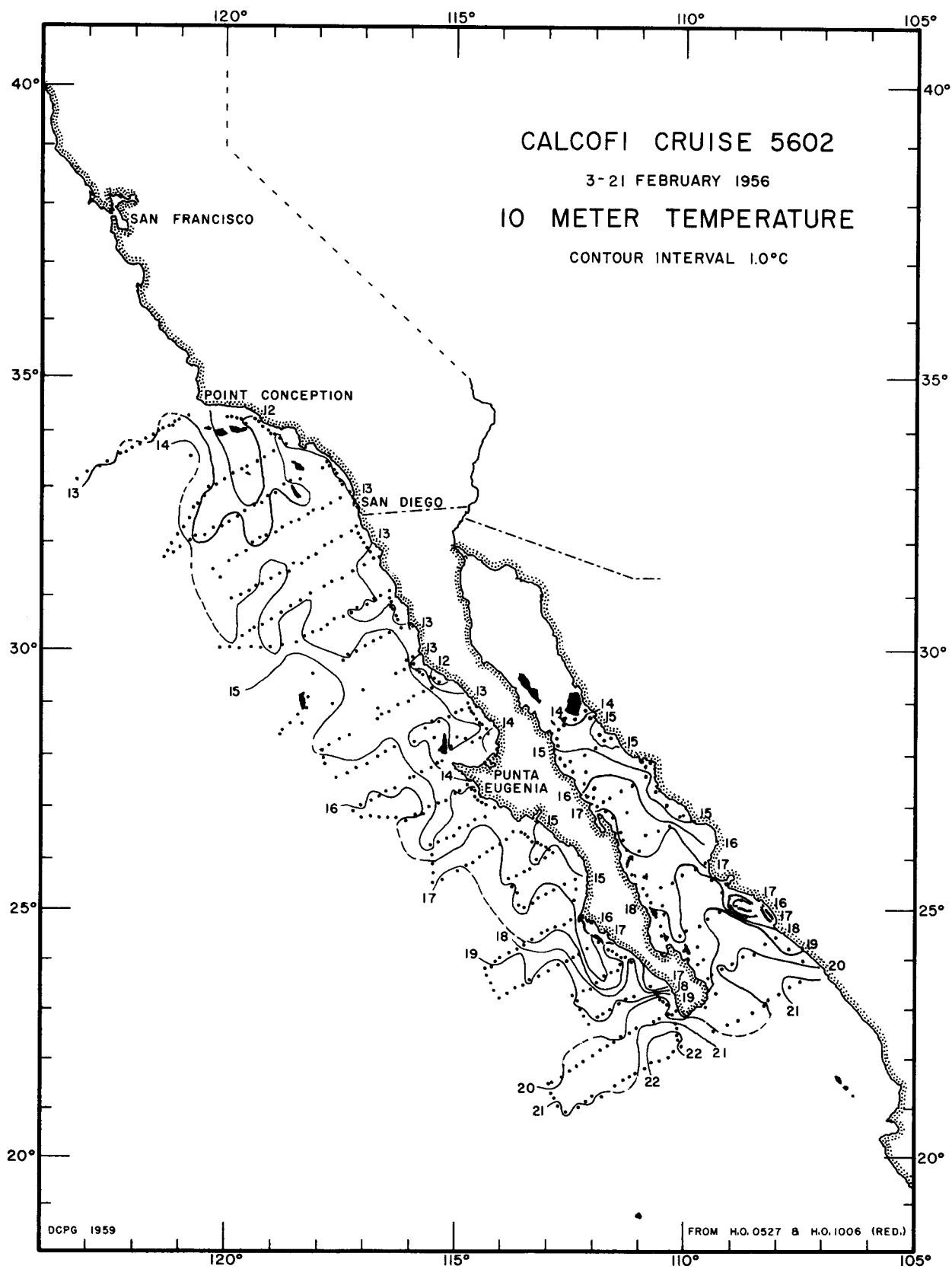
10m T
5511



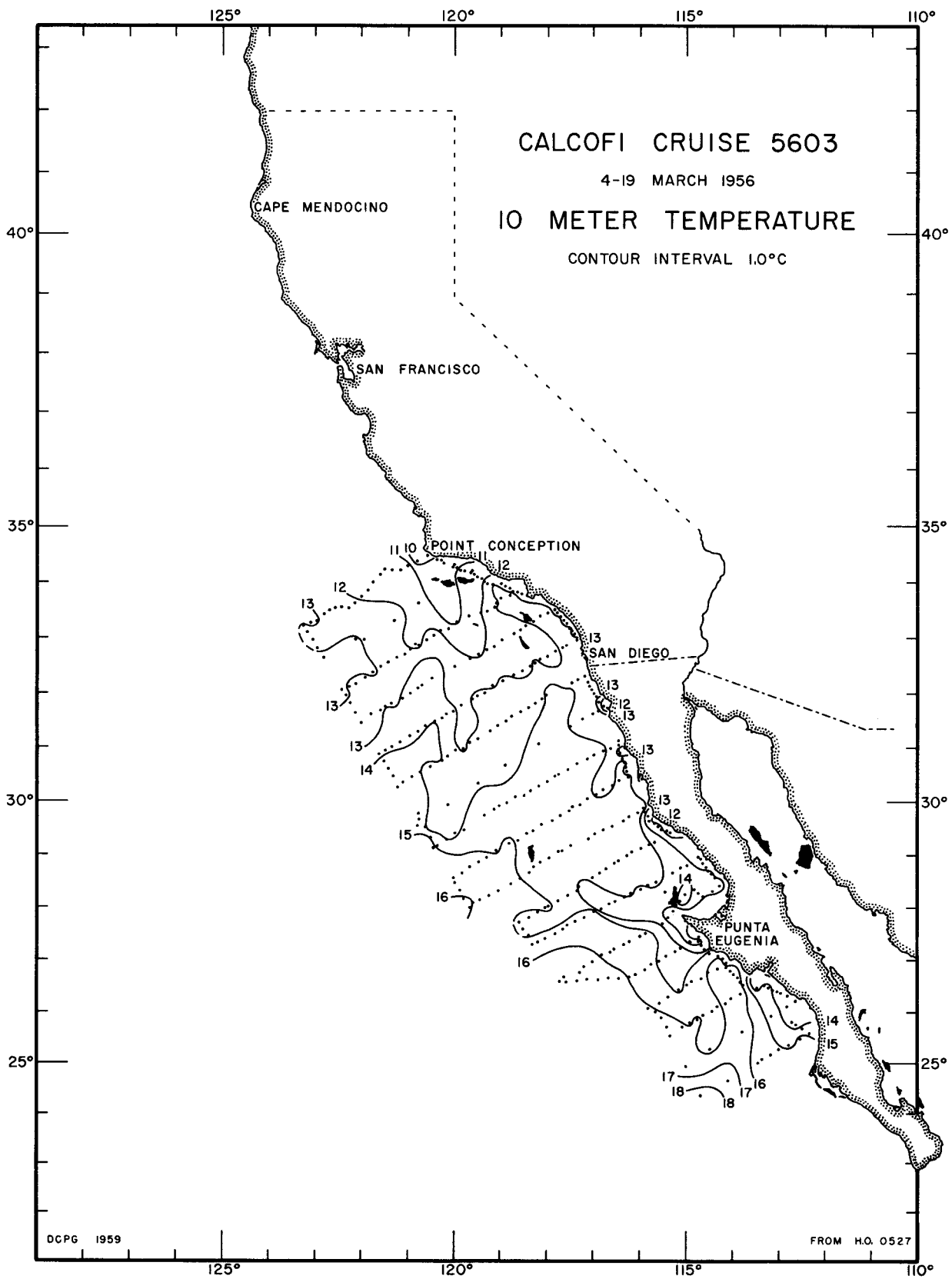
10m T
5512



10m T
5601



10m T
5602

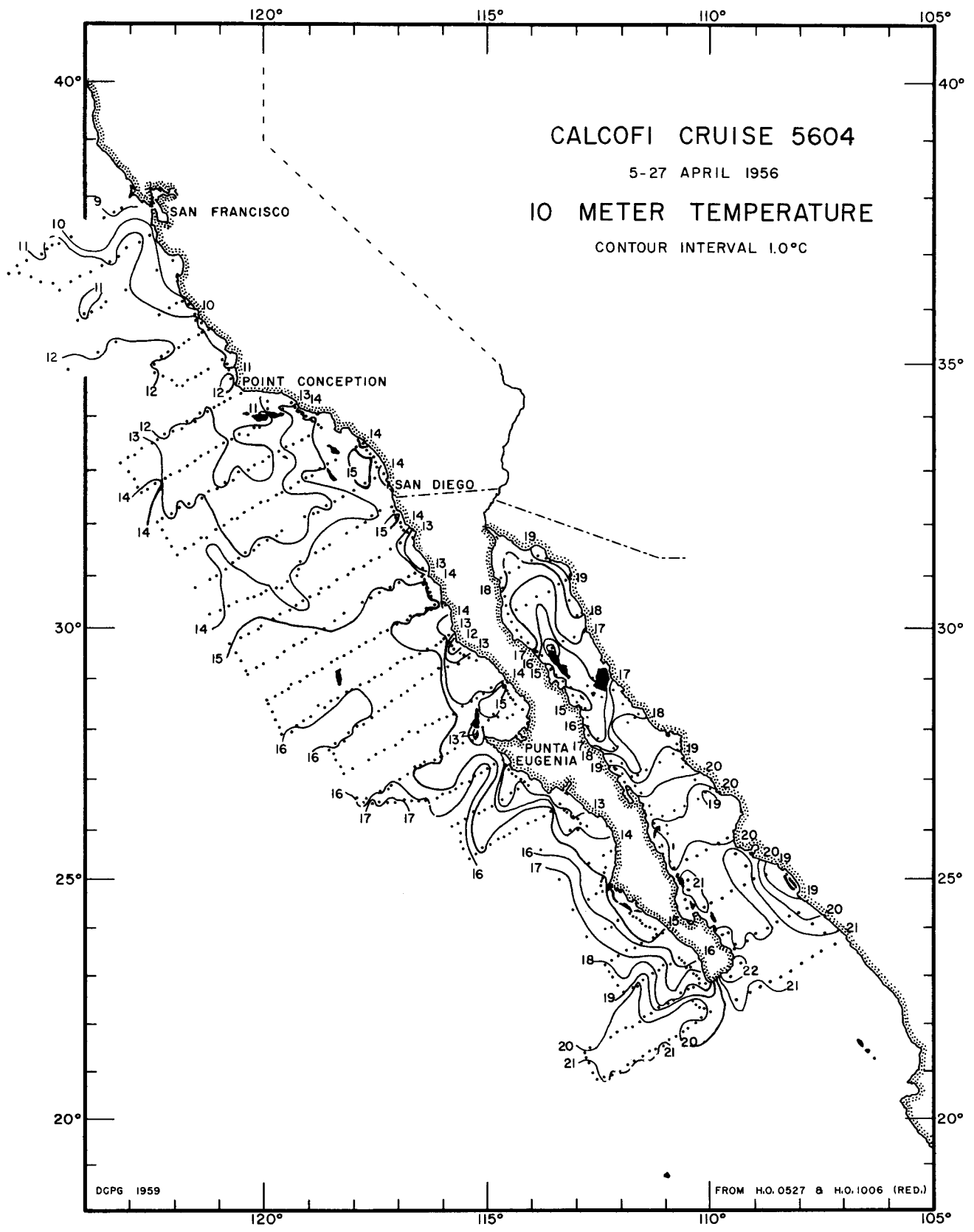


CALCOFI CRUISE 5603
4-19 MARCH 1956
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C

DCPG 1959

FROM H.O. 0527

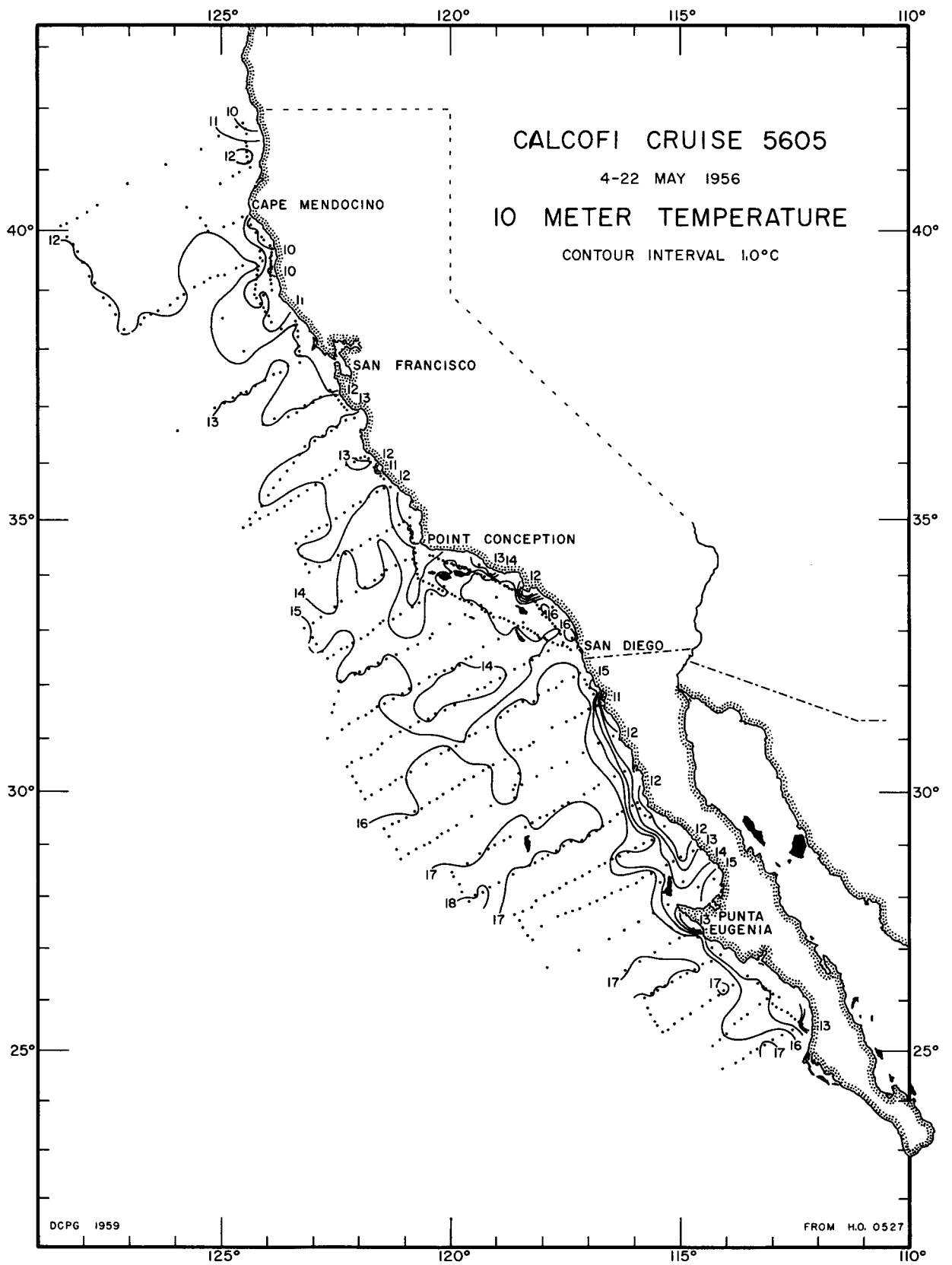
10m T
5603



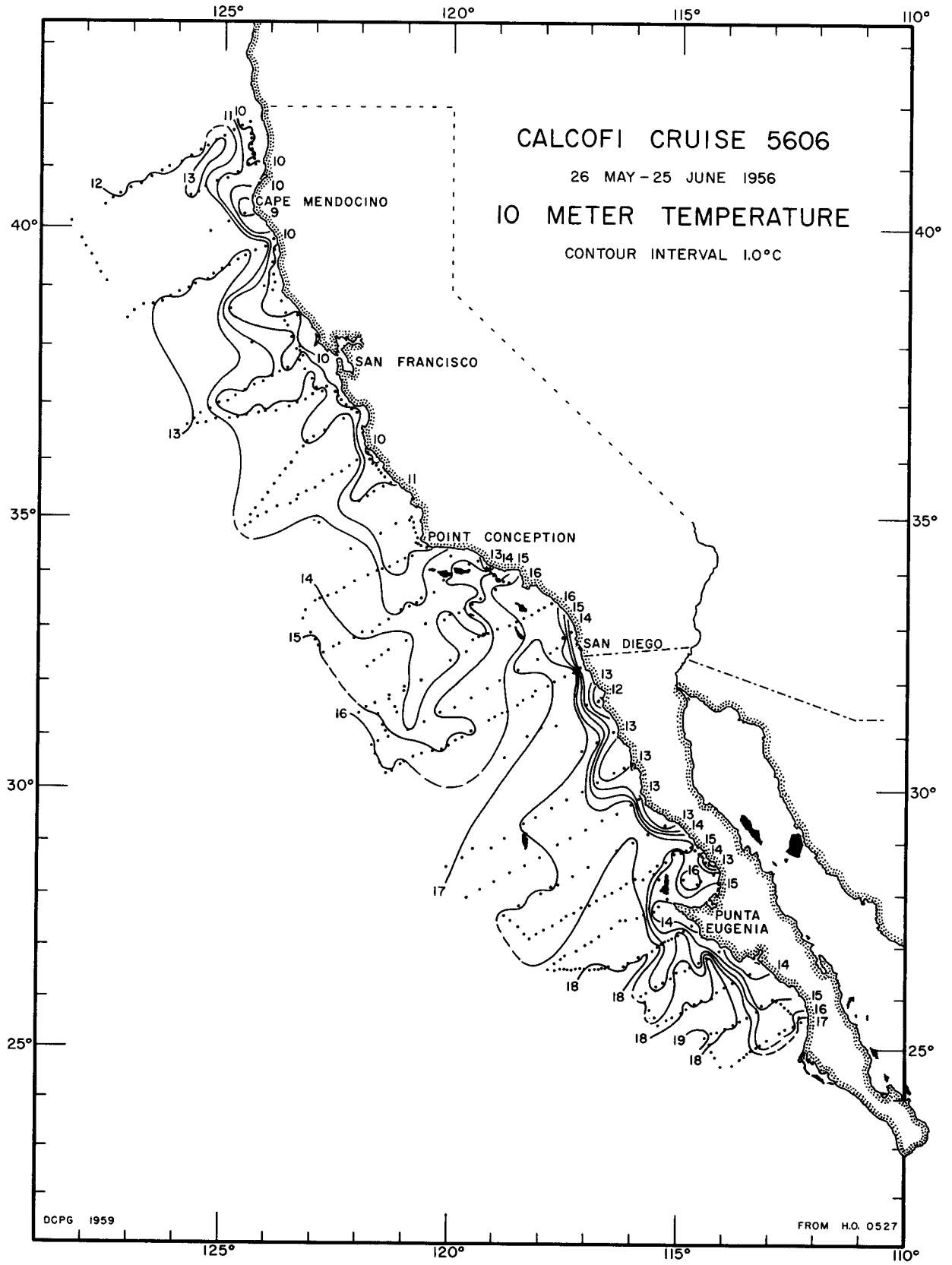
DGPG 1959

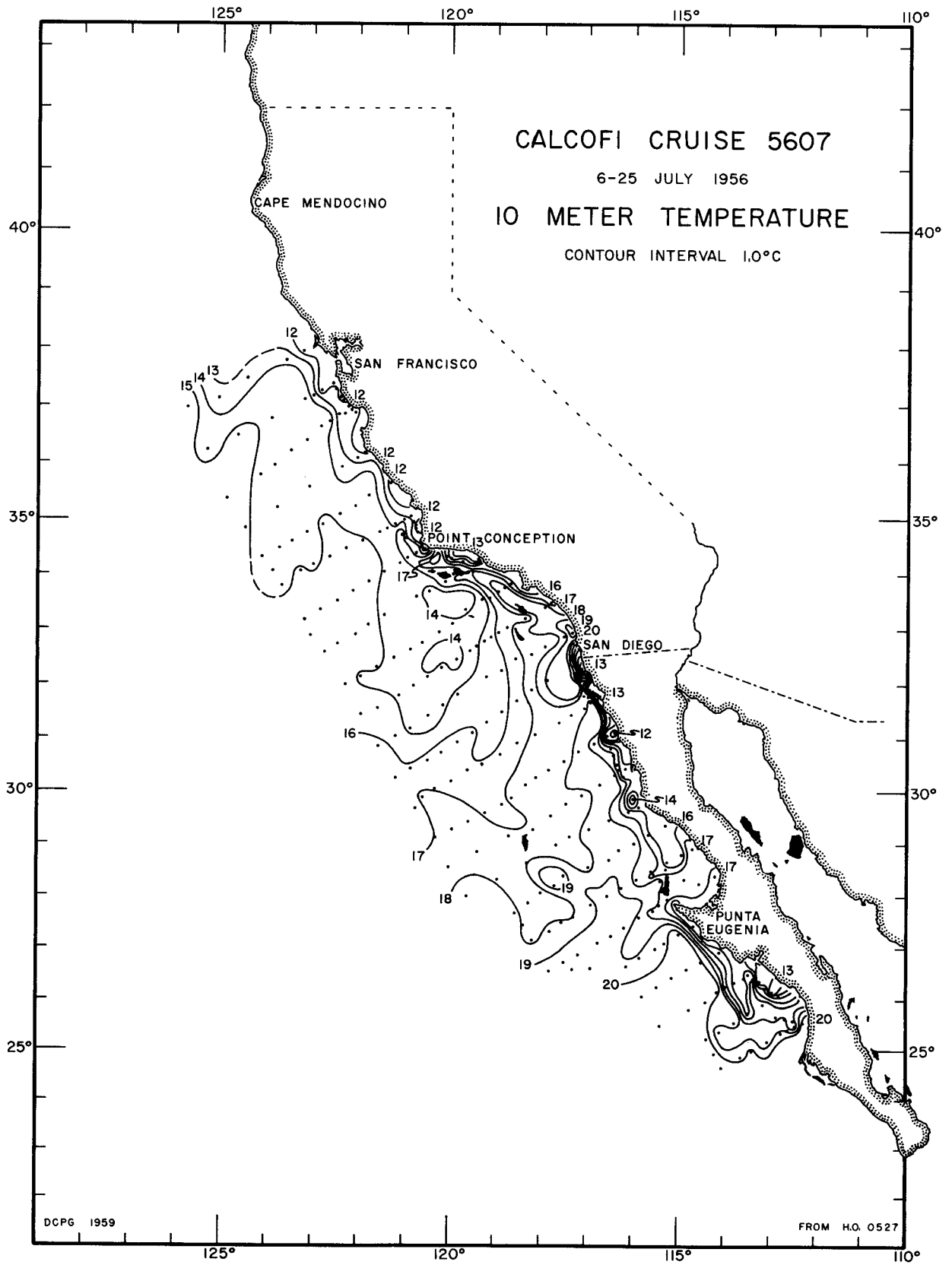
FROM H.O. 0527 & H.O. 1006 (RED.)

10m T
5604



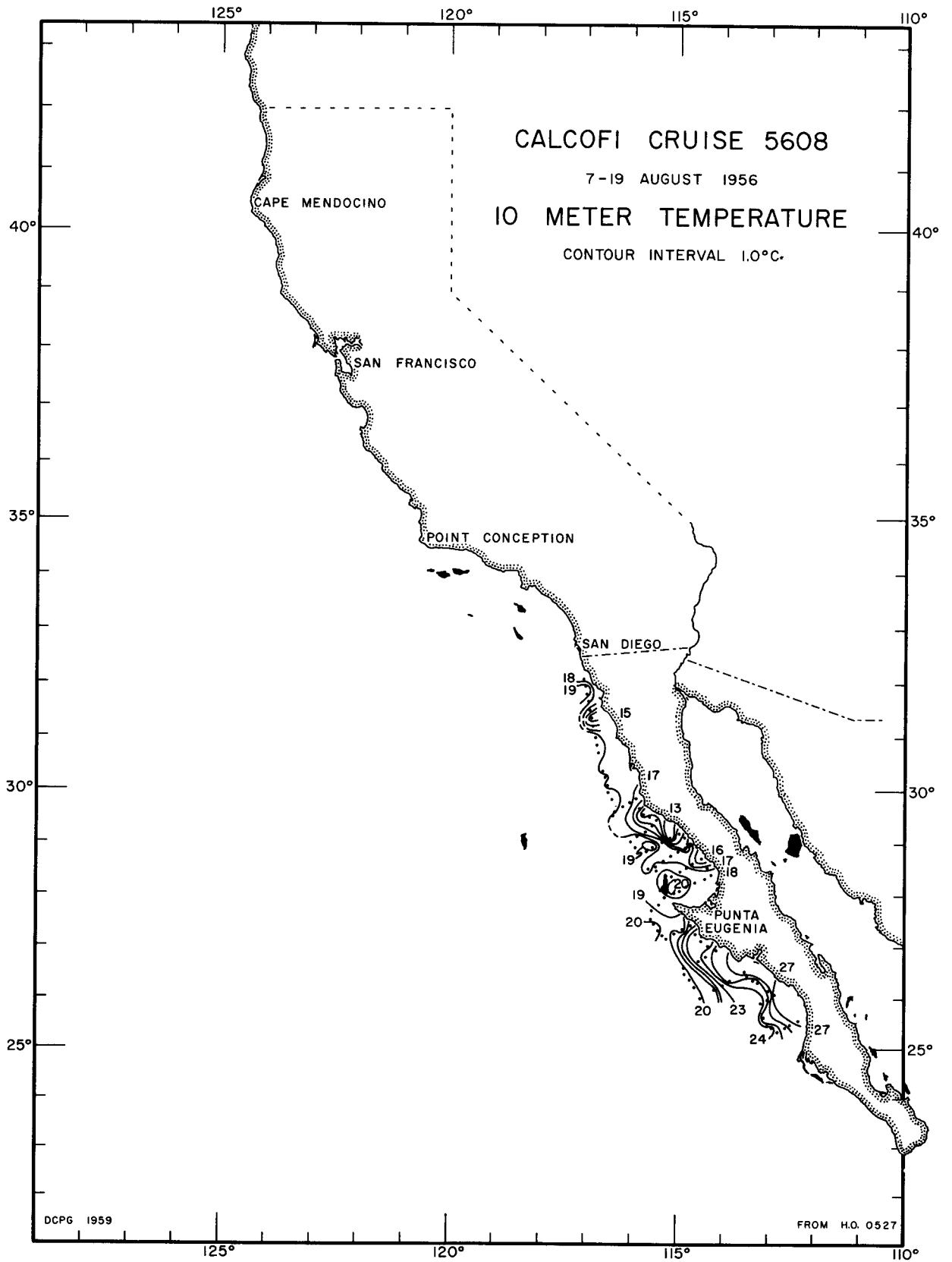
10m T
 5605



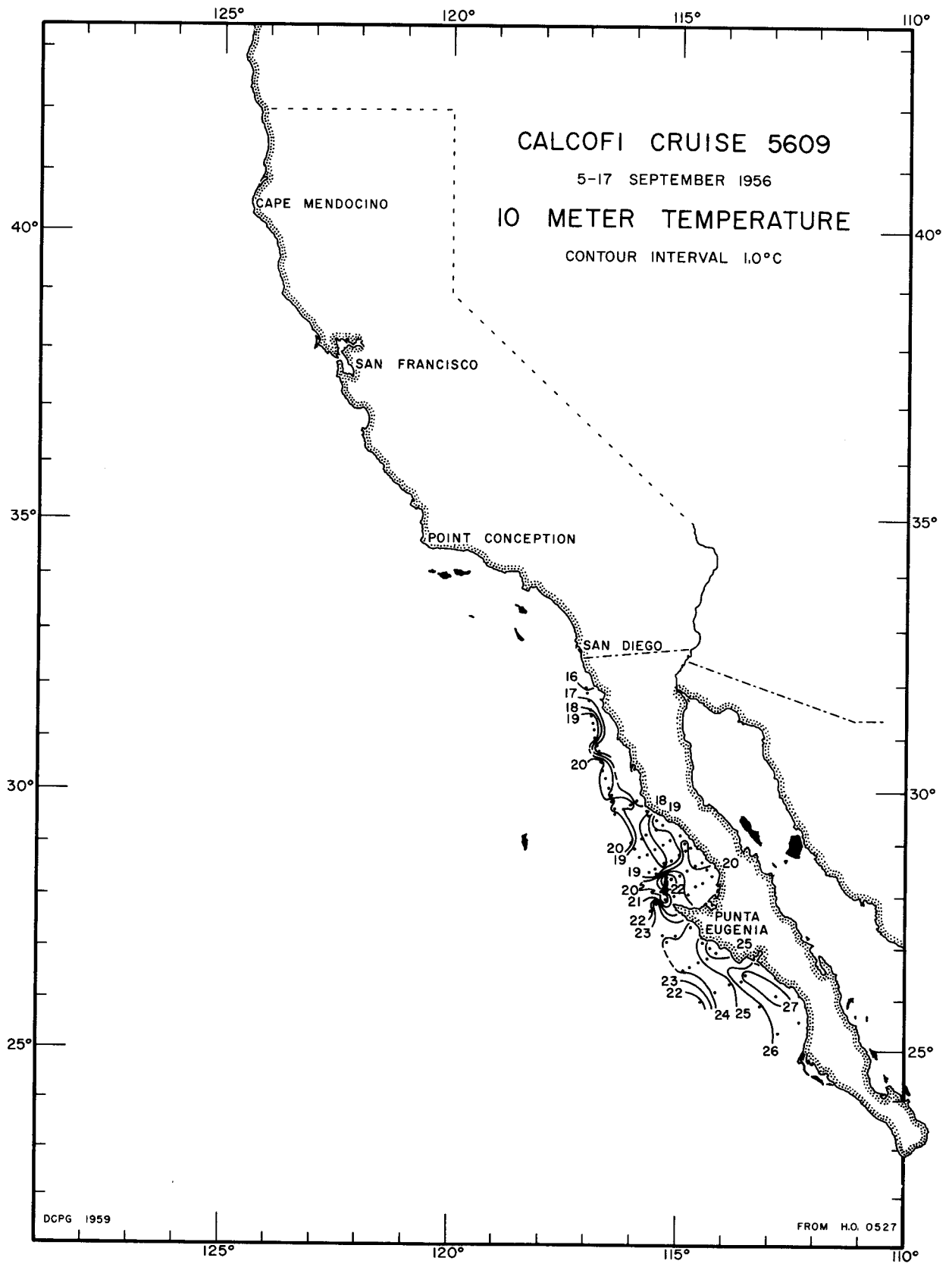


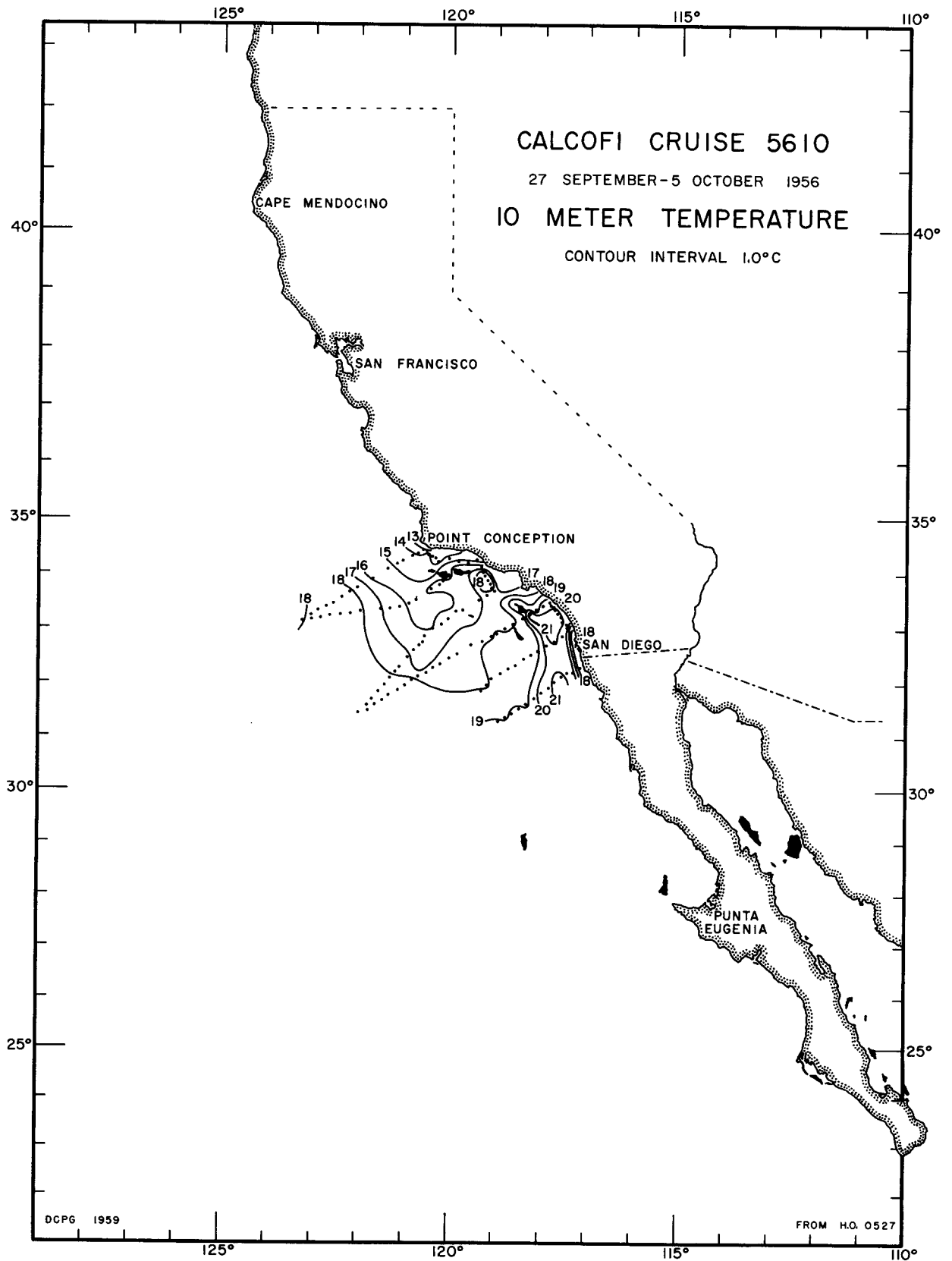
CALCOFI CRUISE 5607
6-25 JULY 1956
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C

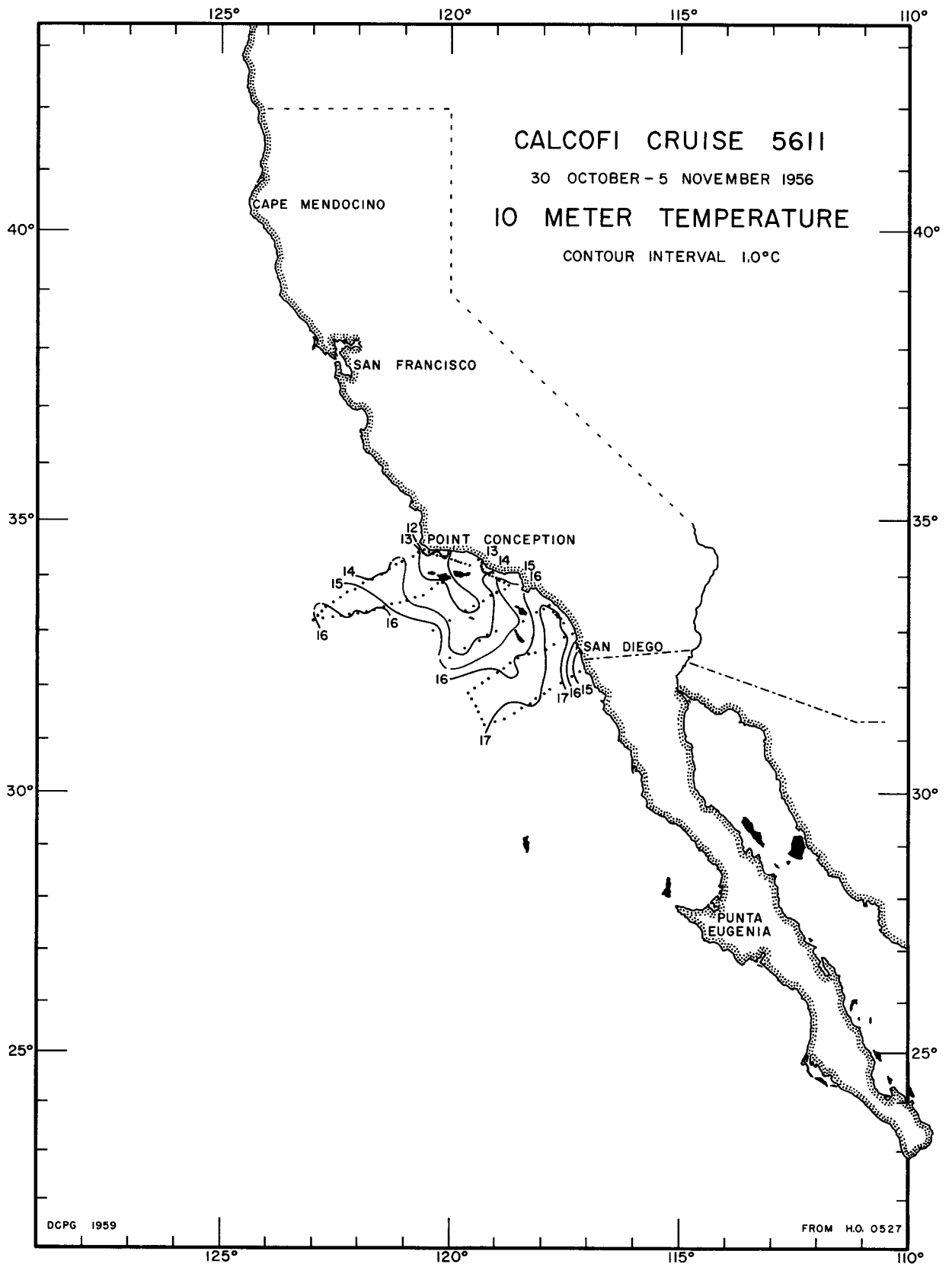
10m T
5607

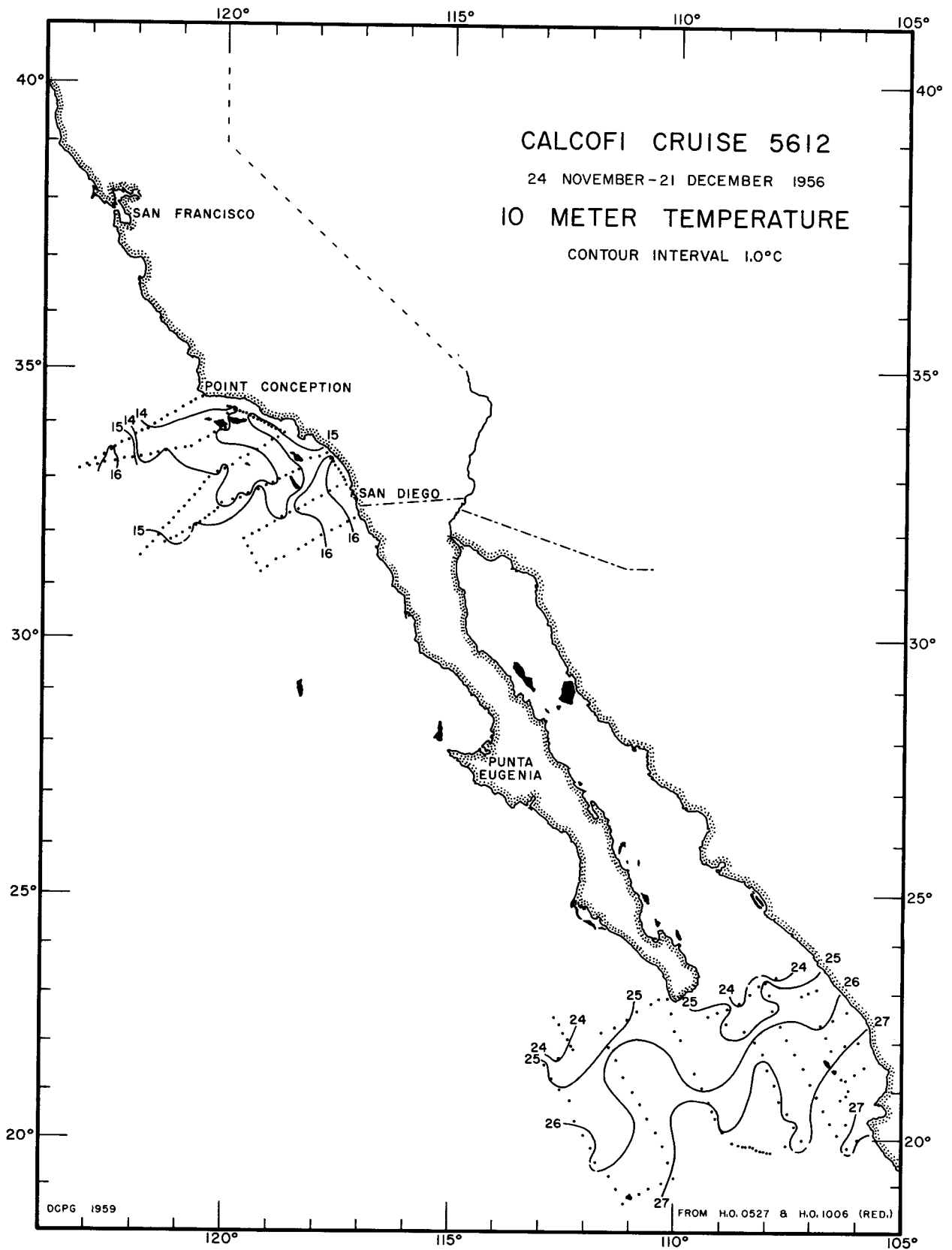


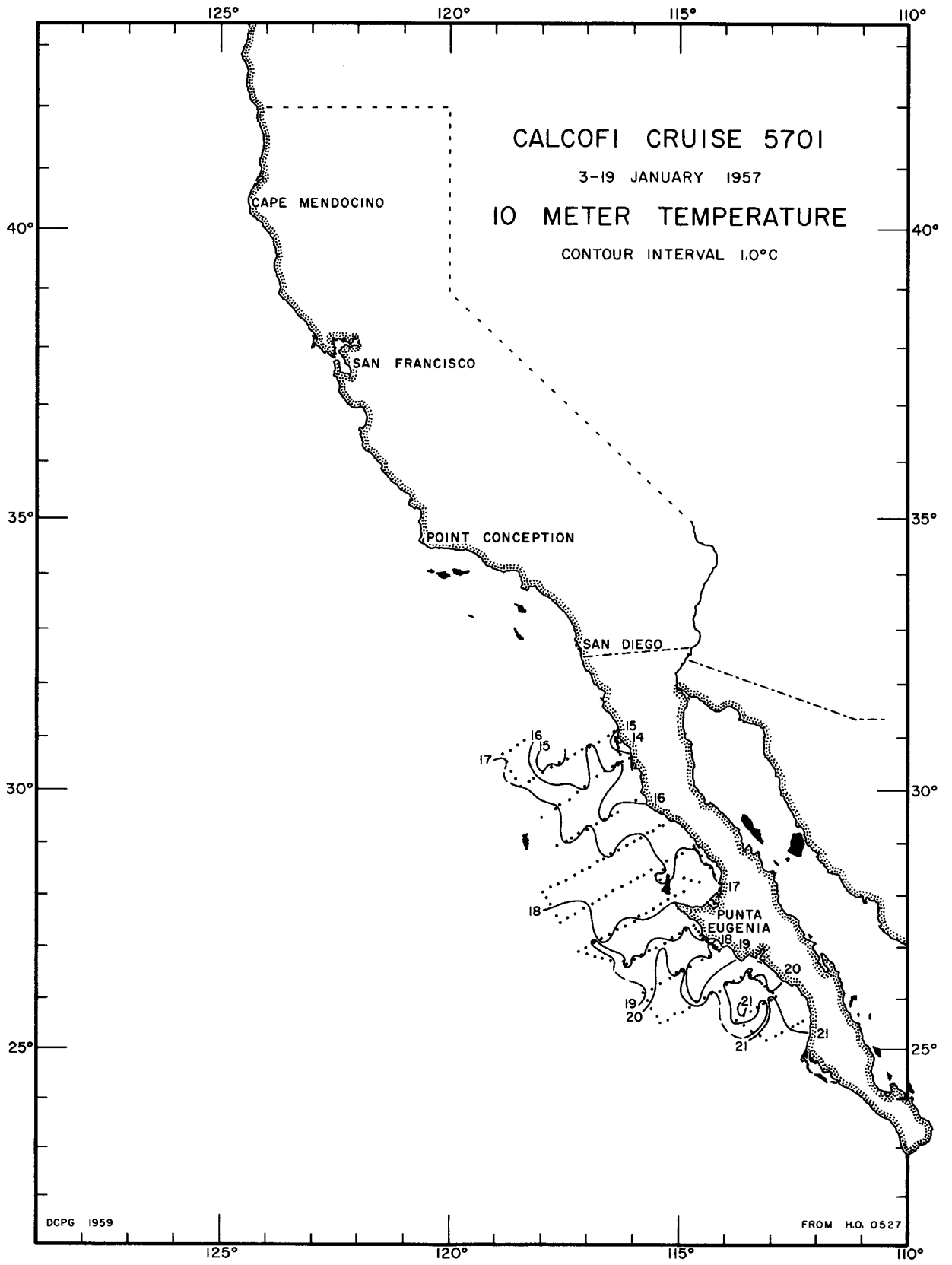
10m T
5608



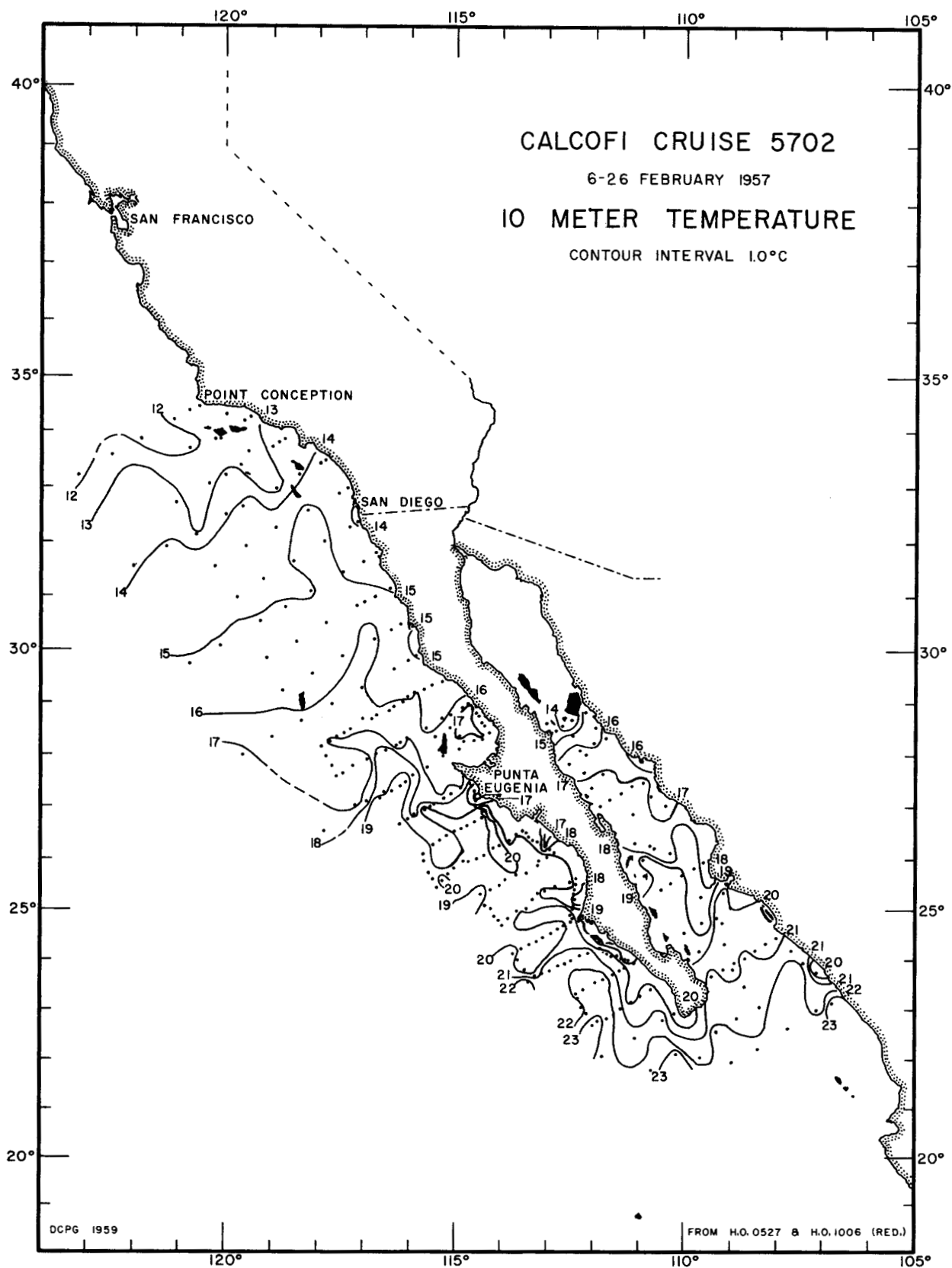




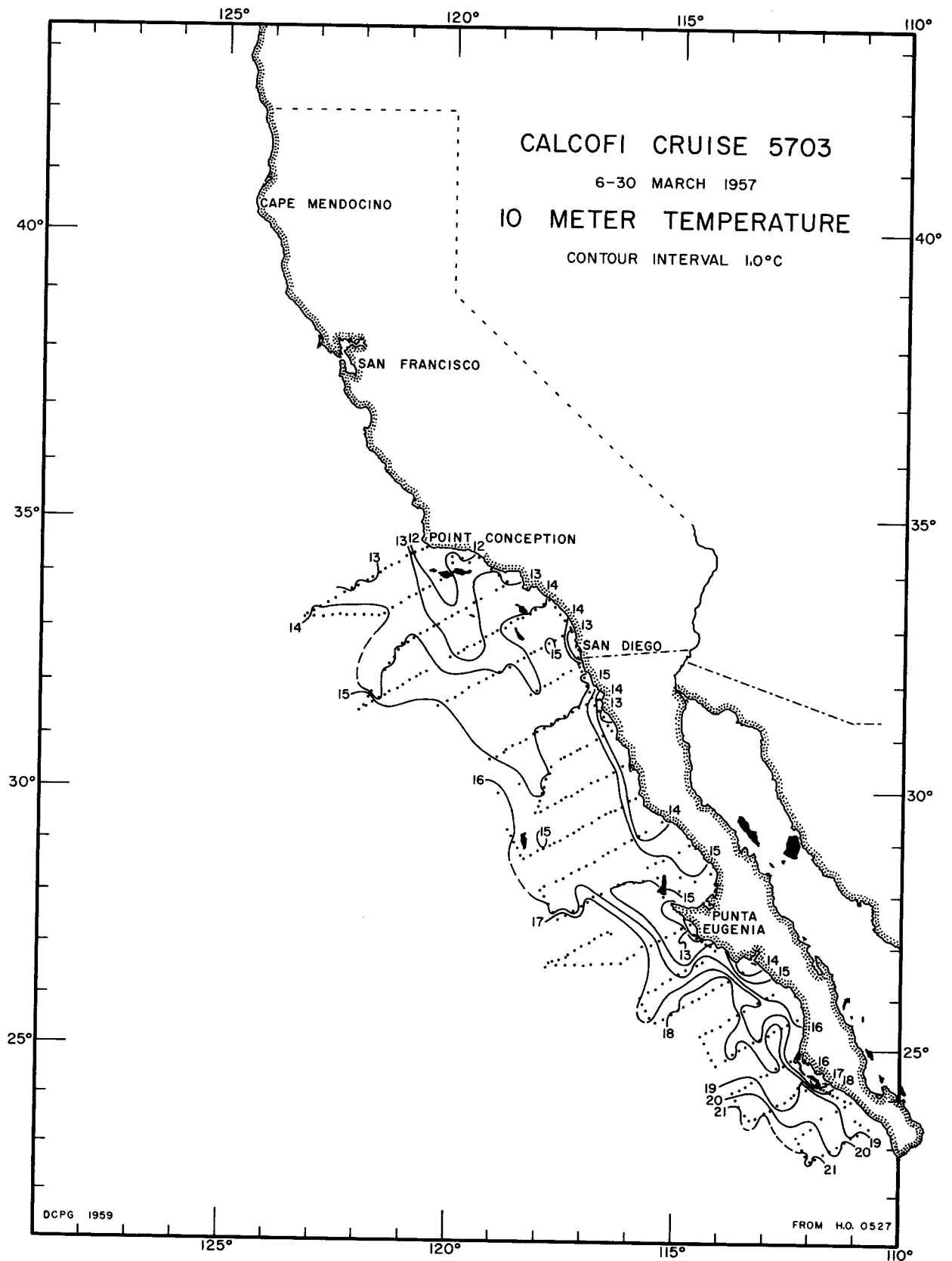




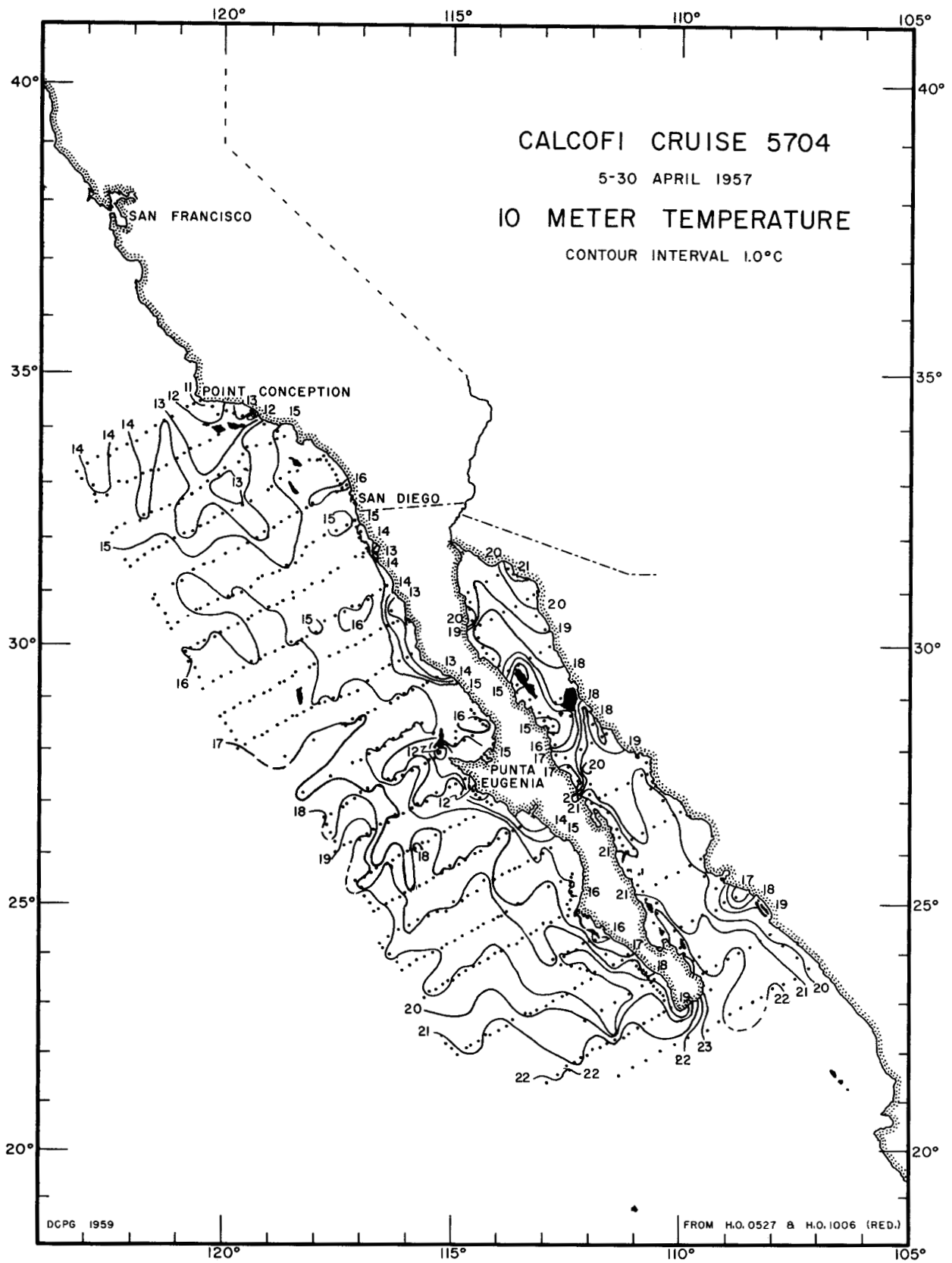
10m T
5701



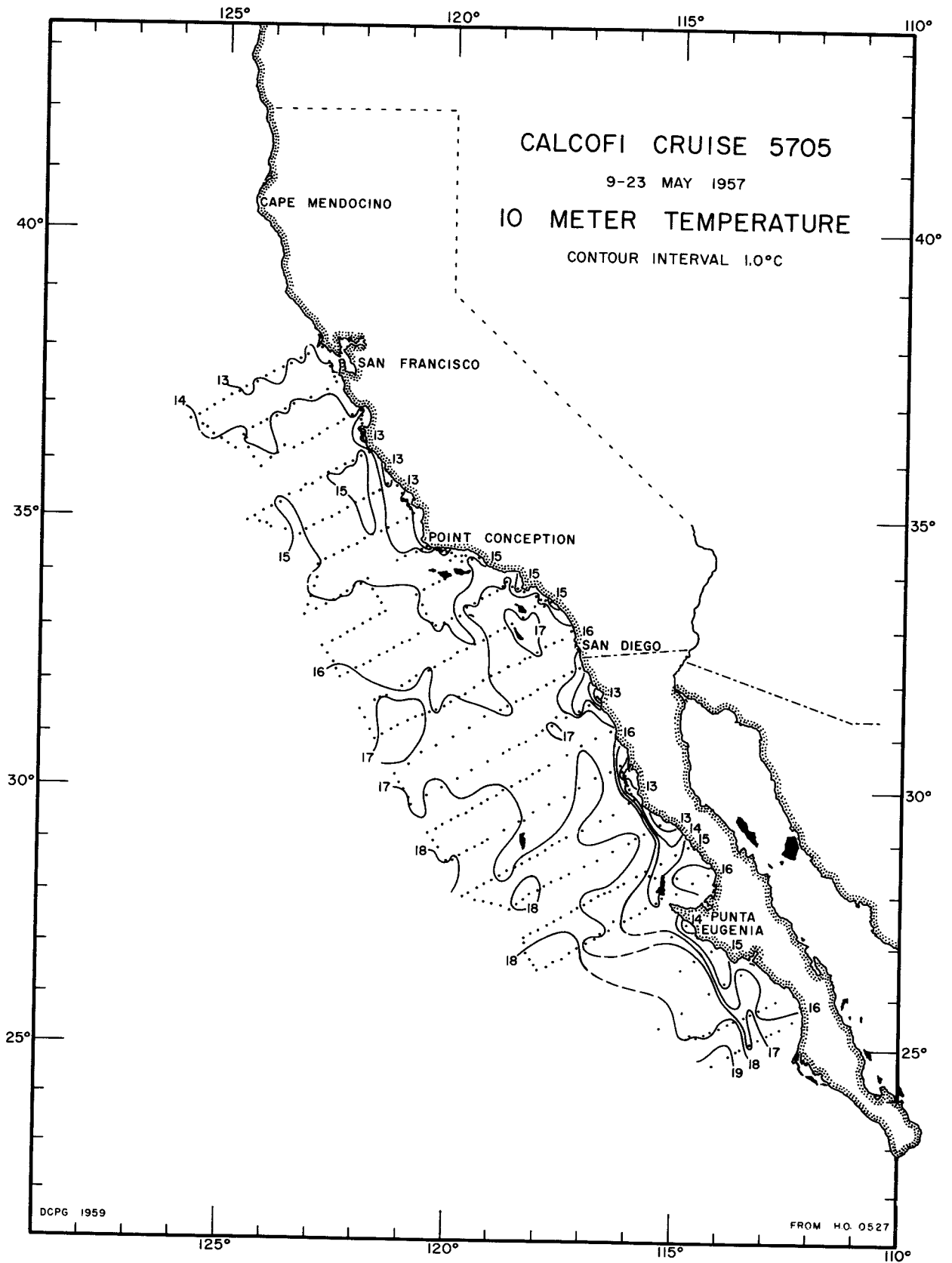
10m T
5702



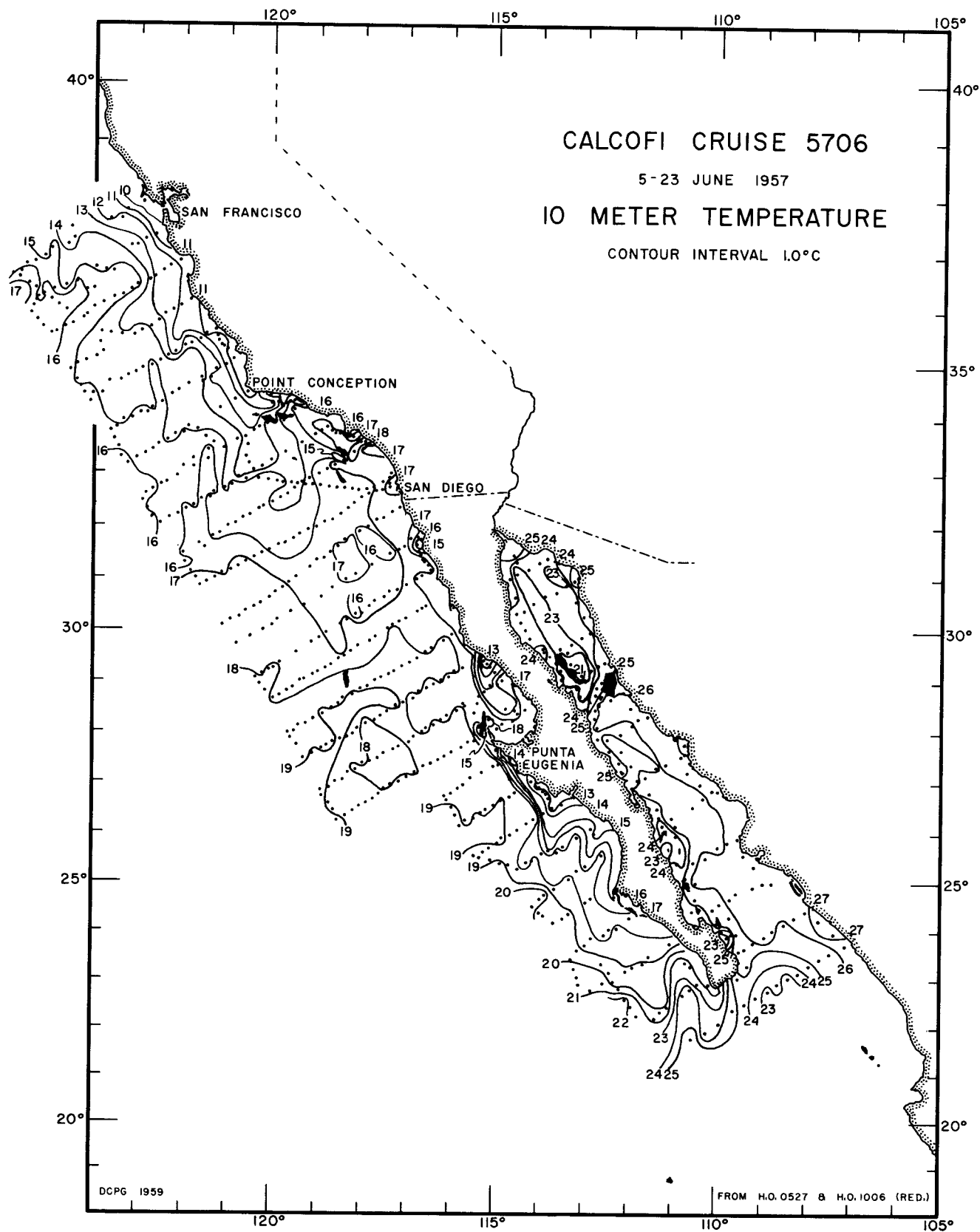
10m T
5703



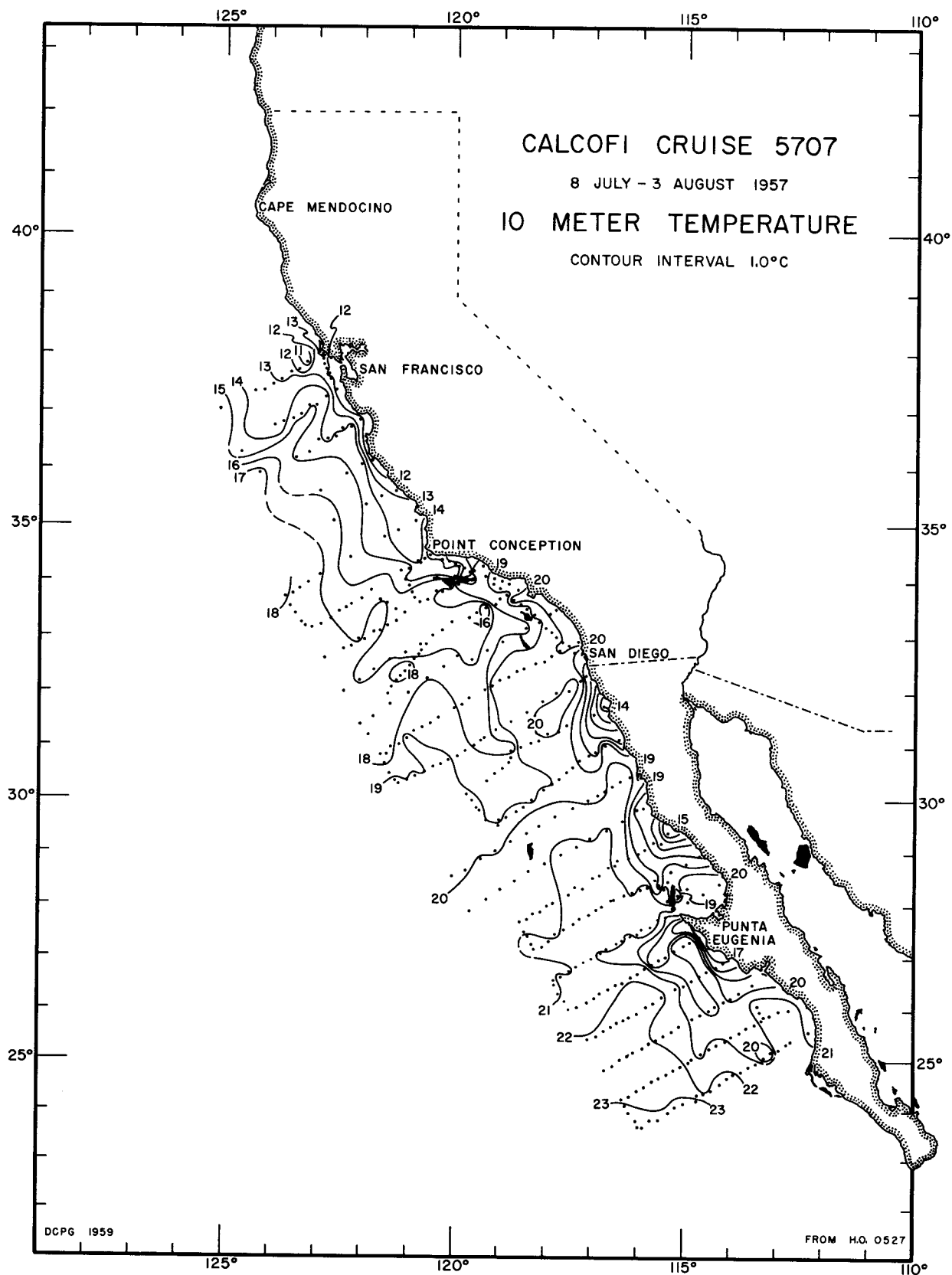
10m T
5704



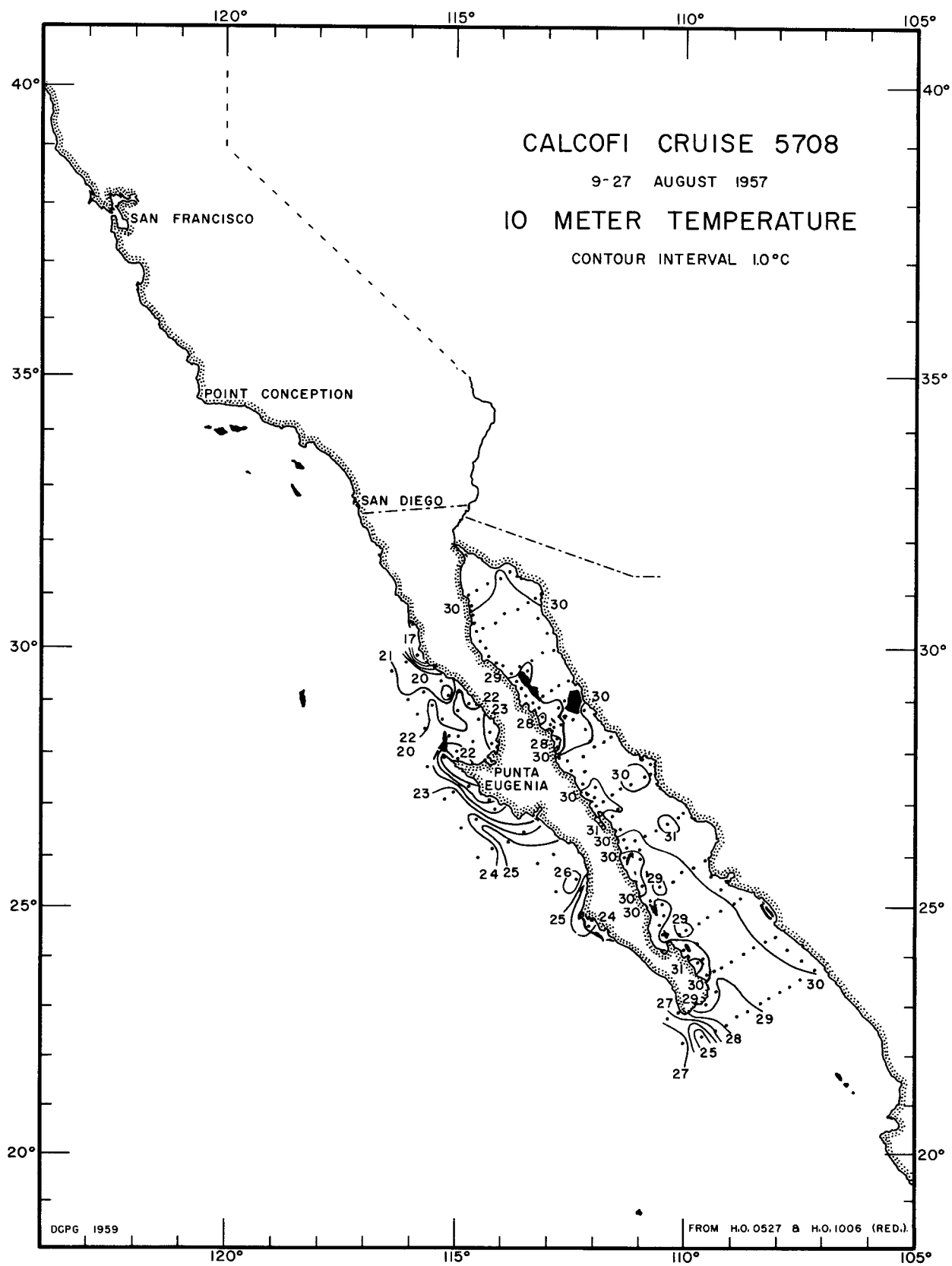
10m T
5705



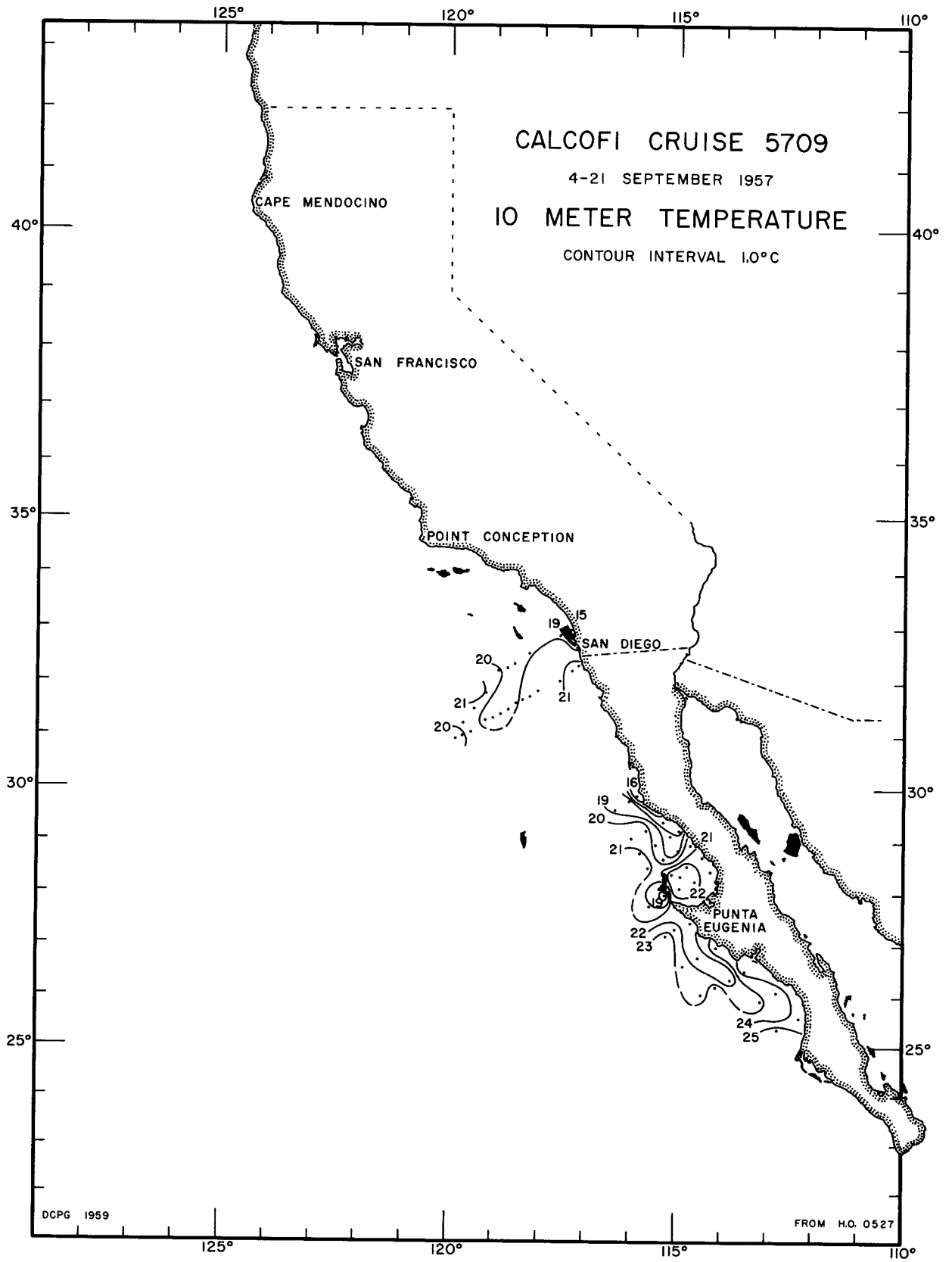
10m T
5706



10m T
5707

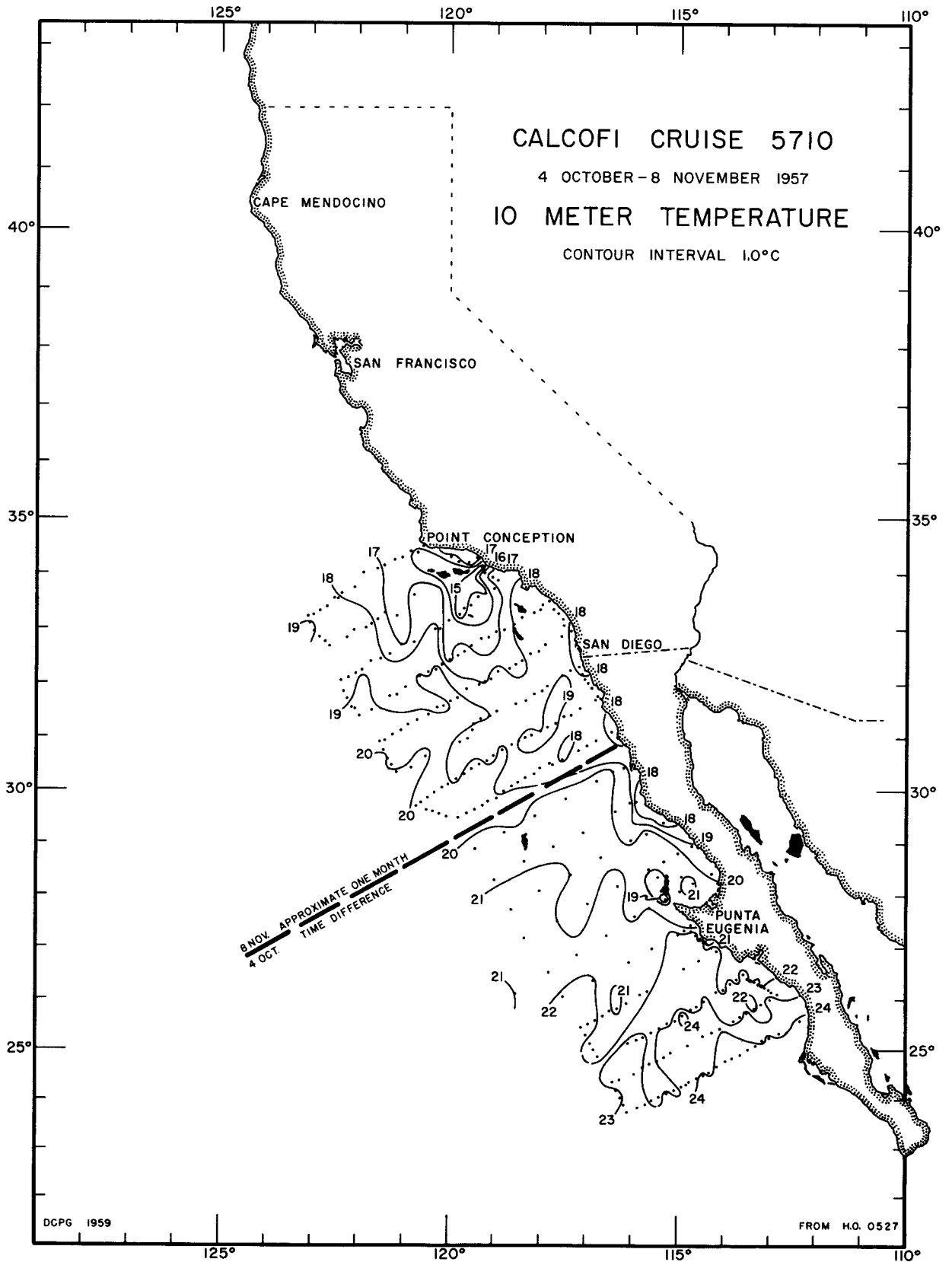


10m T
5708

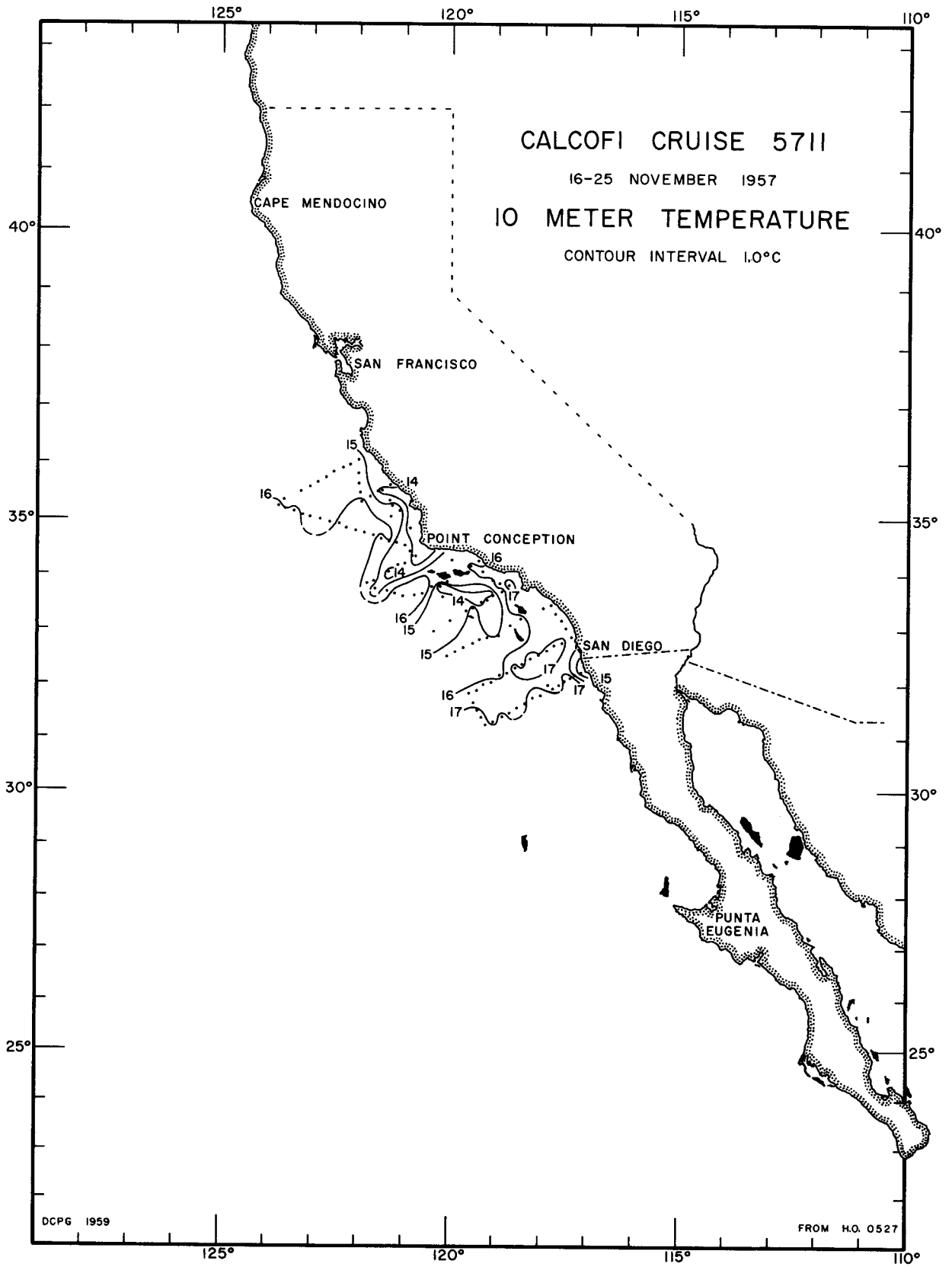


CALCOFI CRUISE 5709
4-21 SEPTEMBER 1957
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C

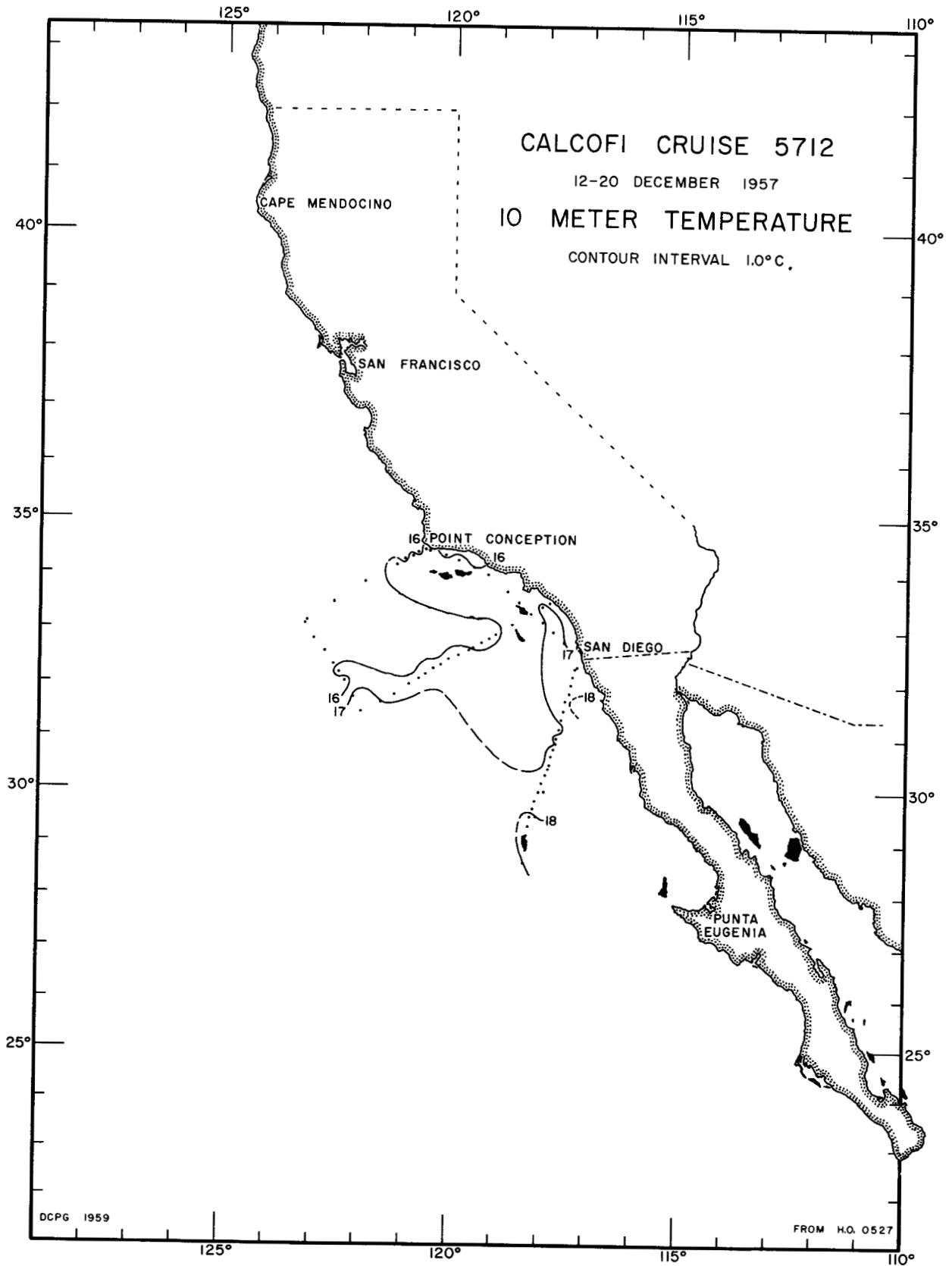
10m T
5709



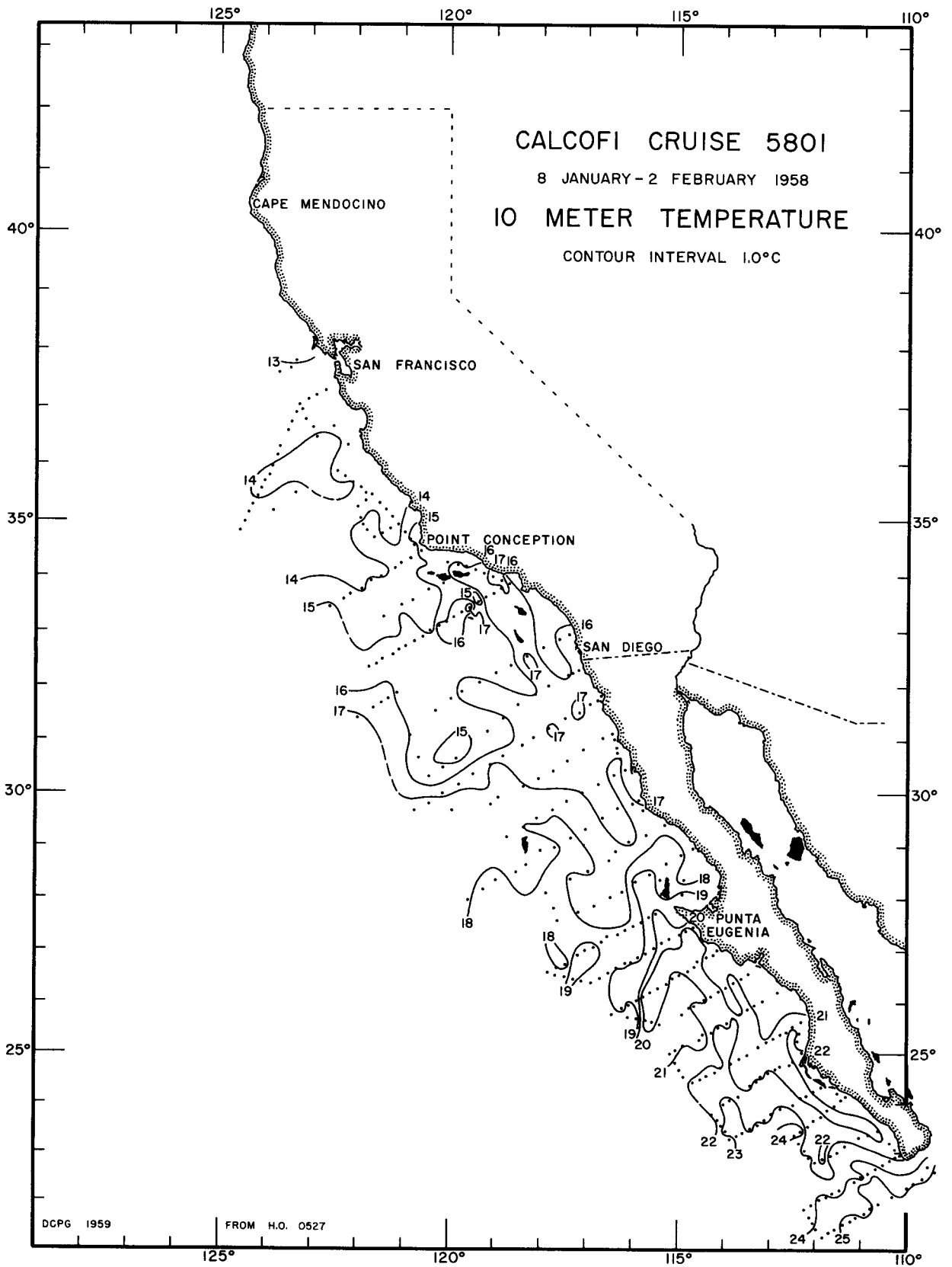
10m T
5710



10m T
 5711



10m T
5712



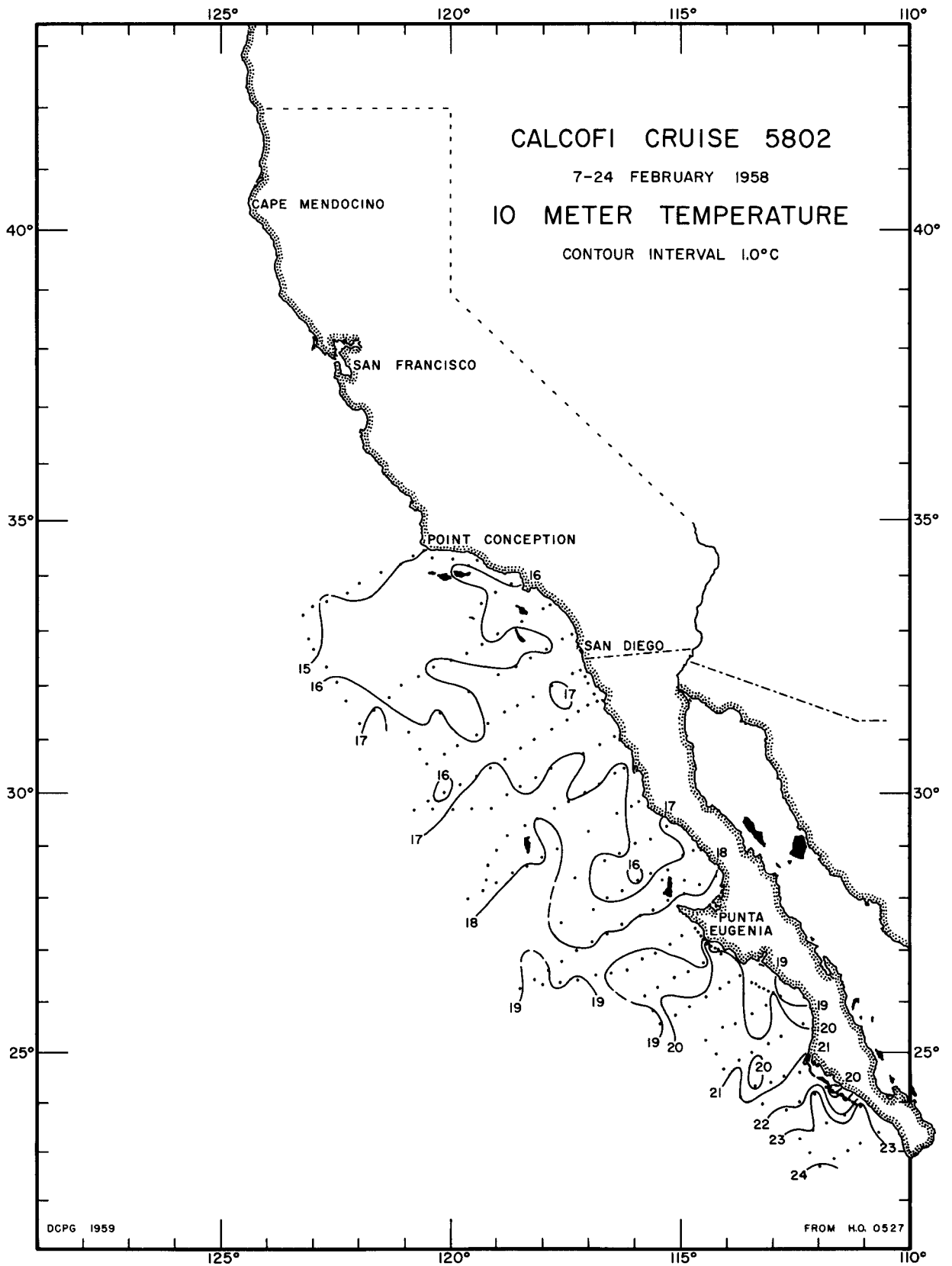
CALCOFI CRUISE 5801

8 JANUARY - 2 FEBRUARY 1958

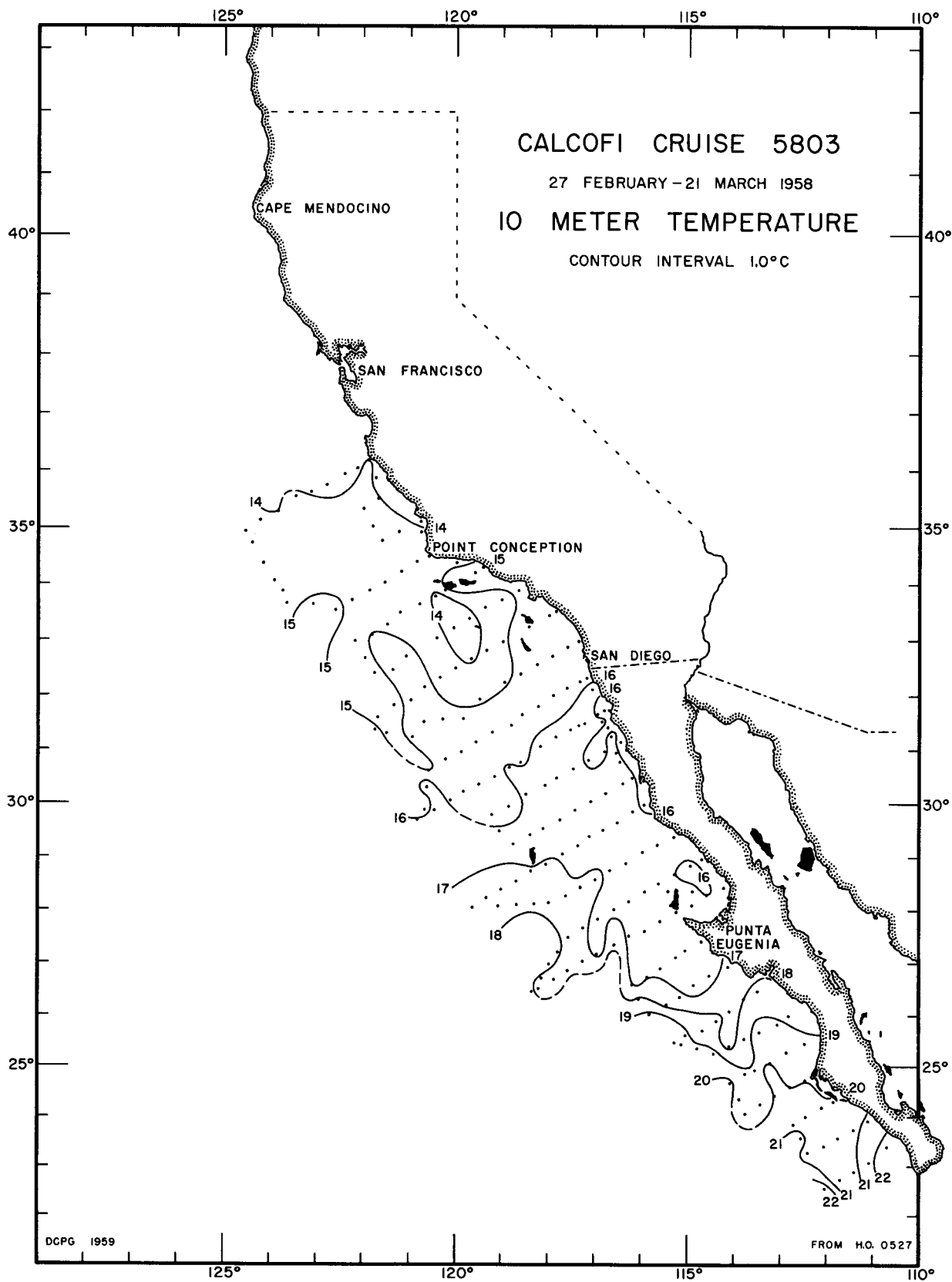
10 METER TEMPERATURE

CONTOUR INTERVAL 1.0°C

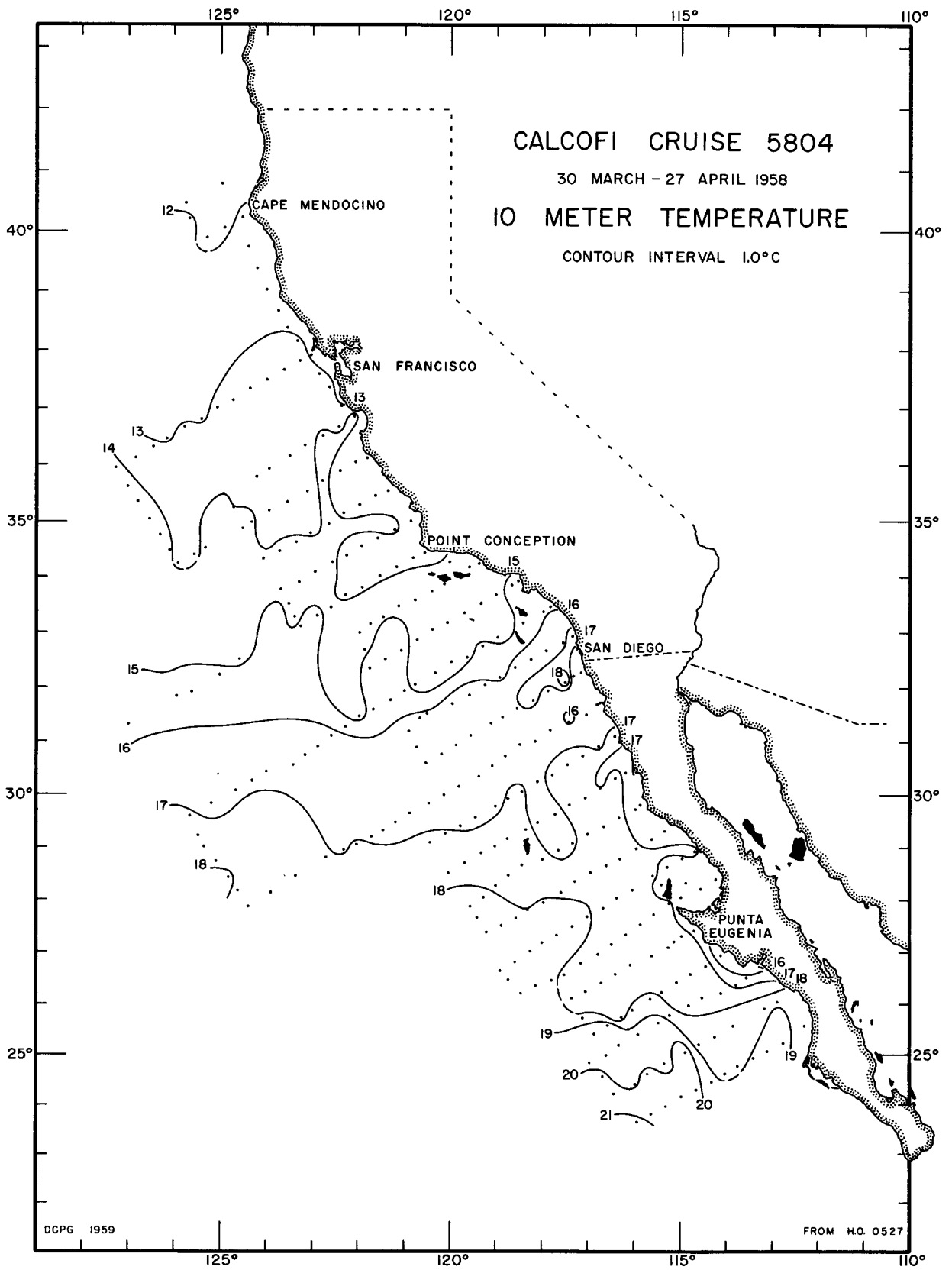
10m T
5801



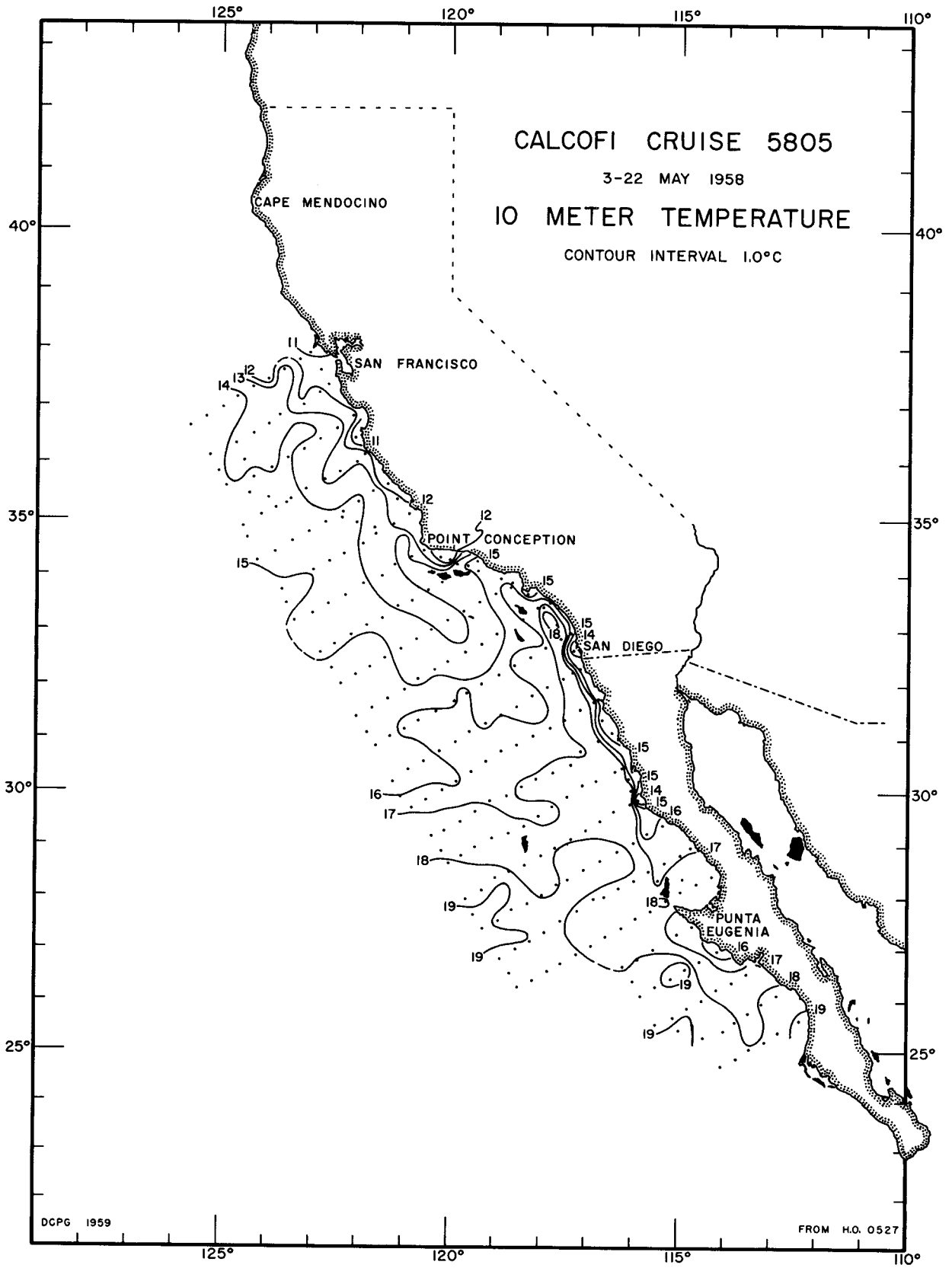
10m T
5802

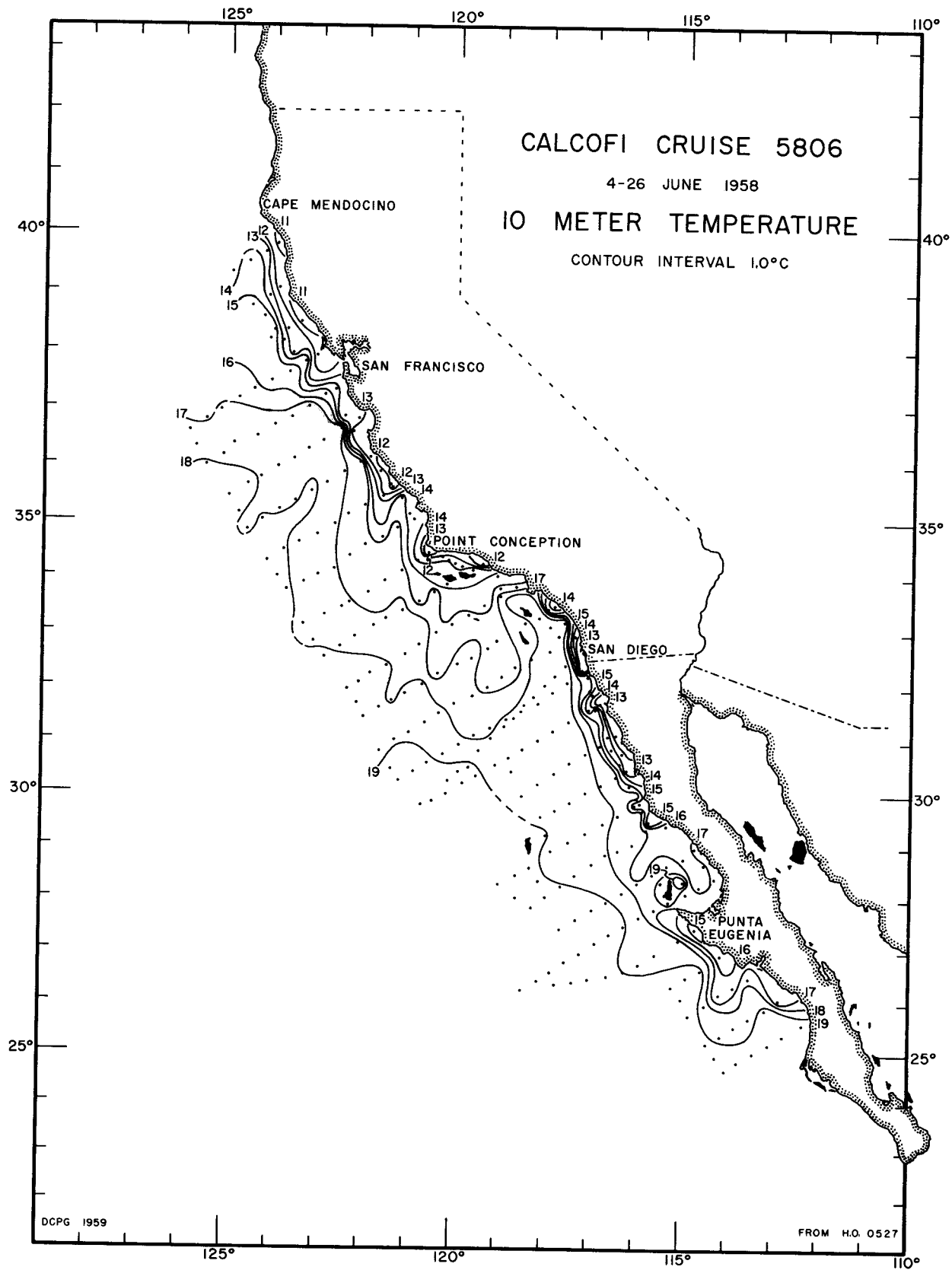


10m T
5803

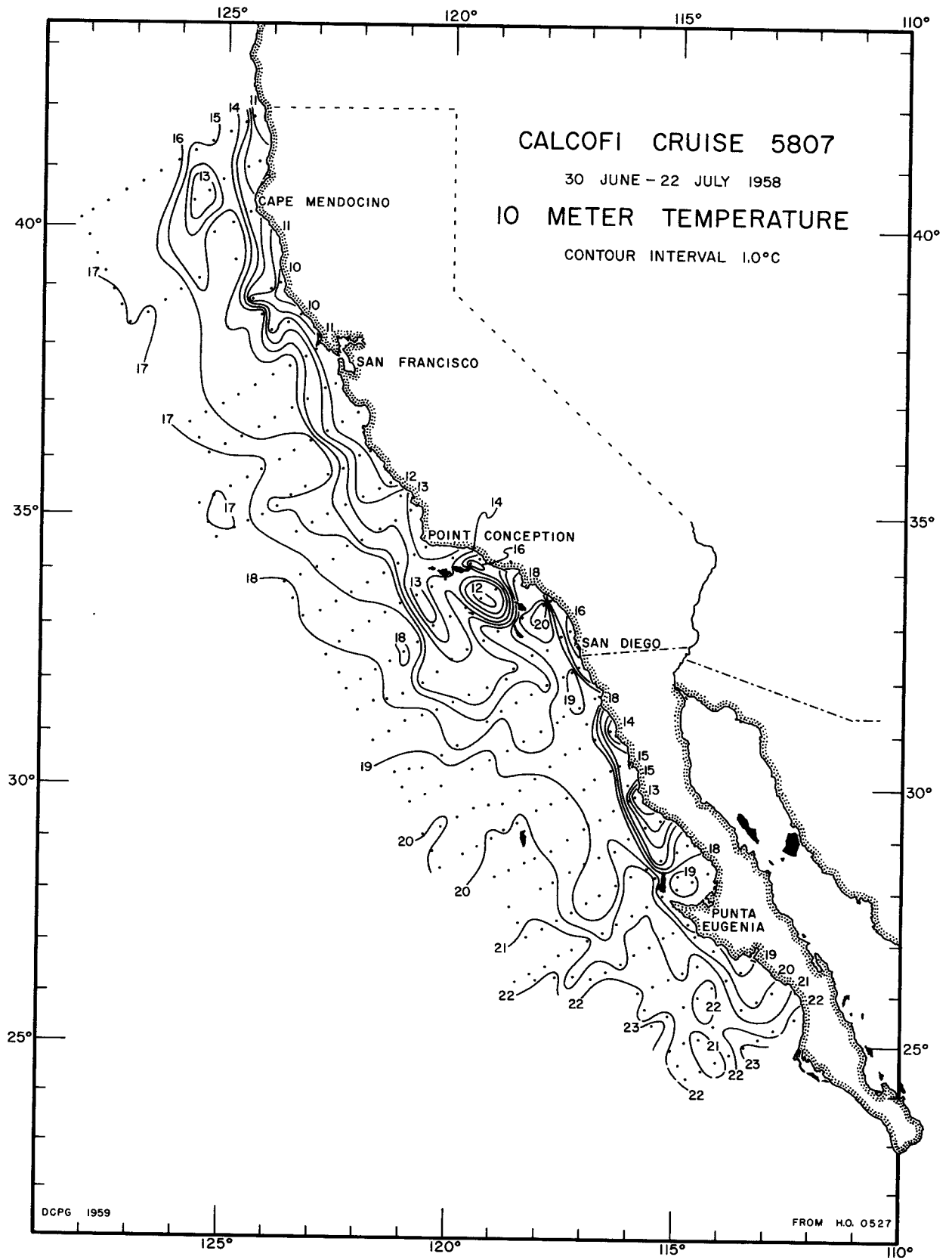


10m T
5804

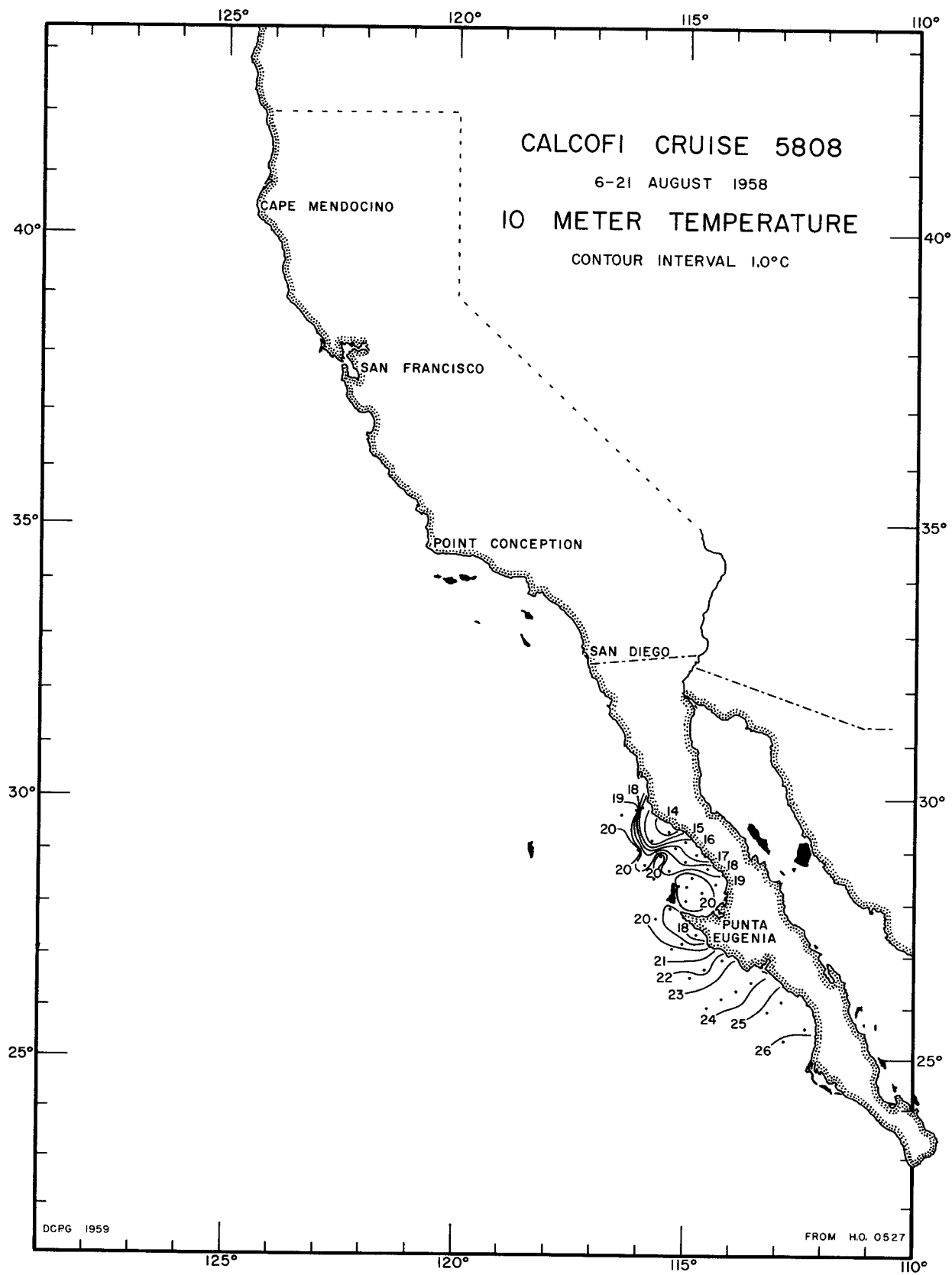




10m T
5806

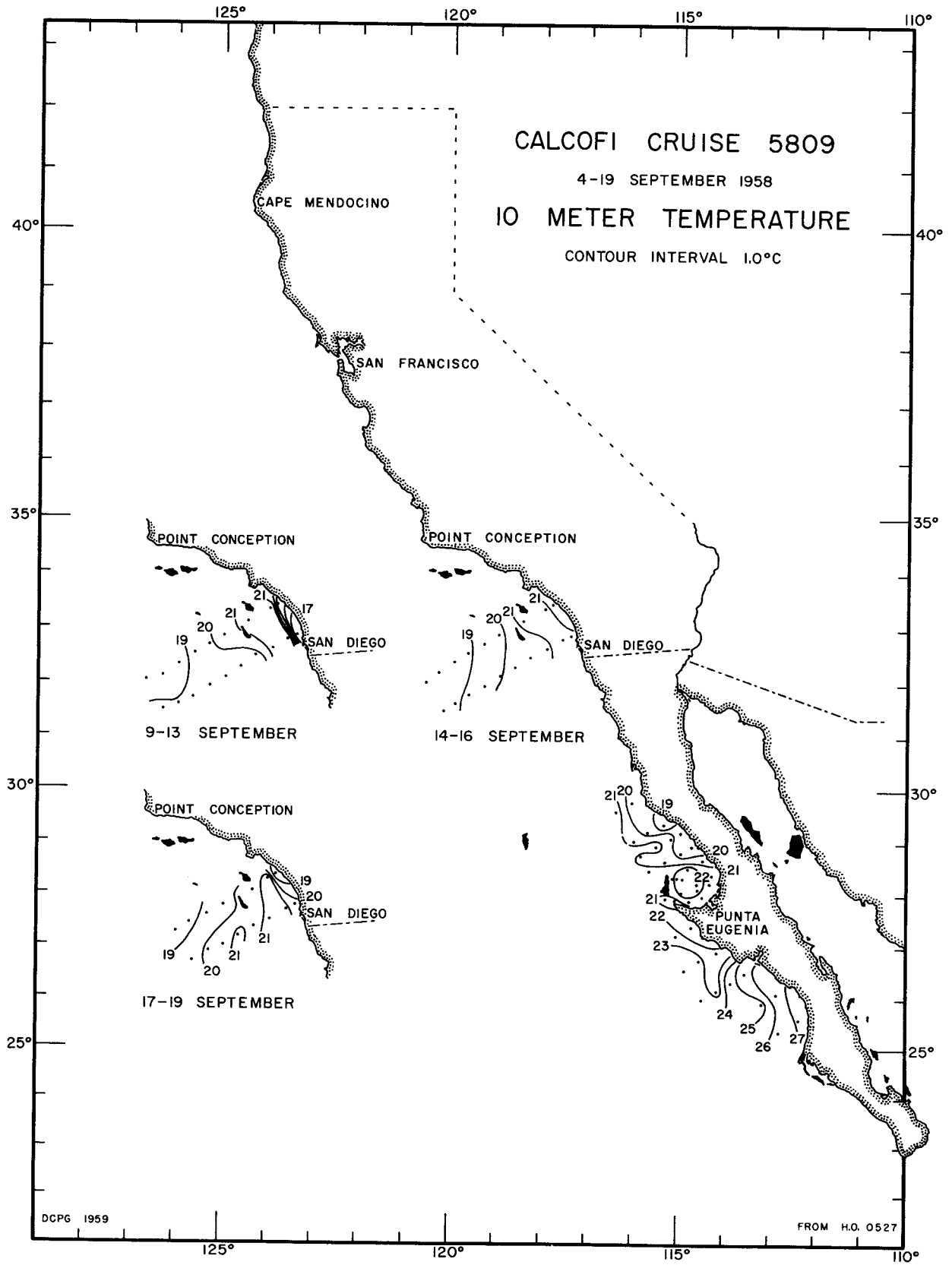


10m T
5807

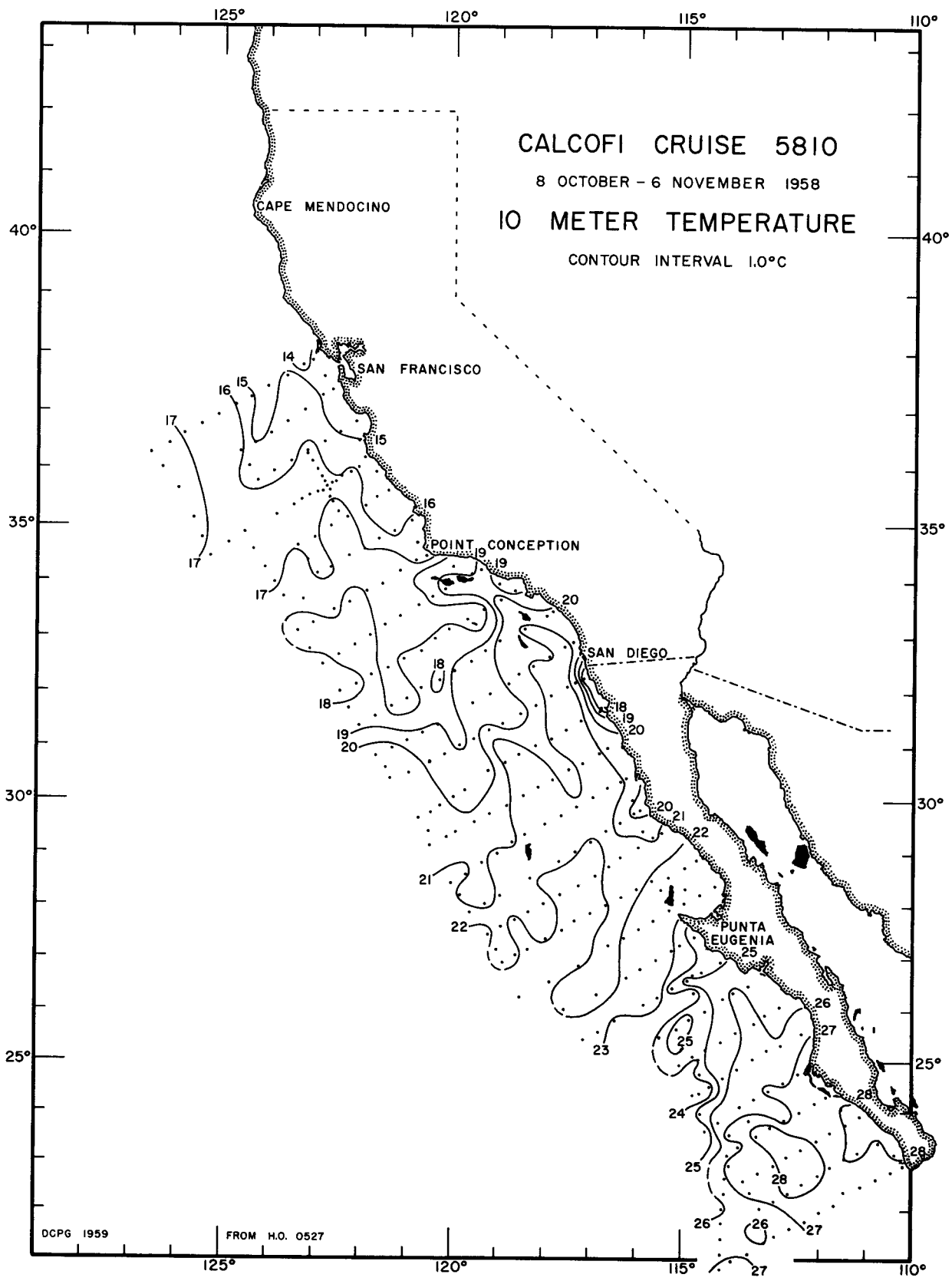


CALCOFI CRUISE 5808
6-21 AUGUST 1958
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C

10m T
5808



10m T
5809



CALCOFI CRUISE 5810

8 OCTOBER - 6 NOVEMBER 1958

10 METER TEMPERATURE

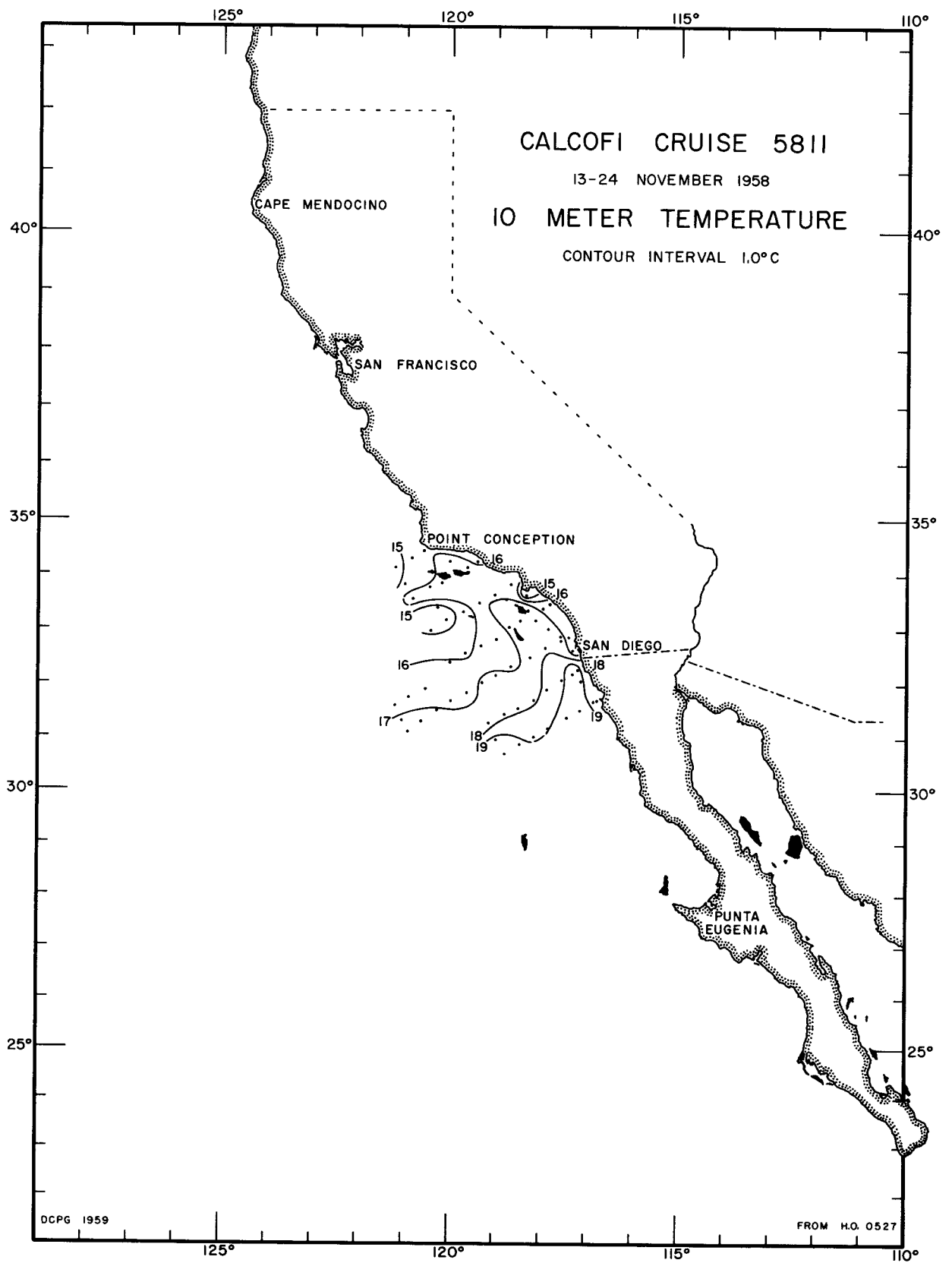
CONTOUR INTERVAL 1.0°C

DCPG 1959

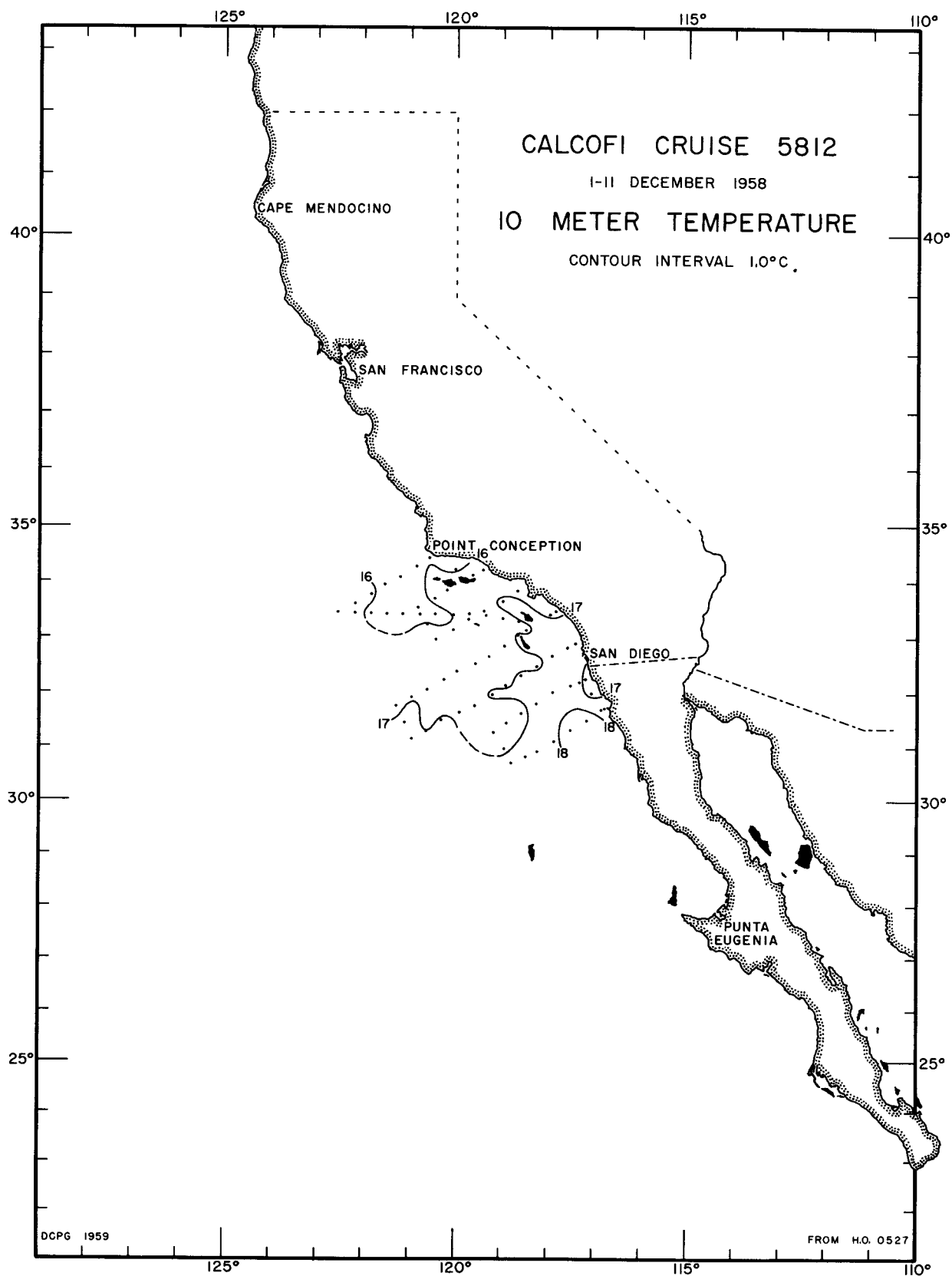
FROM H.O. 0527

10m T

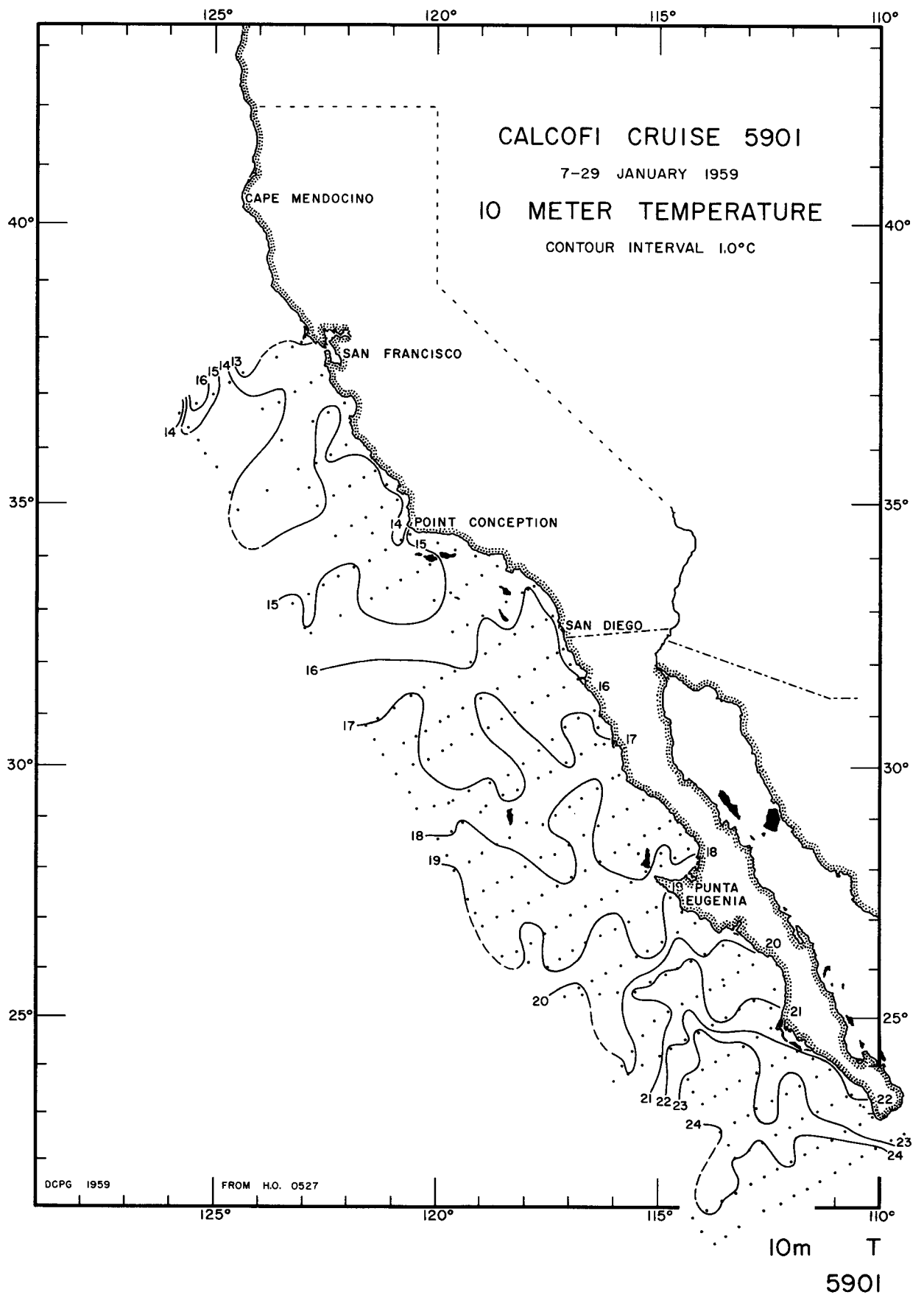
5810

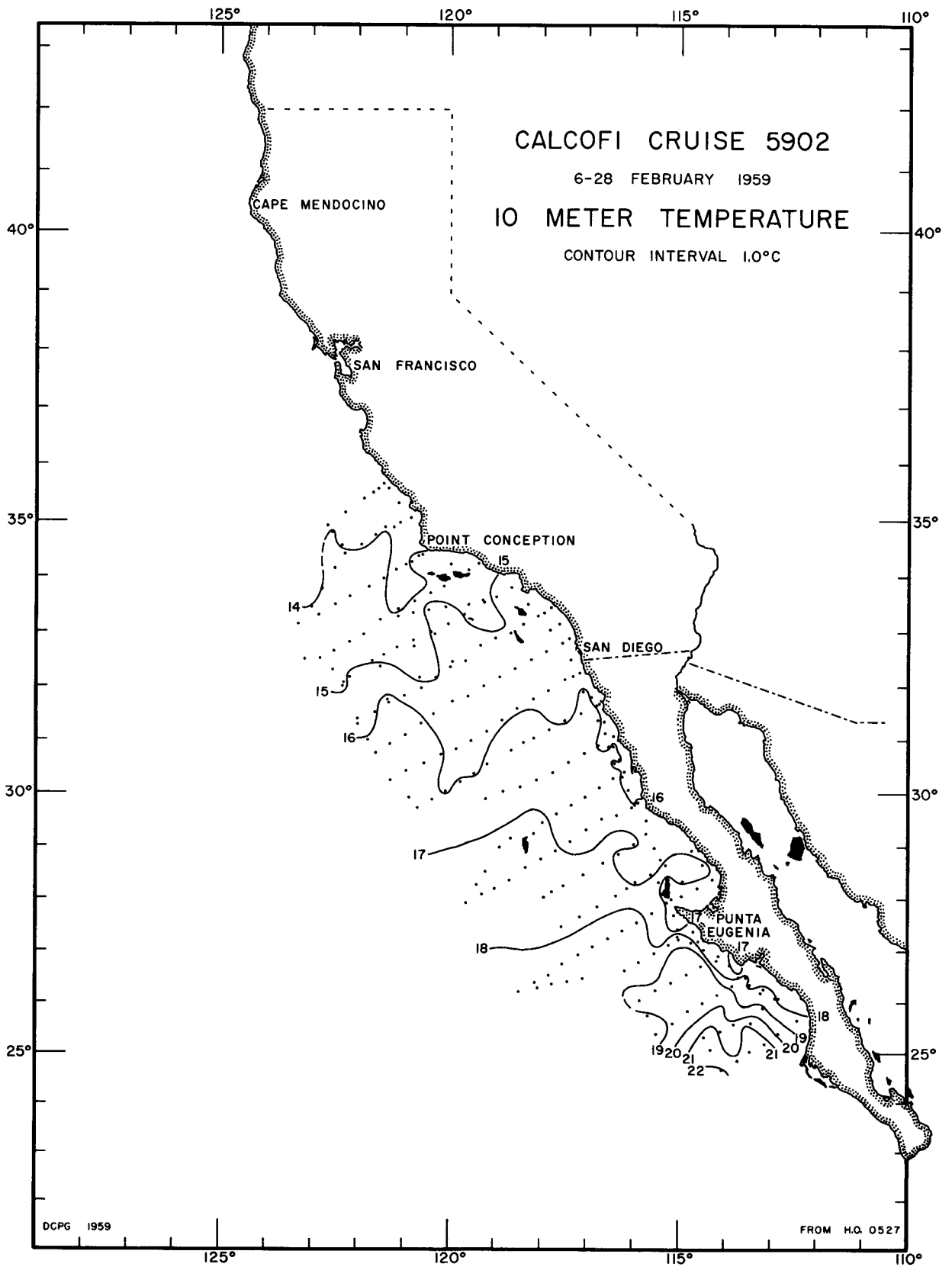


10m T
5811

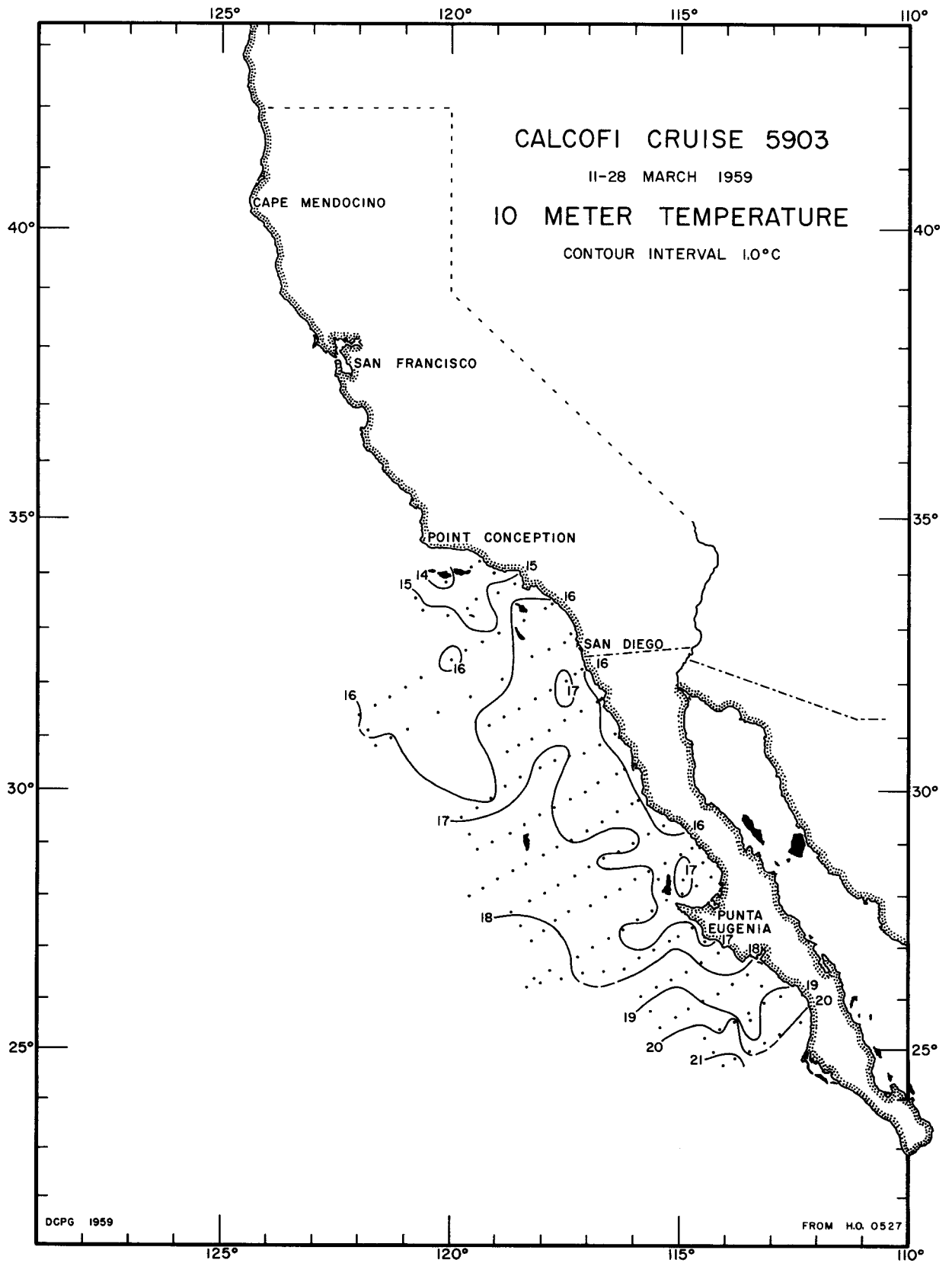


10m T
5812

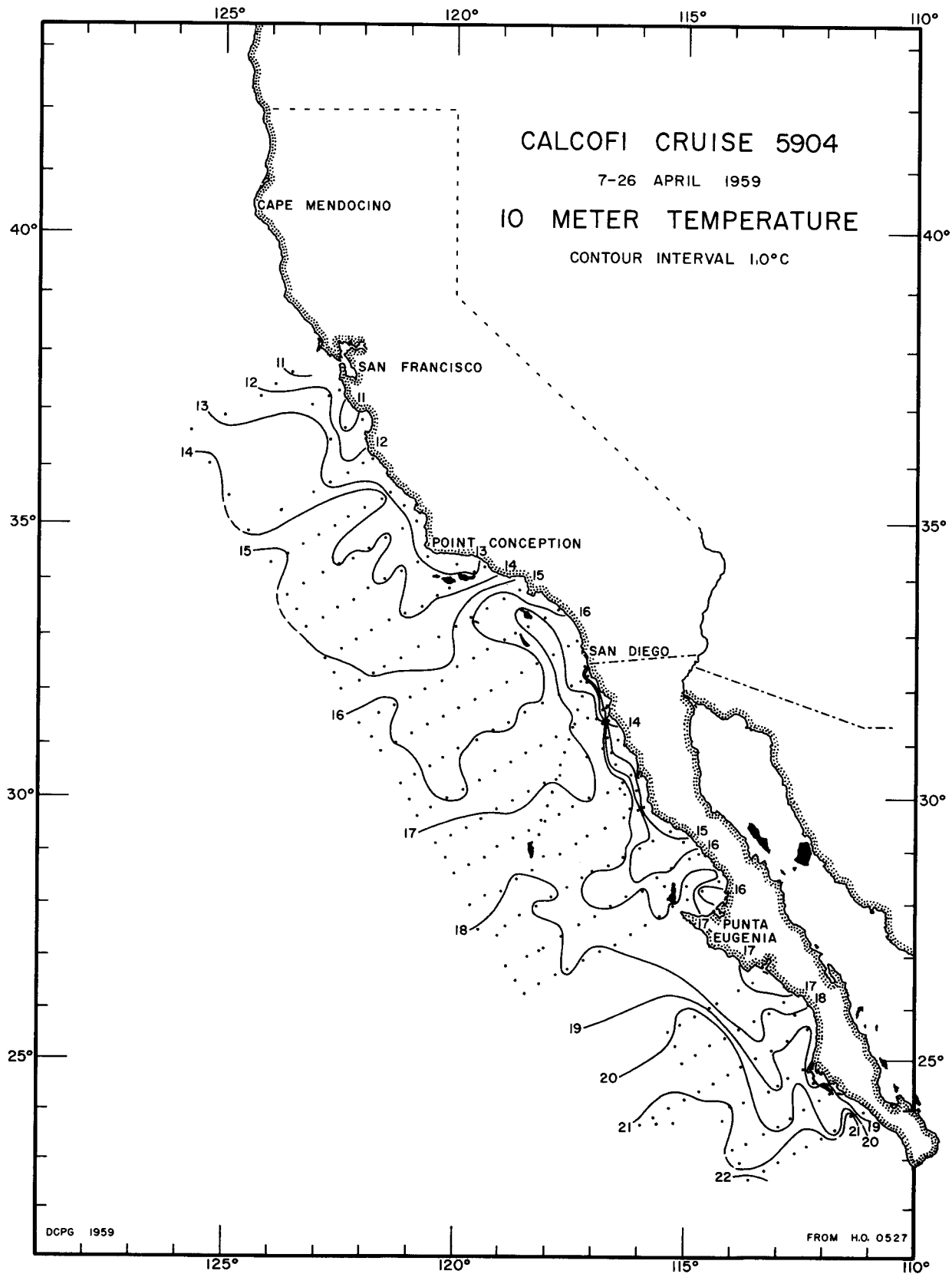




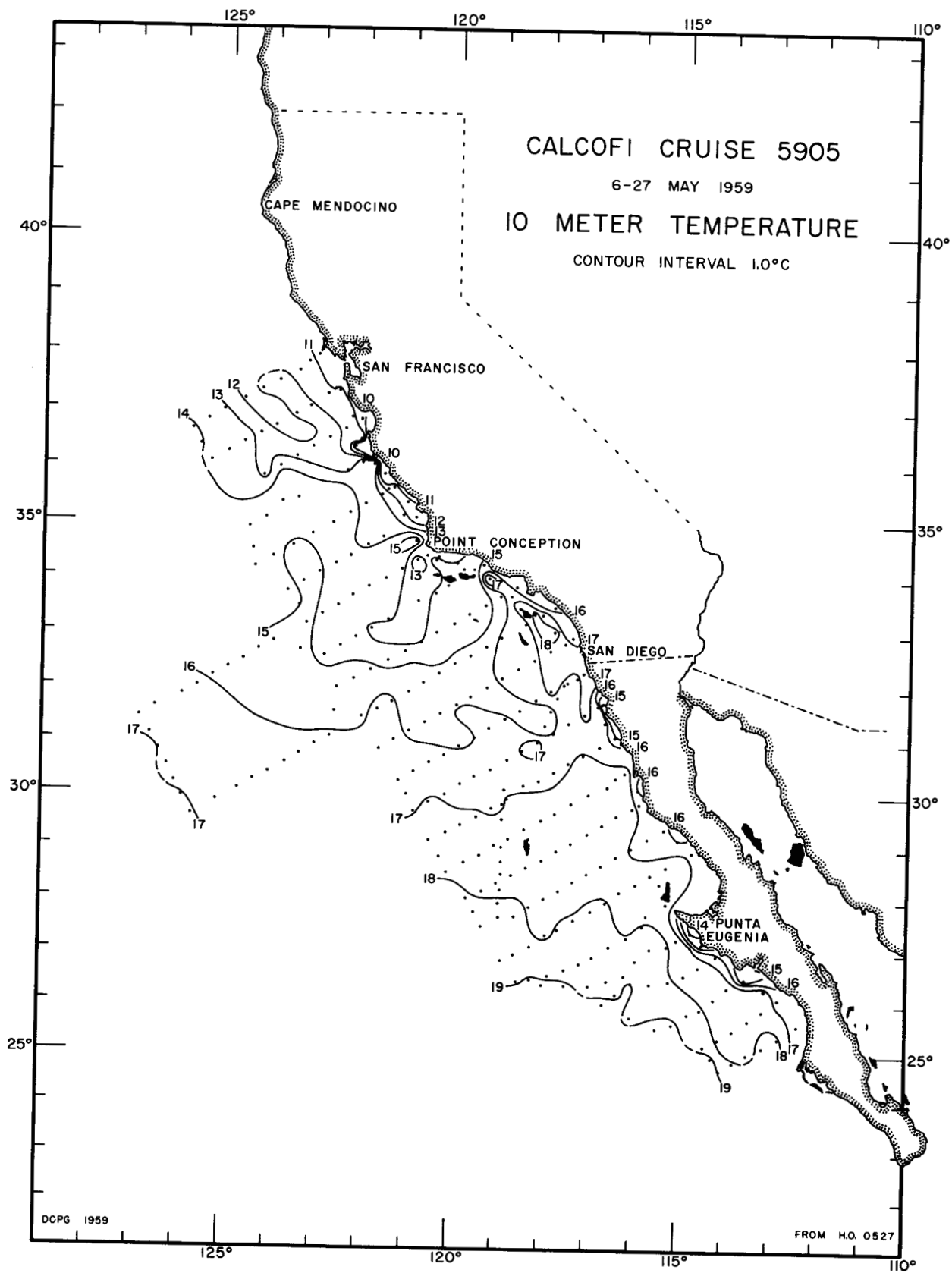
10m T
5902

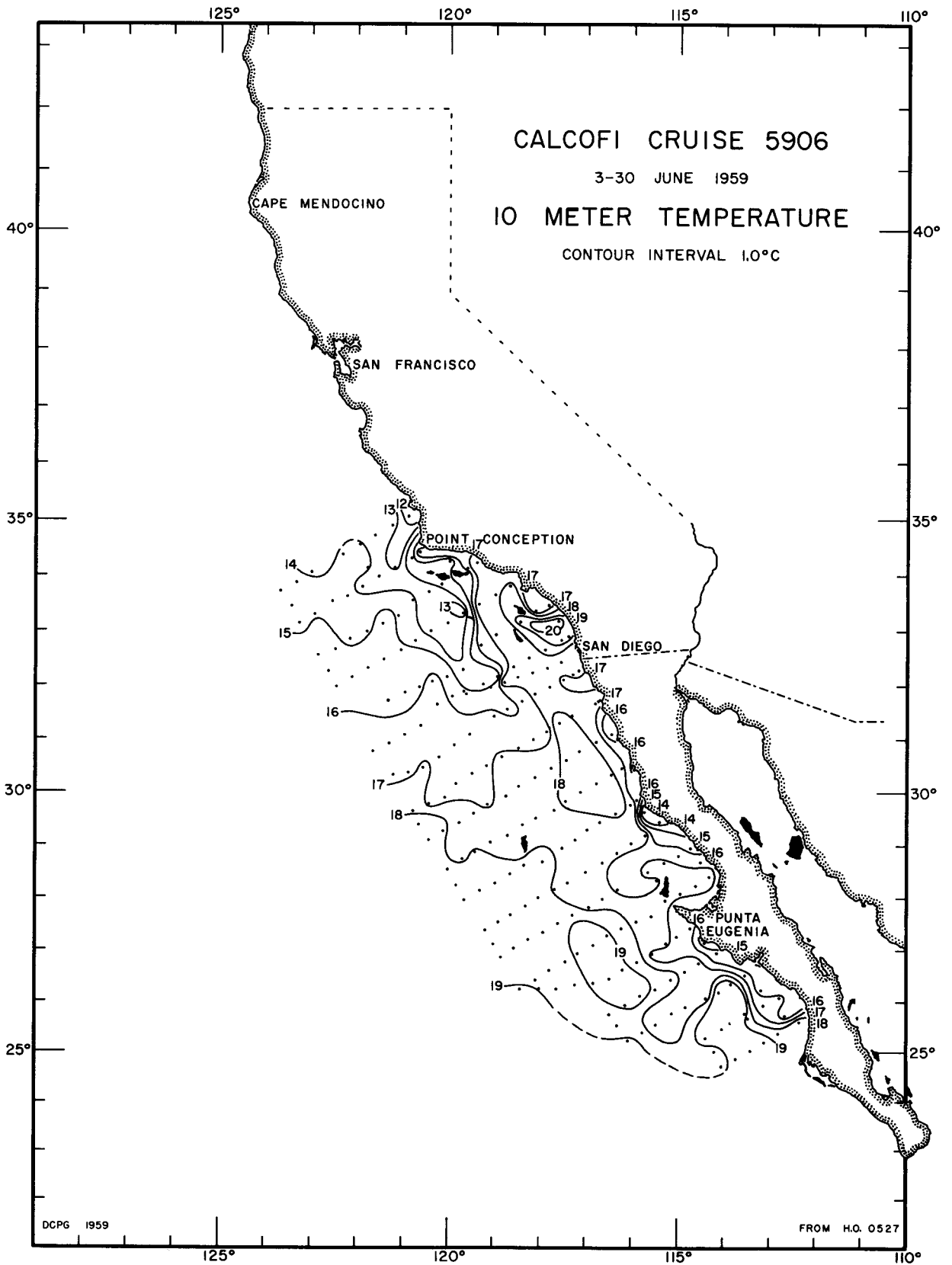


10m T
5903

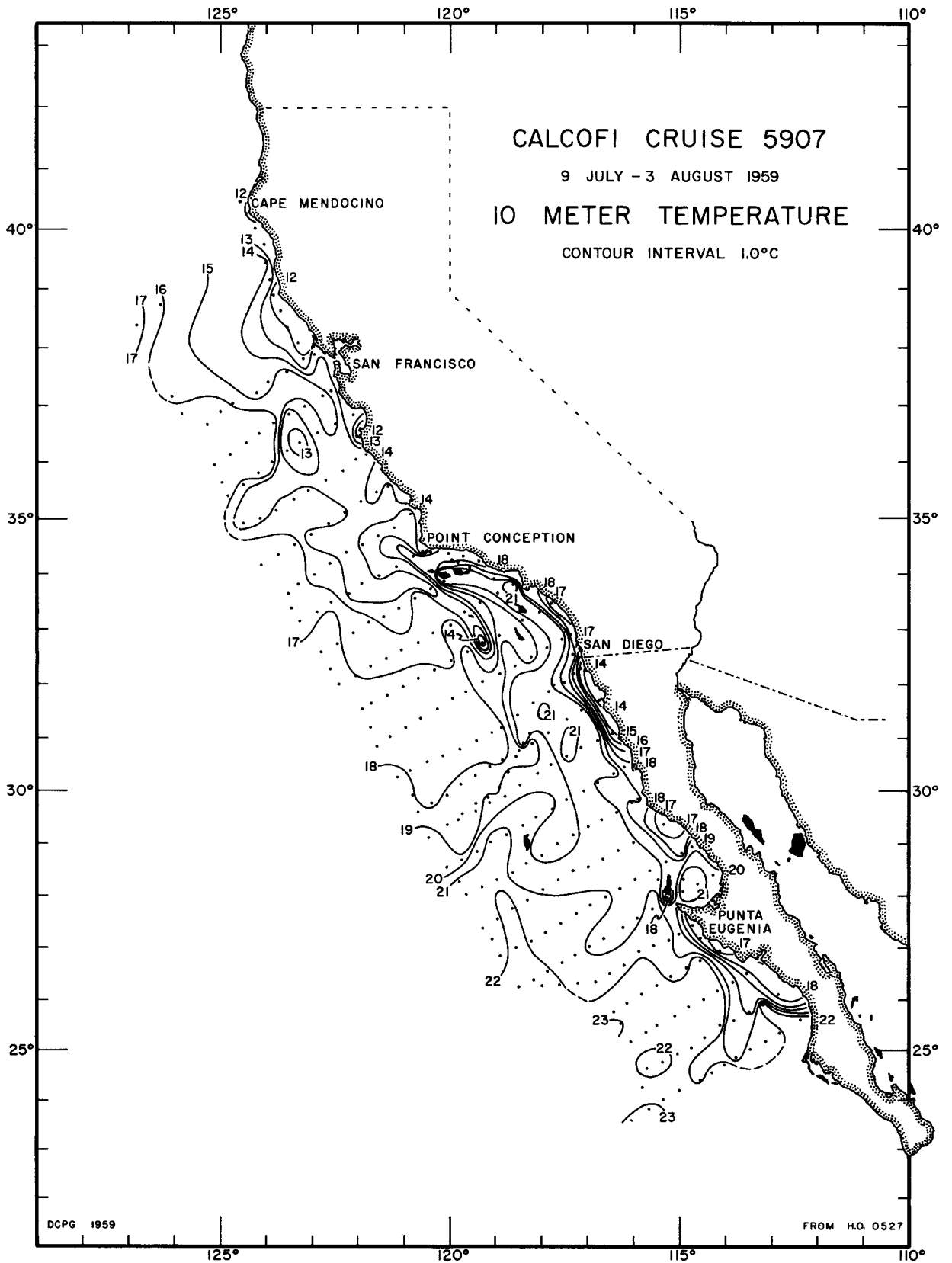


10m T
5904

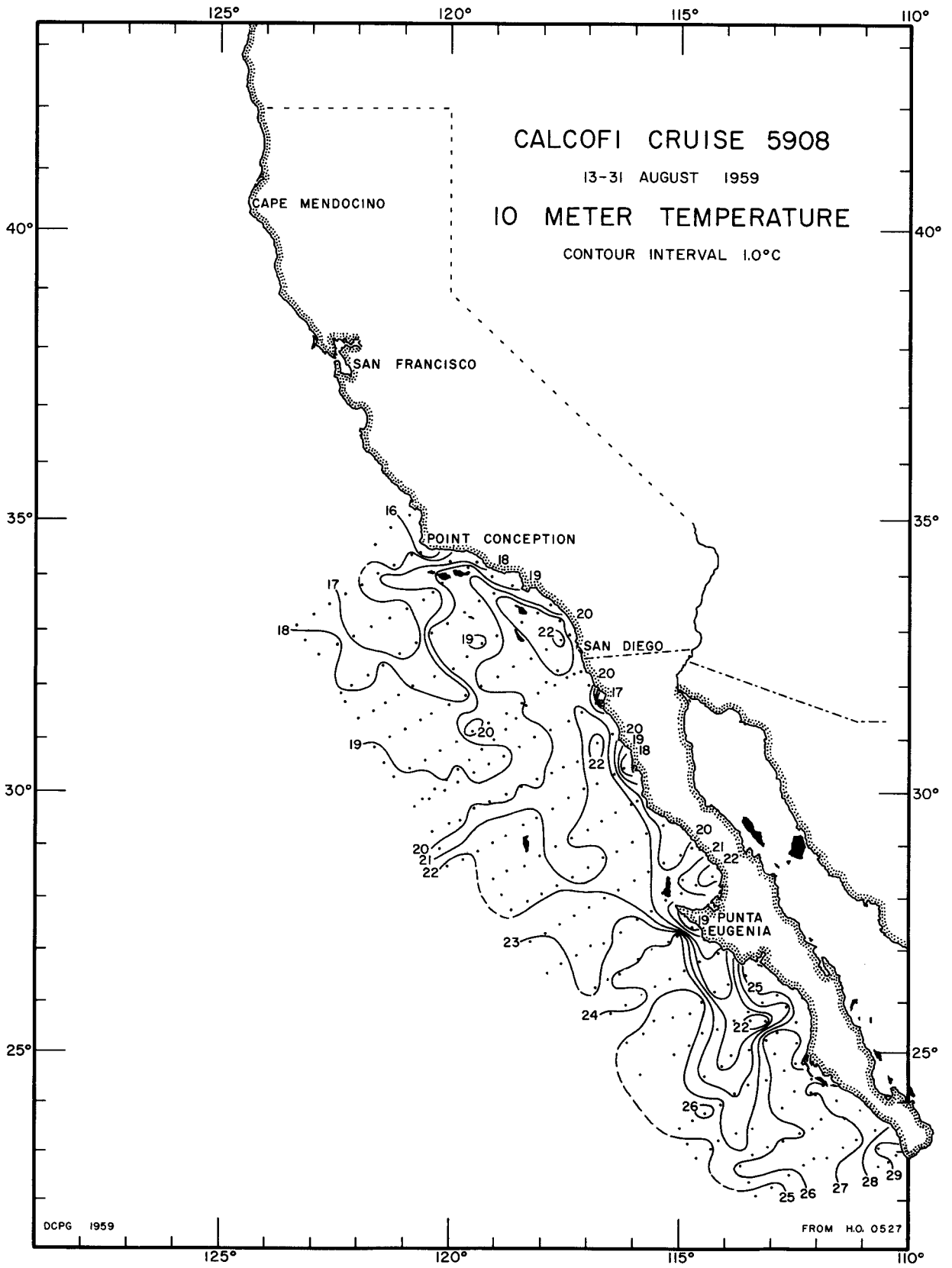




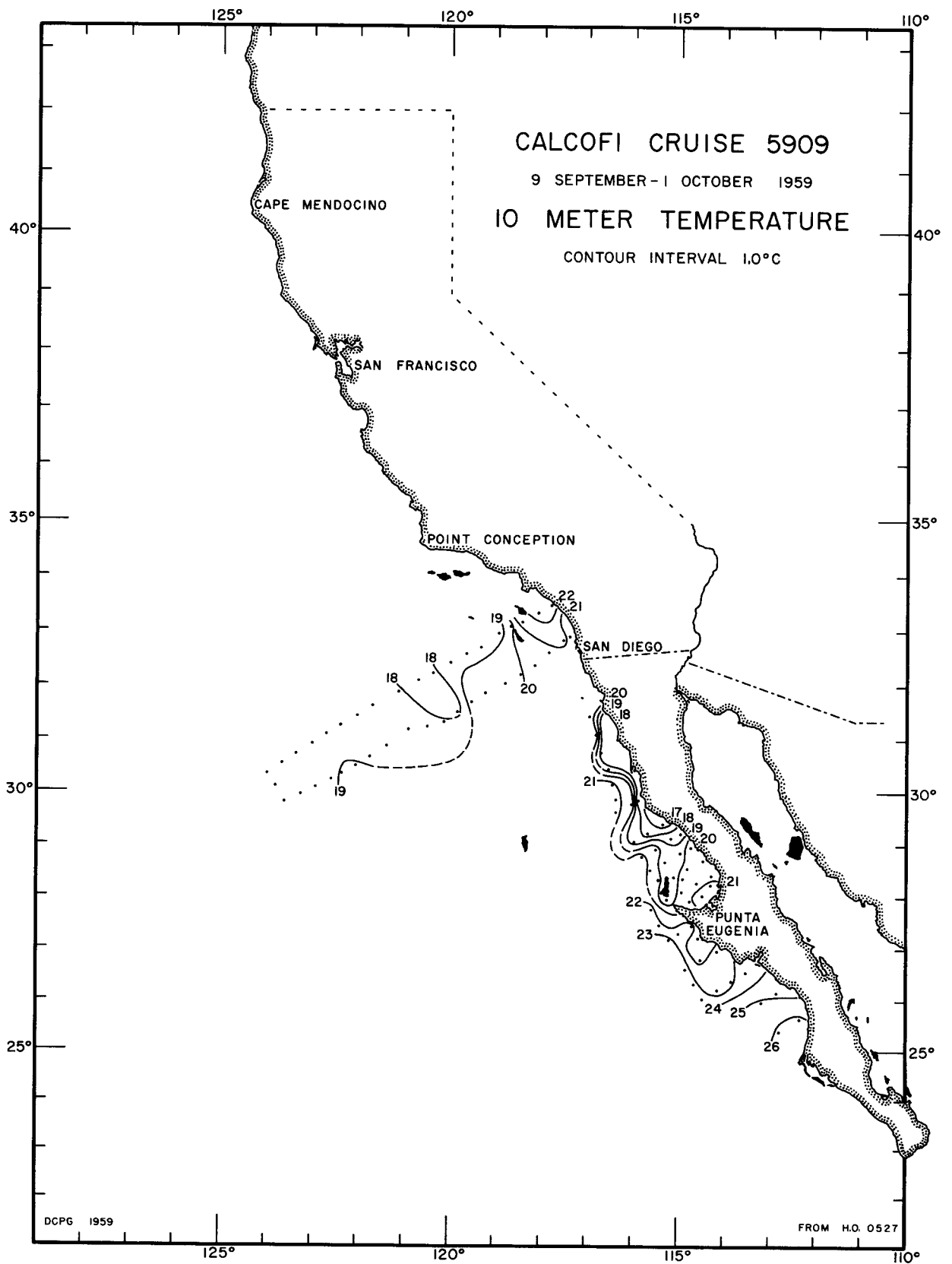
10m T
5906



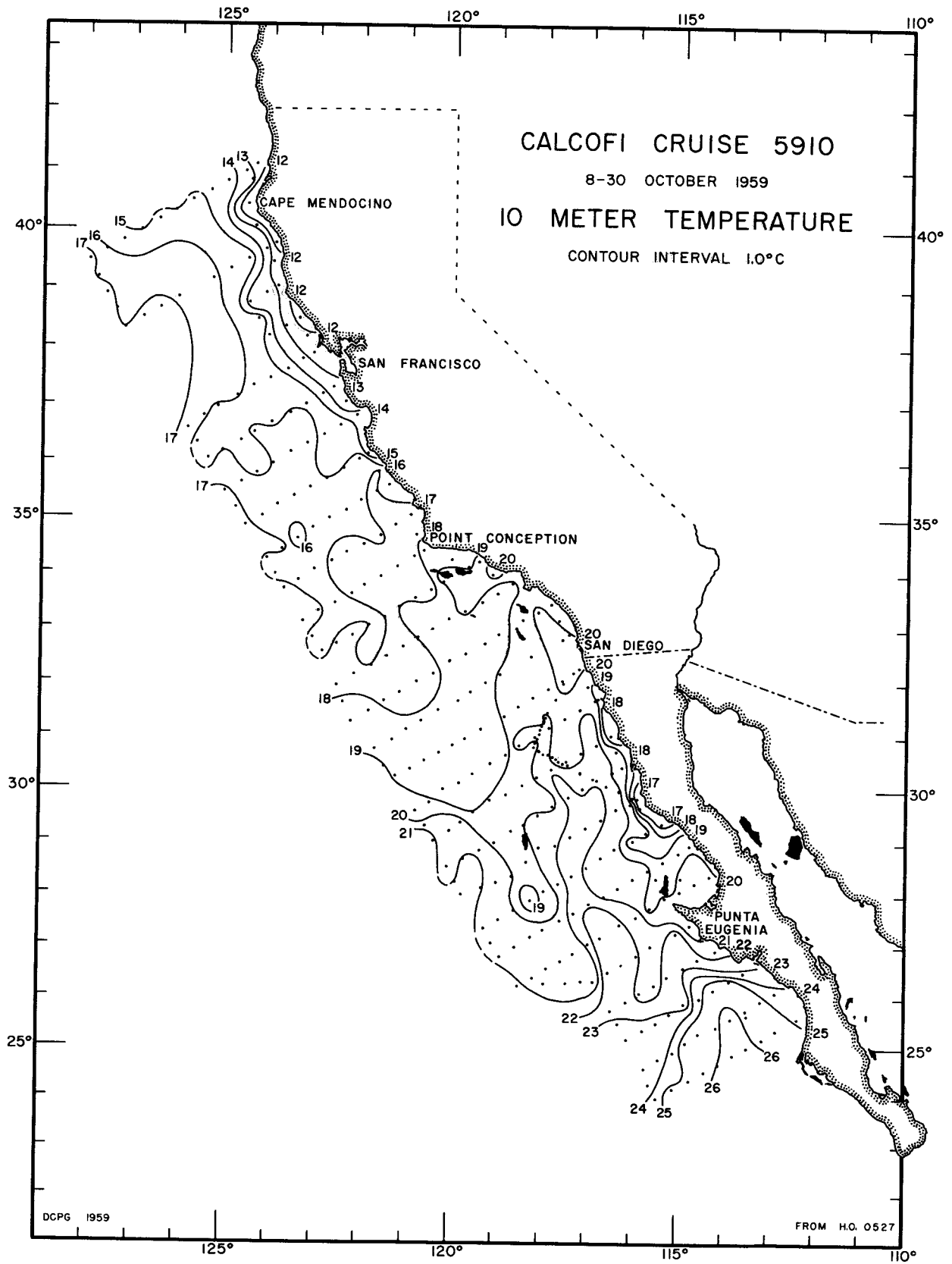
10m T
5907



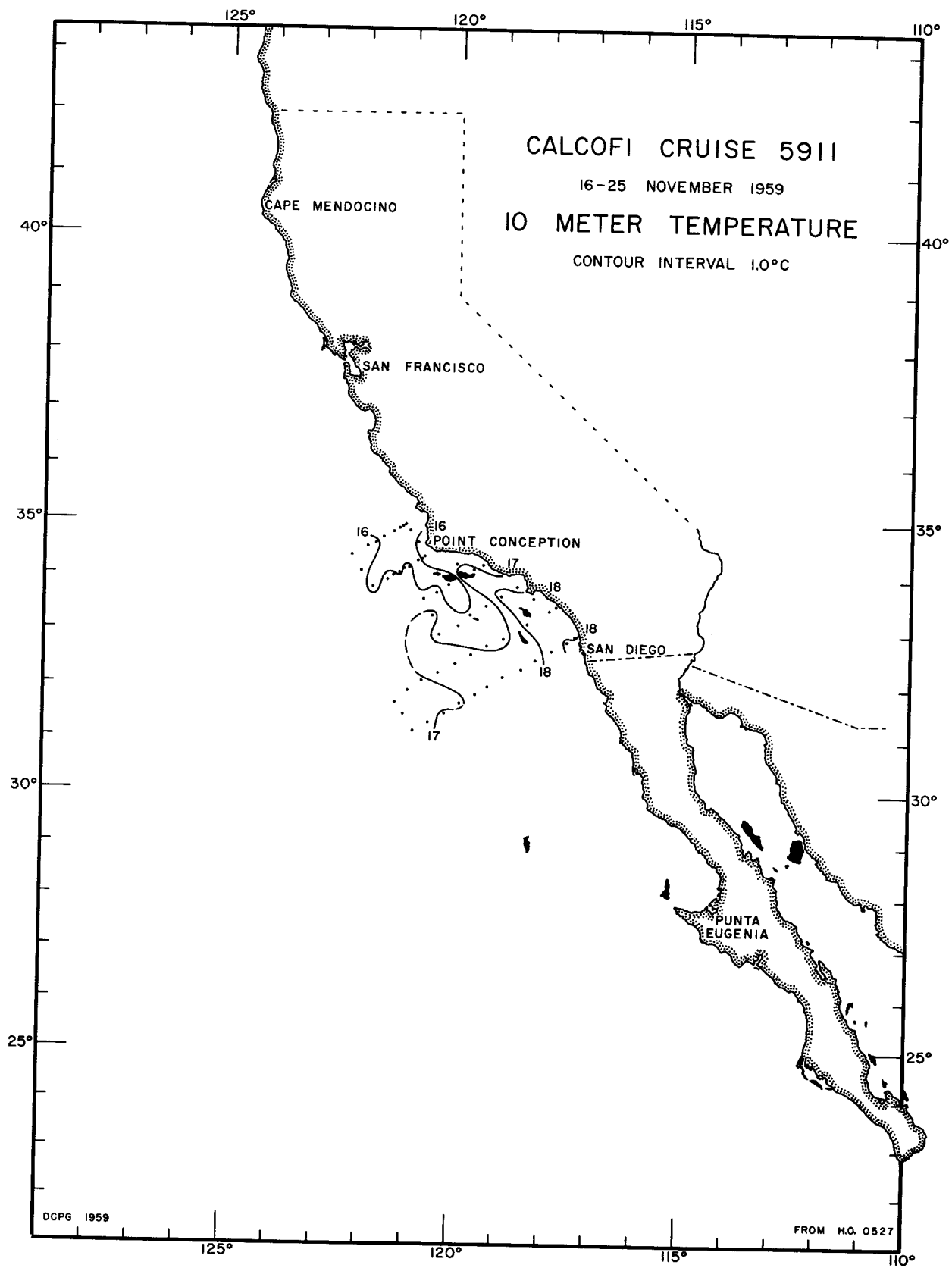
10m T
5908



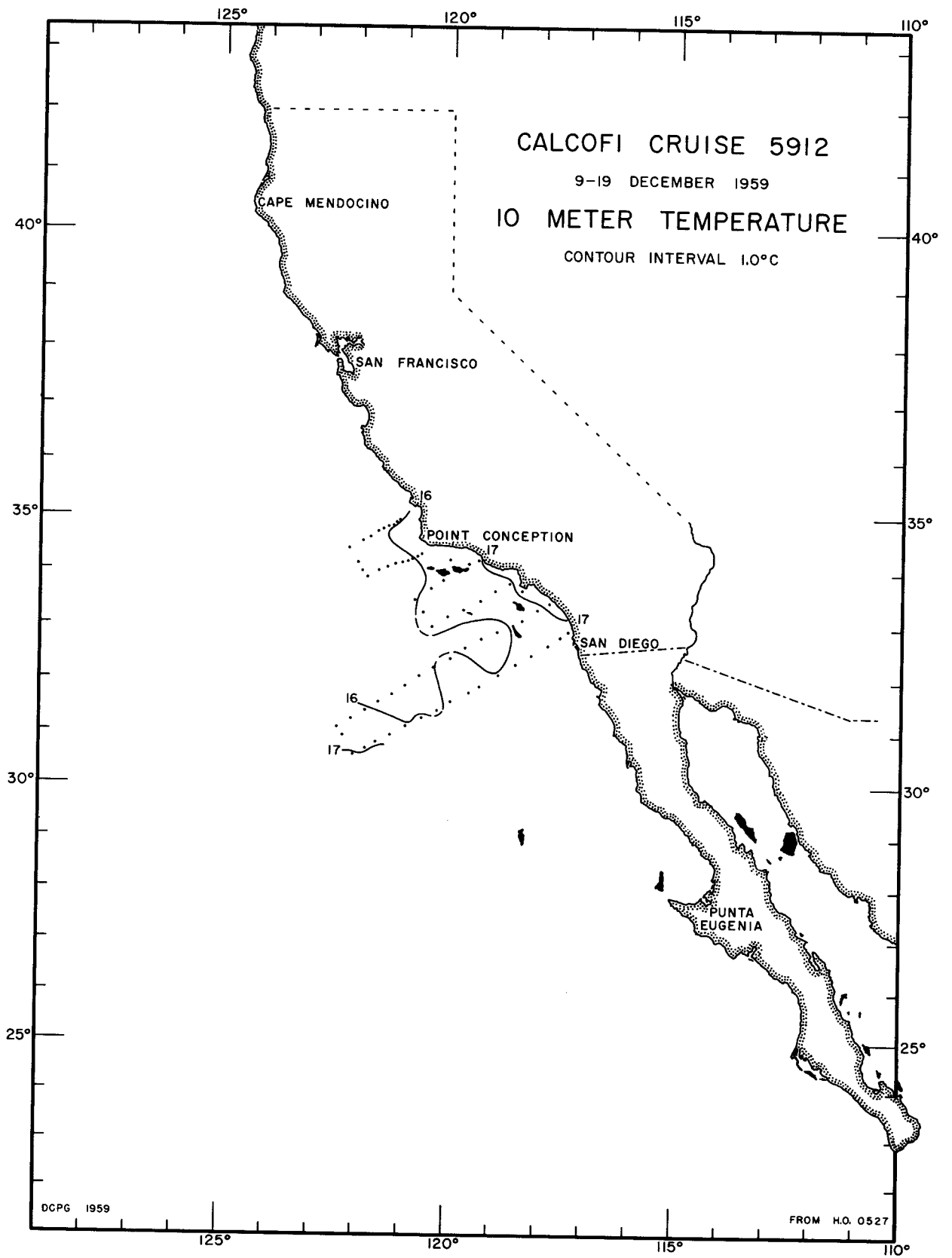
10m T
5909



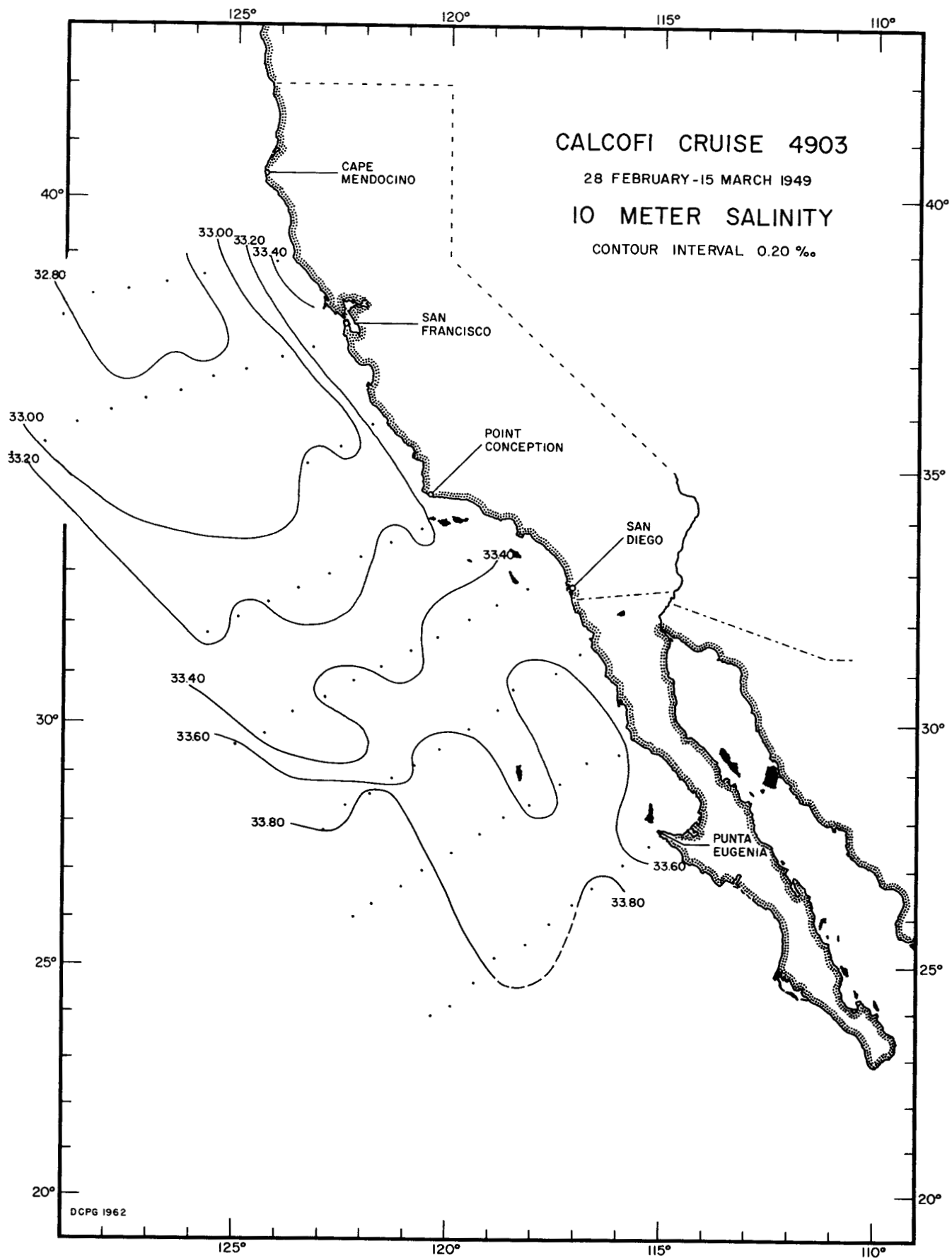
10m T
 5910

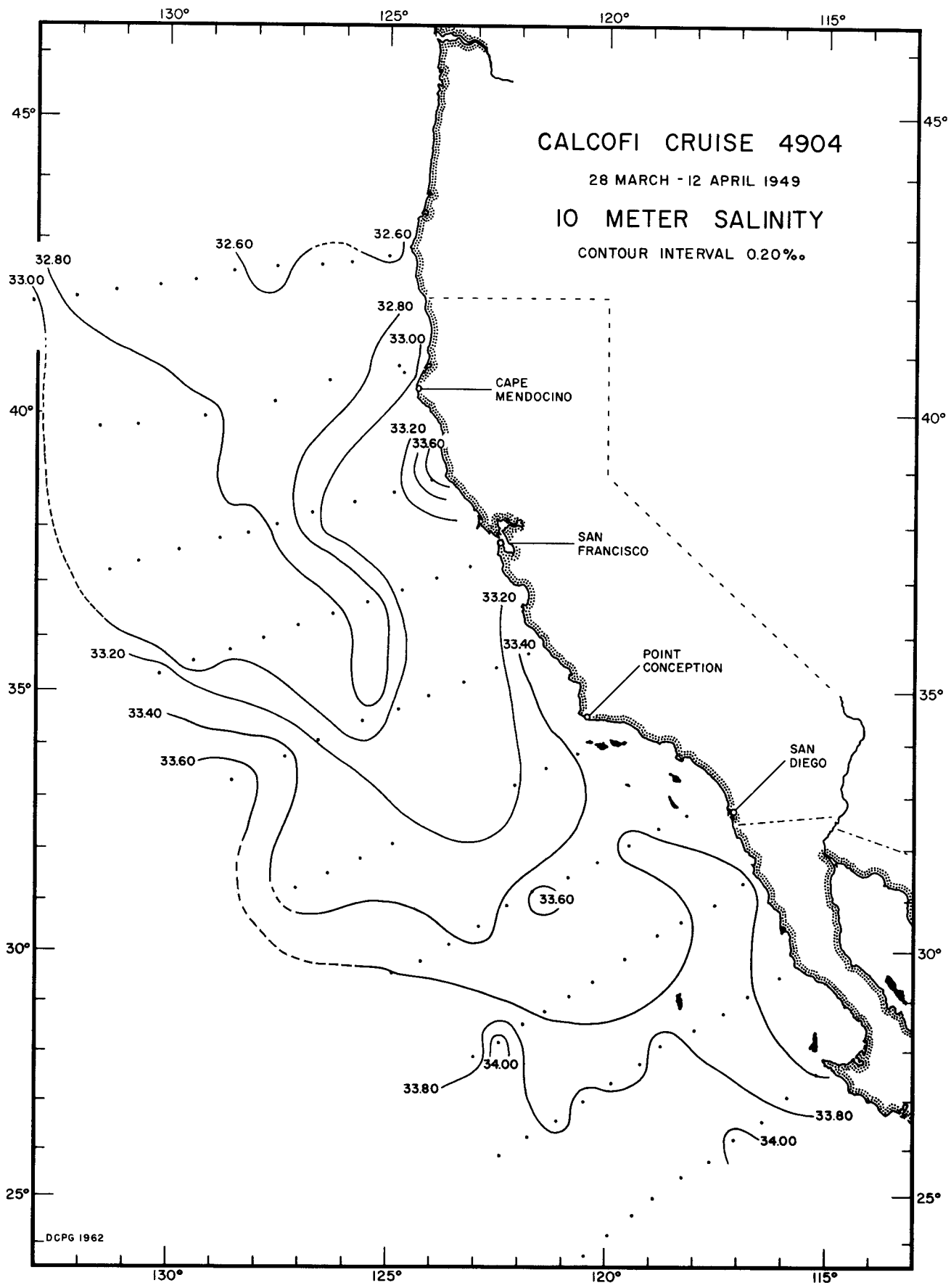


10m T
5911

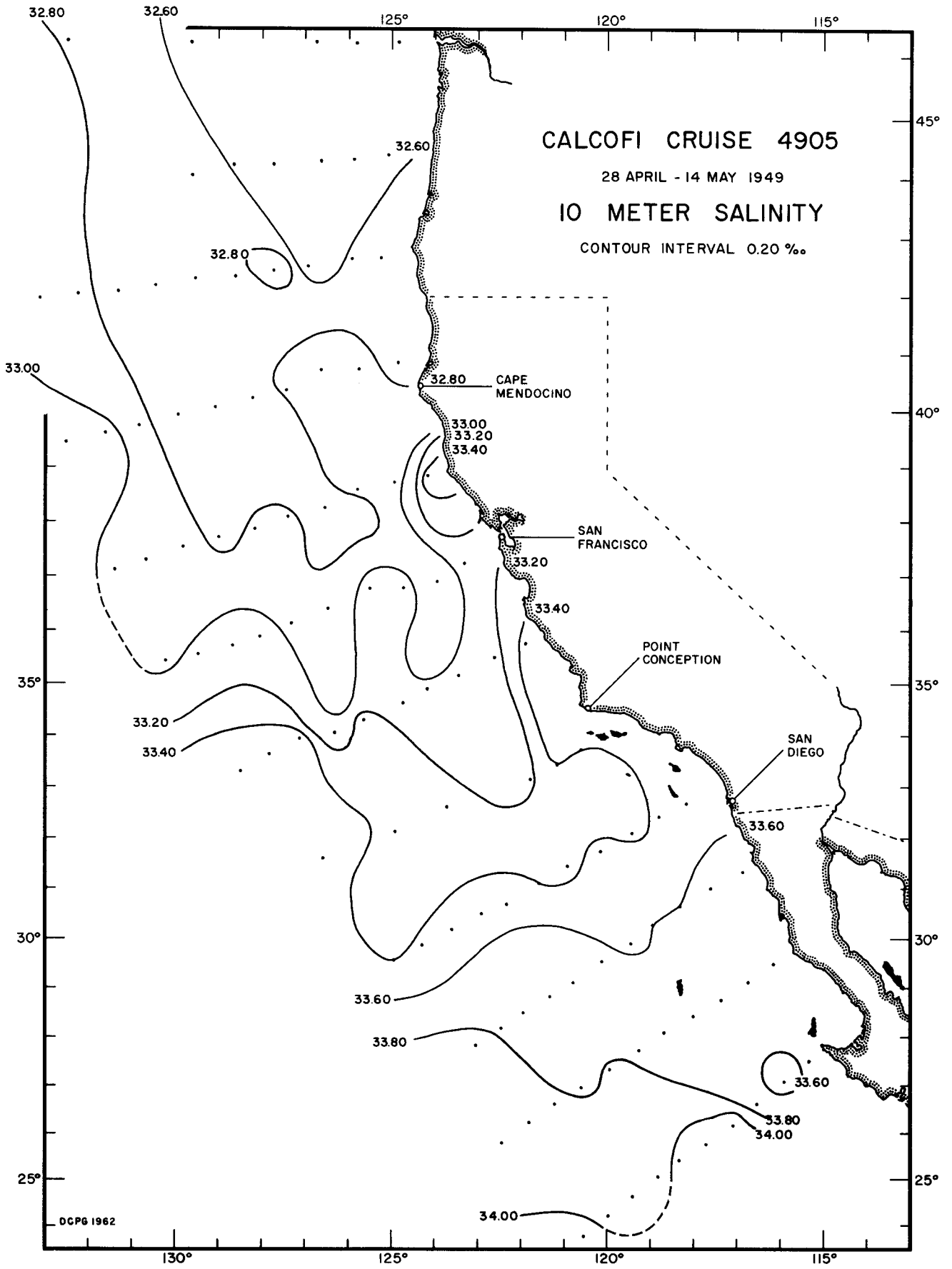


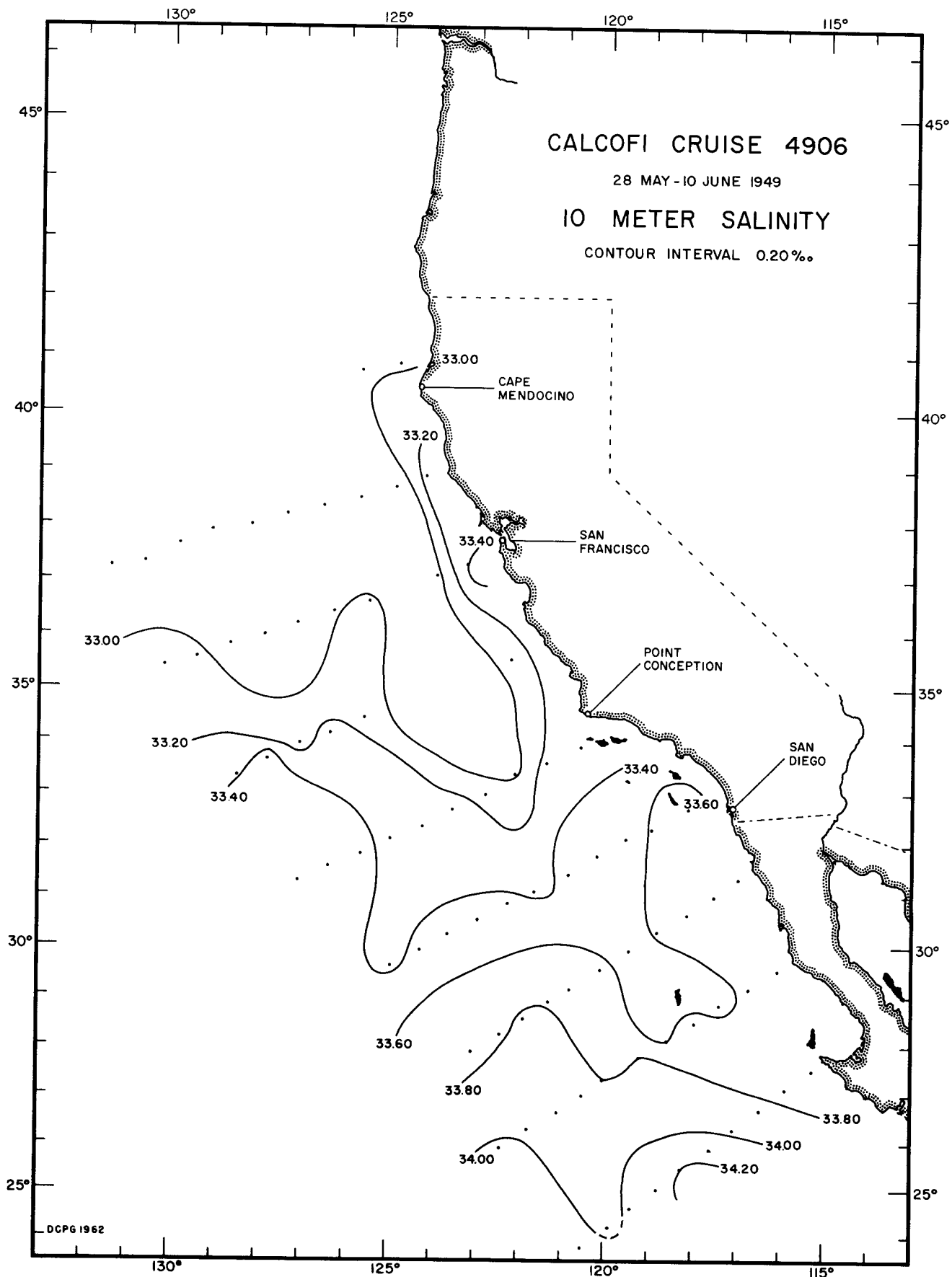
10m T
5912



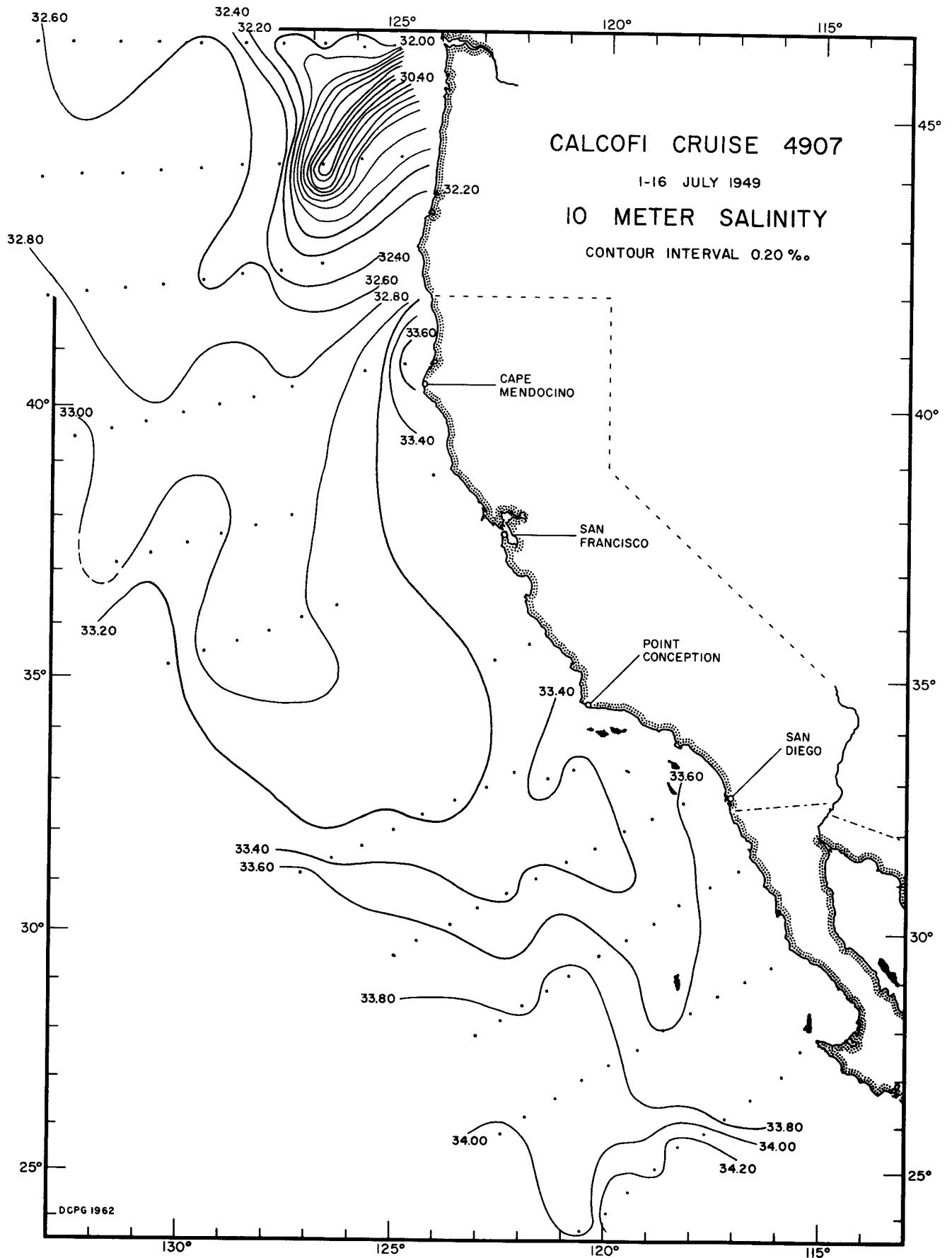


10m S
4904



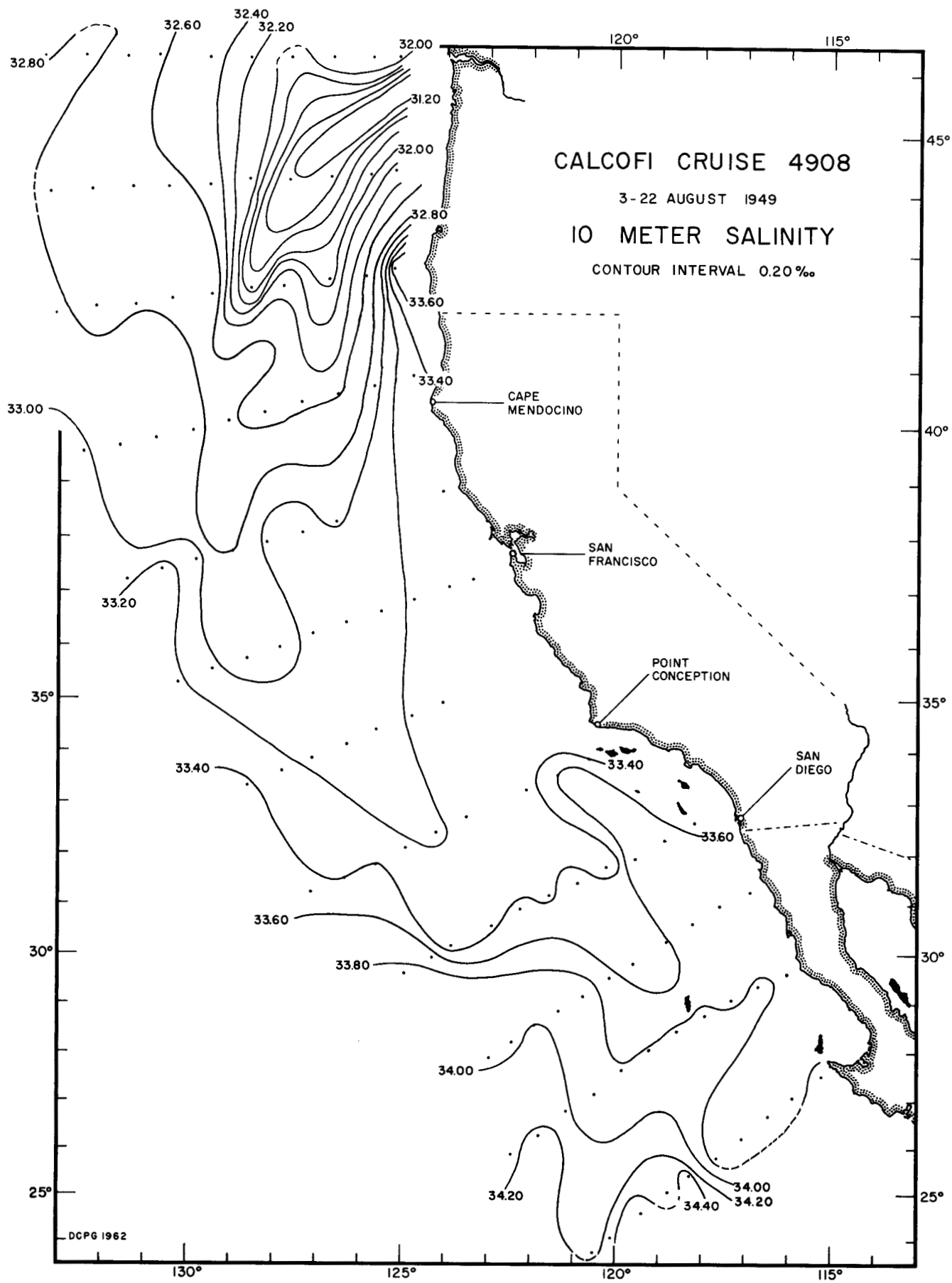


10m S
4906

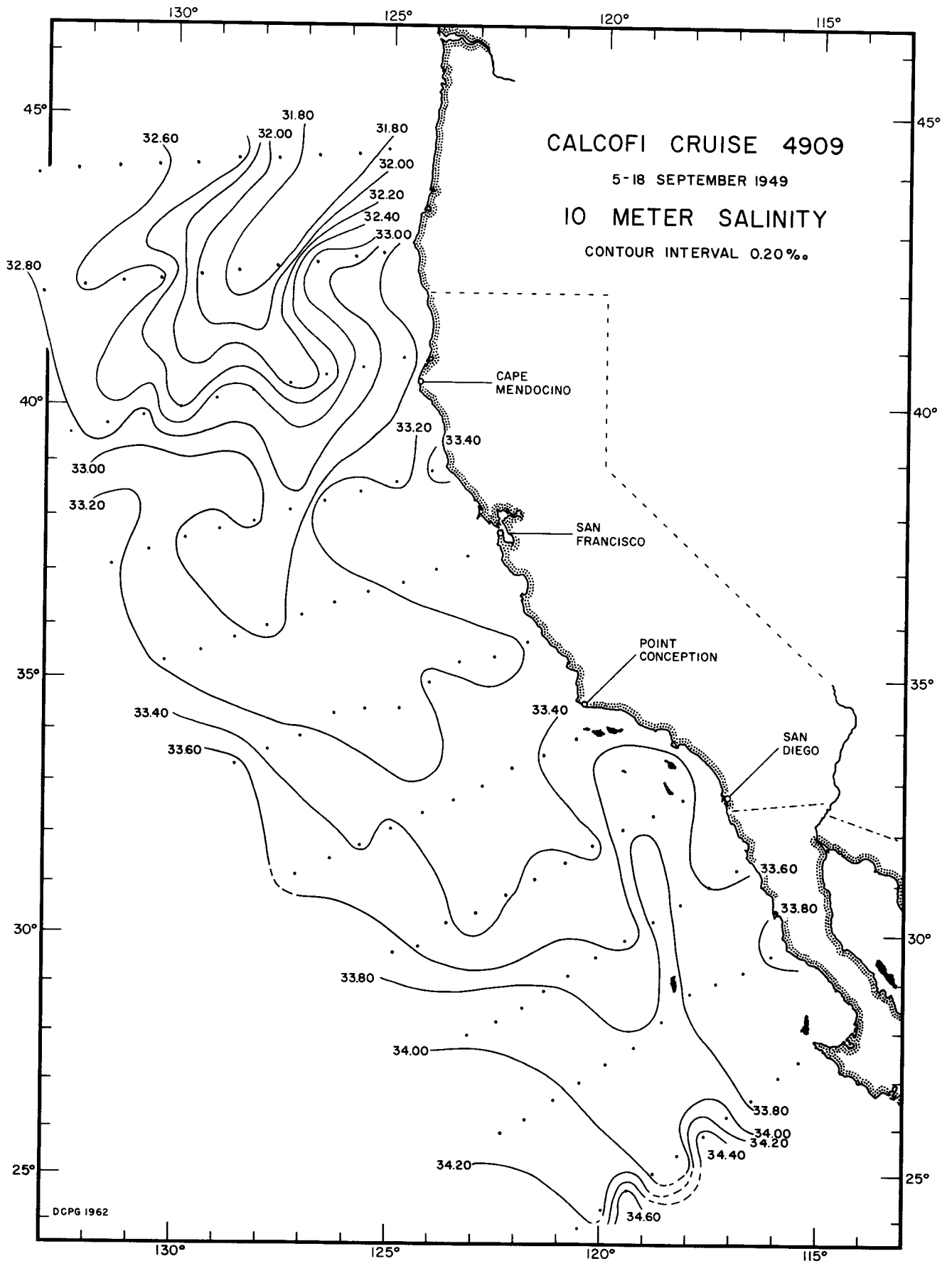


DCPG 1962

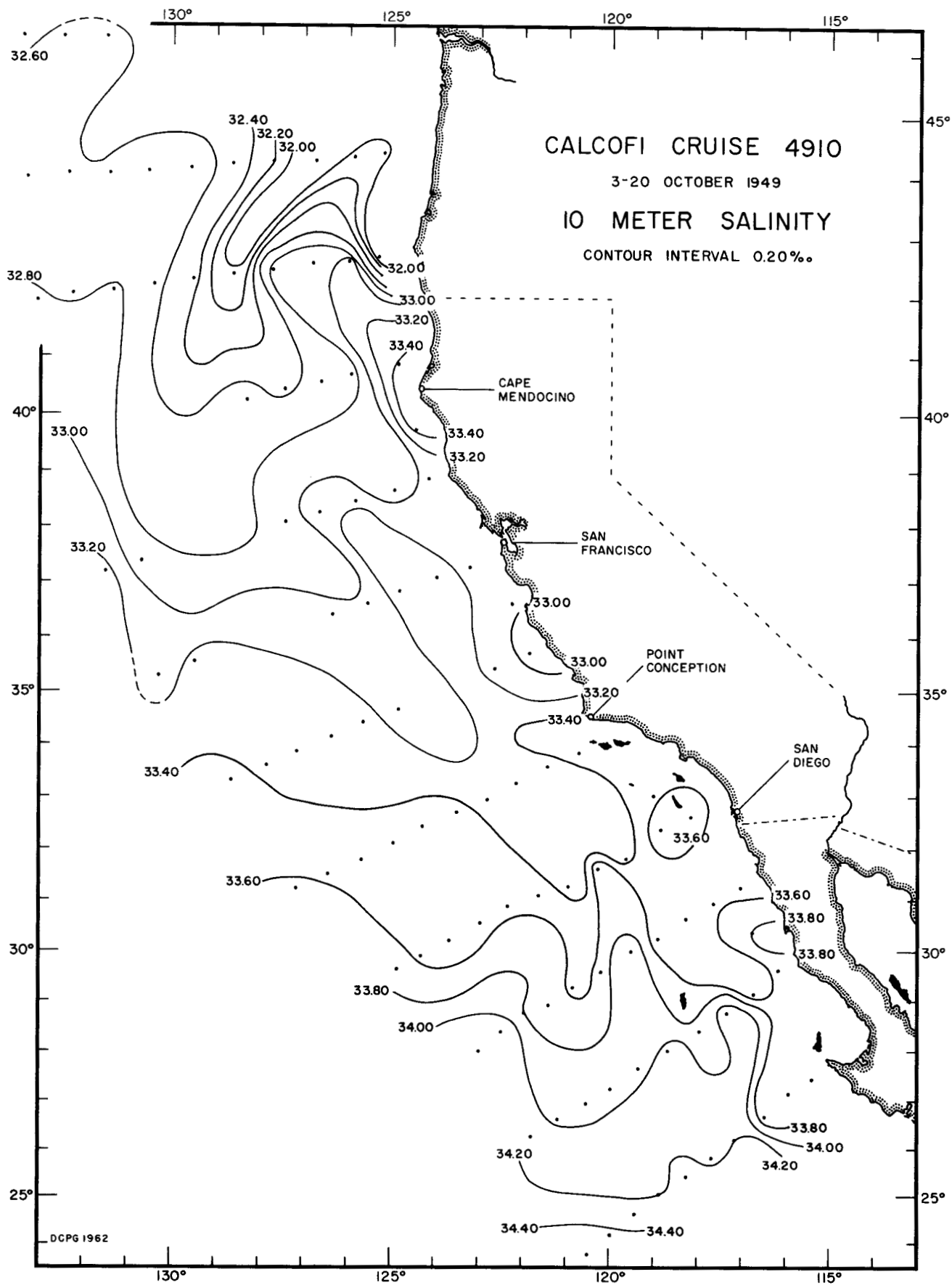
10m S
4907



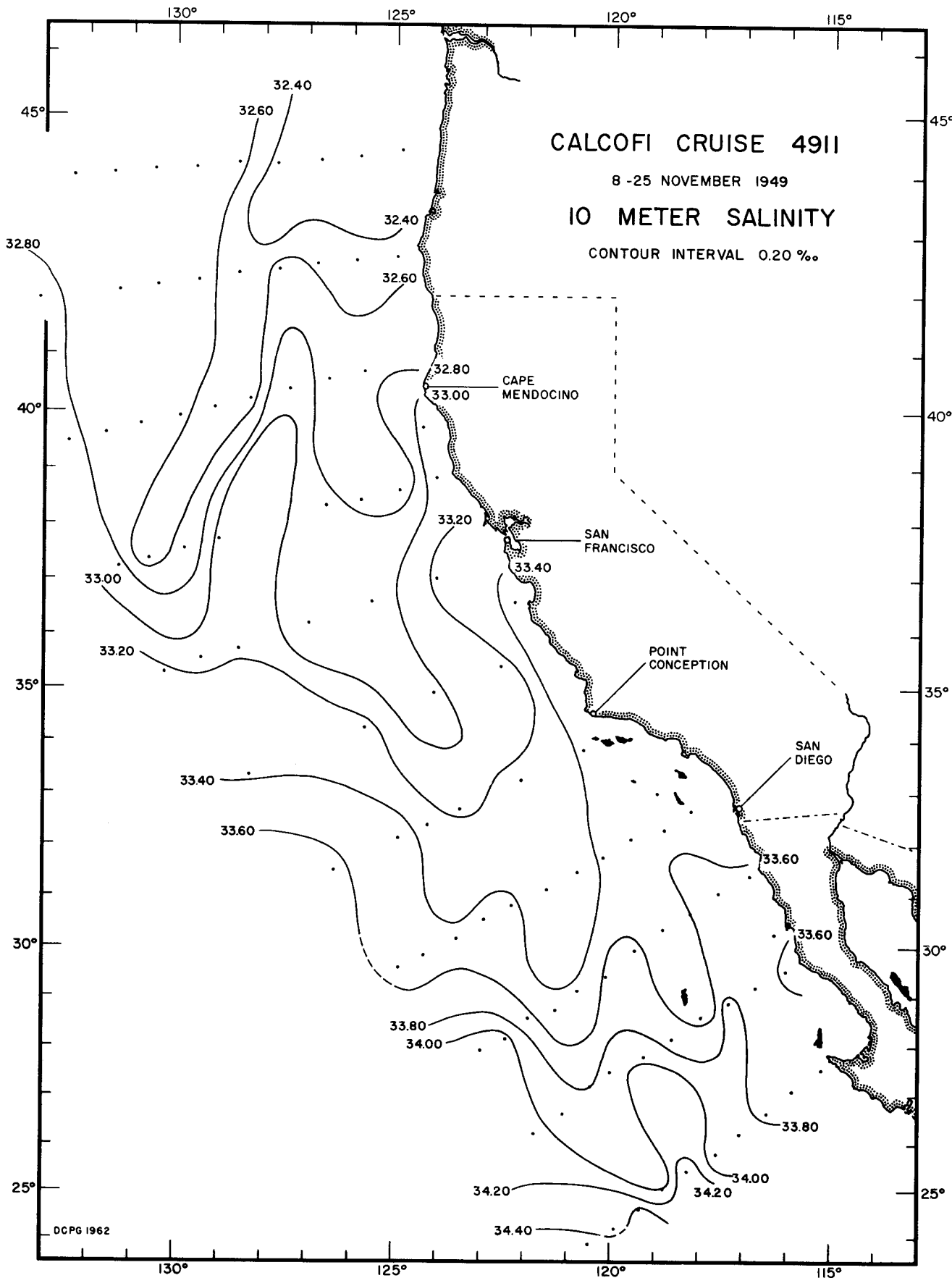
10m S
4908



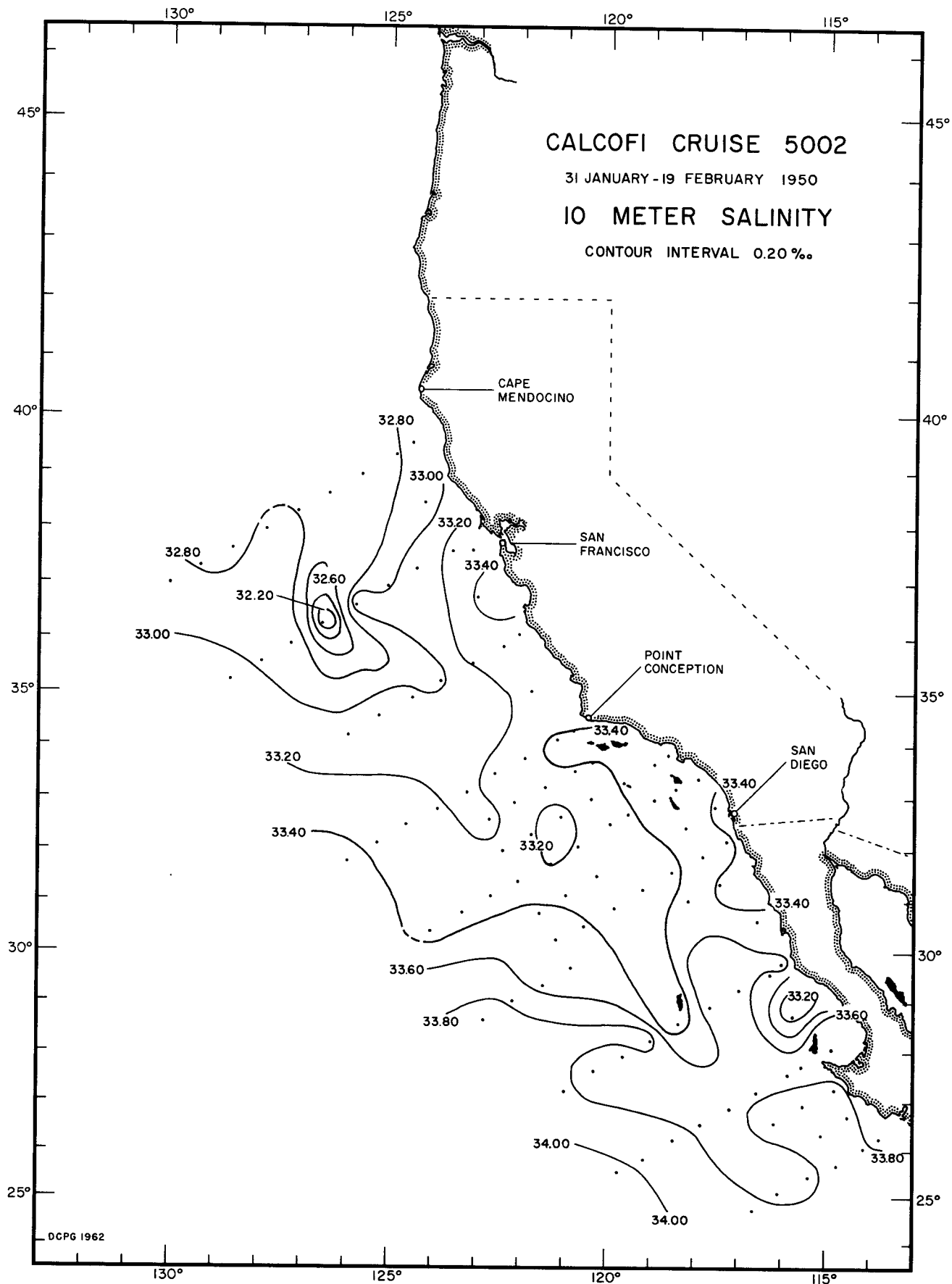
10m S
4909



10m S
4910

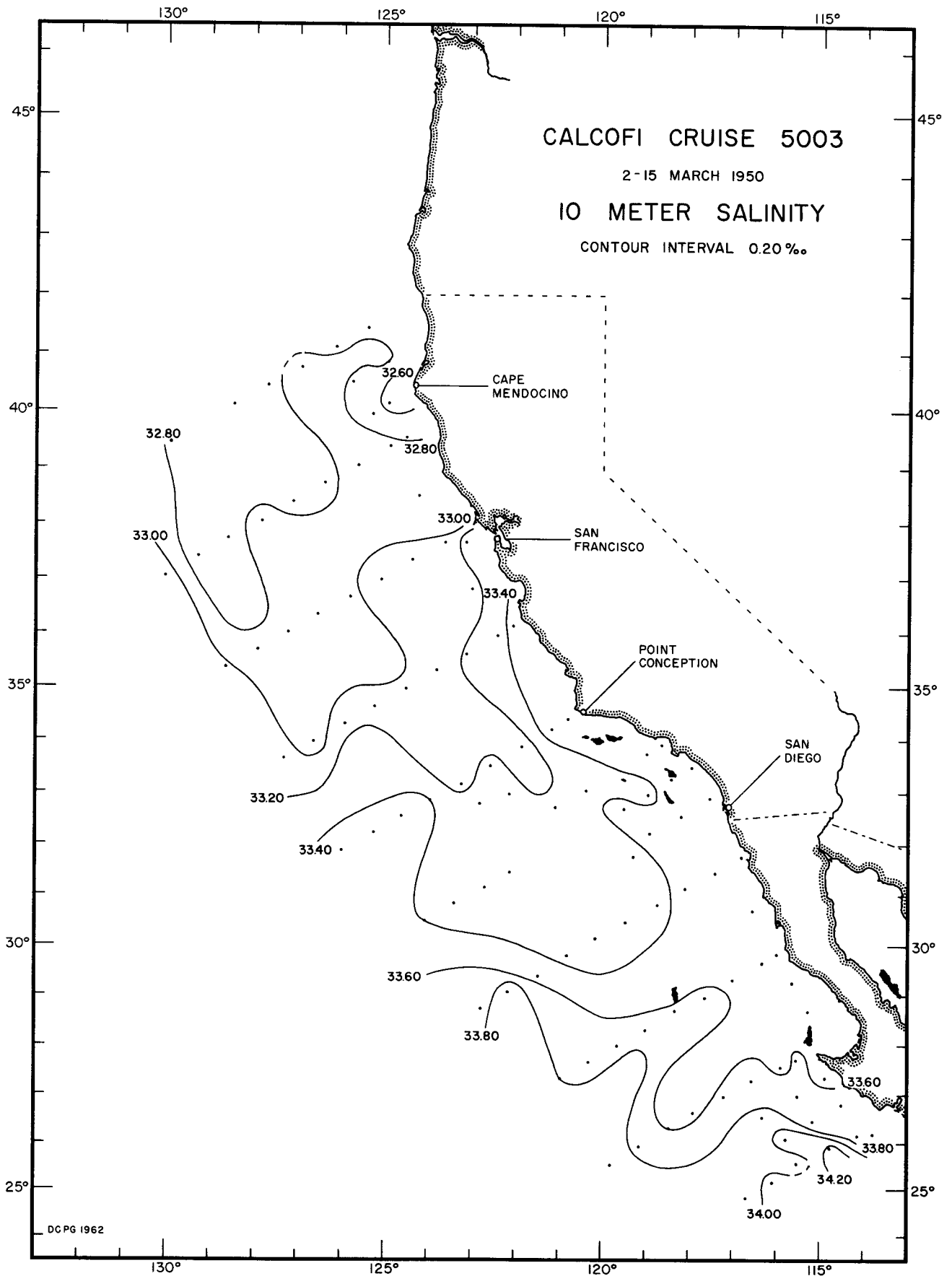


10m S
4911

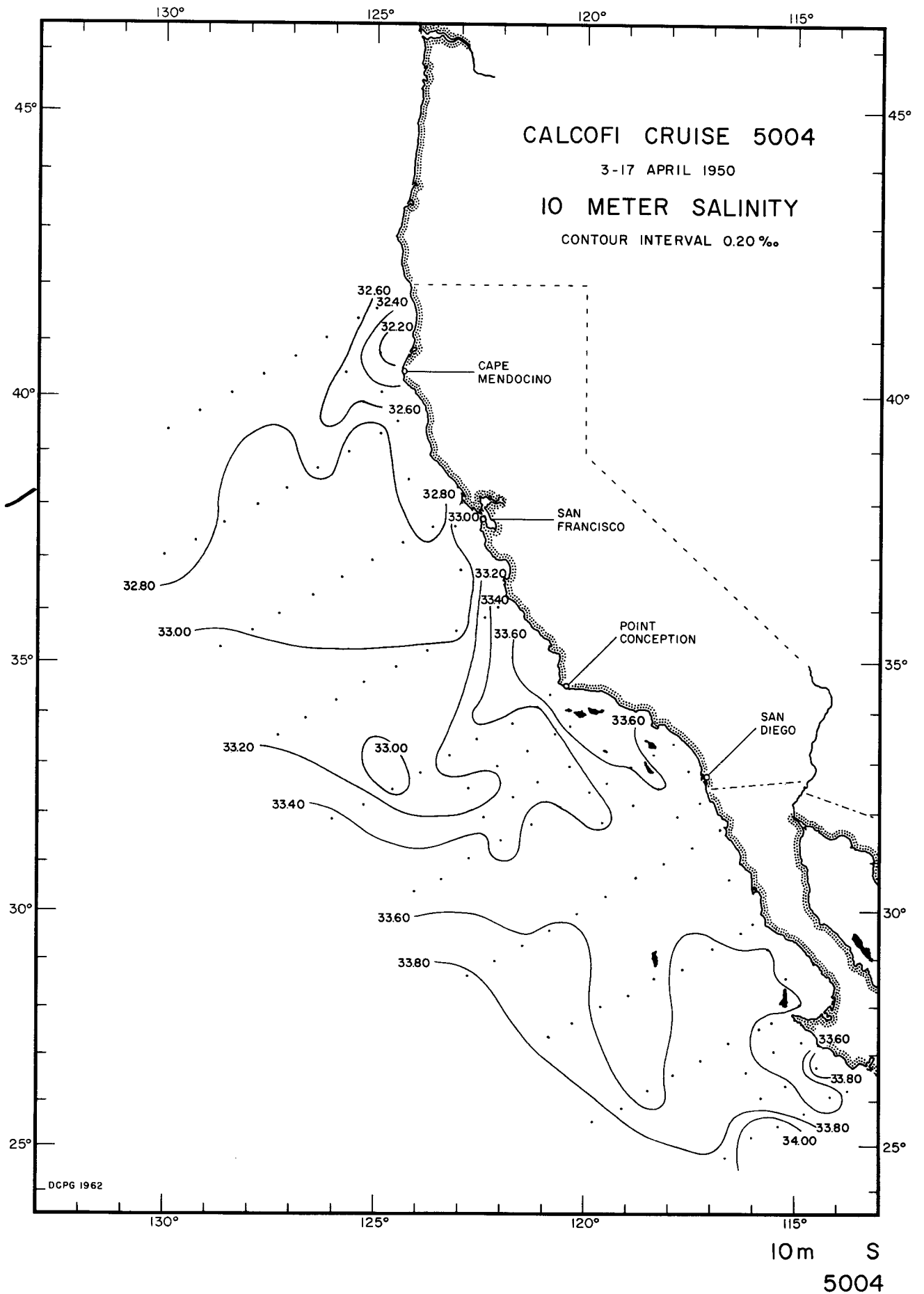


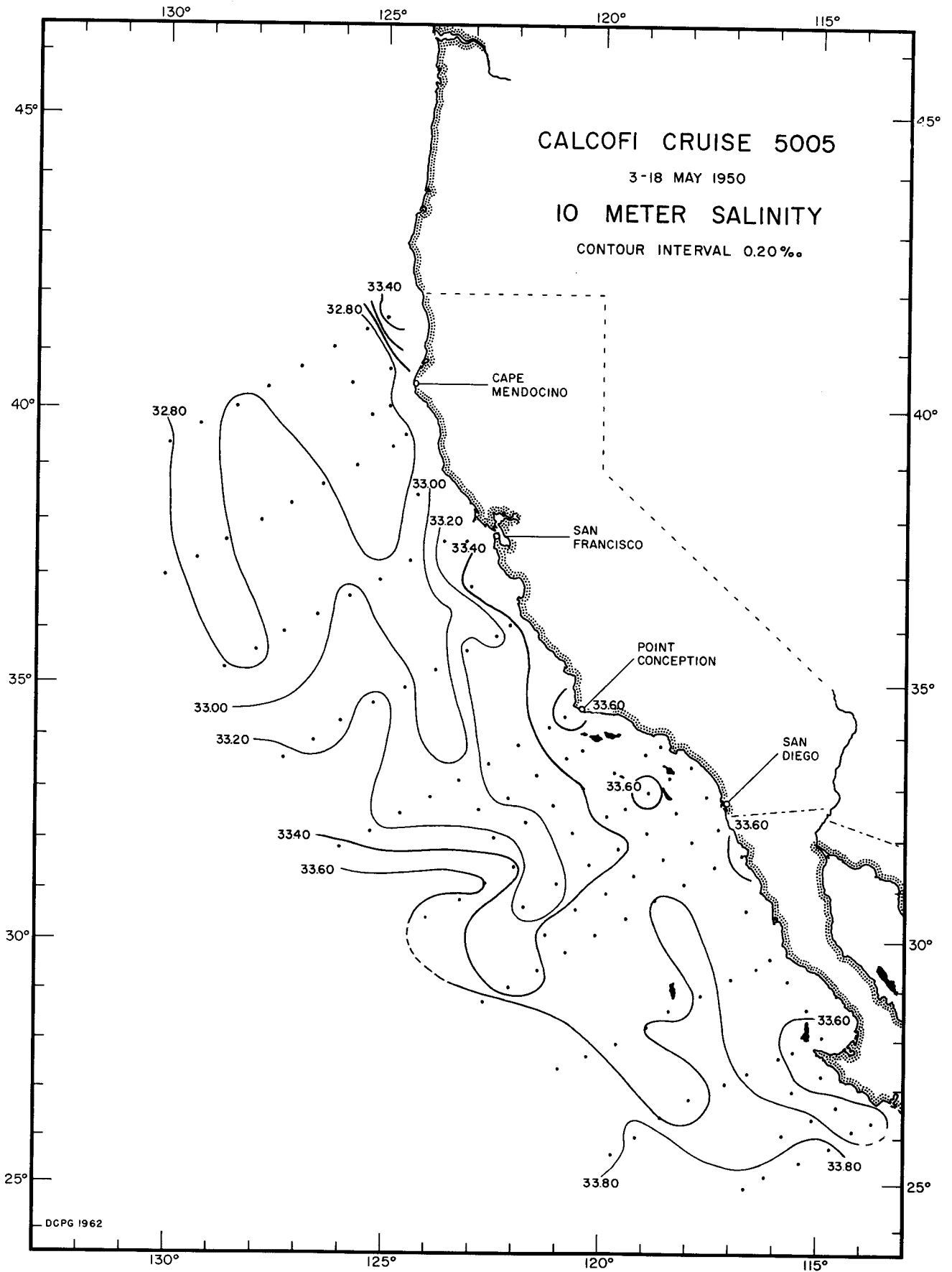
DCPG 1962

10m S
5002

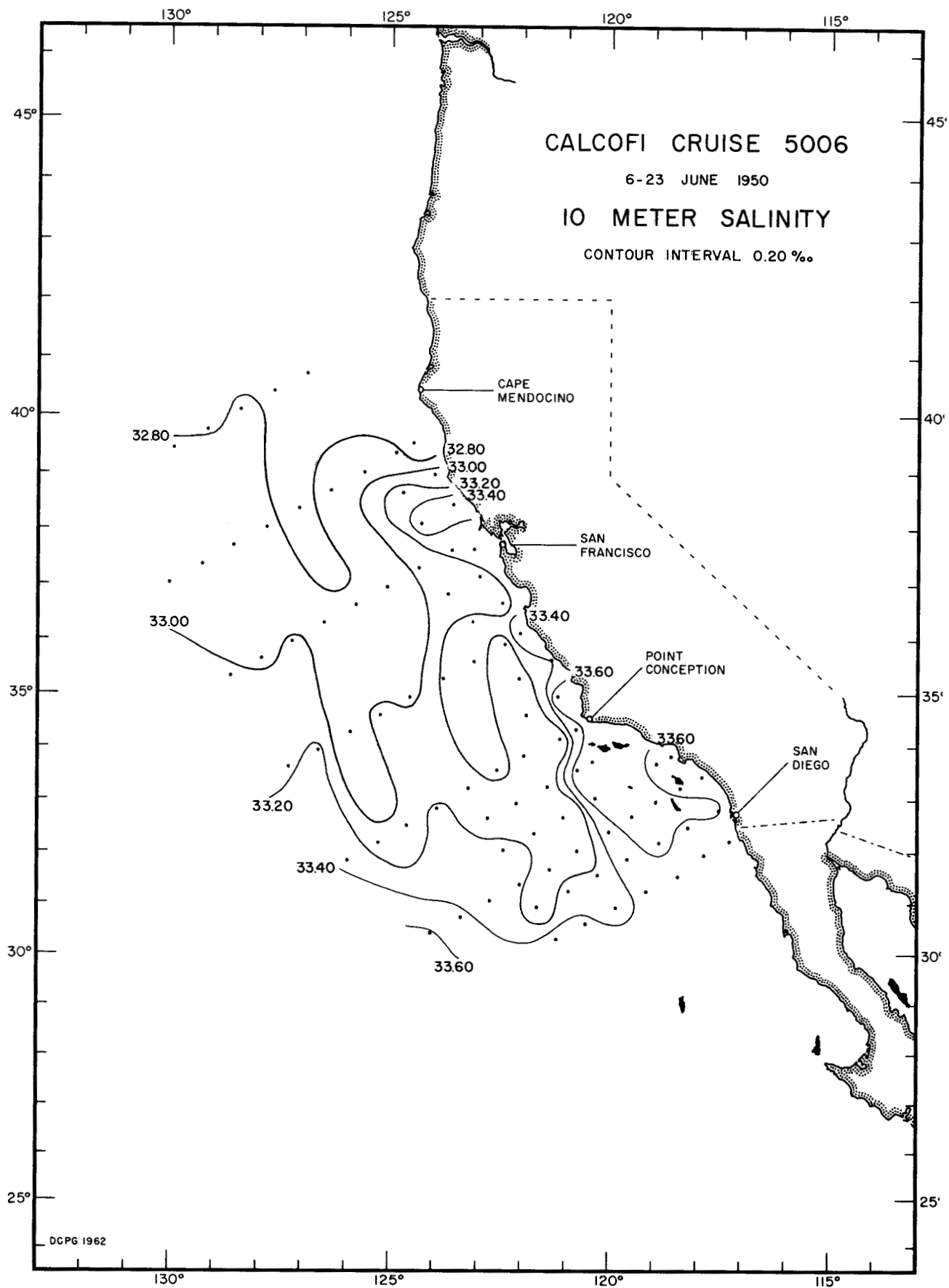


10m S
5003

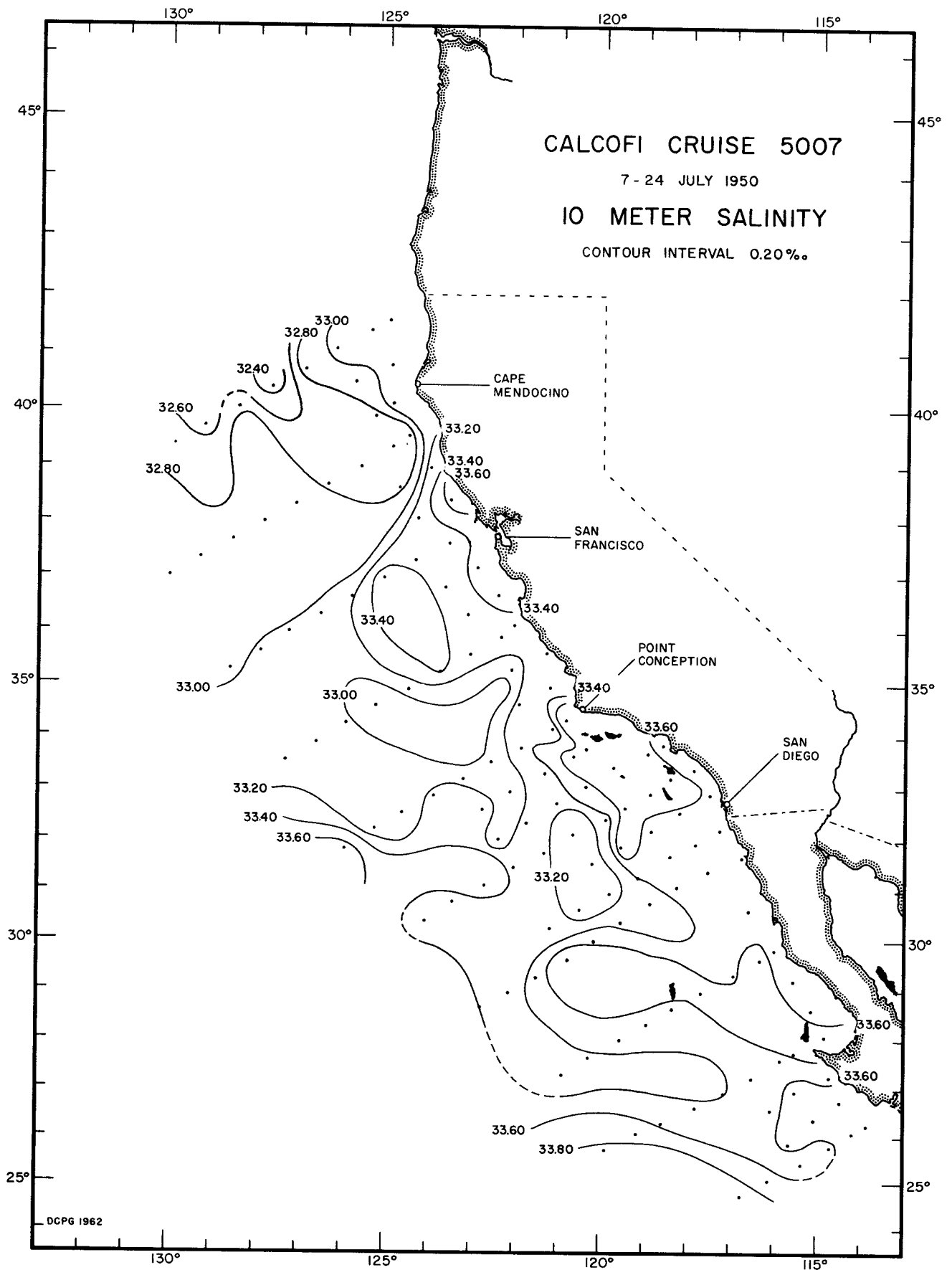




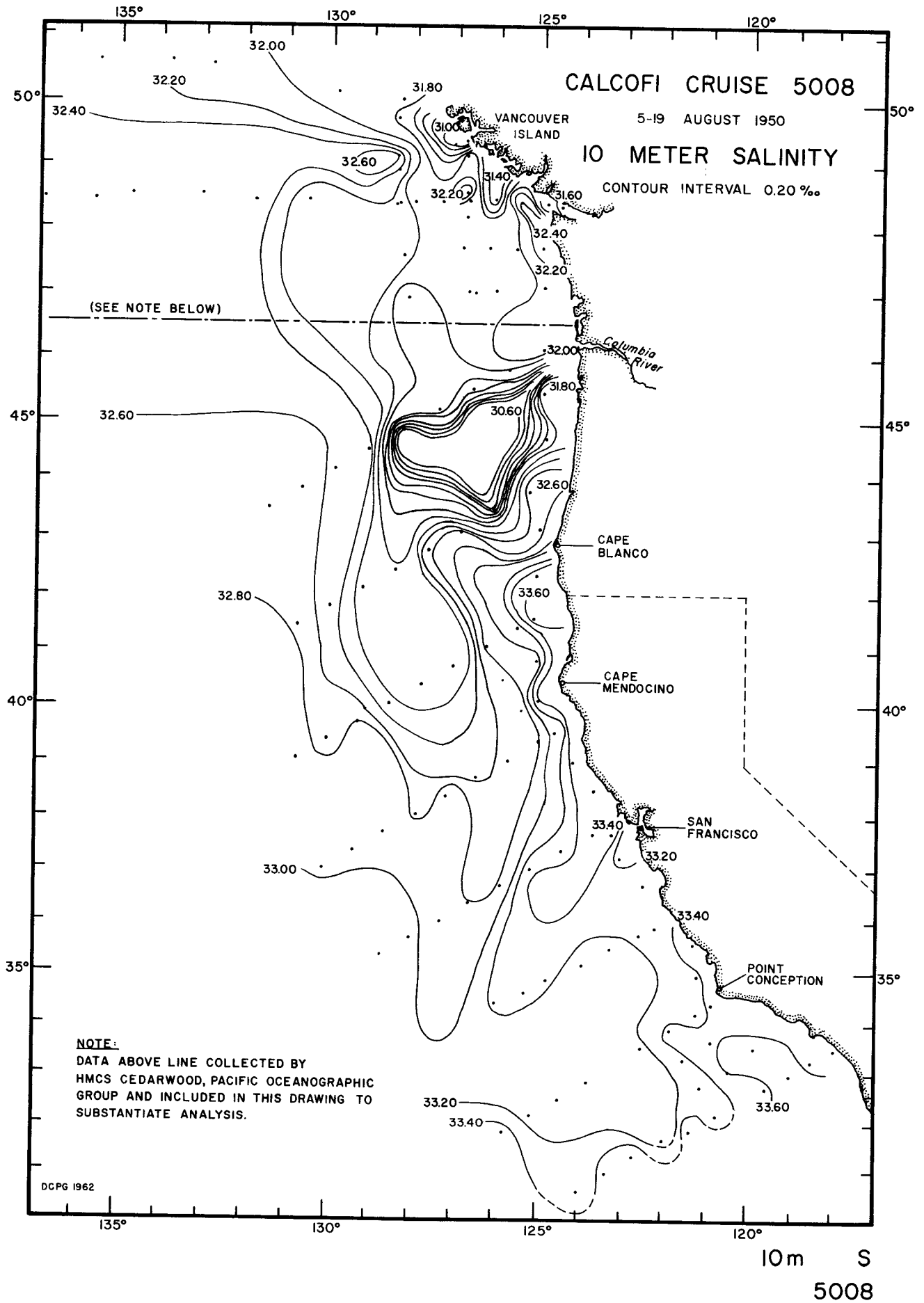
10m S
5005

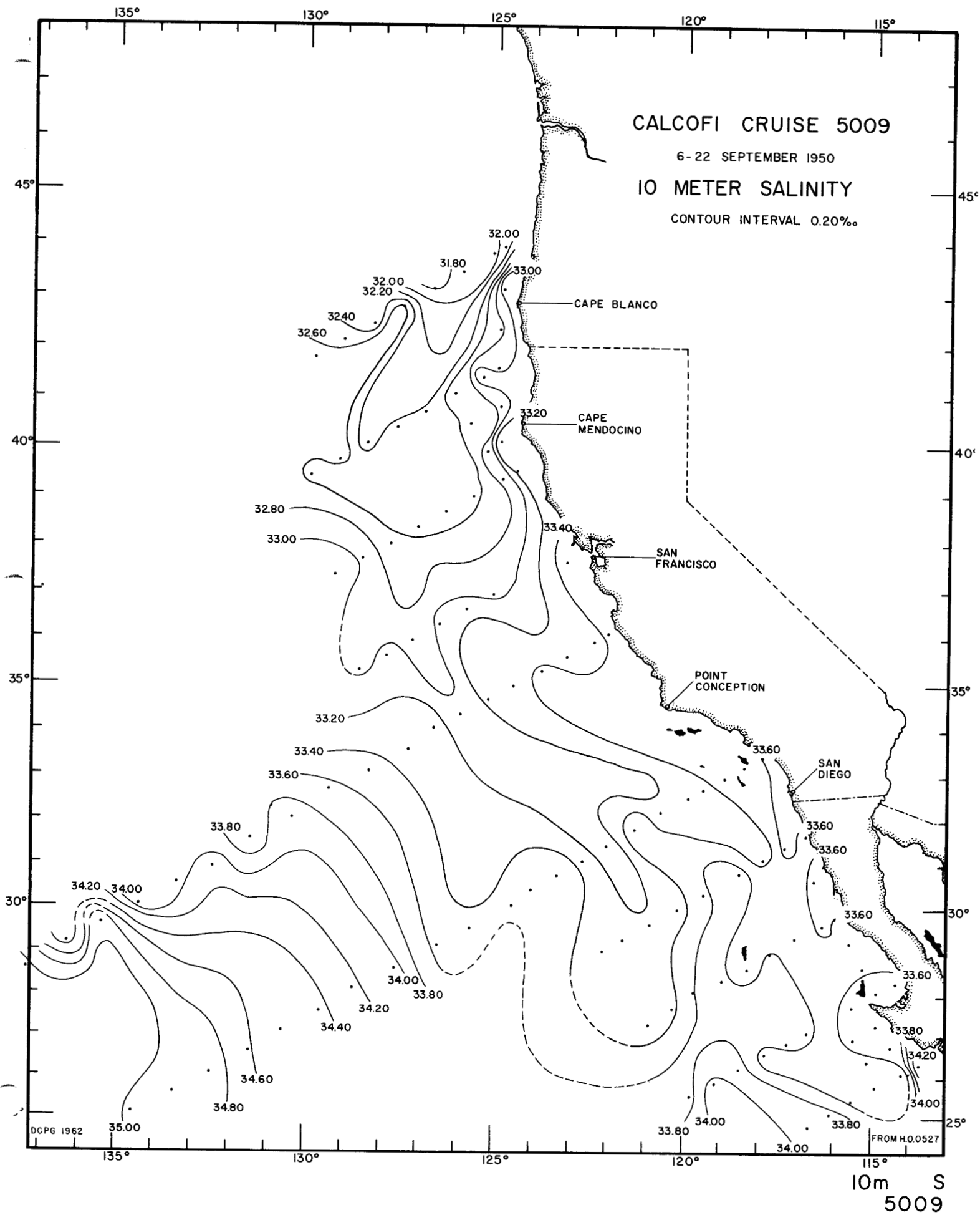


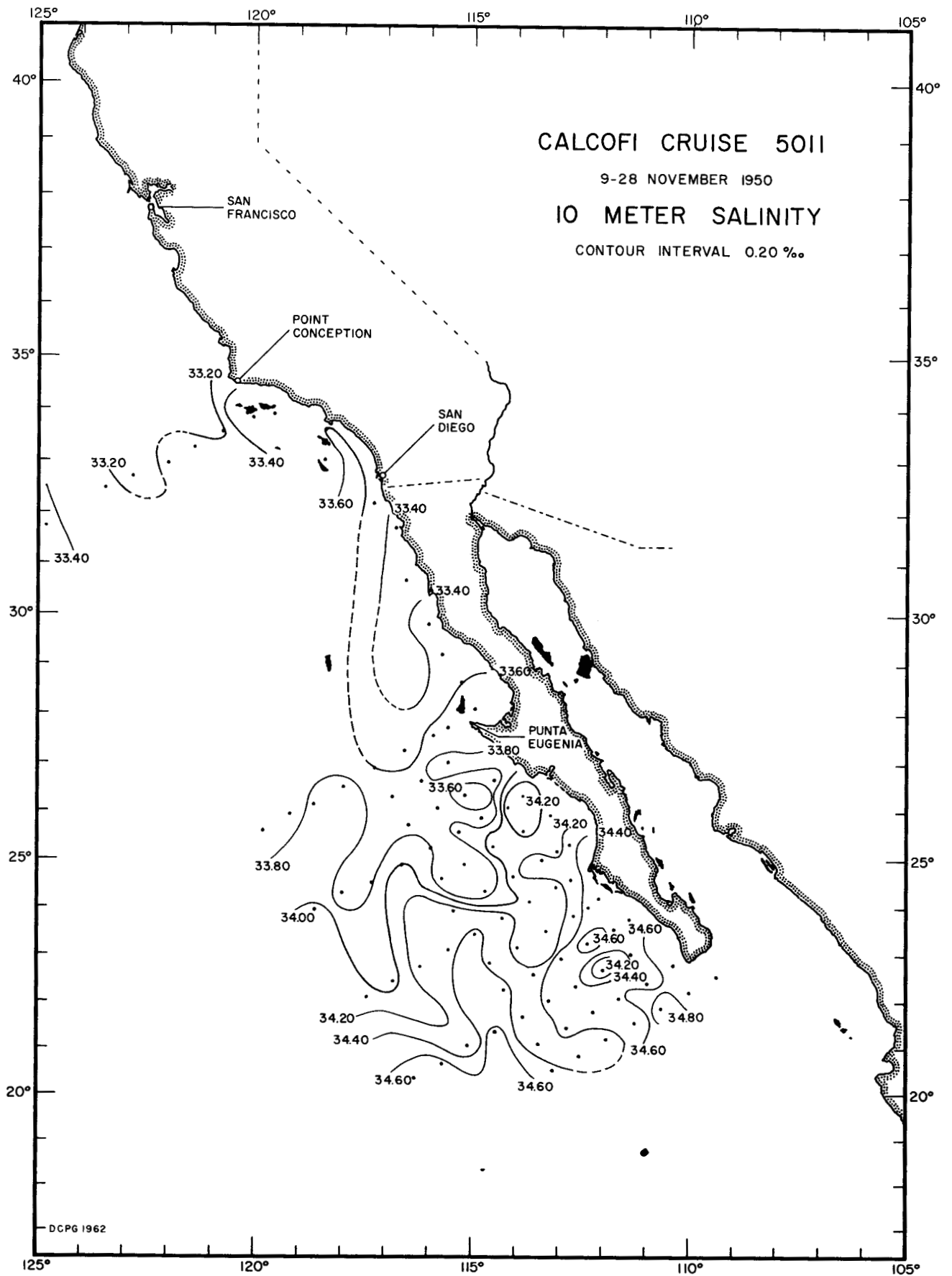
10m S
5006



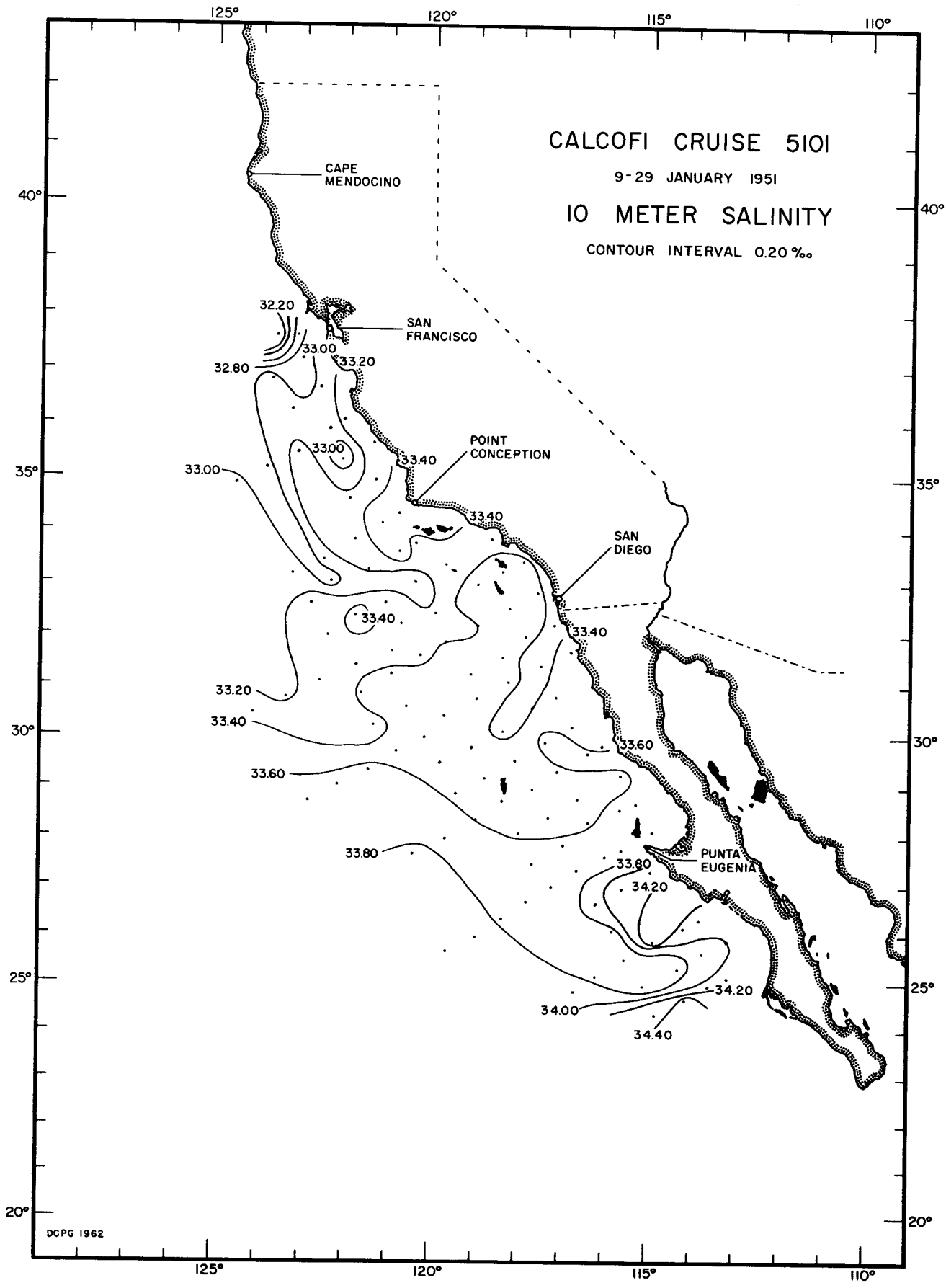
10m S
5007



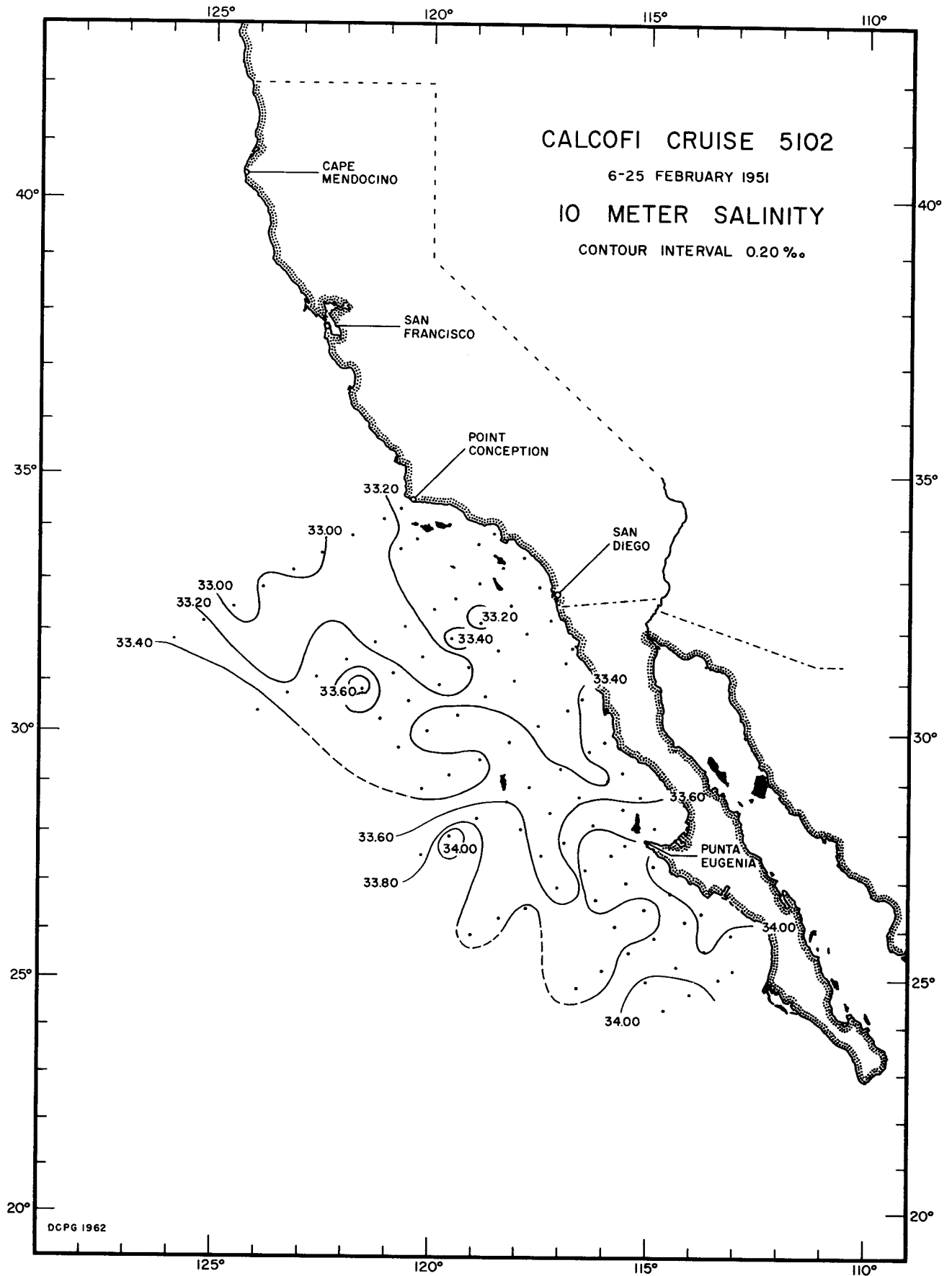




10m S
5011



10m S
5101



CALCOFI CRUISE 5102

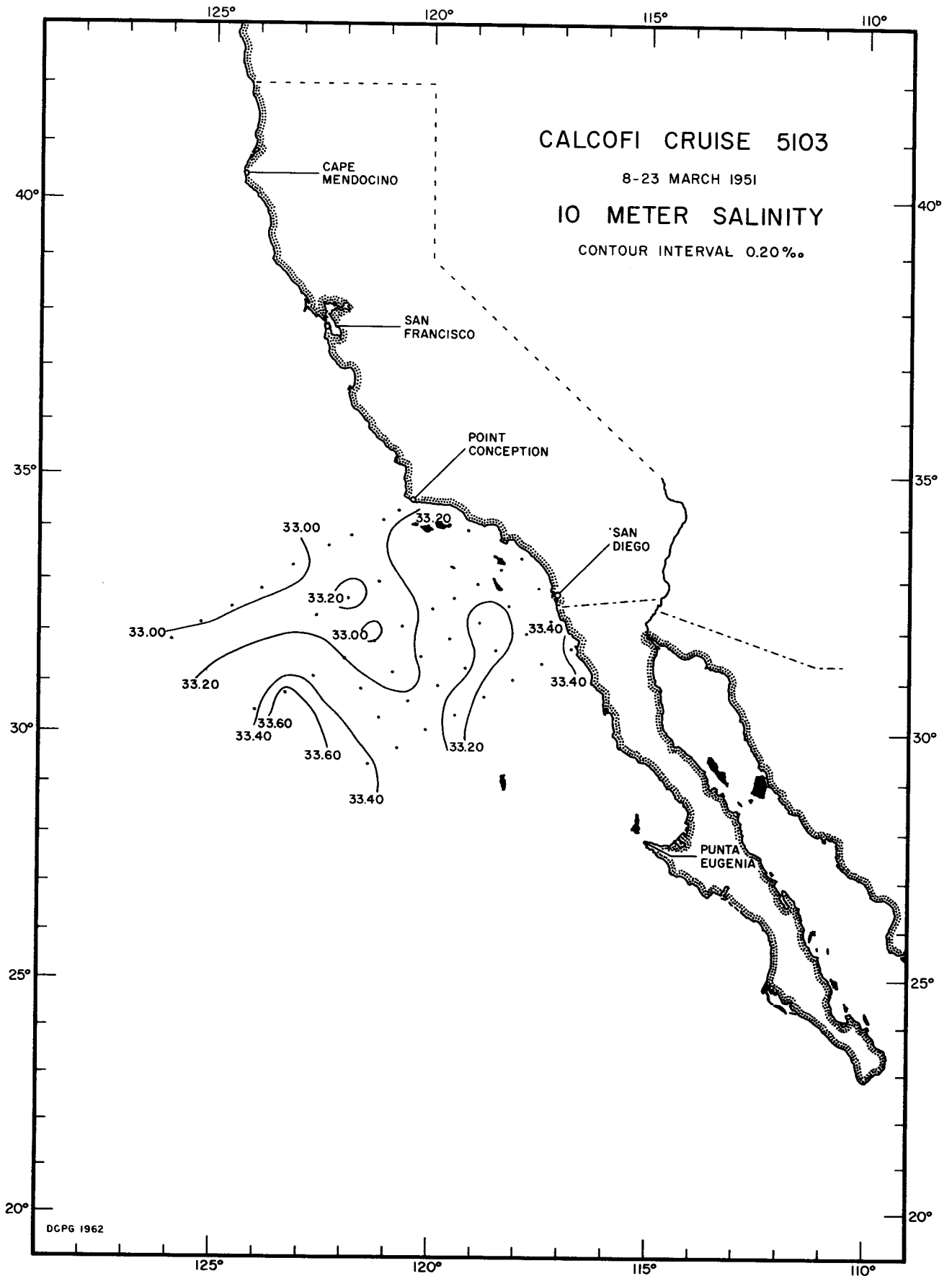
6-25 FEBRUARY 1951

10 METER SALINITY

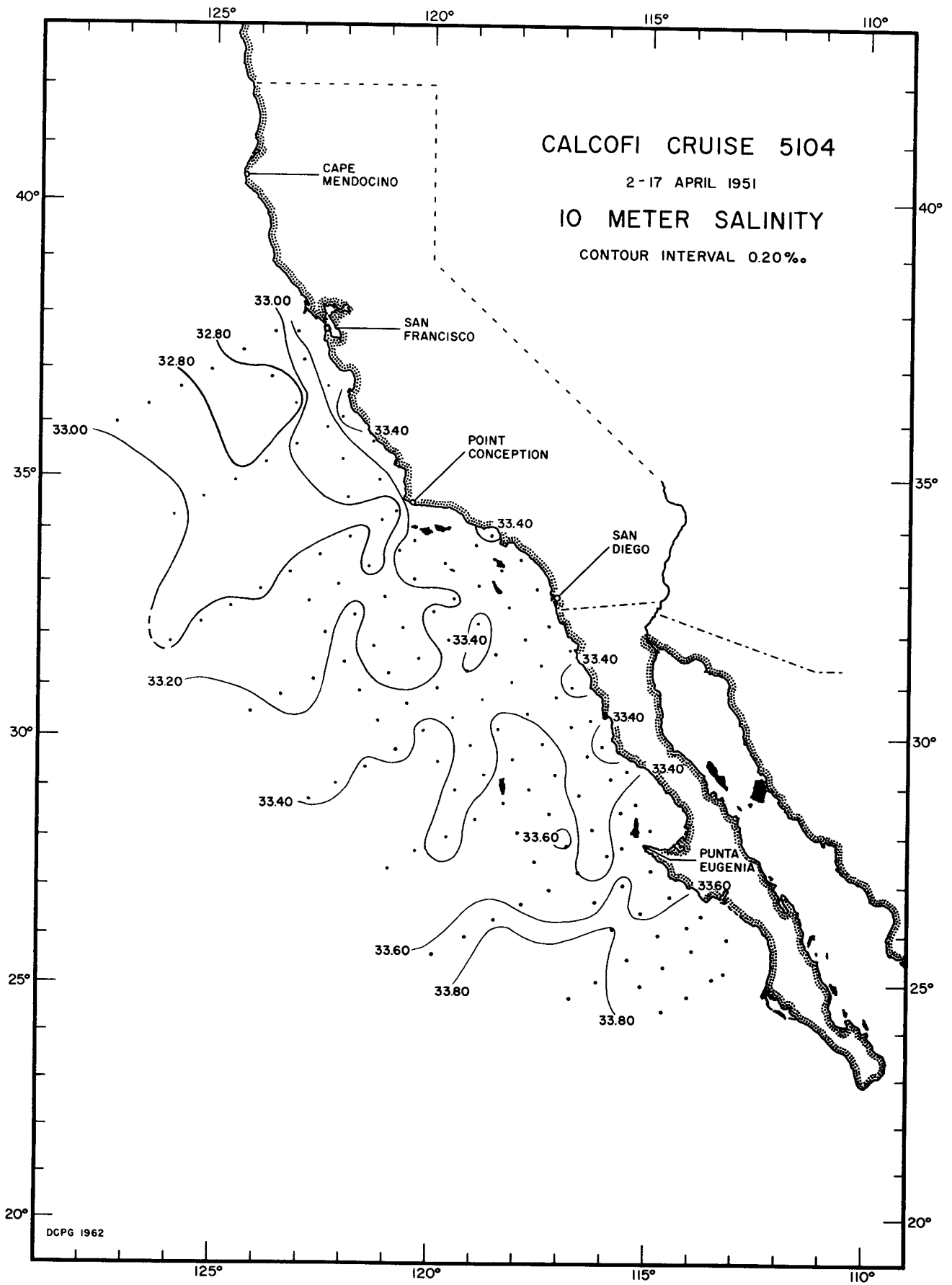
CONTOUR INTERVAL 0.20 ‰

10m S

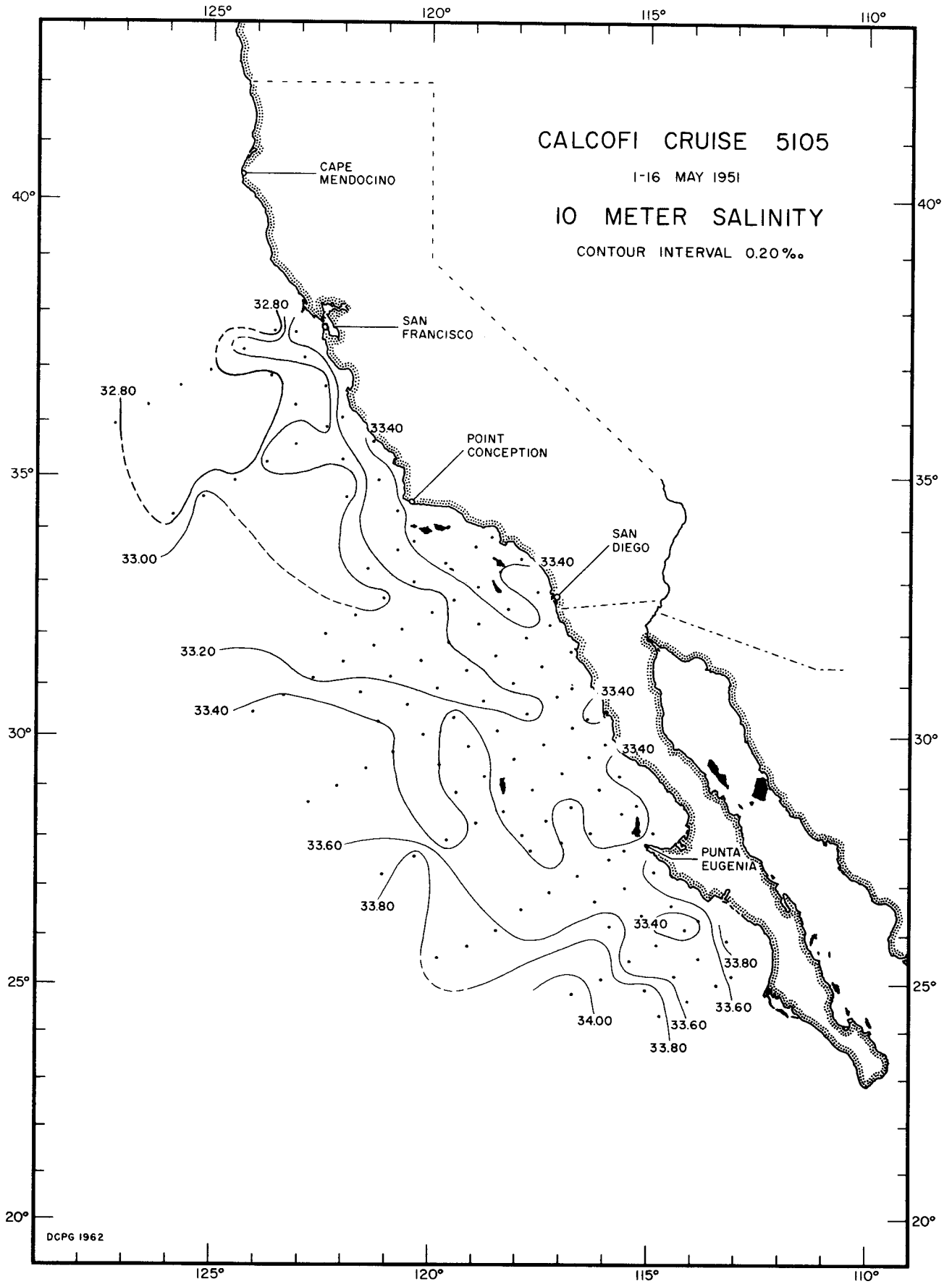
5102



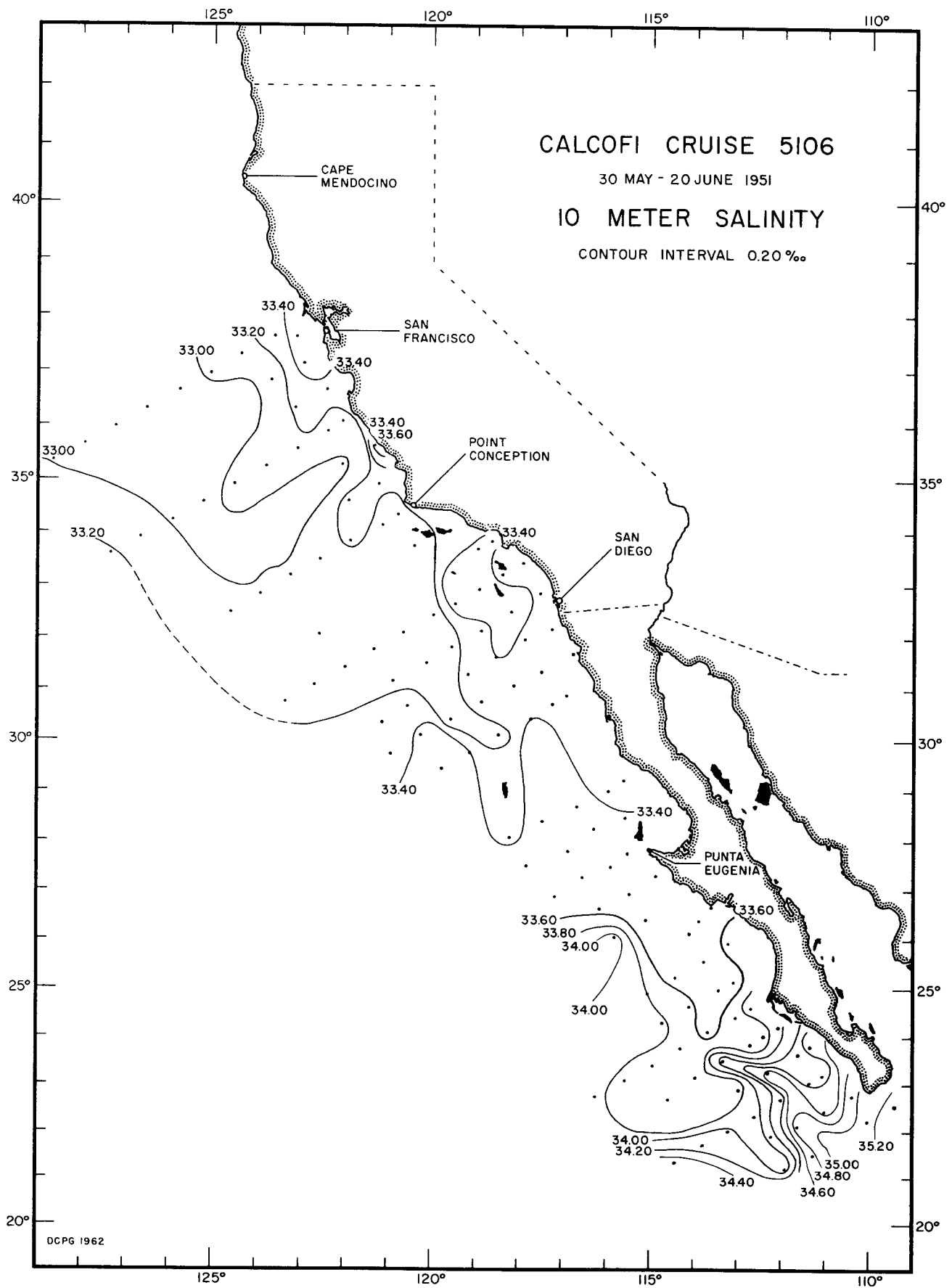
10m S
5103



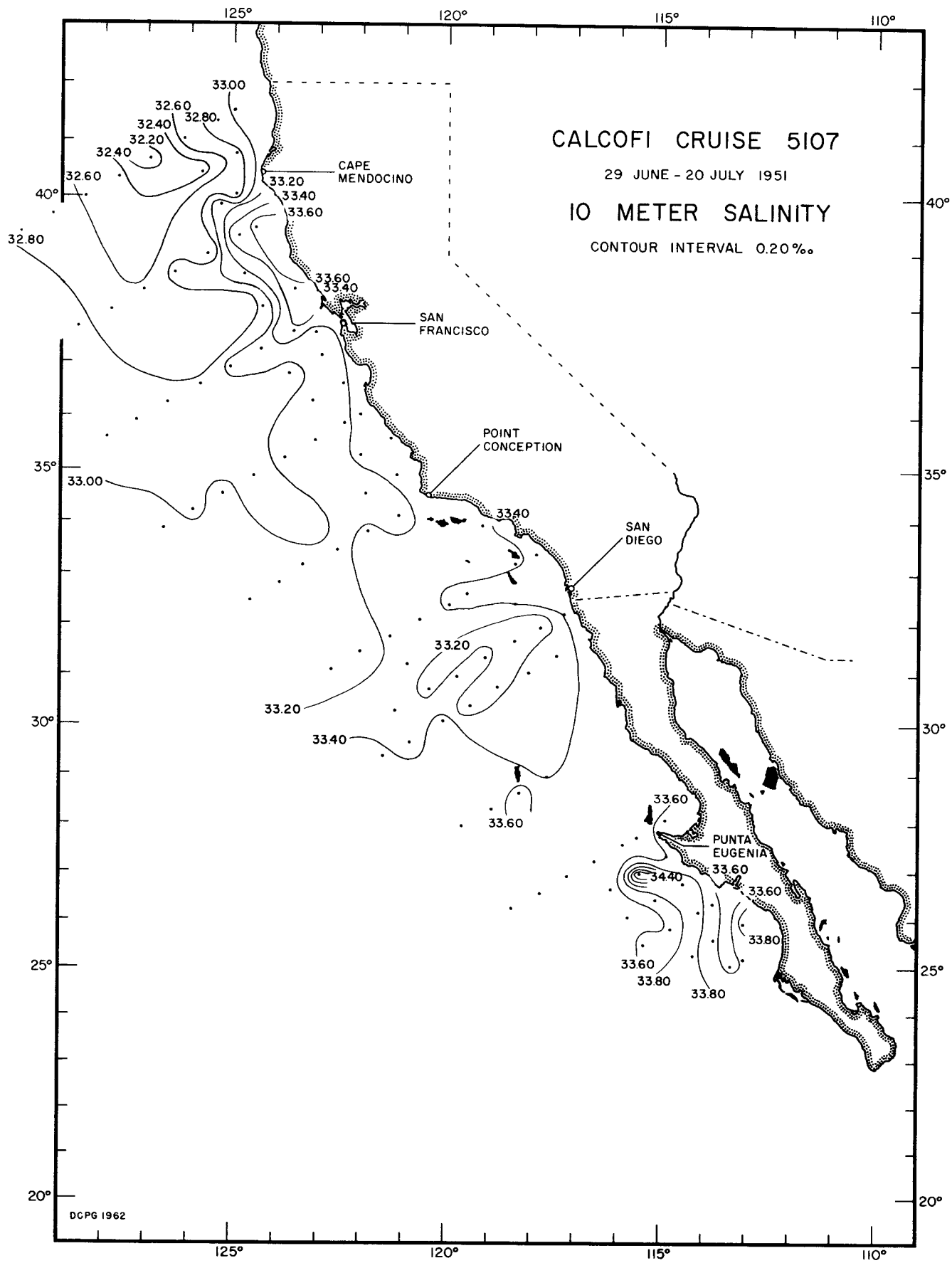
10m S
5104



10m S
5105



10m S
5106



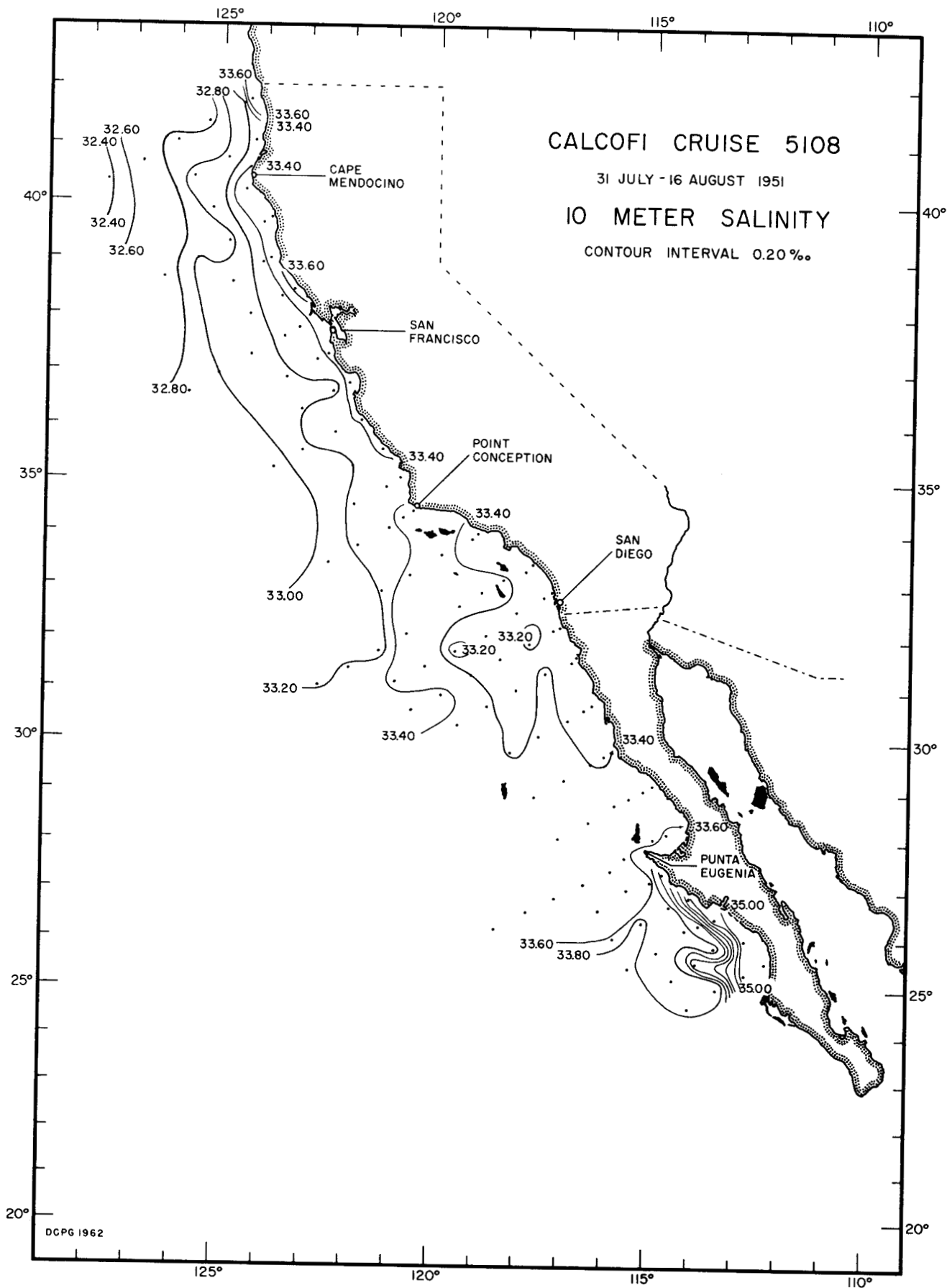
CALCOFI CRUISE 5107

29 JUNE - 20 JULY 1951

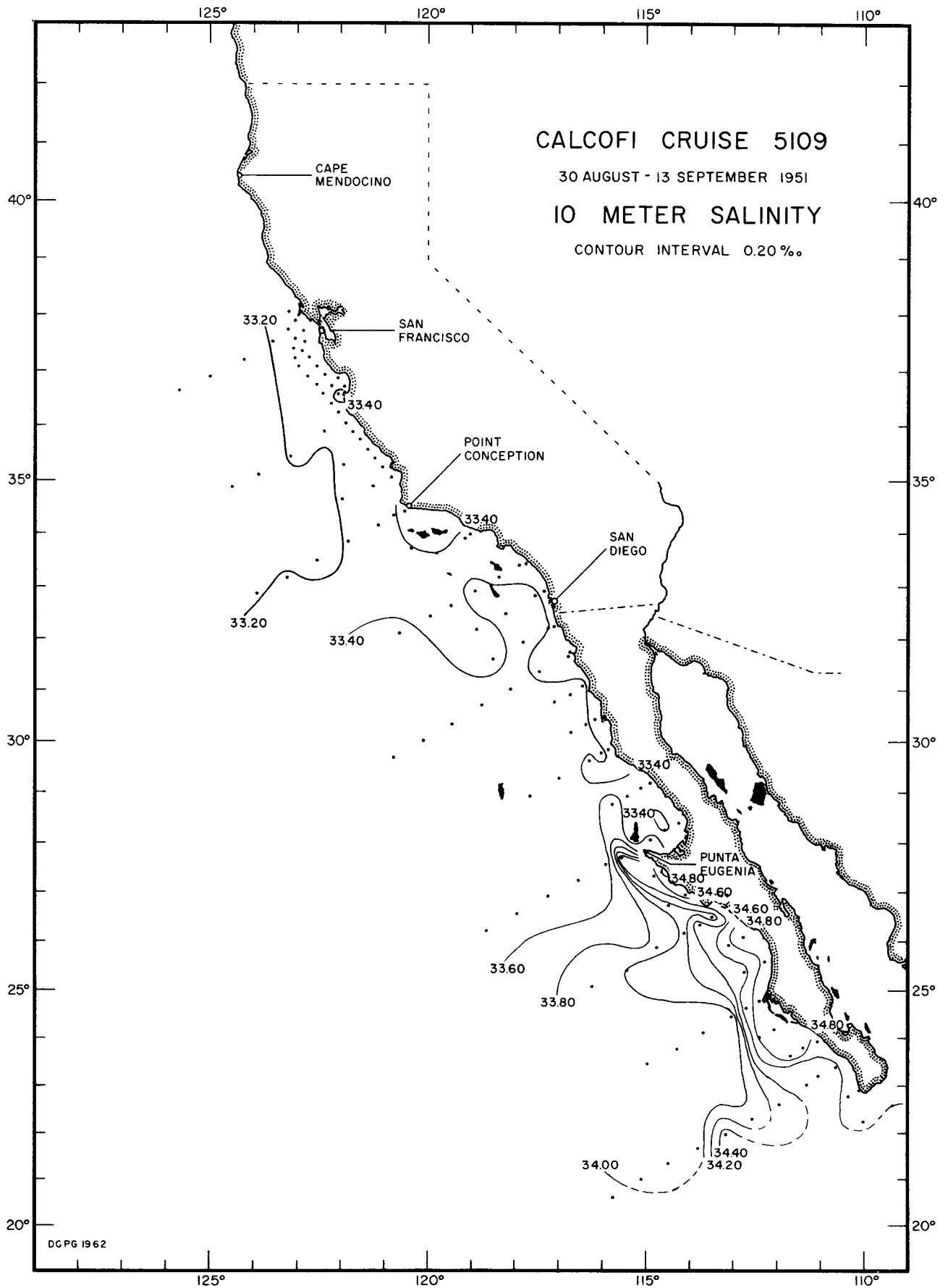
10 METER SALINITY

CONTOUR INTERVAL 0.20‰

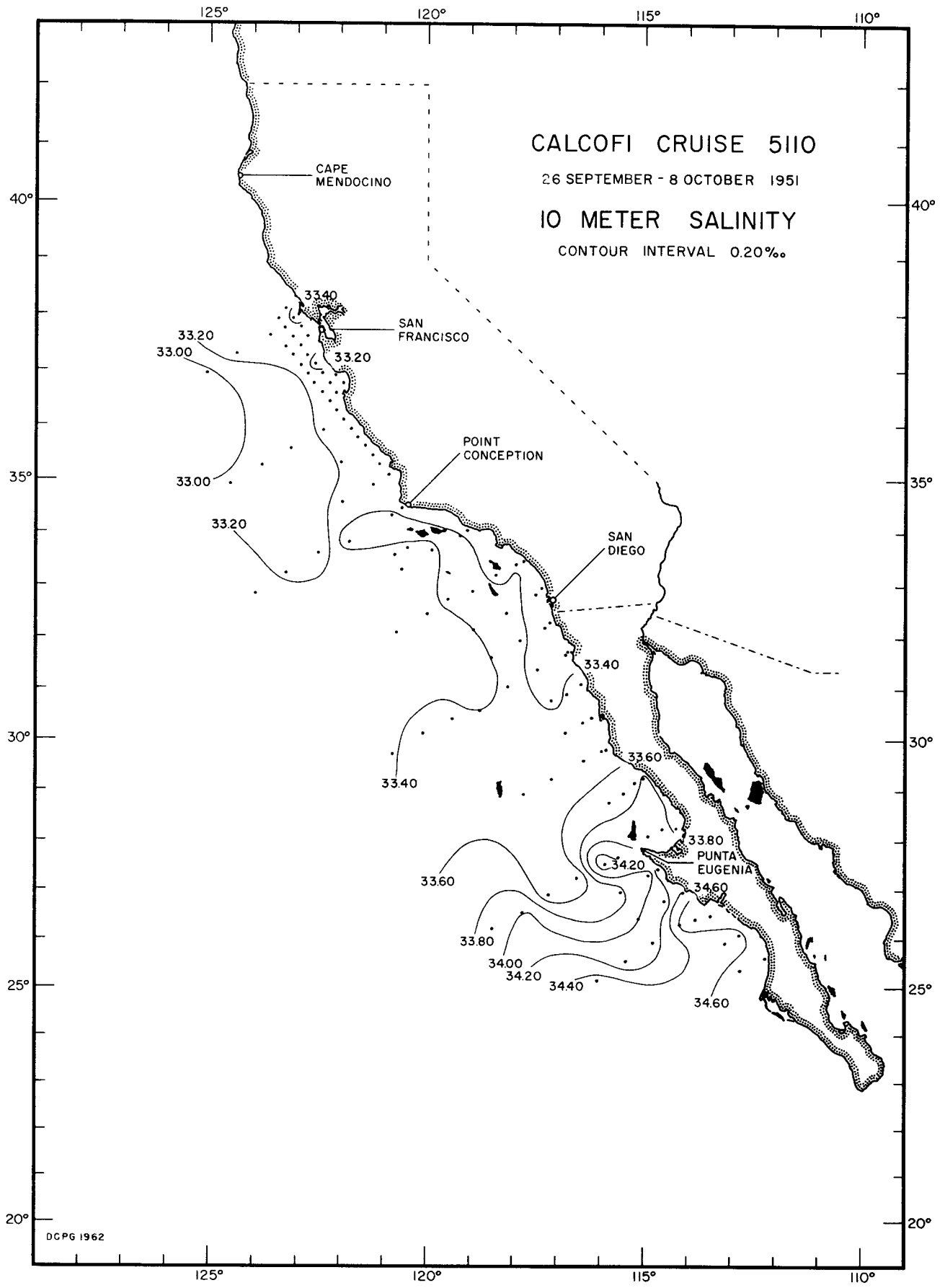
10m S
5107



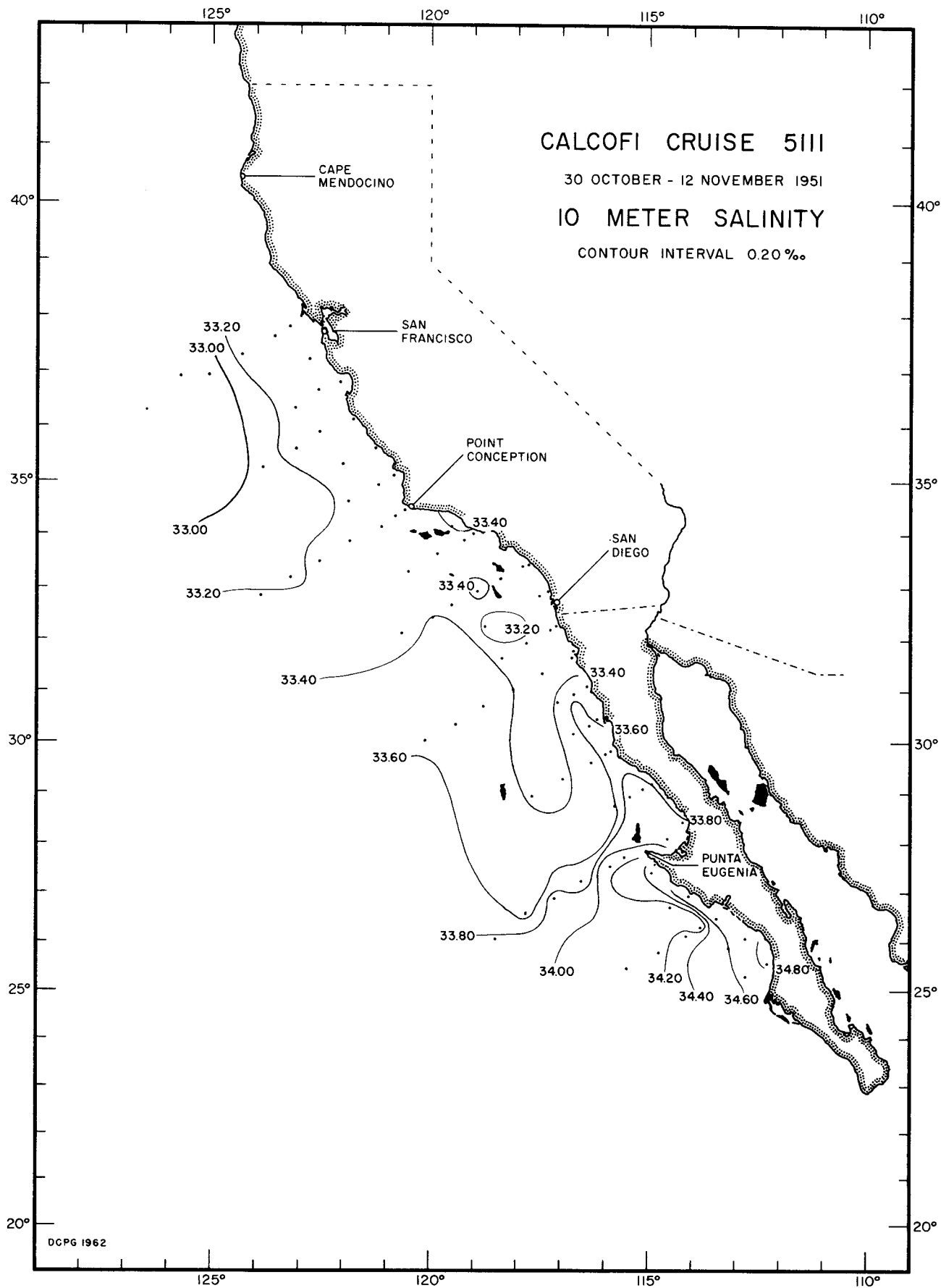
10m S
 5108



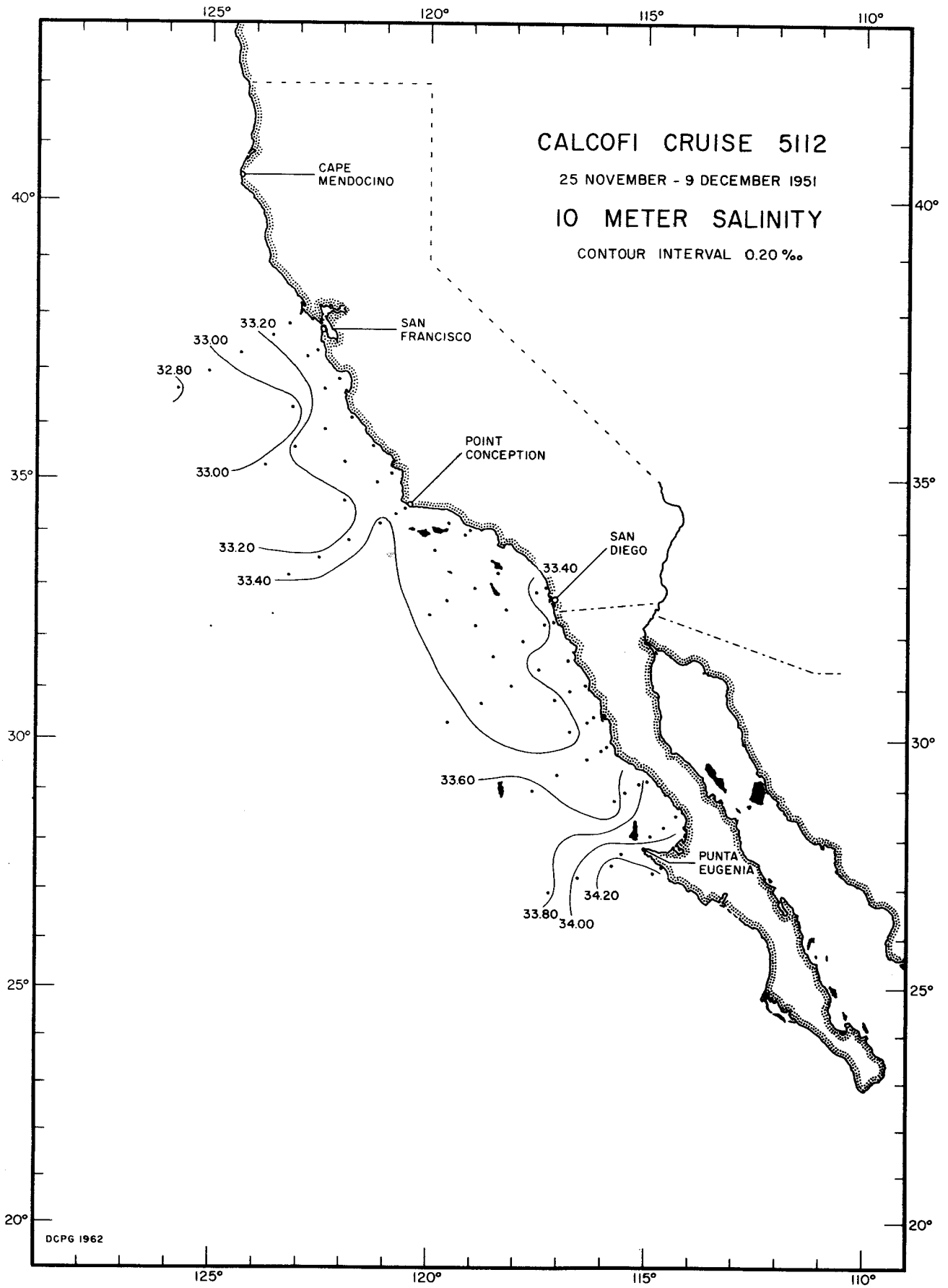
10m S
5109

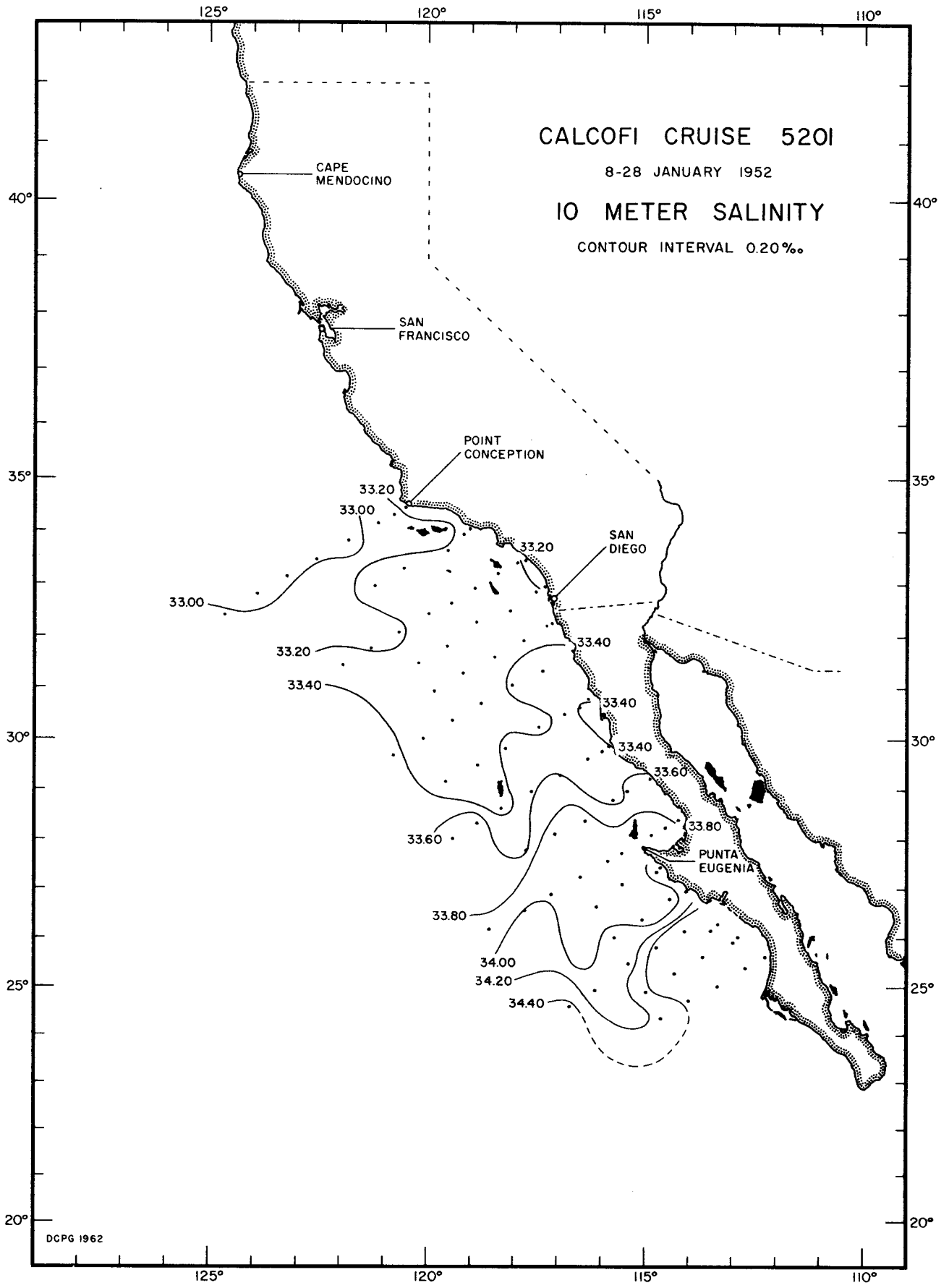


10m S
5110

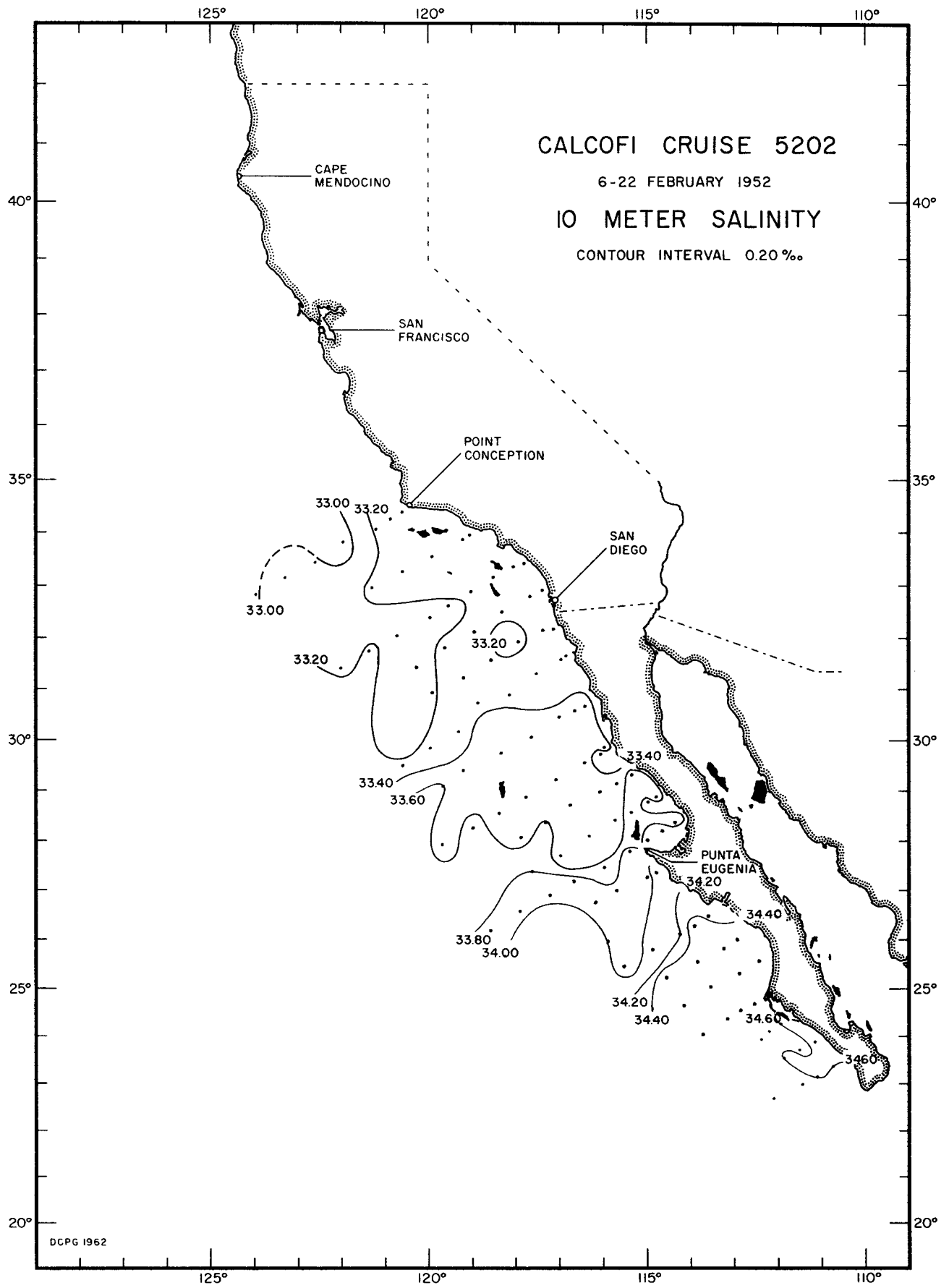


10m S
5111

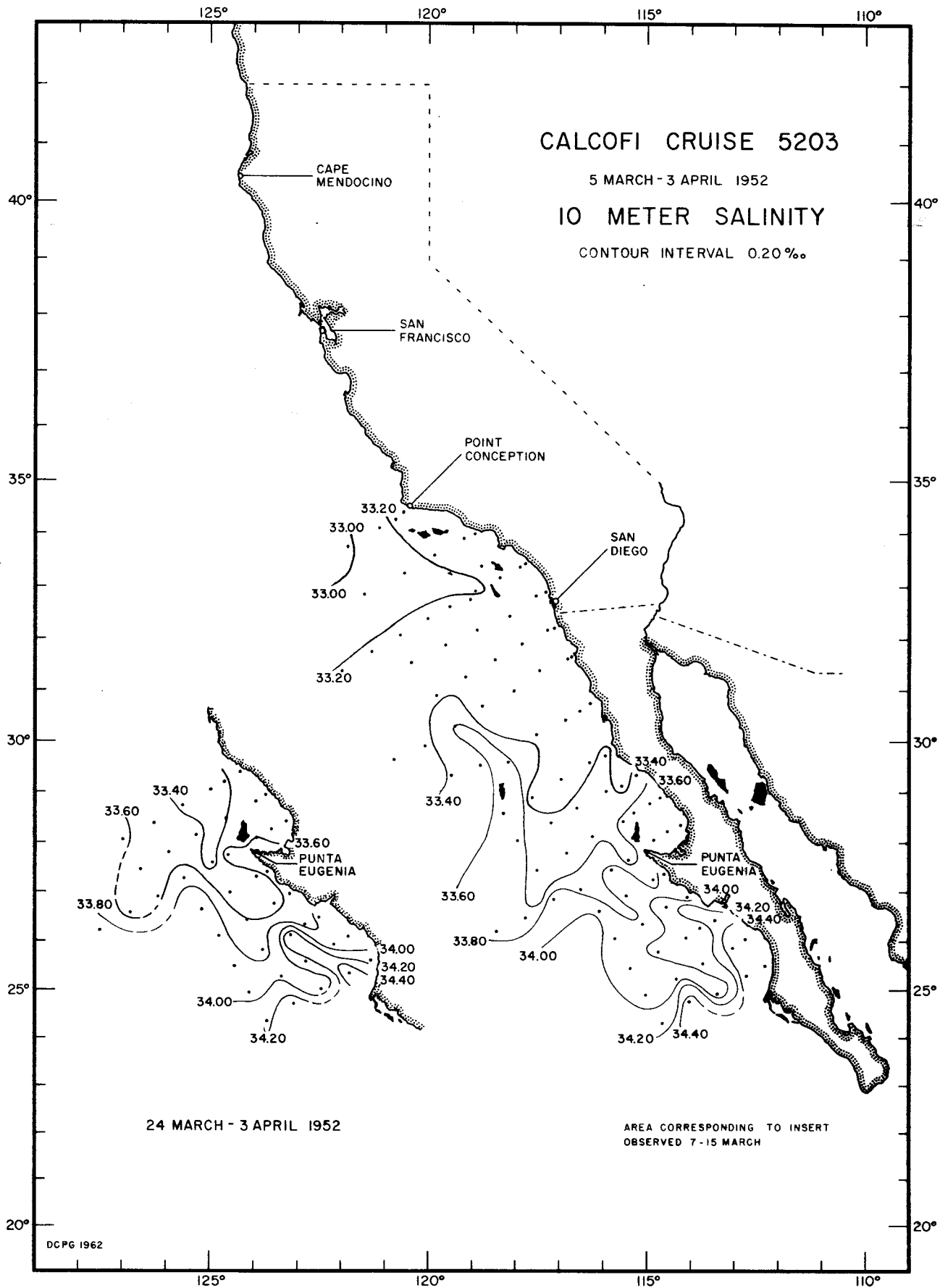




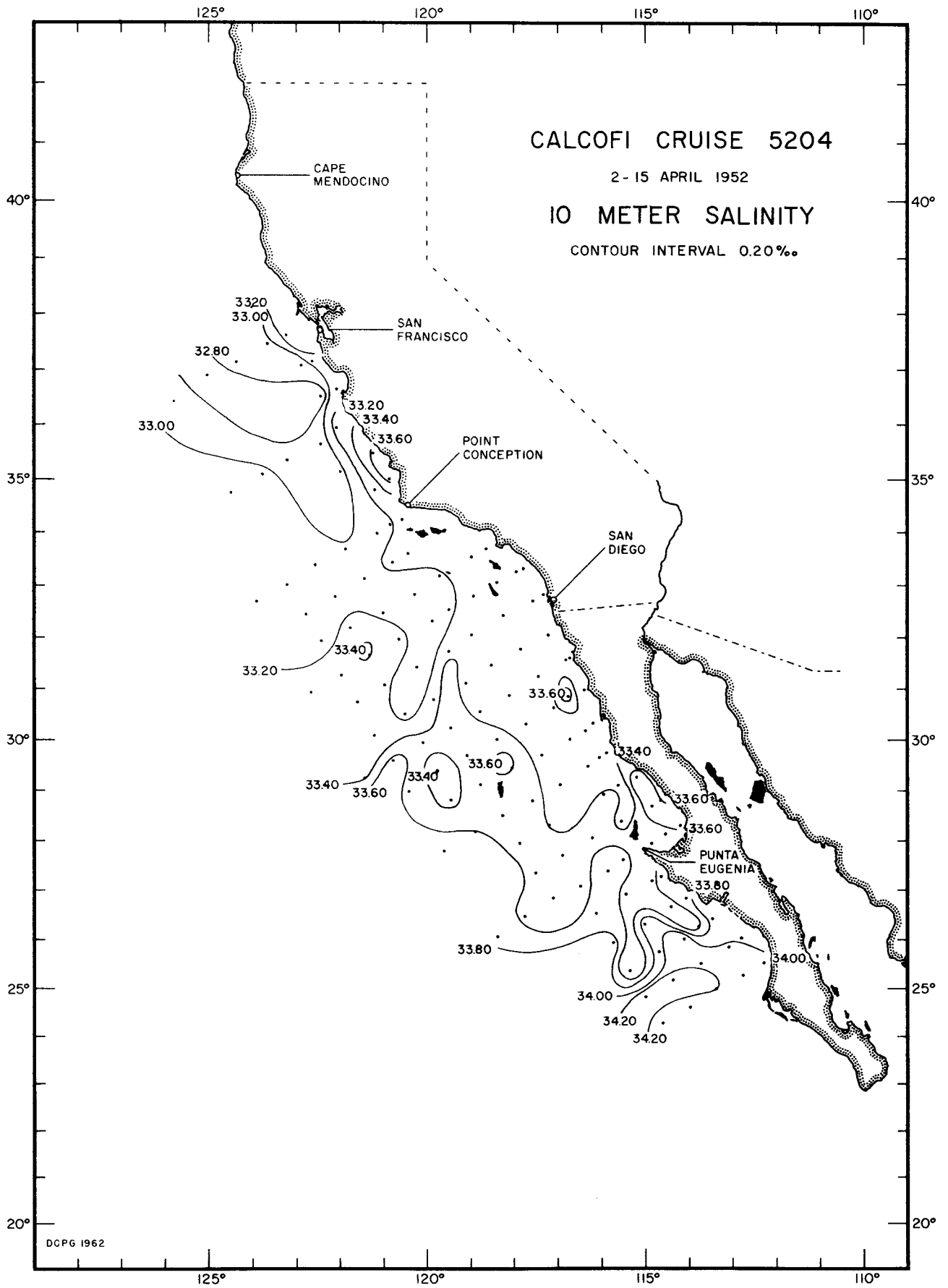
10m S
520I



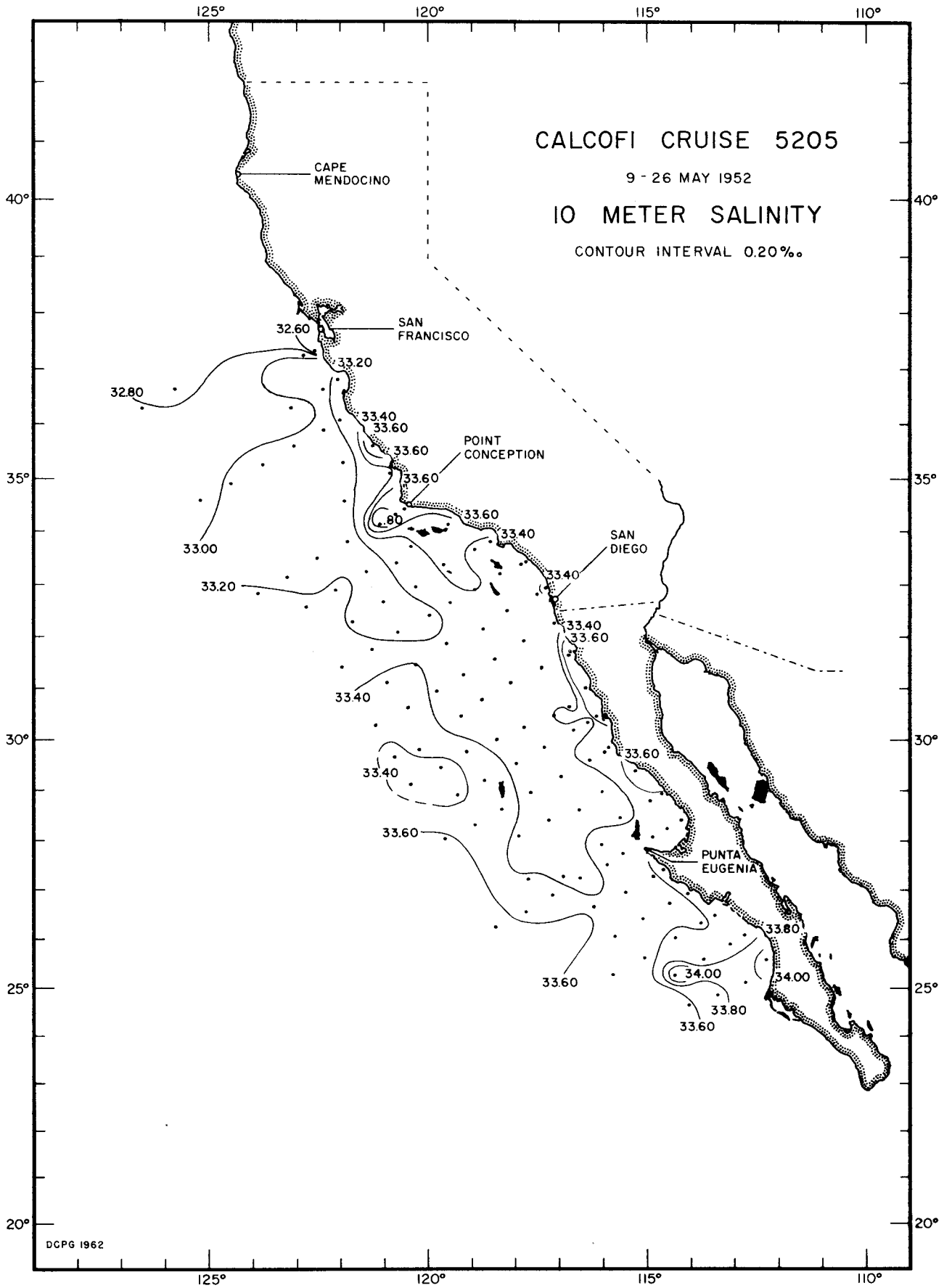
10m S
5202



10m S
5203

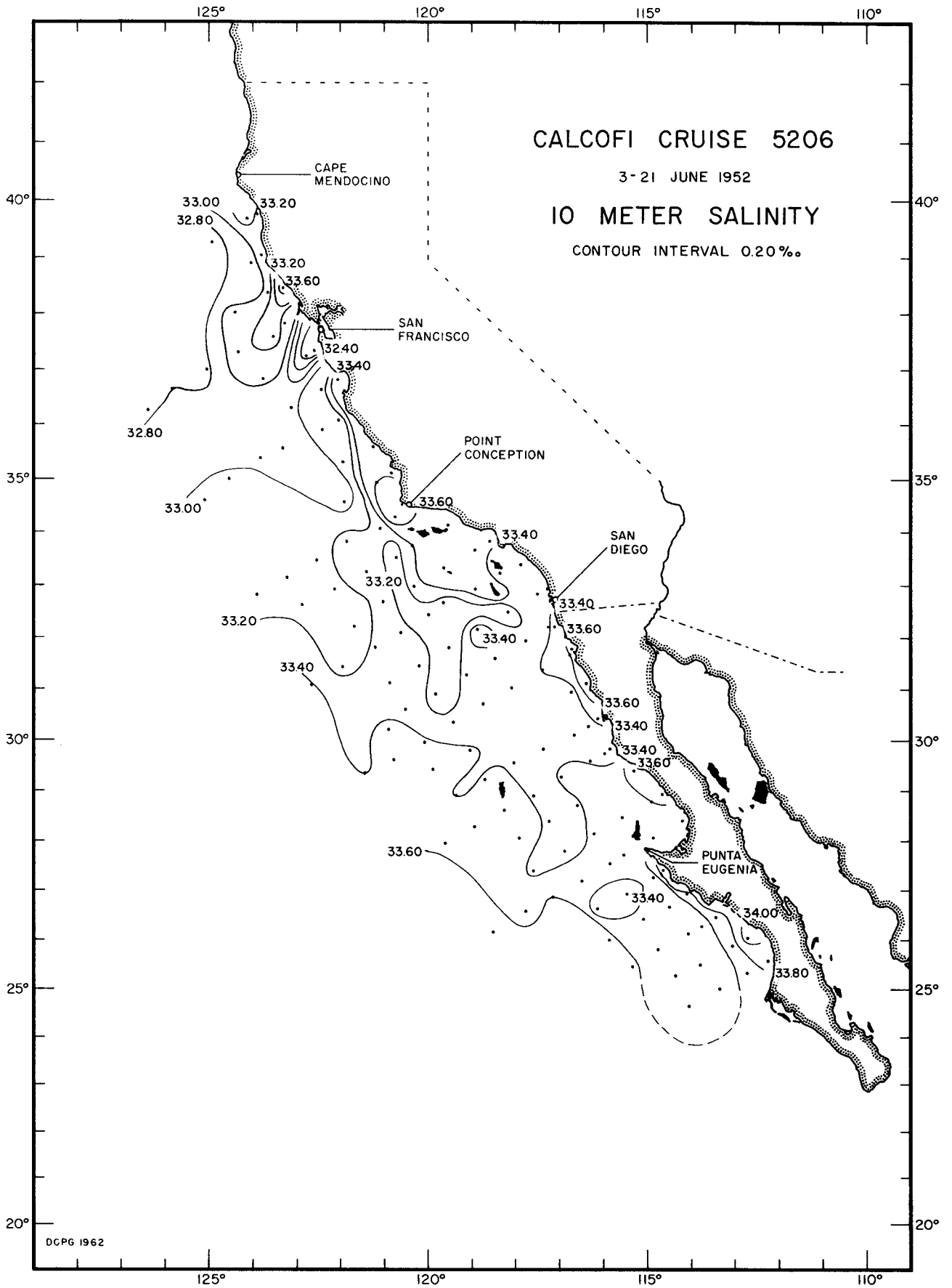


10m S
5204

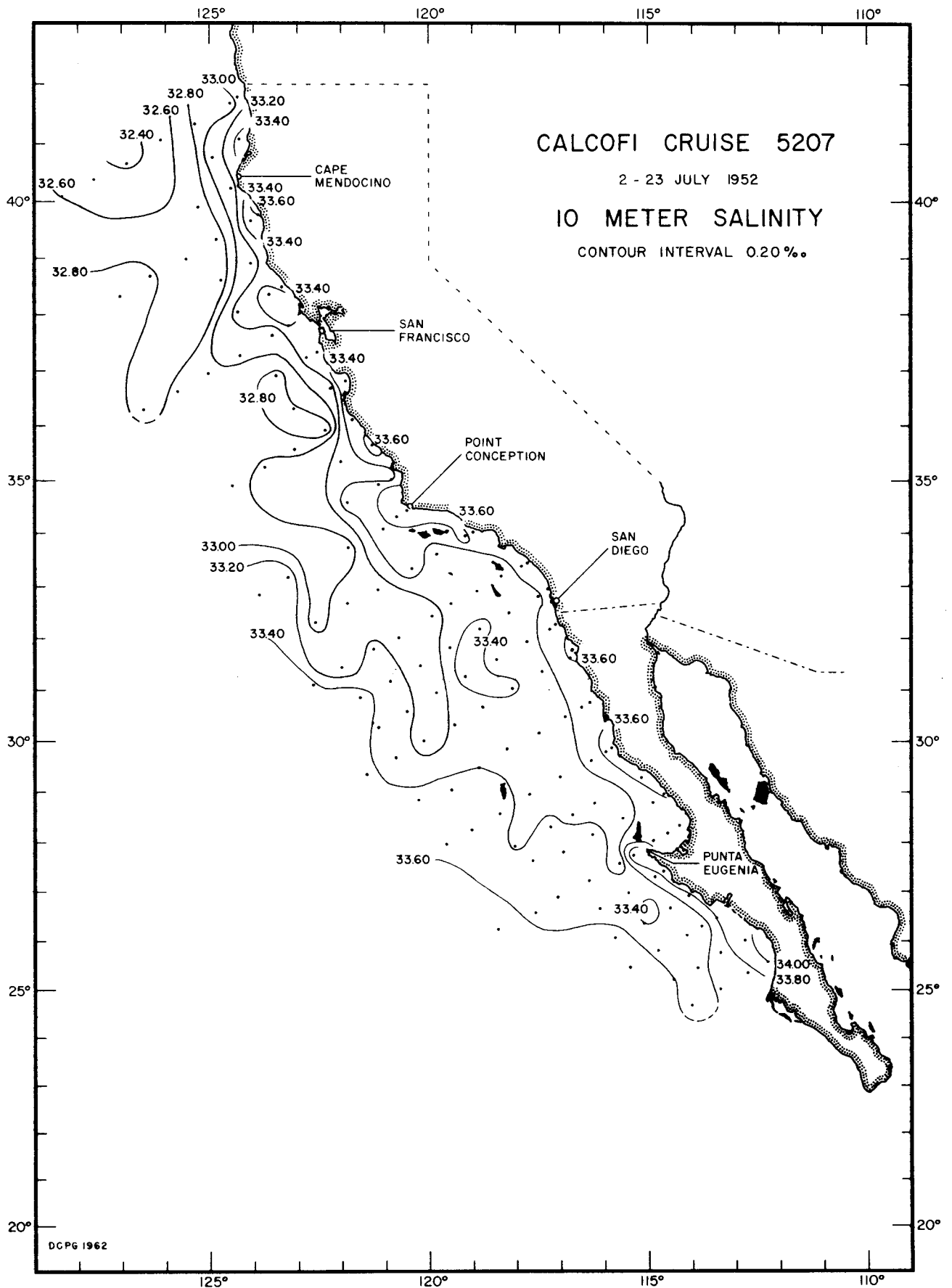


DCPG 1962

10m S
5205



10m S
5206



CALCOFI CRUISE 5207

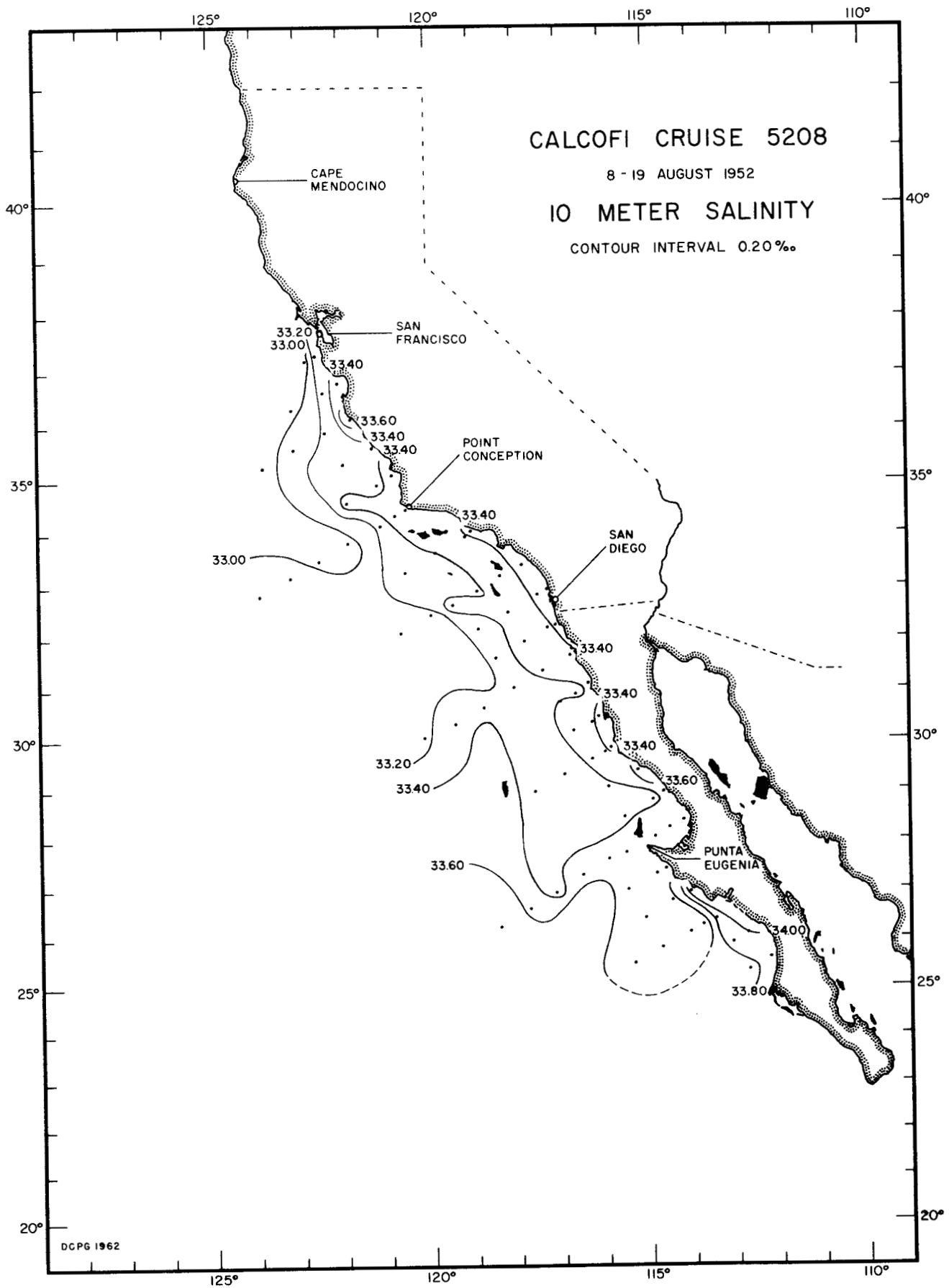
2 - 23 JULY 1952

10 METER SALINITY

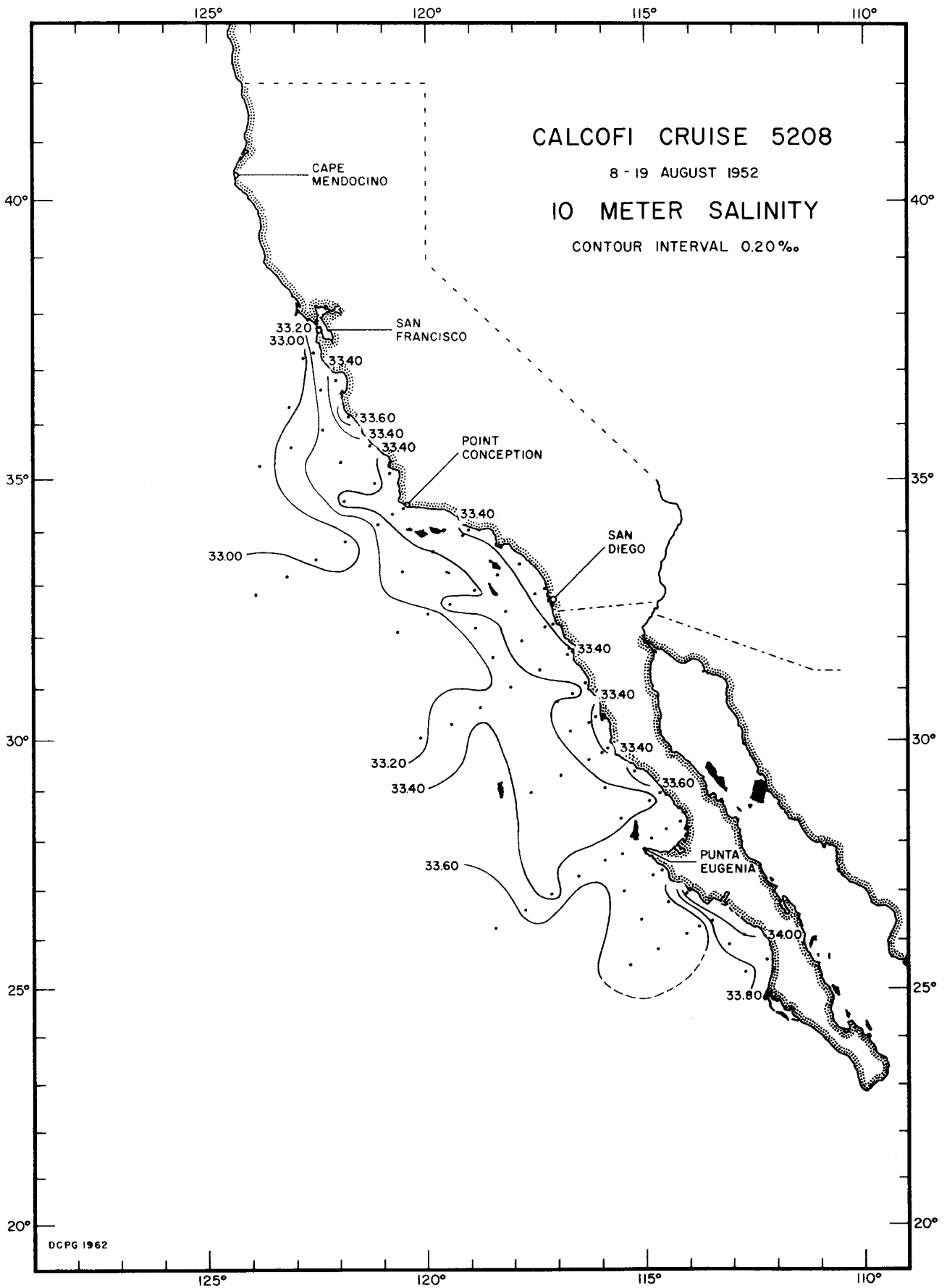
CONTOUR INTERVAL 0.20‰

DCPG 1962

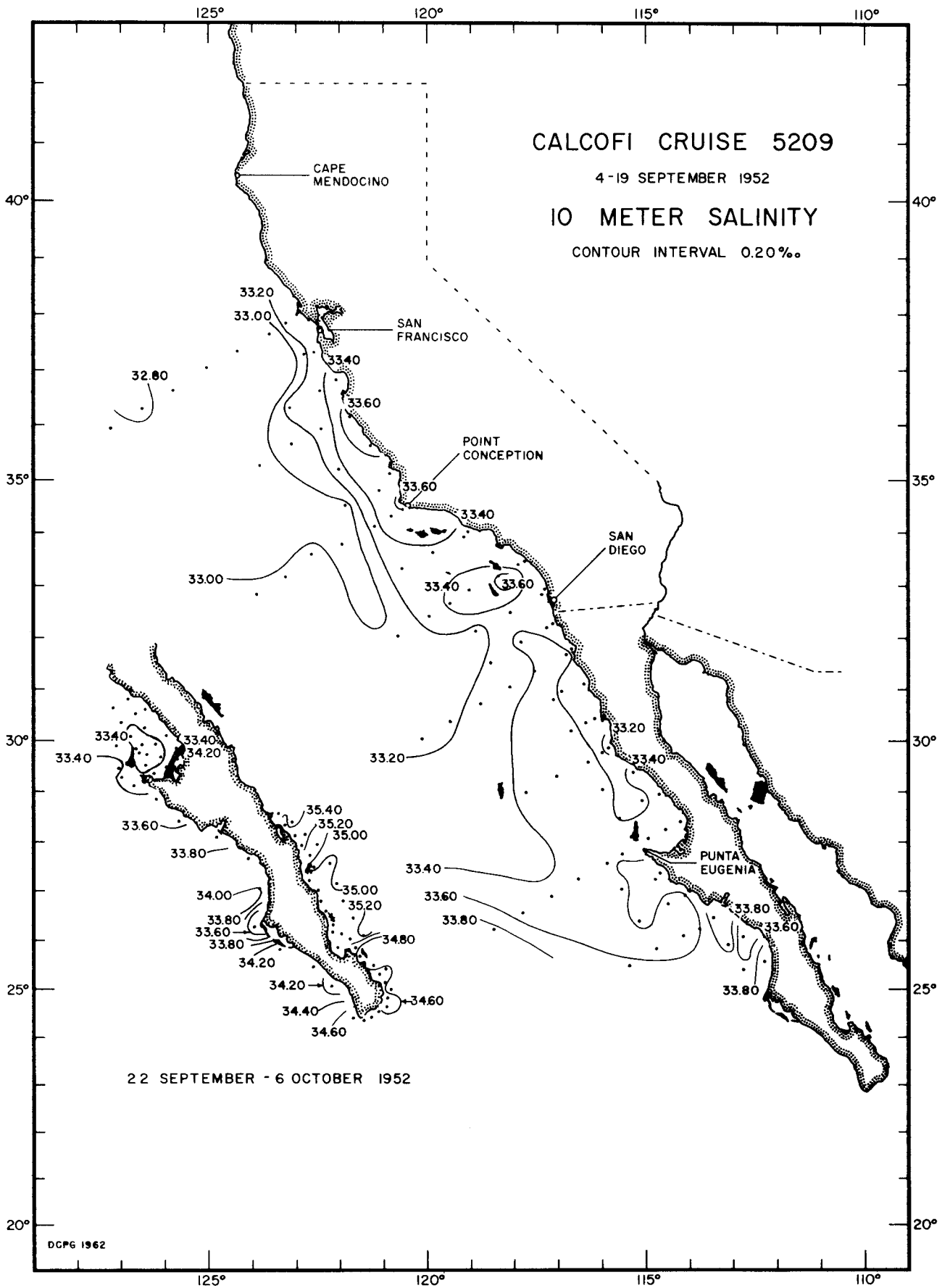
10m S
5207



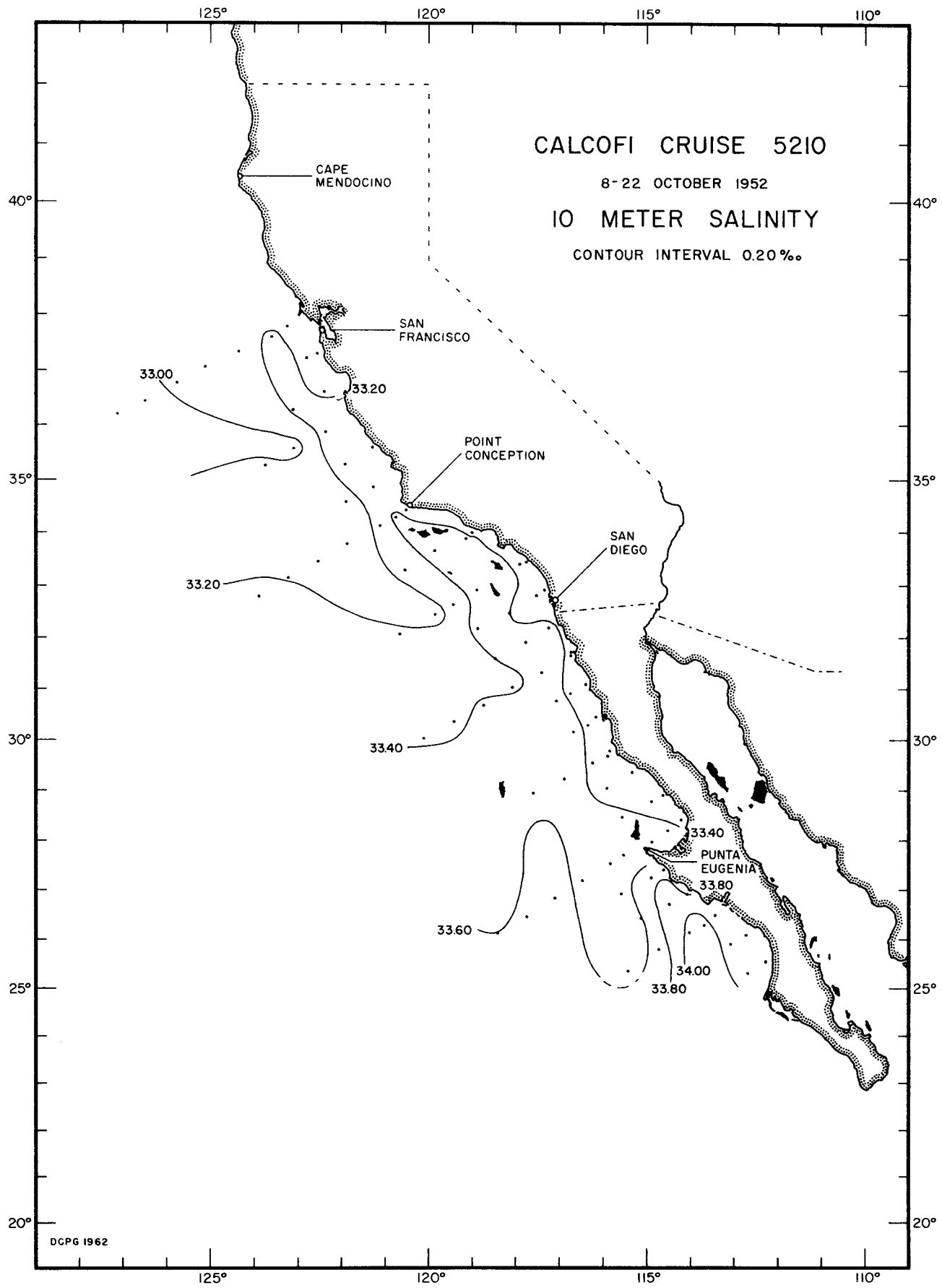
10m S
5208



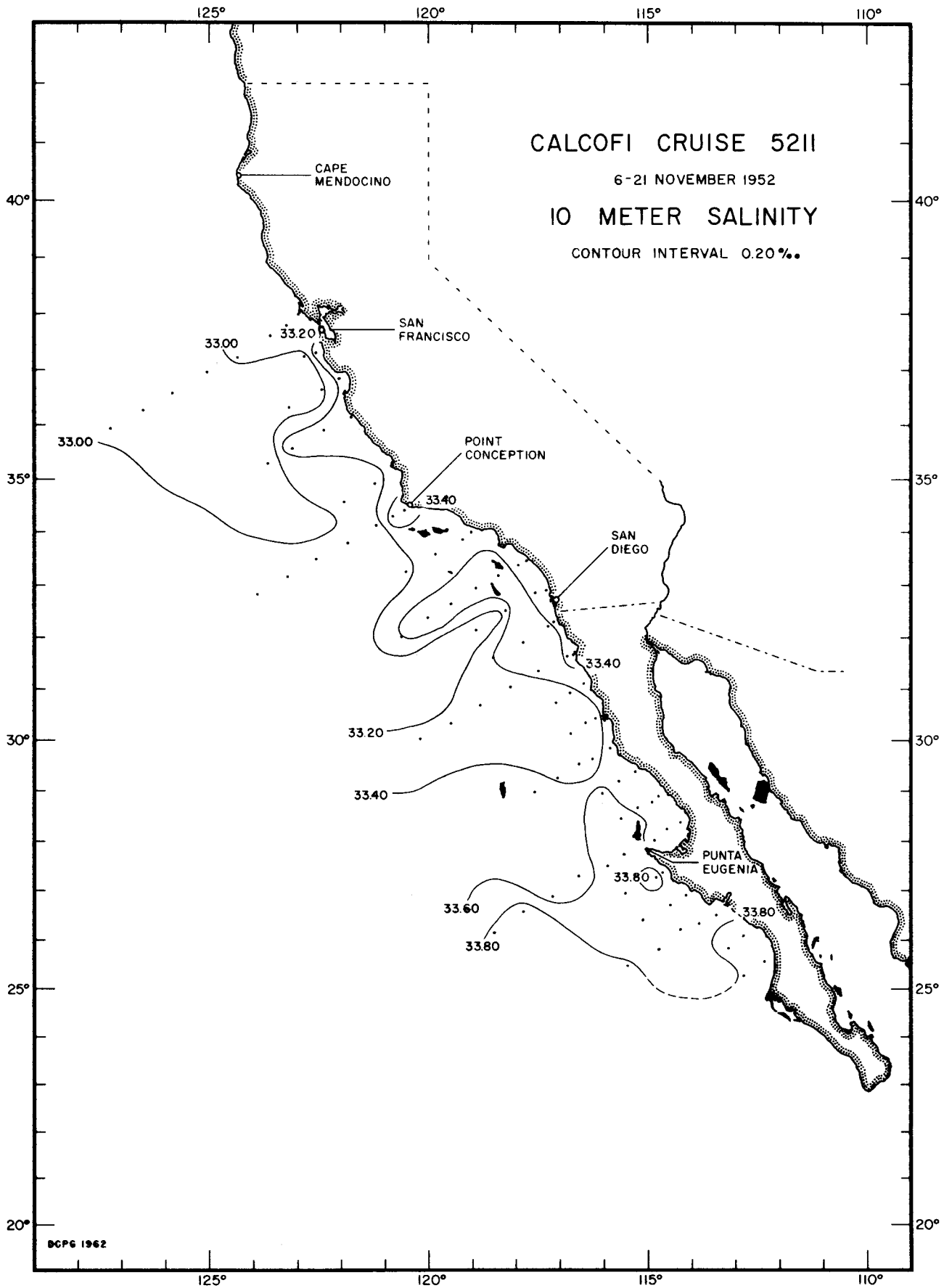
10m S
5208



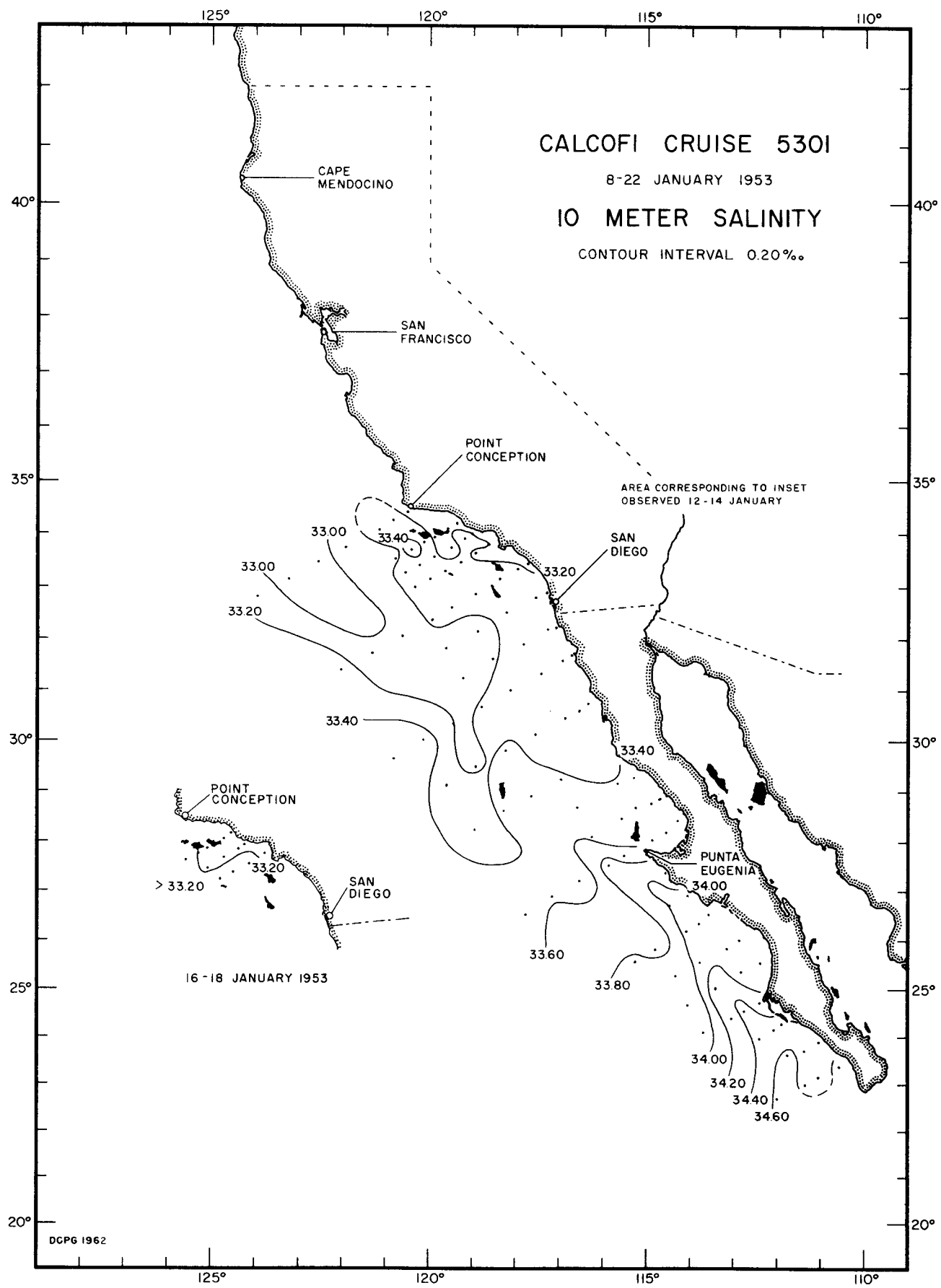
10m S
 5209



10m S
5210

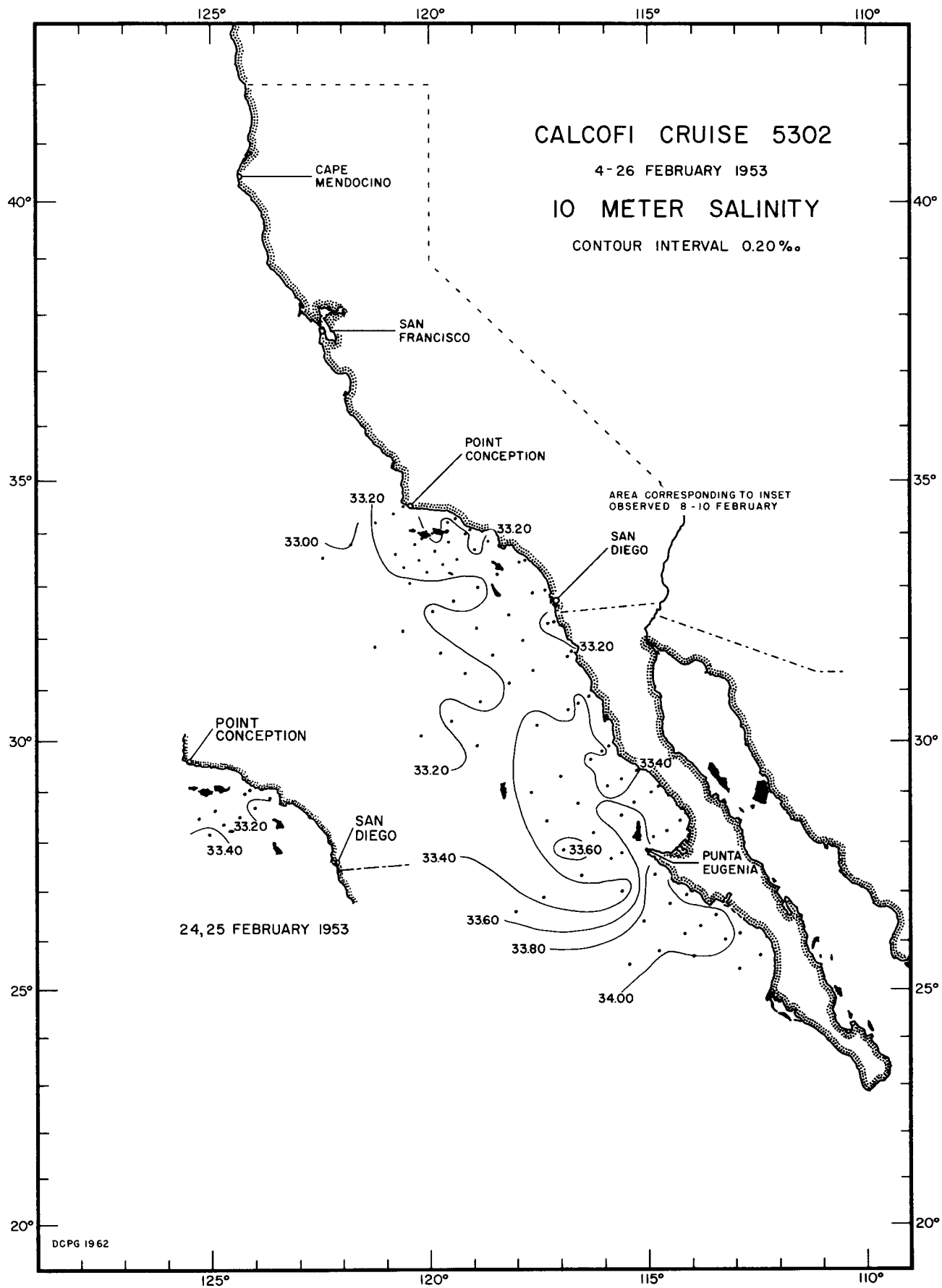


10m S
5211

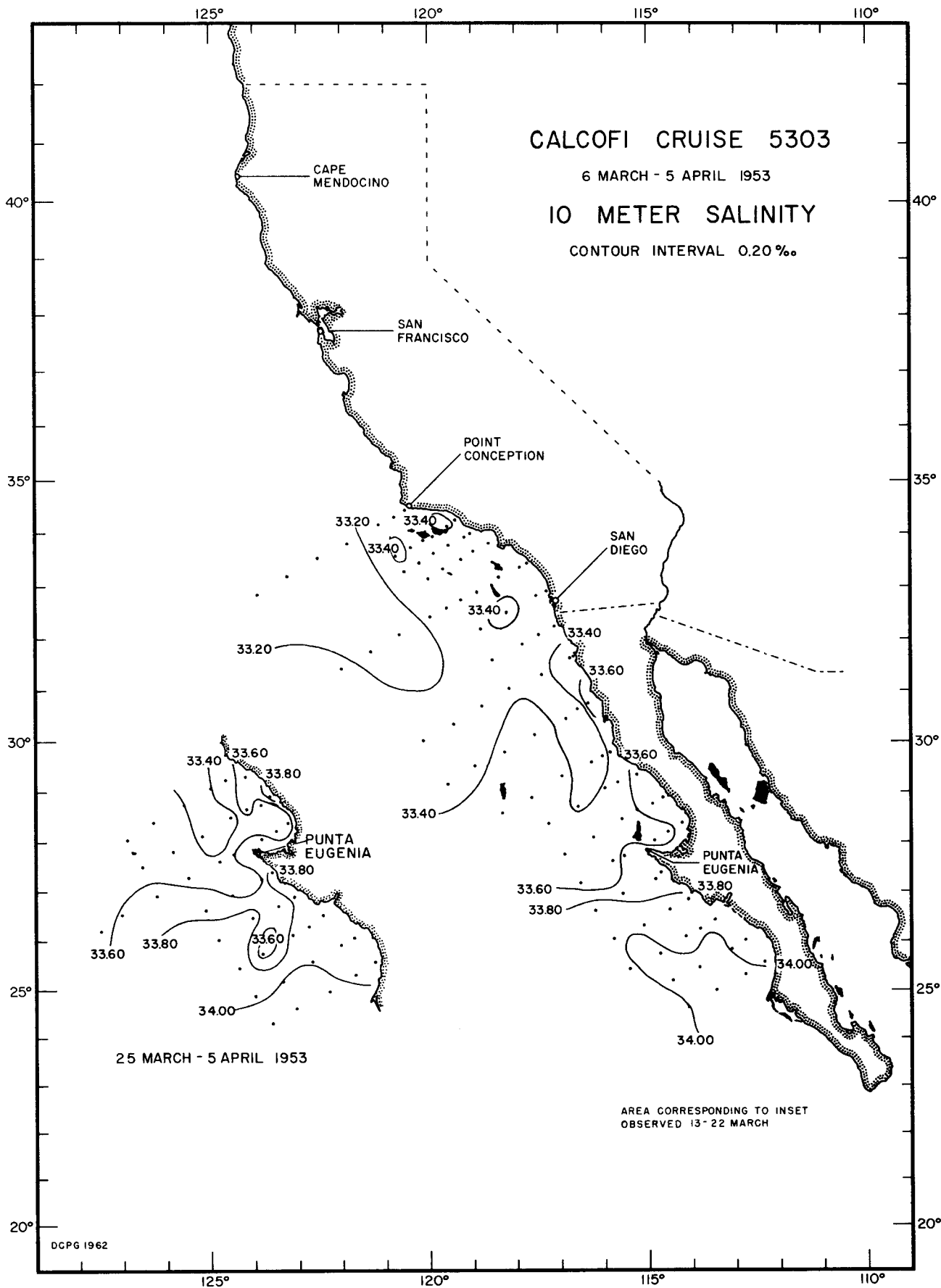


DCPG 1962

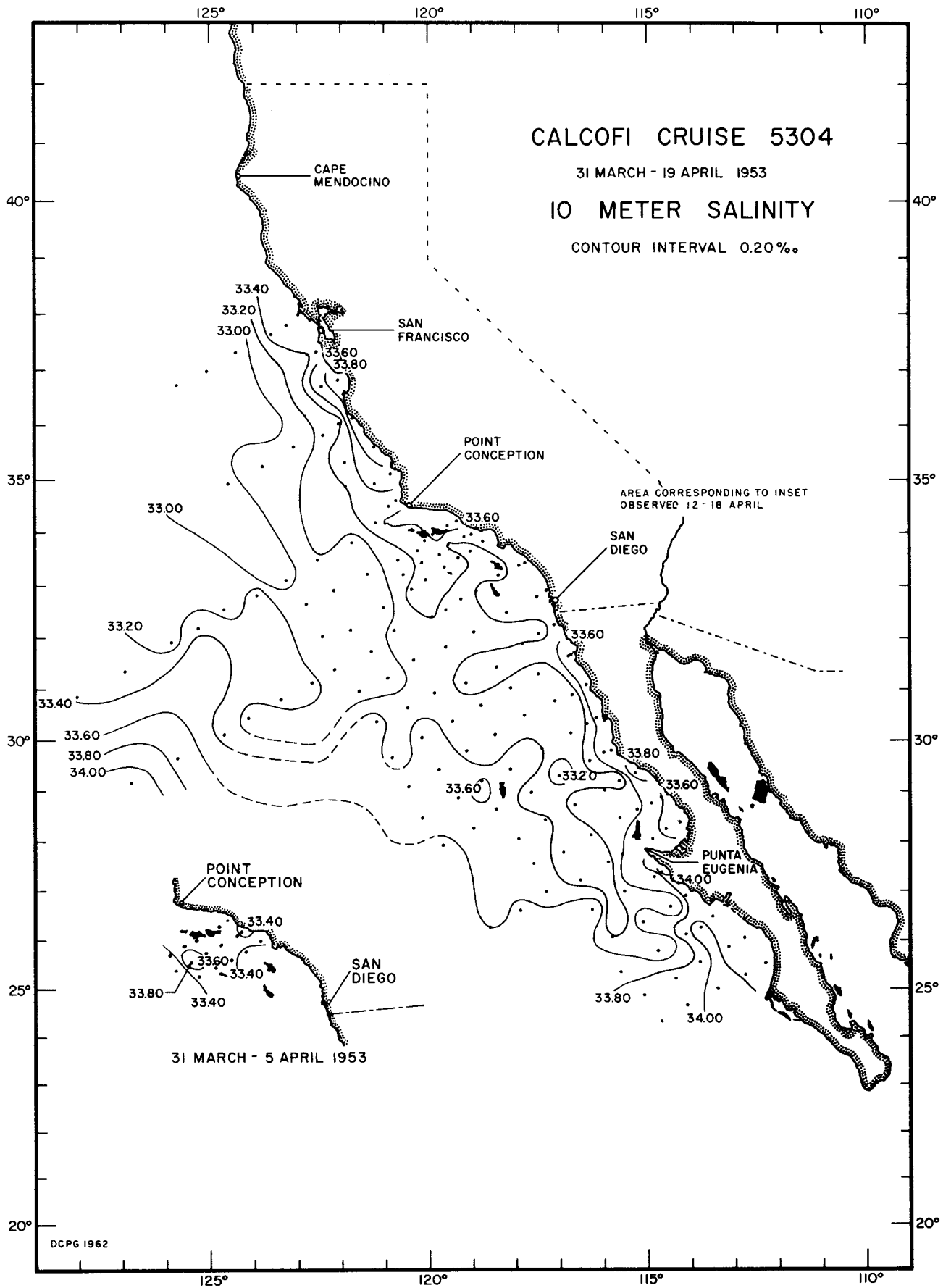
10m S
5301



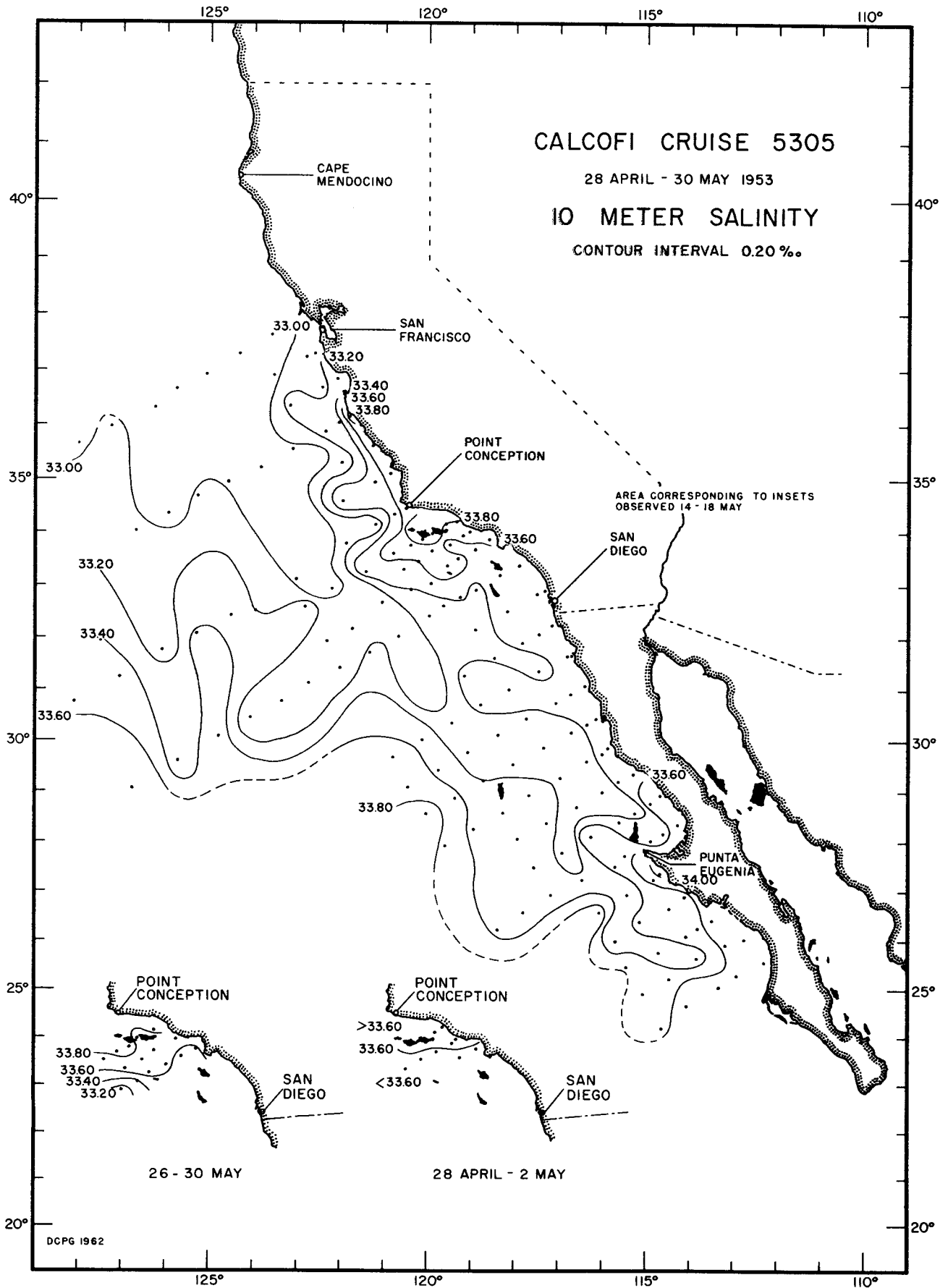
10m S
5302



10m S
5303

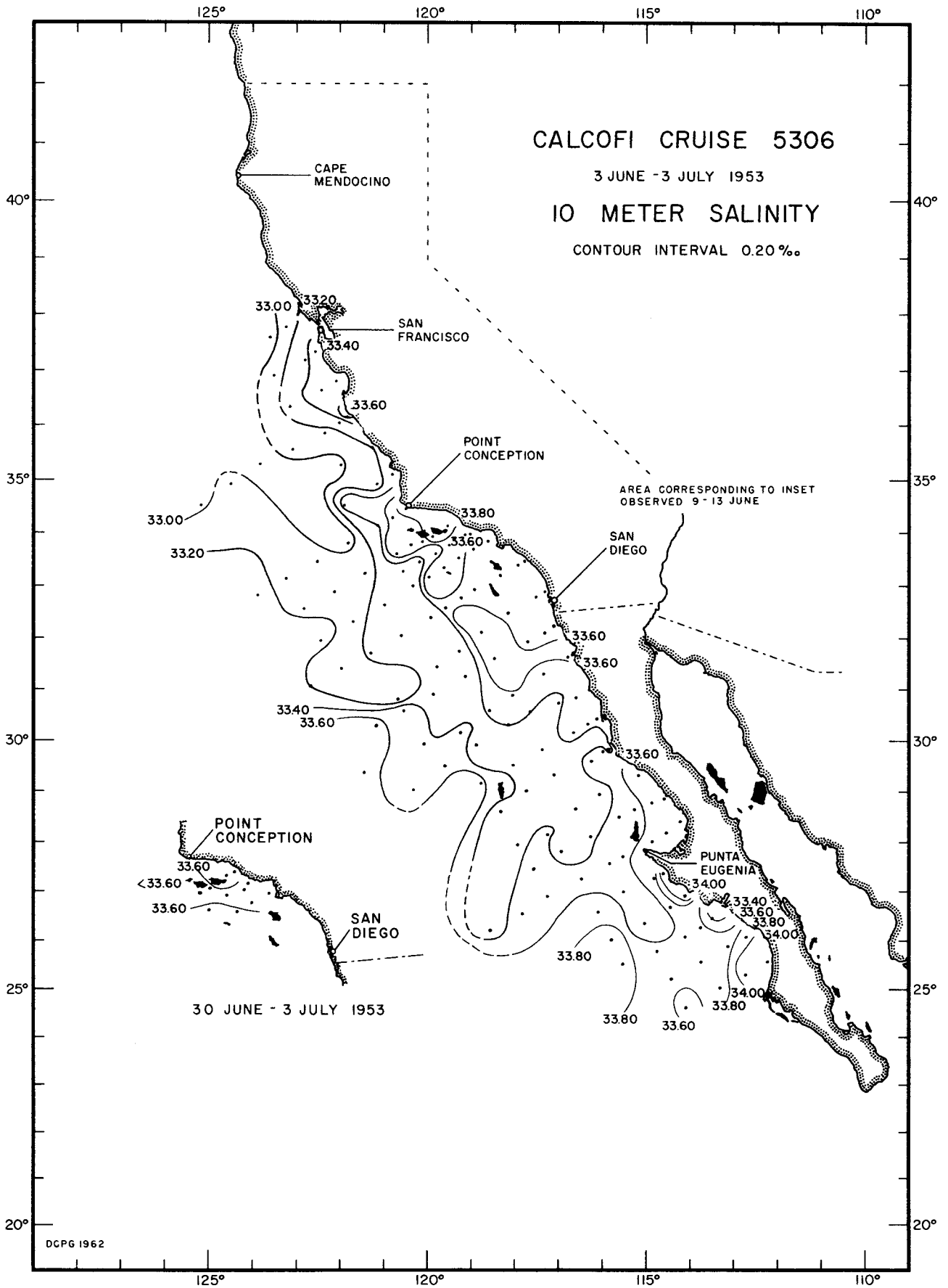


10m S
5304

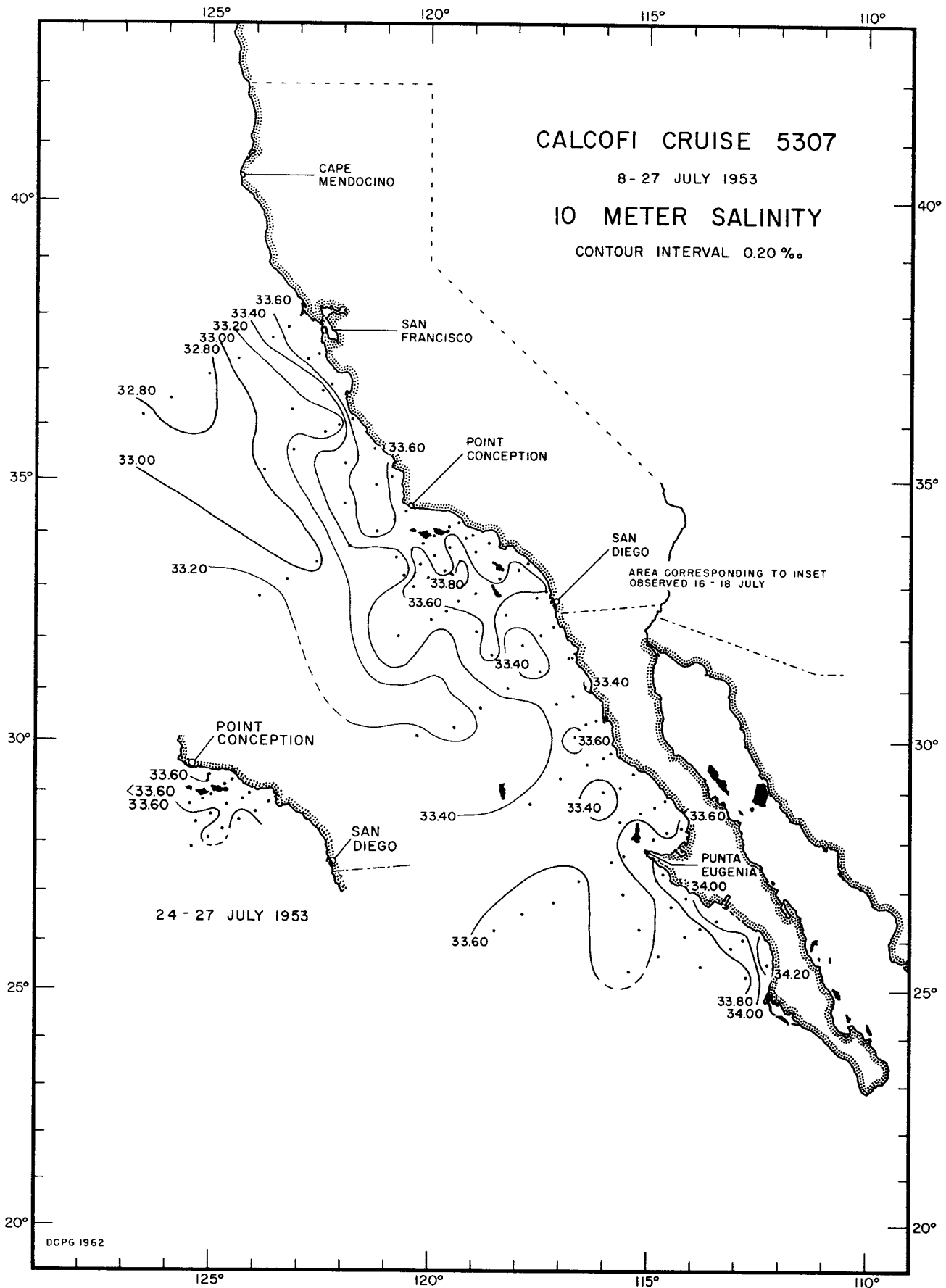


DCPG 1962

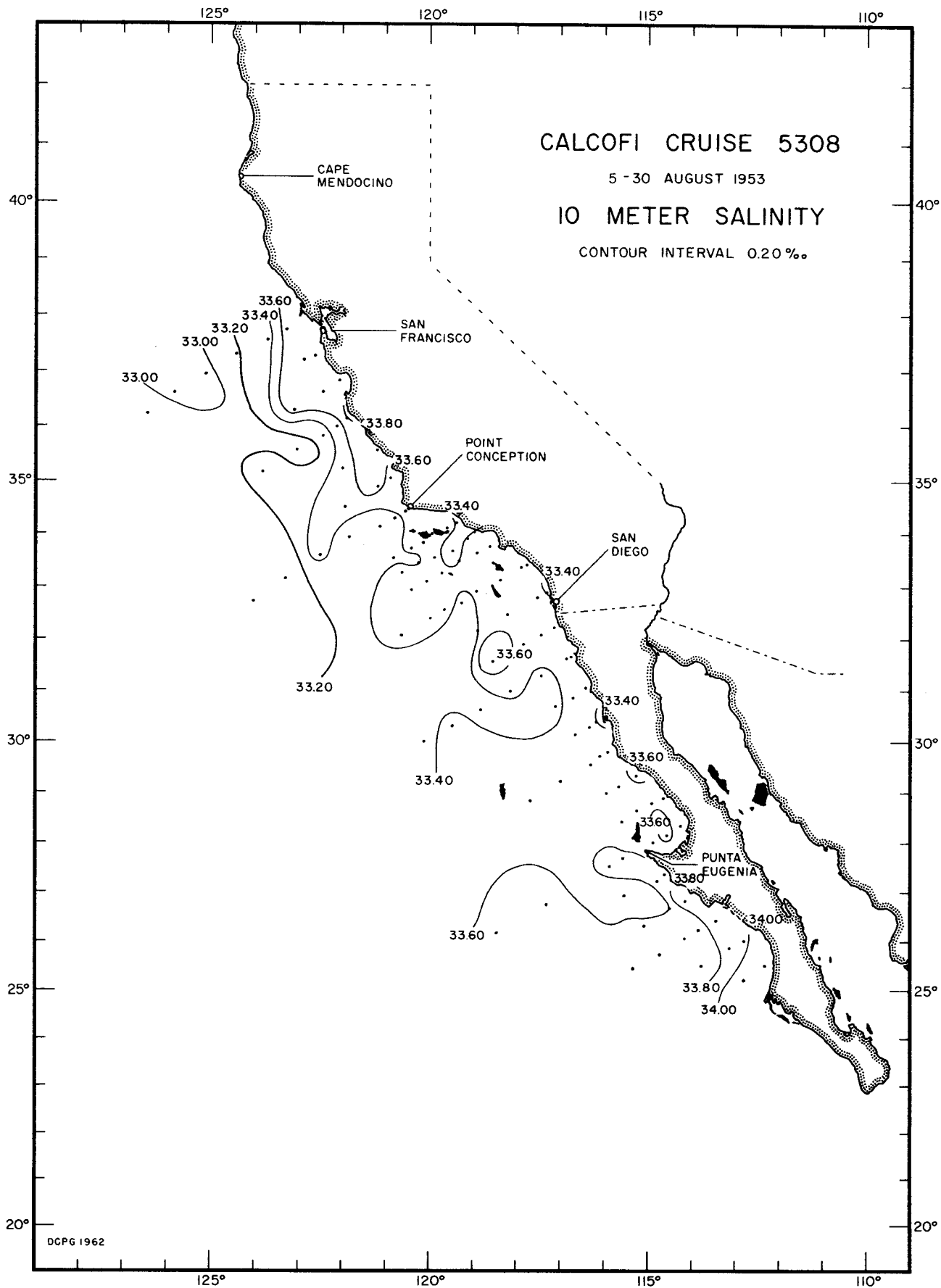
10m S
5305



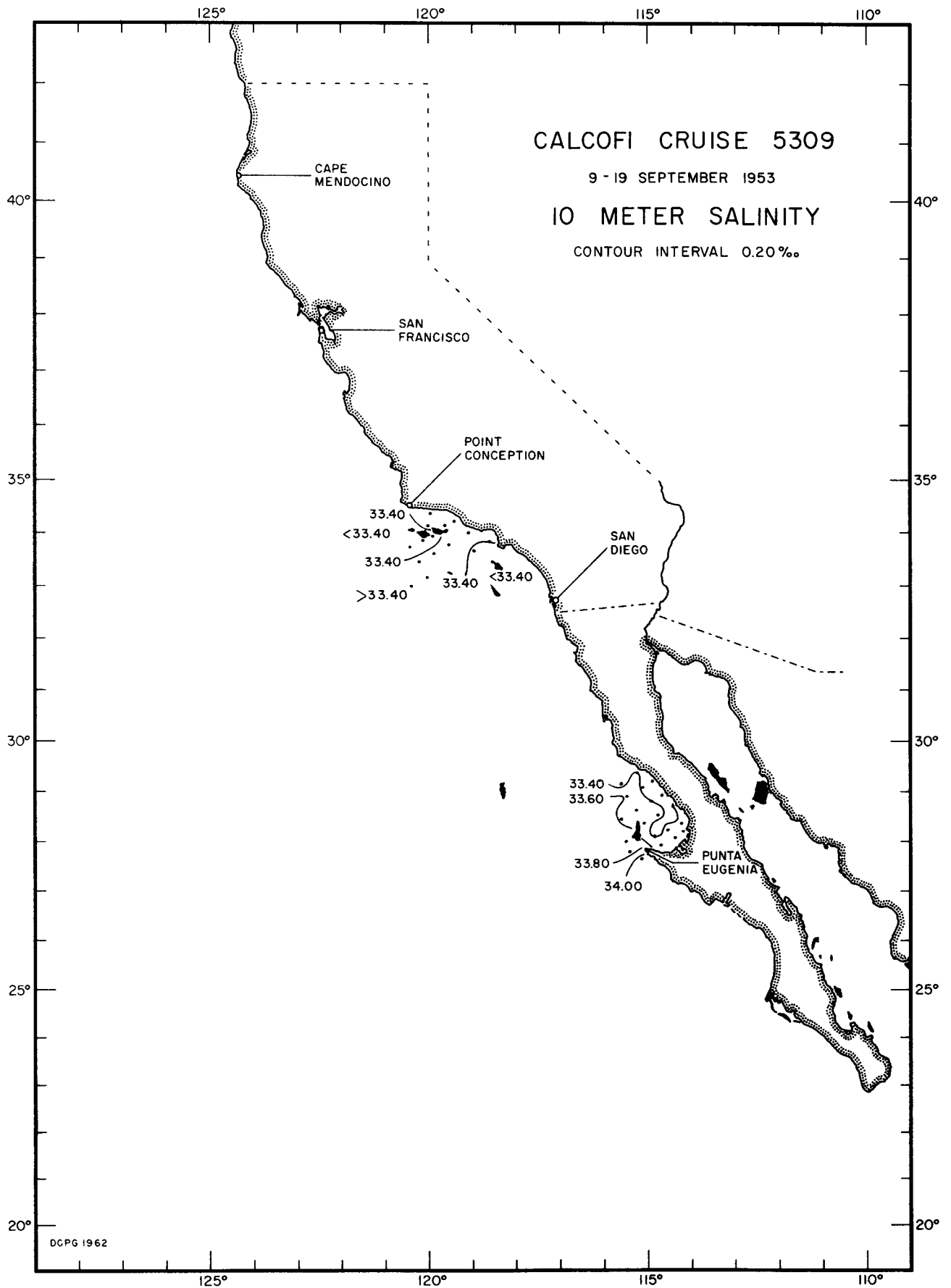
10m S
 5306



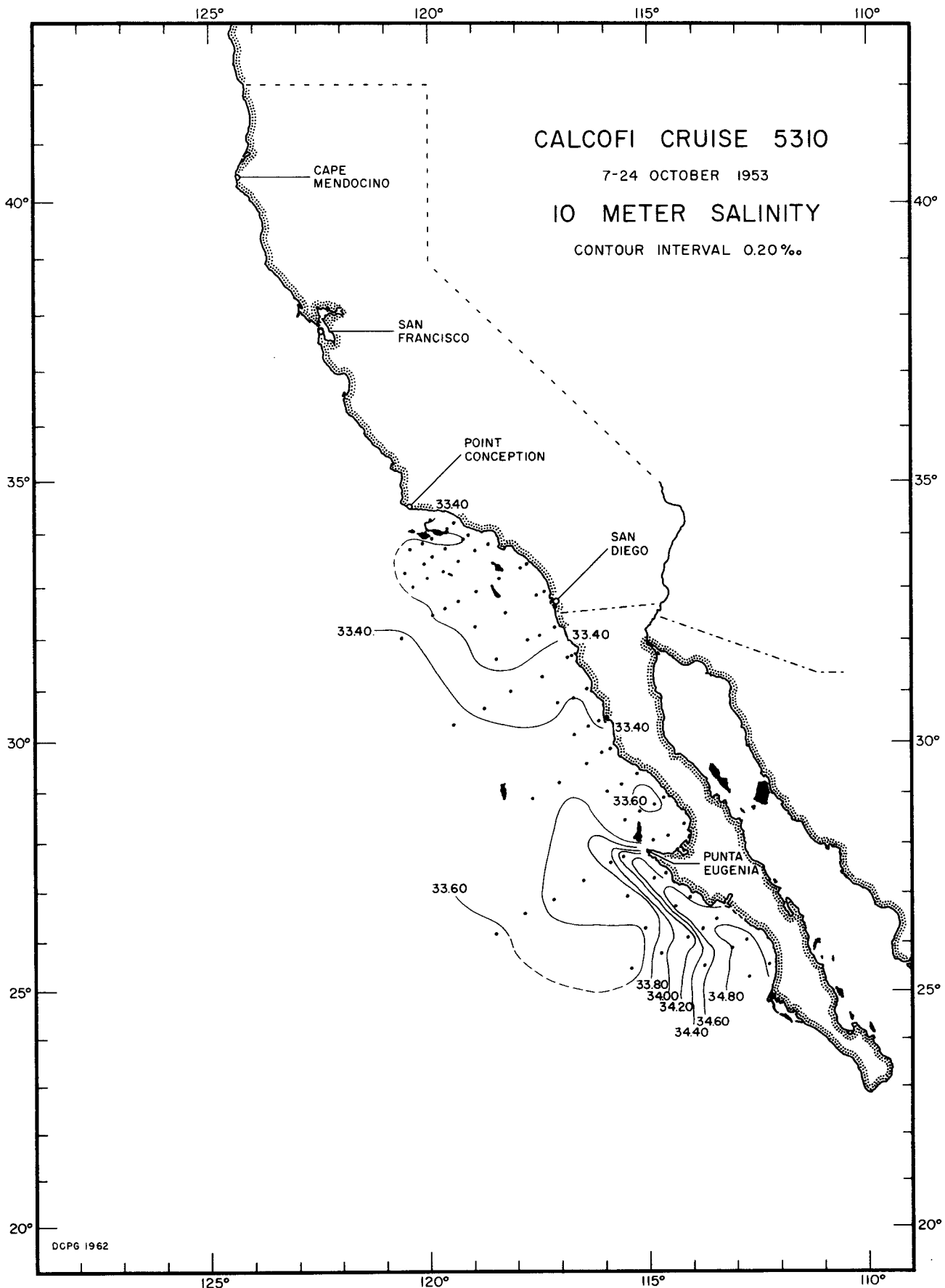
10m S
5307



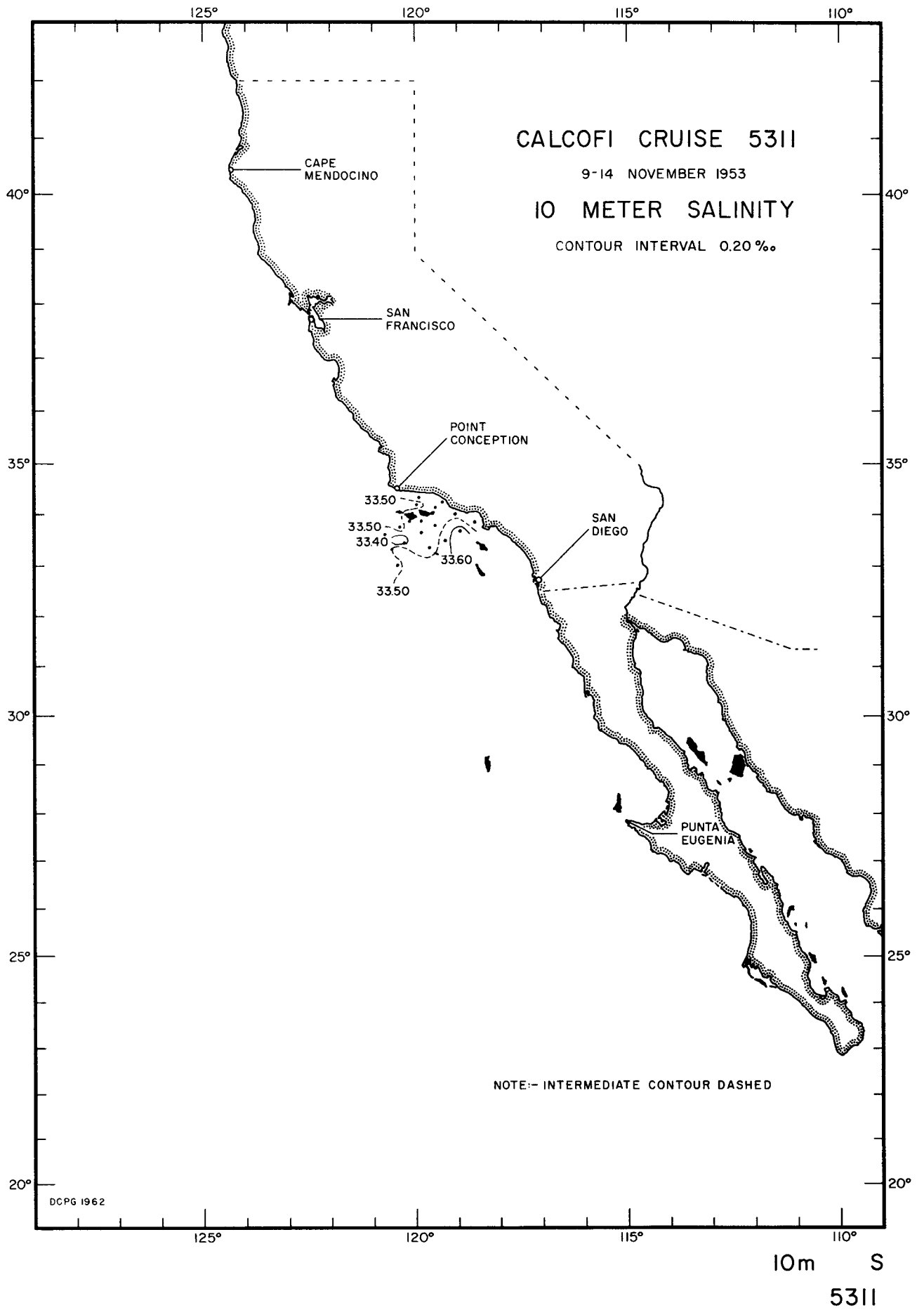
10m S
5308

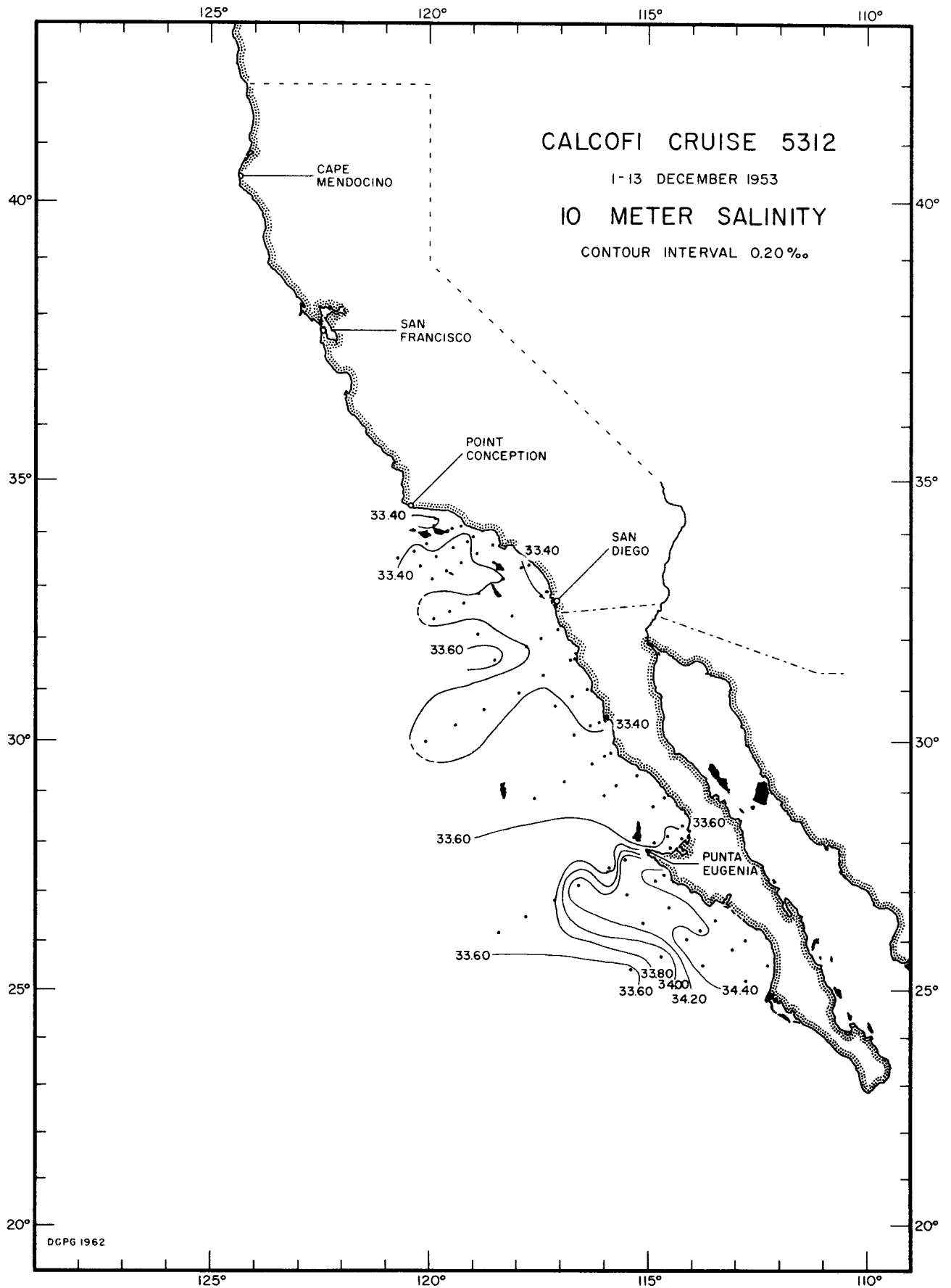


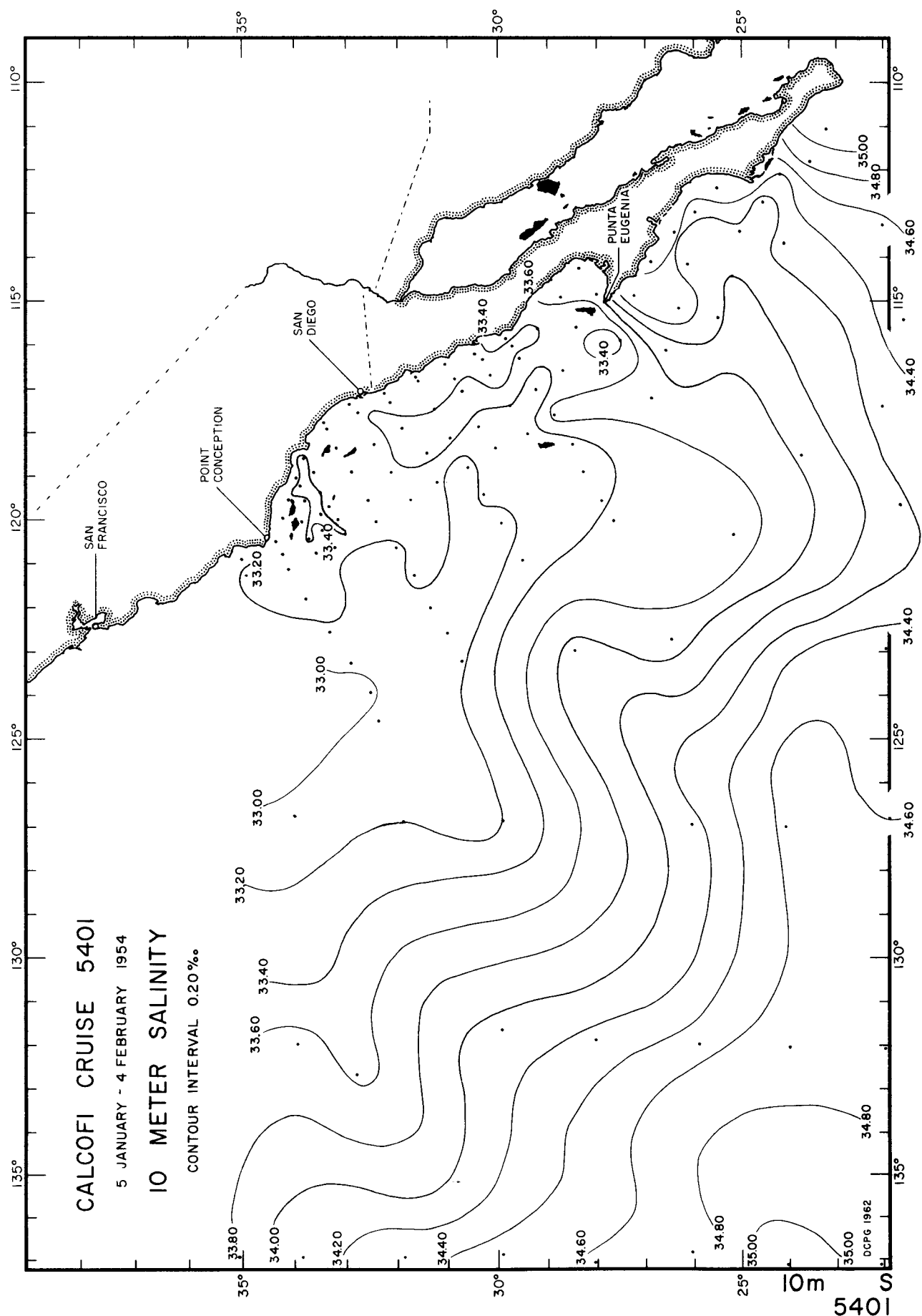
10m S
5309



10m S
5310







CALCOFI CRUISE 5401

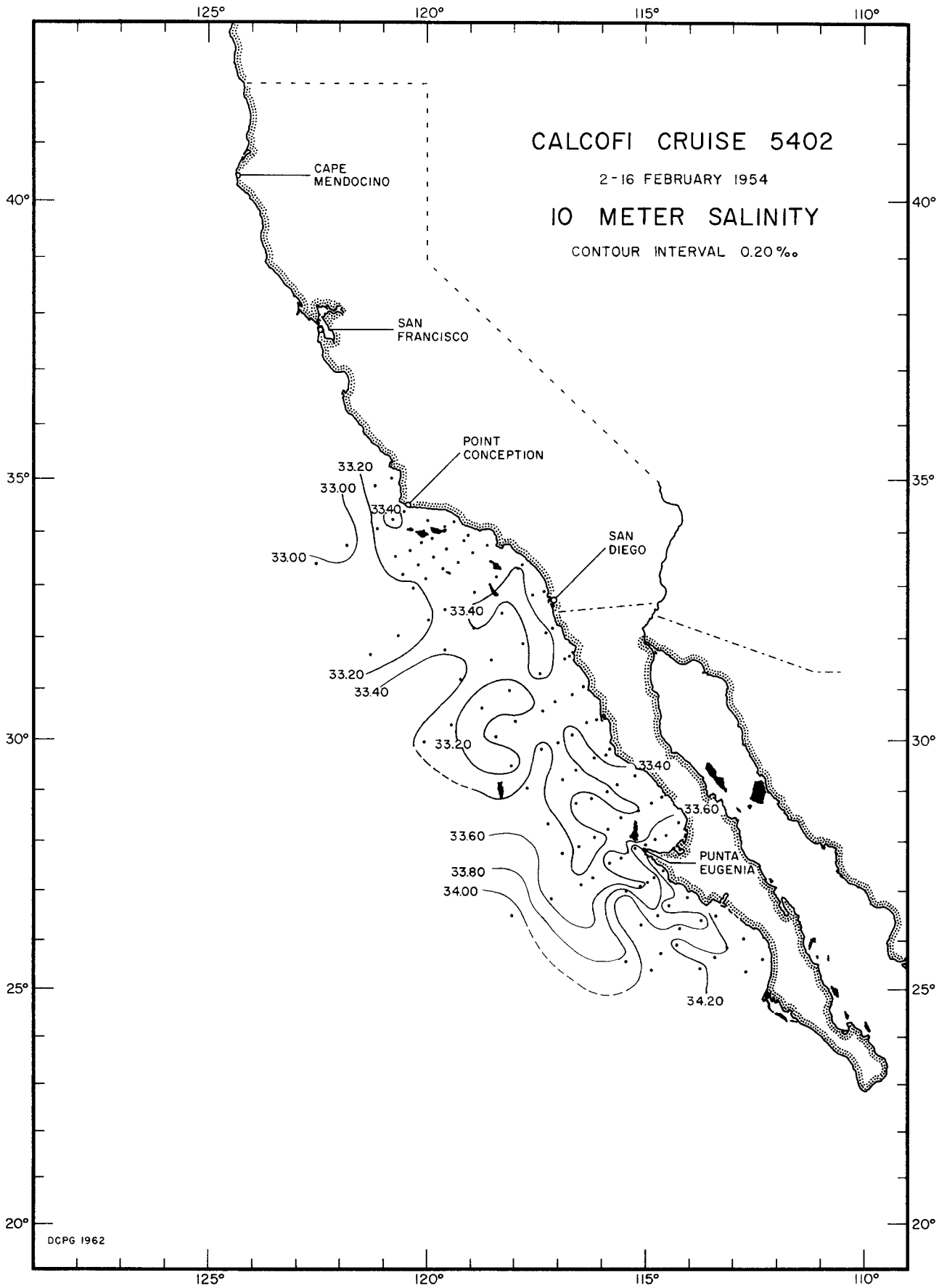
5 JANUARY - 4 FEBRUARY 1954

10 METER SALINITY

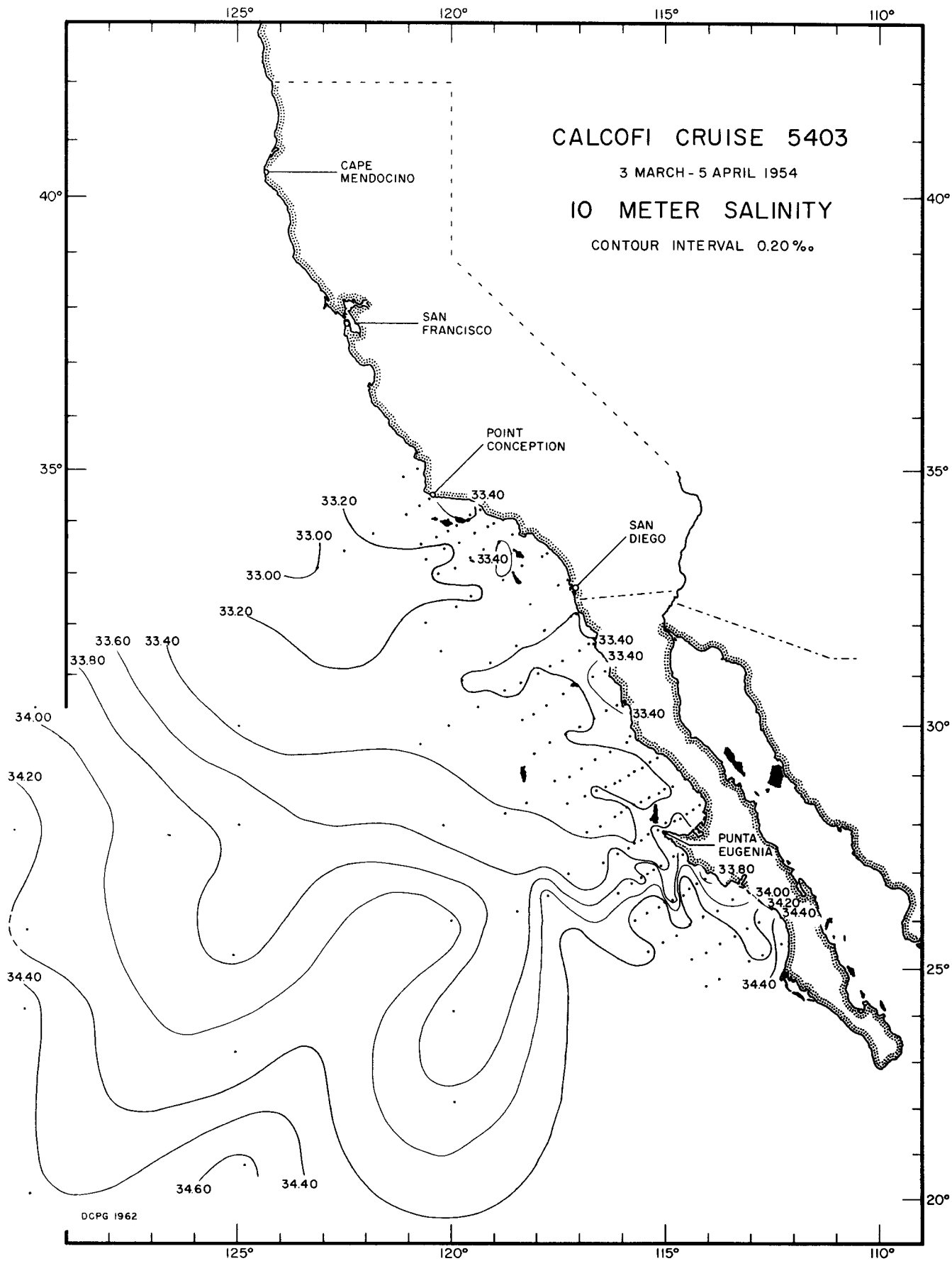
CONTOUR INTERVAL 0.20‰

DCPG 1962

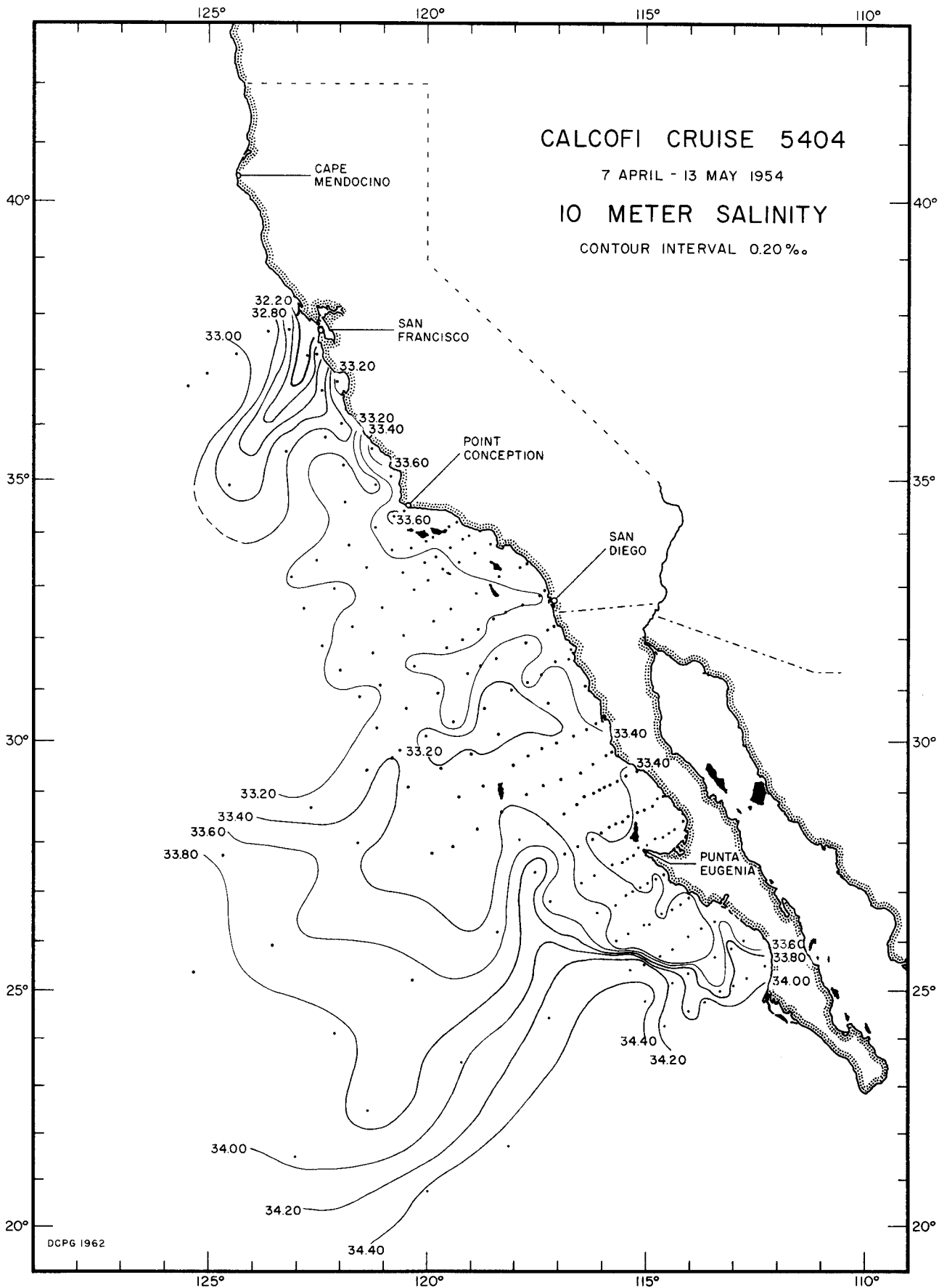
10m S
5401



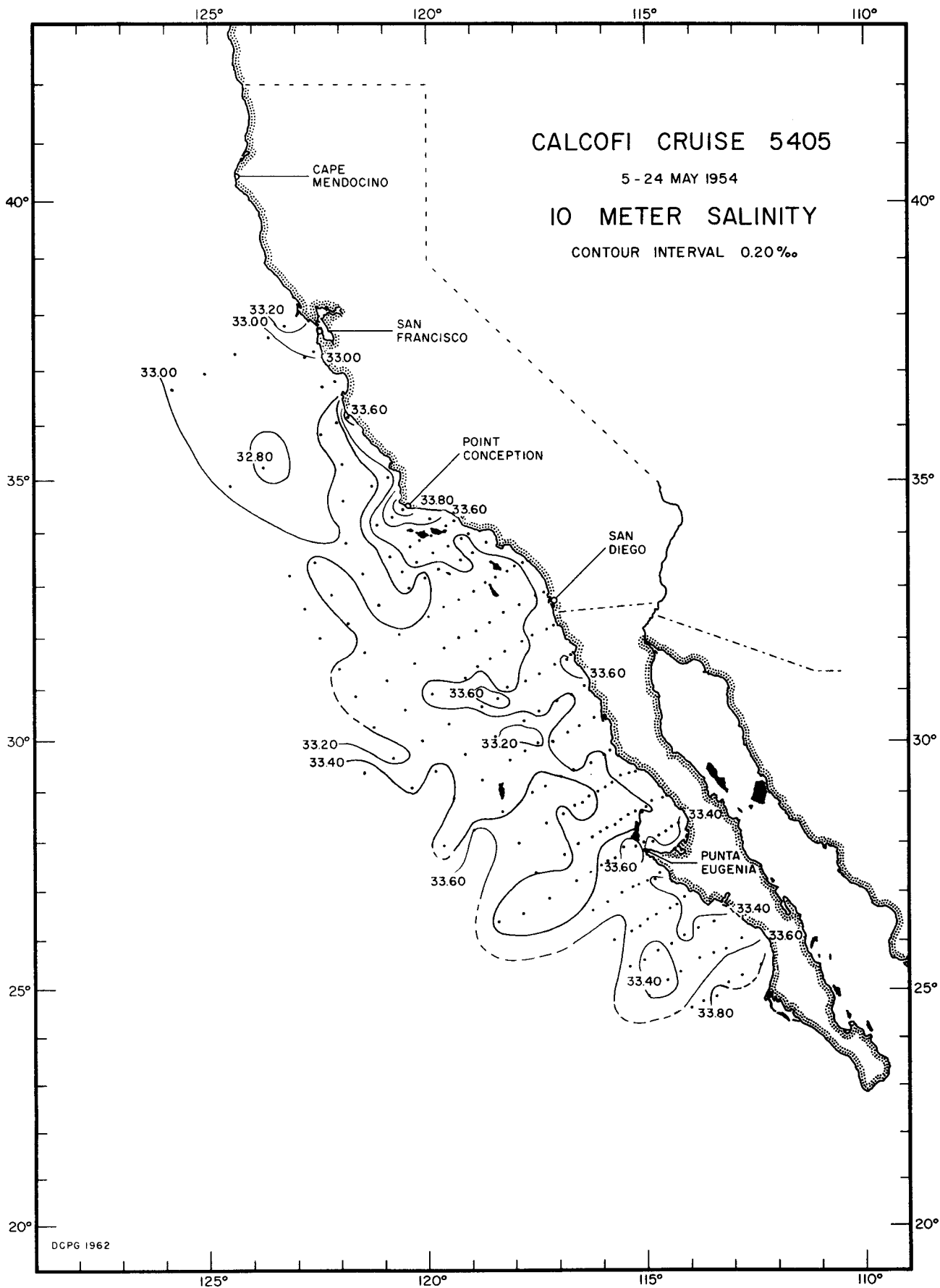
10m S
5402



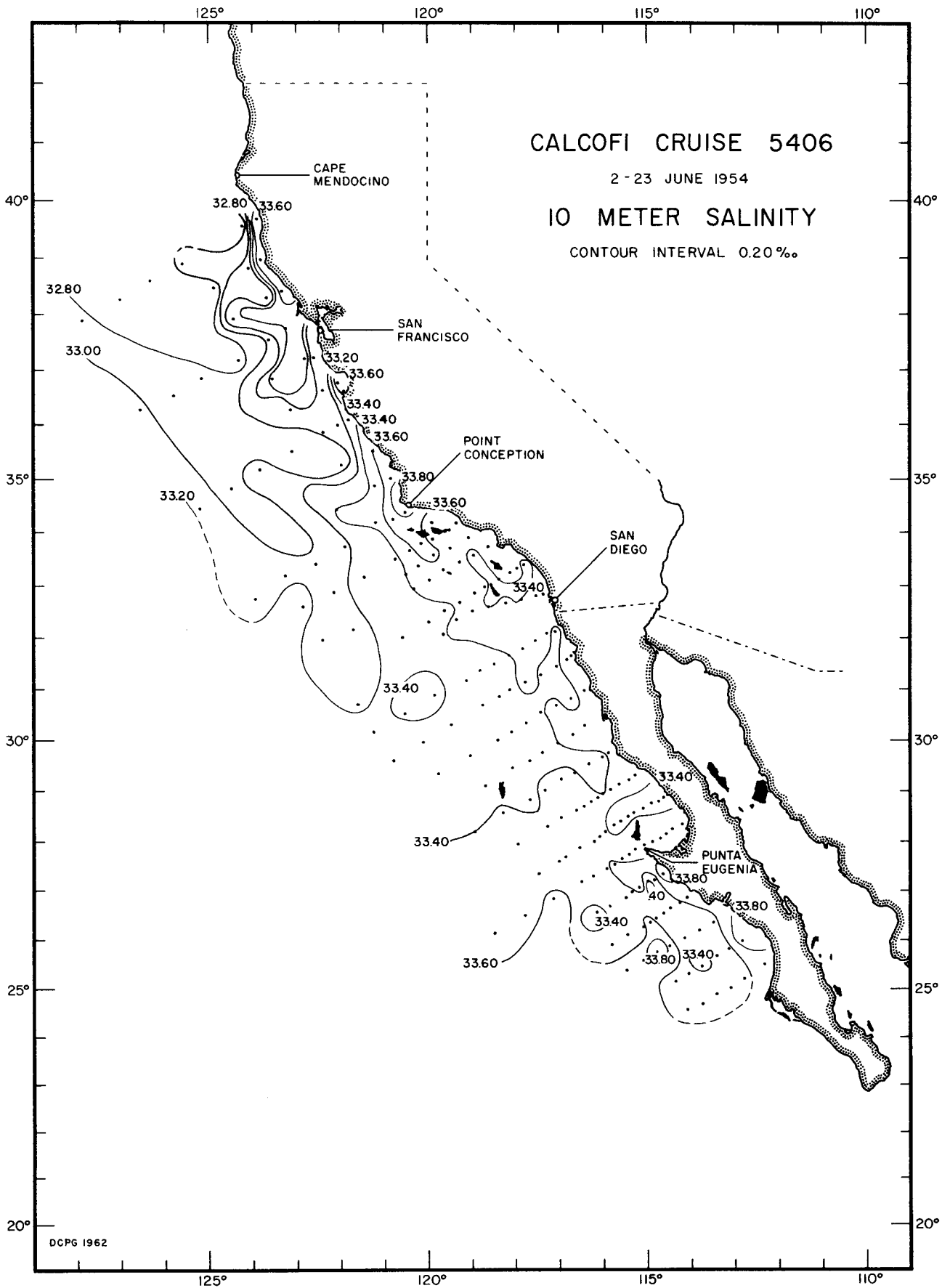
10m S
5403



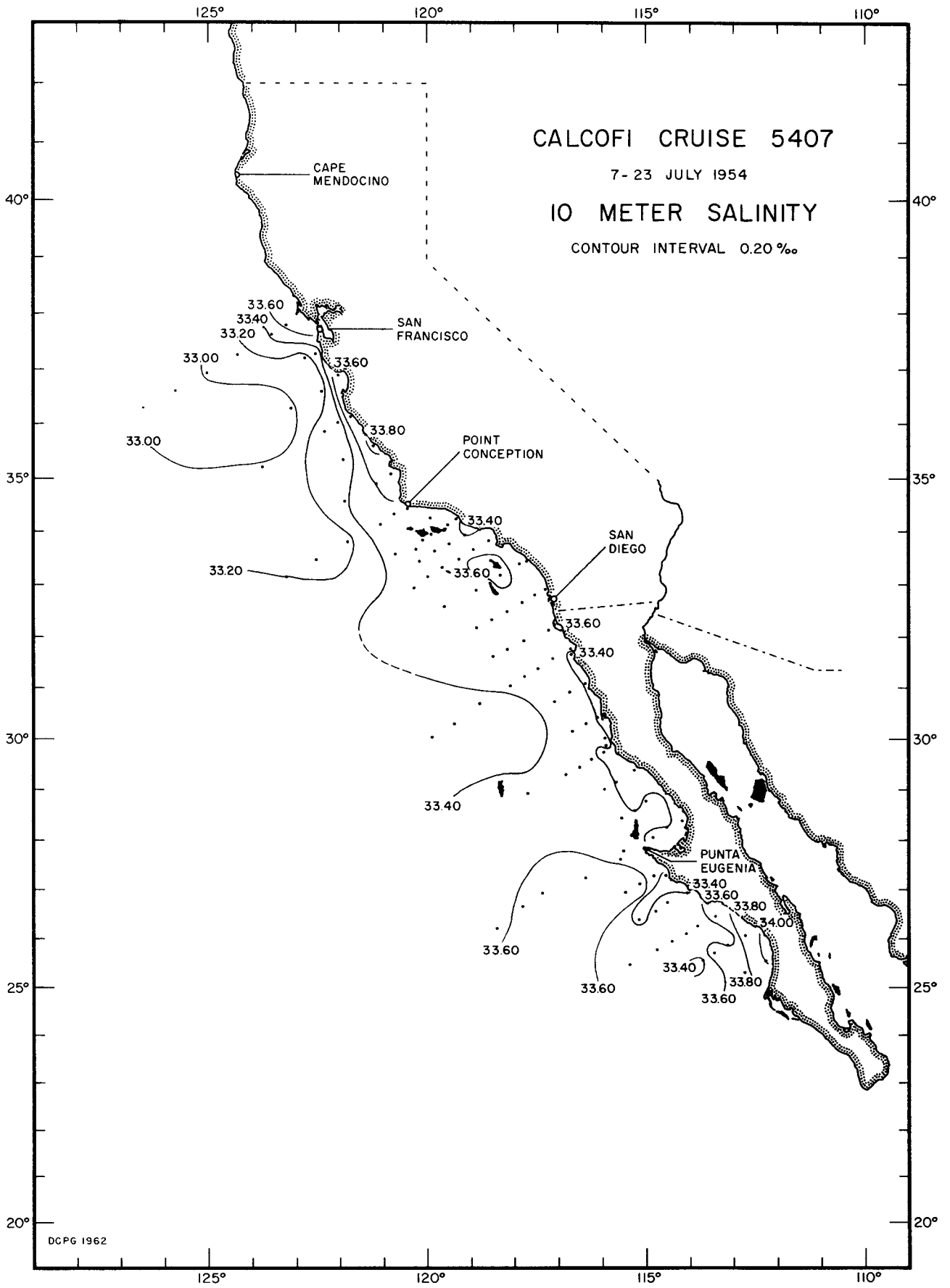
10m S
 5404



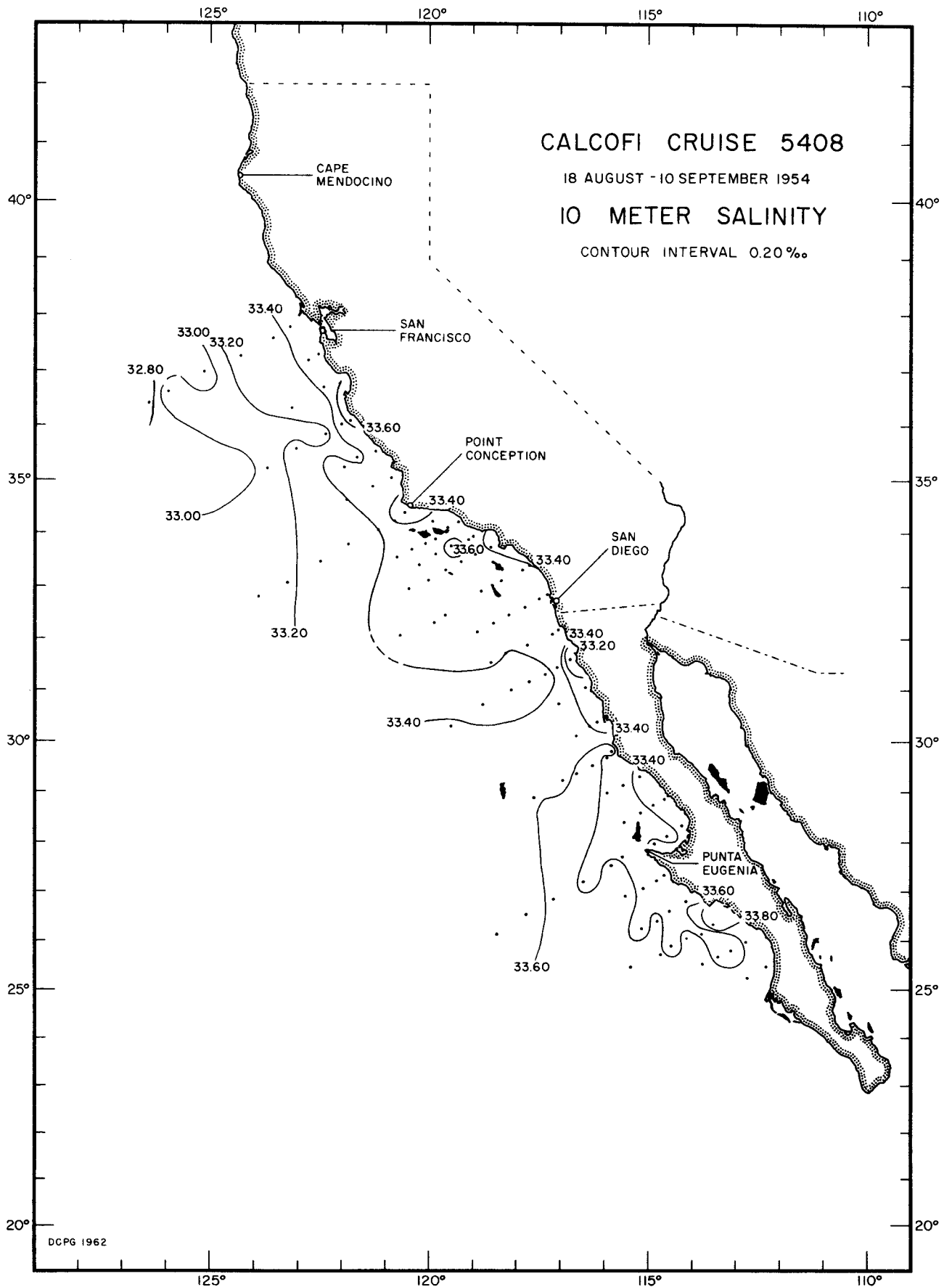
10m S
5405



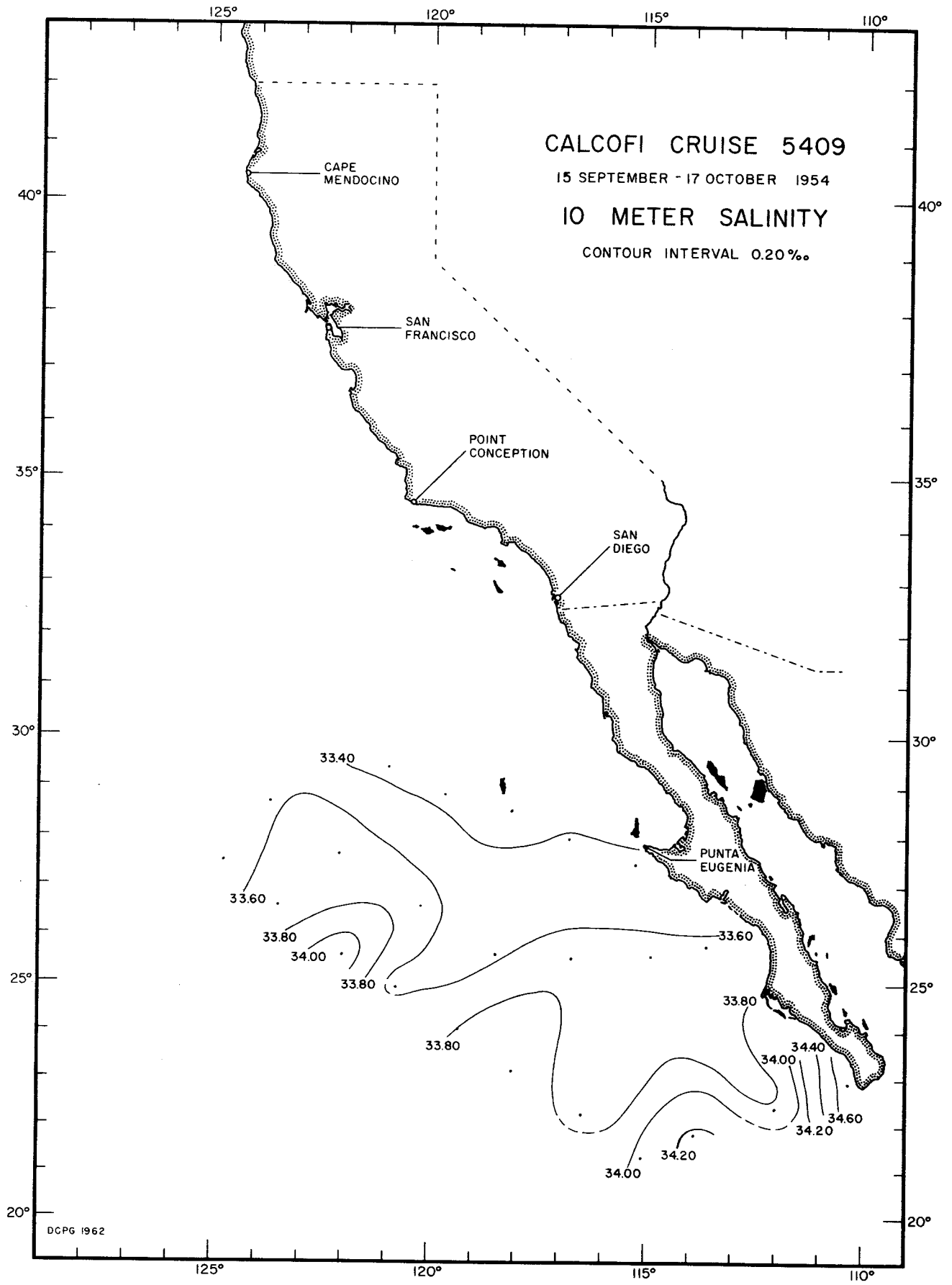
10m S
5406



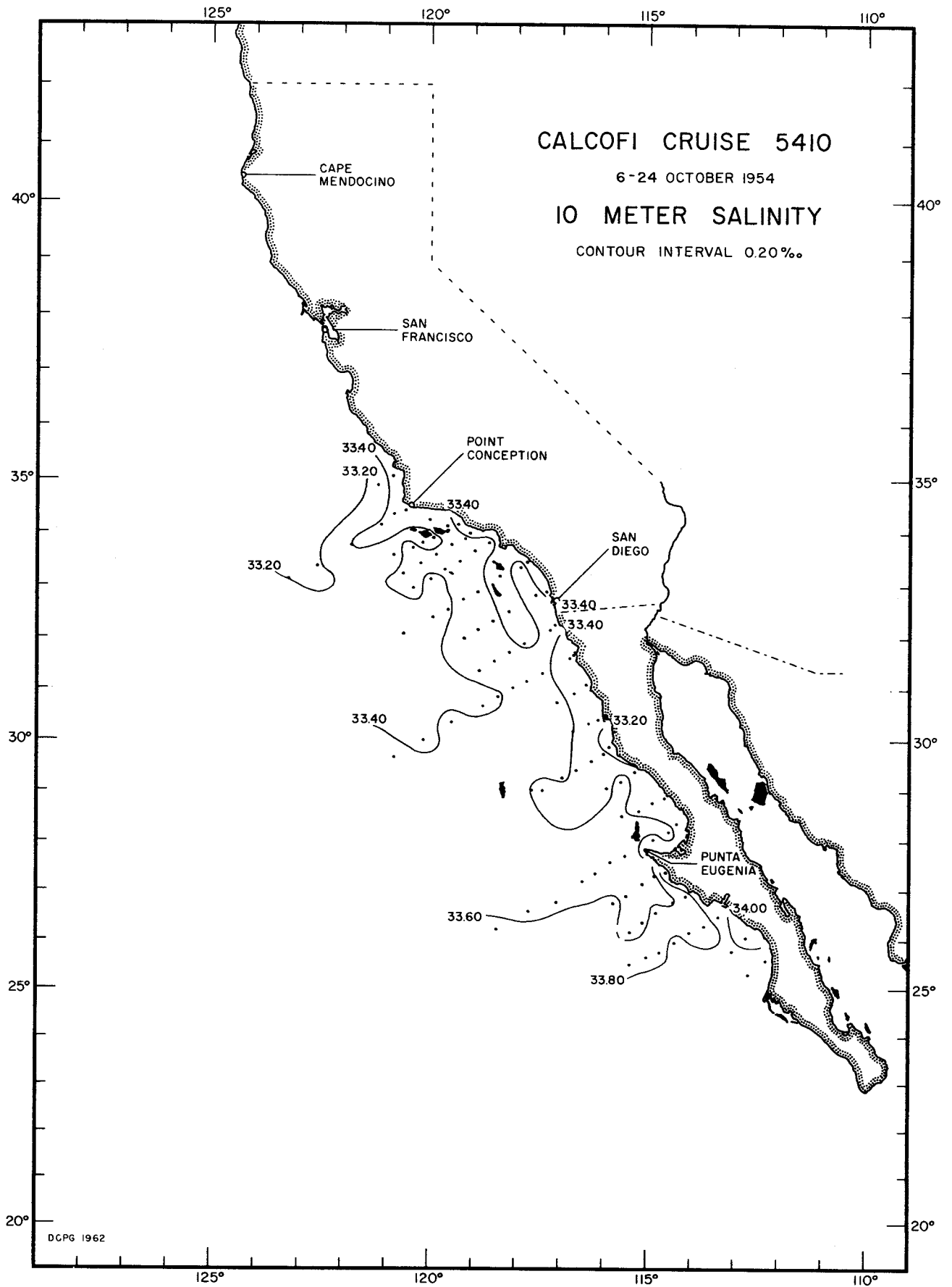
10m S
5407



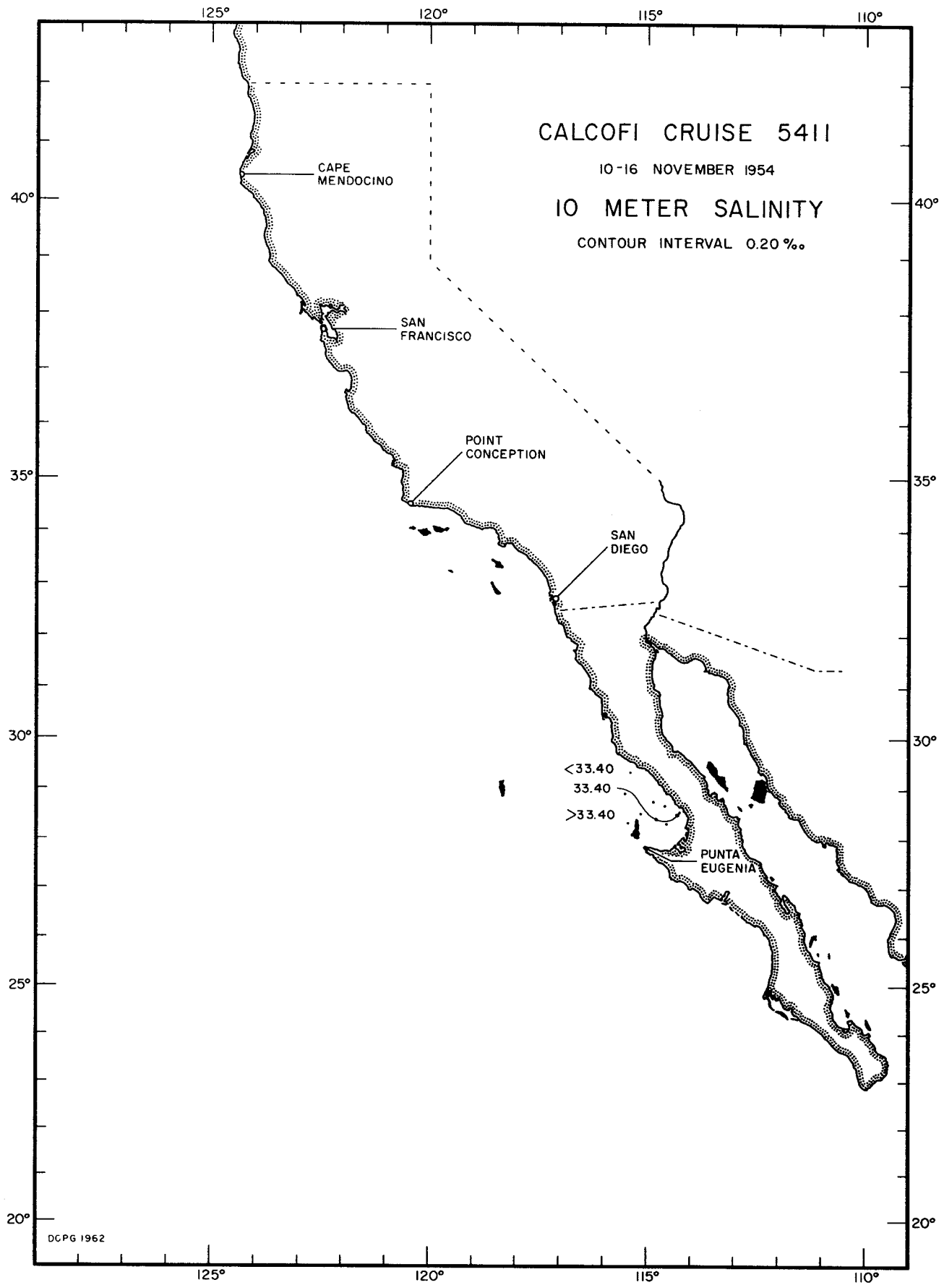
10m S
5408

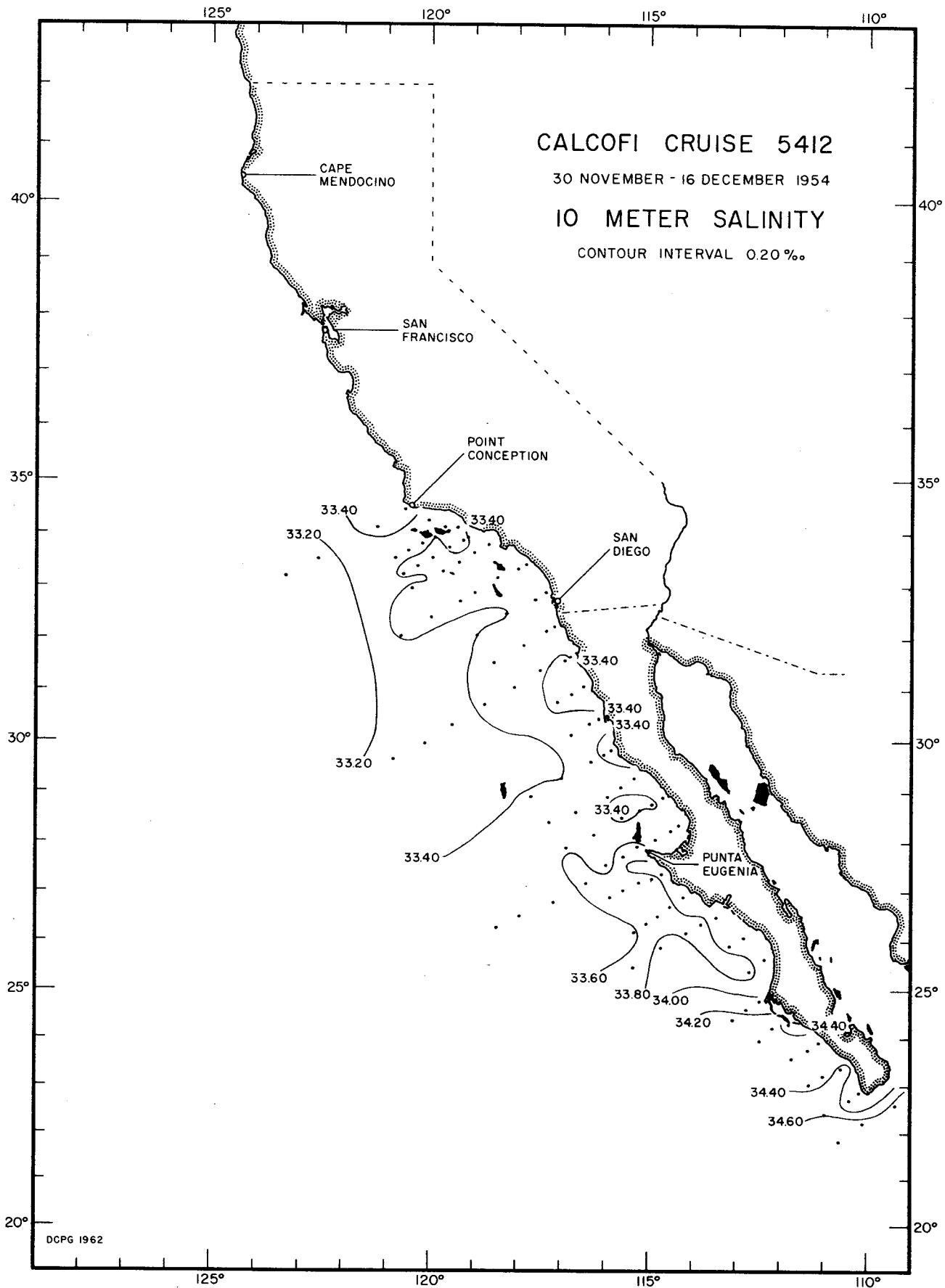


10m S
5409

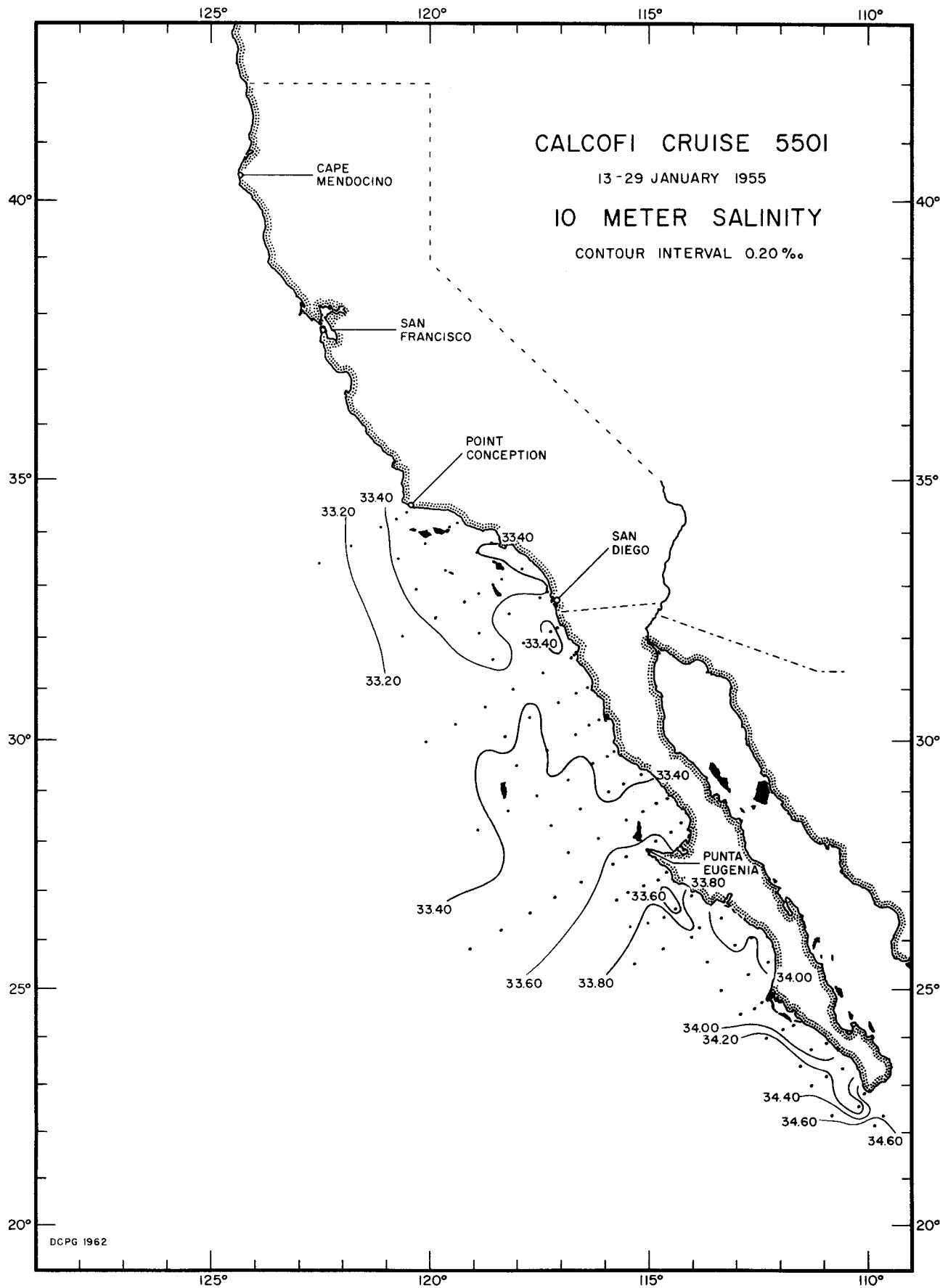


10m S
5410

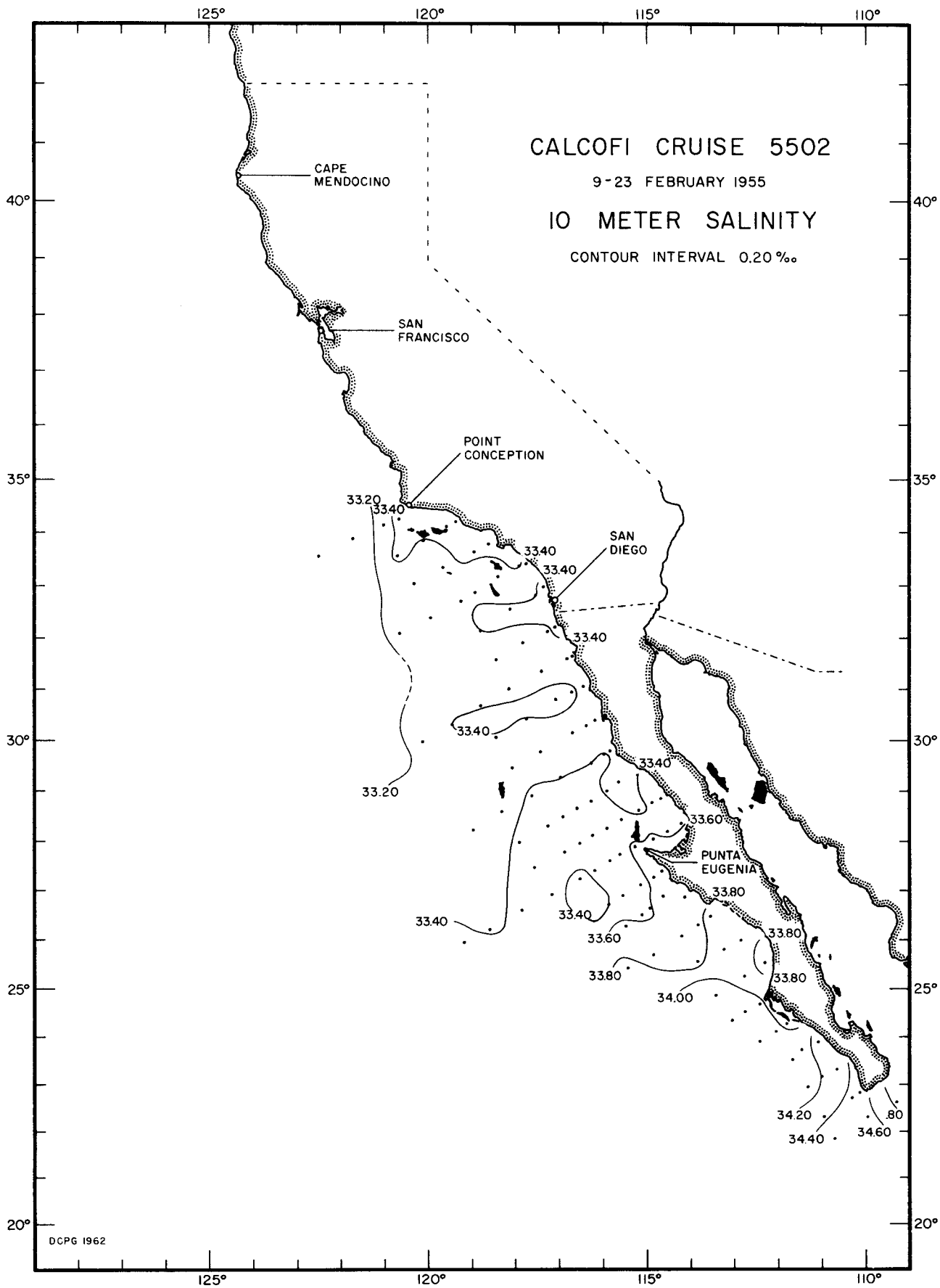




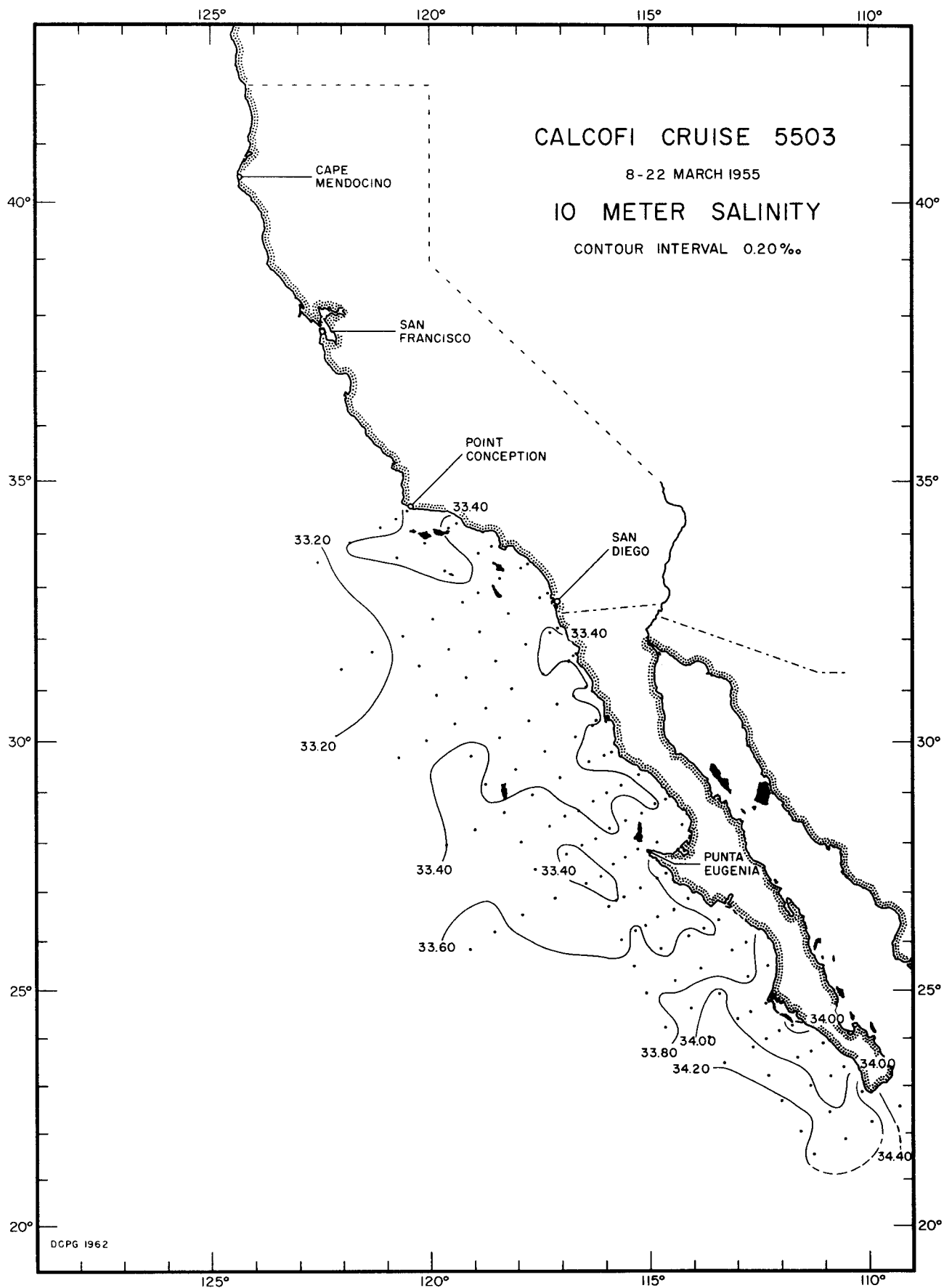
10m S
5412



10m S
5501



10m S
5502



CALCOFI CRUISE 5503

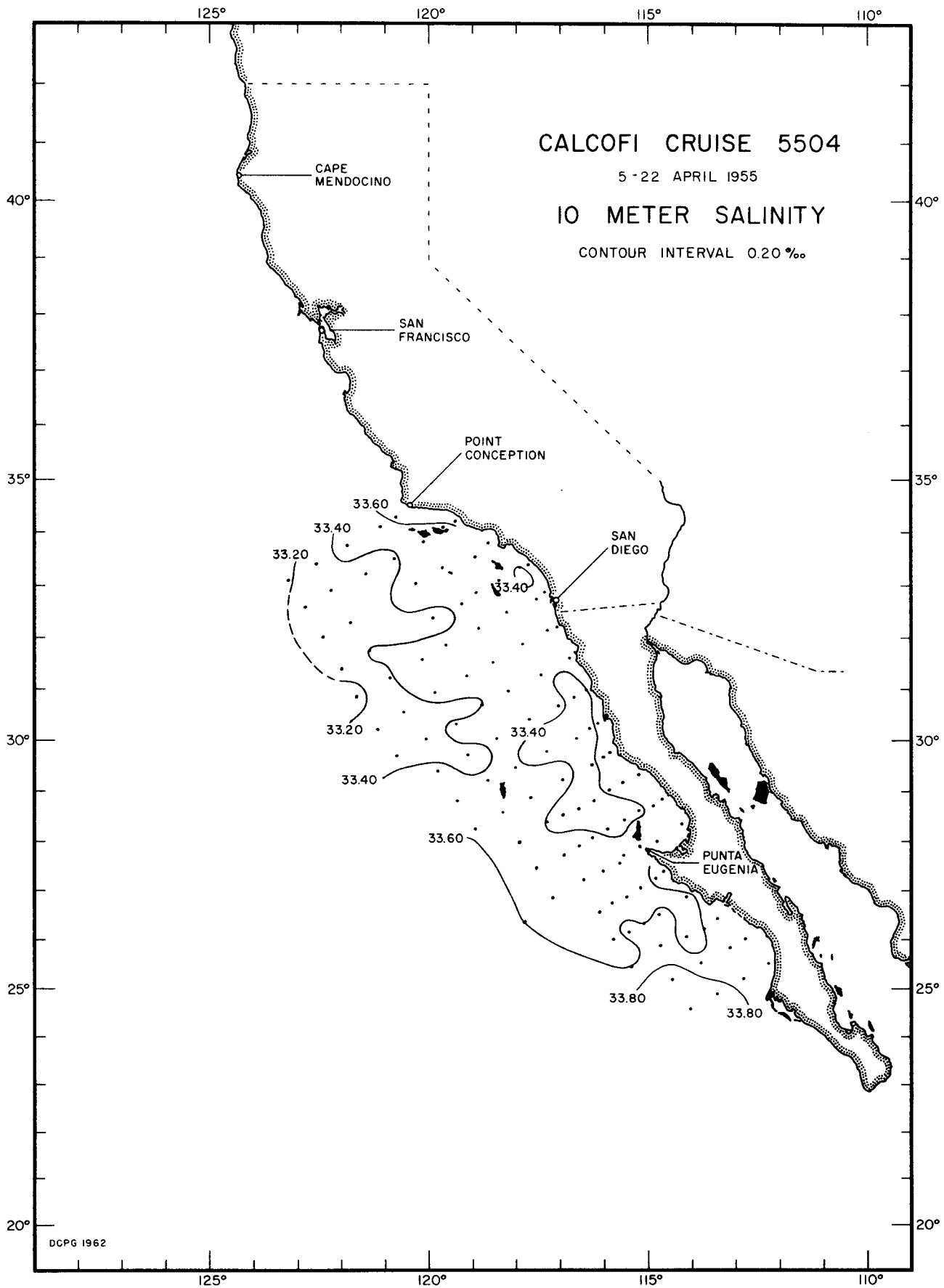
8-22 MARCH 1955

10 METER SALINITY

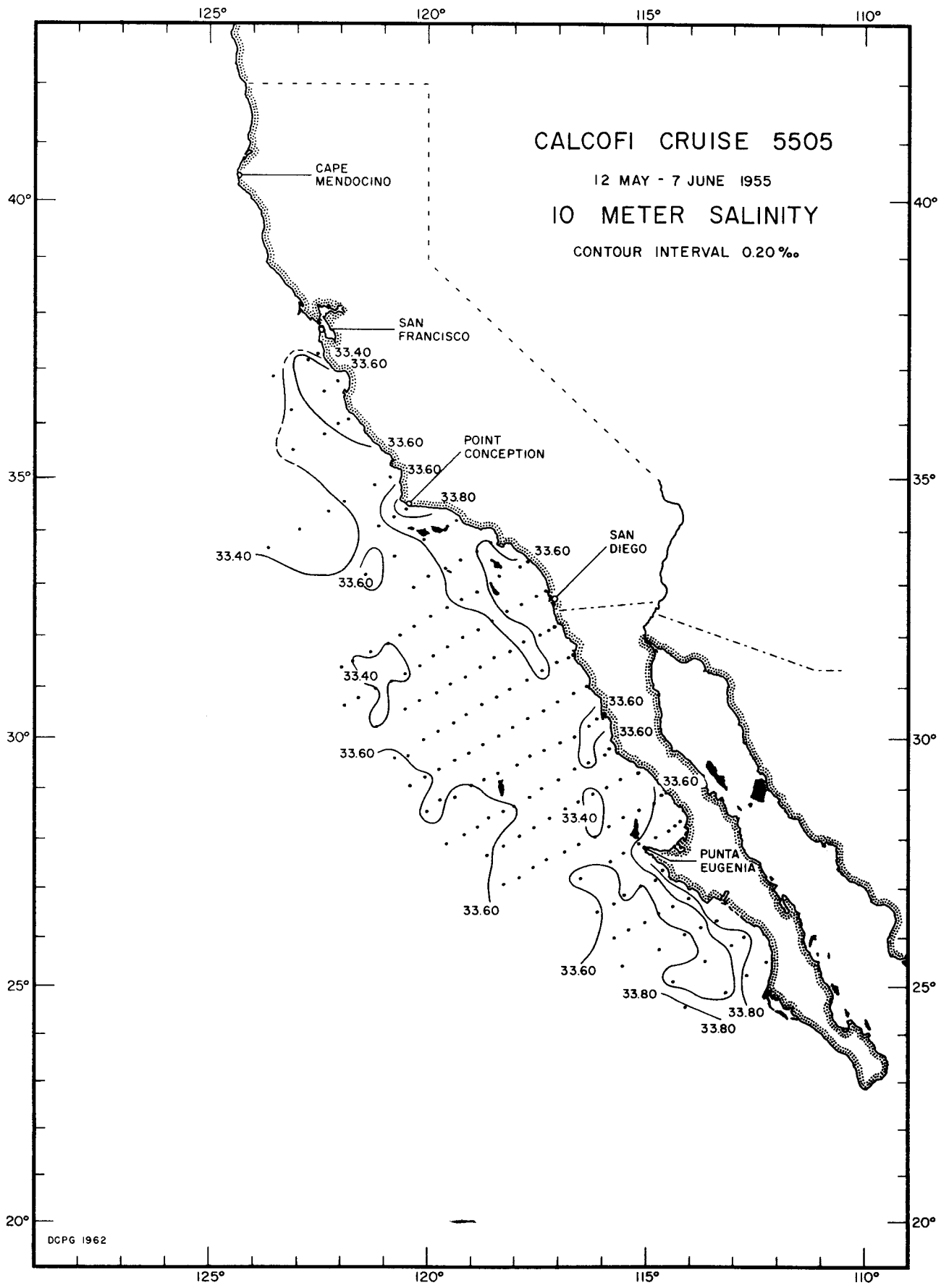
CONTOUR INTERVAL 0.20‰

DCPG 1962

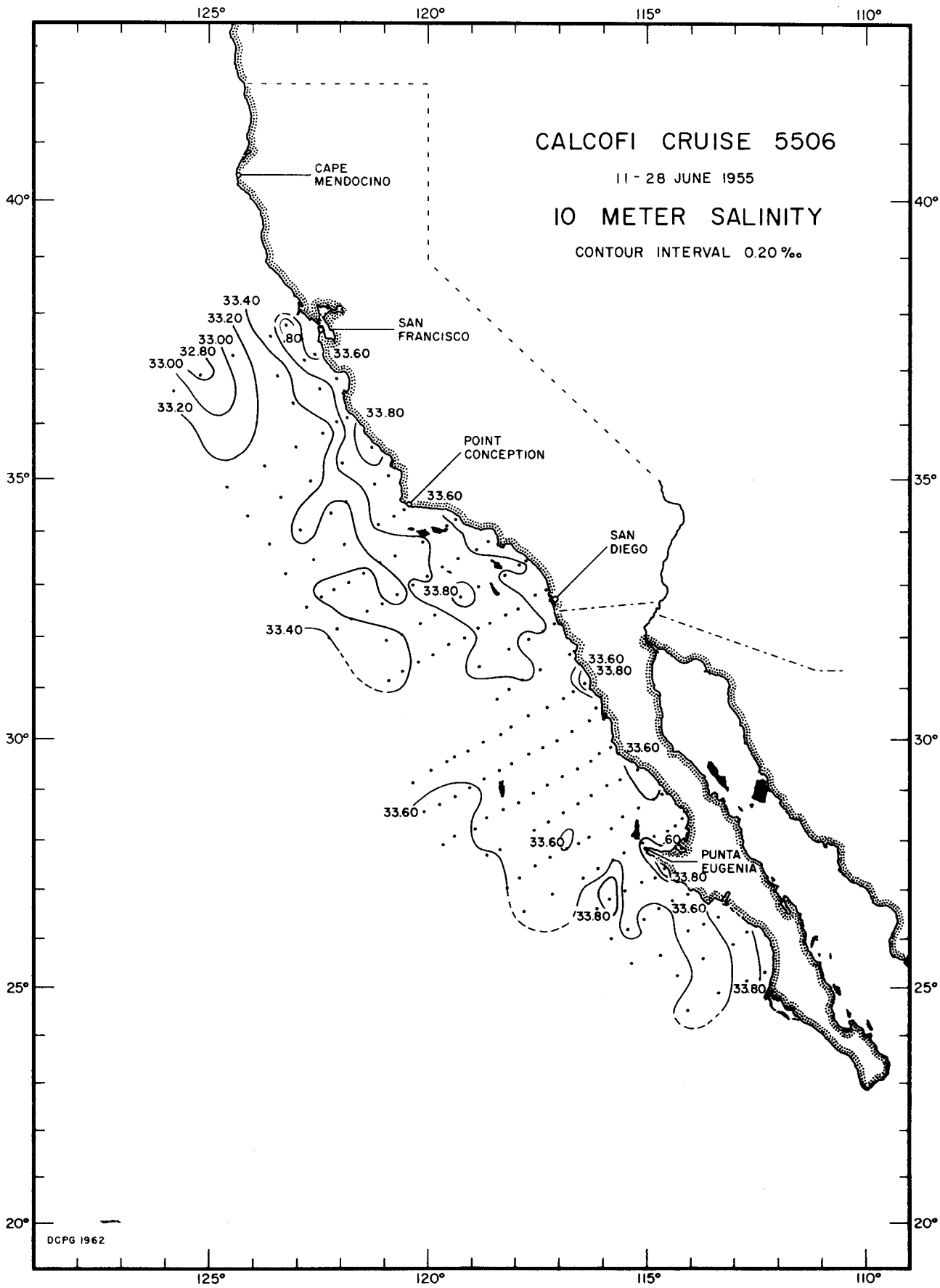
10m S
5503



10m S
5504



10m S
5505



CALCOFI CRUISE 5506

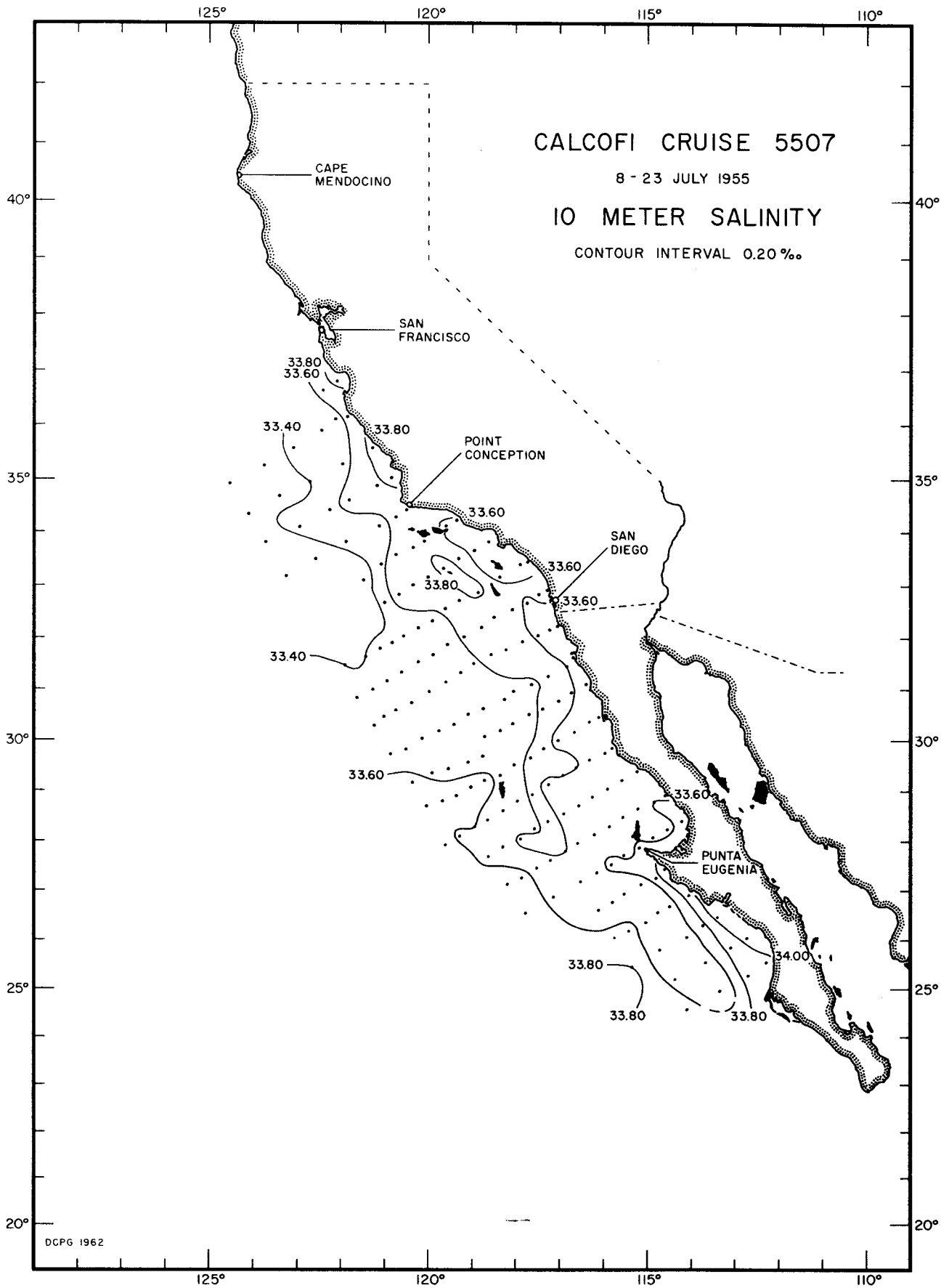
11 - 28 JUNE 1955

10 METER SALINITY

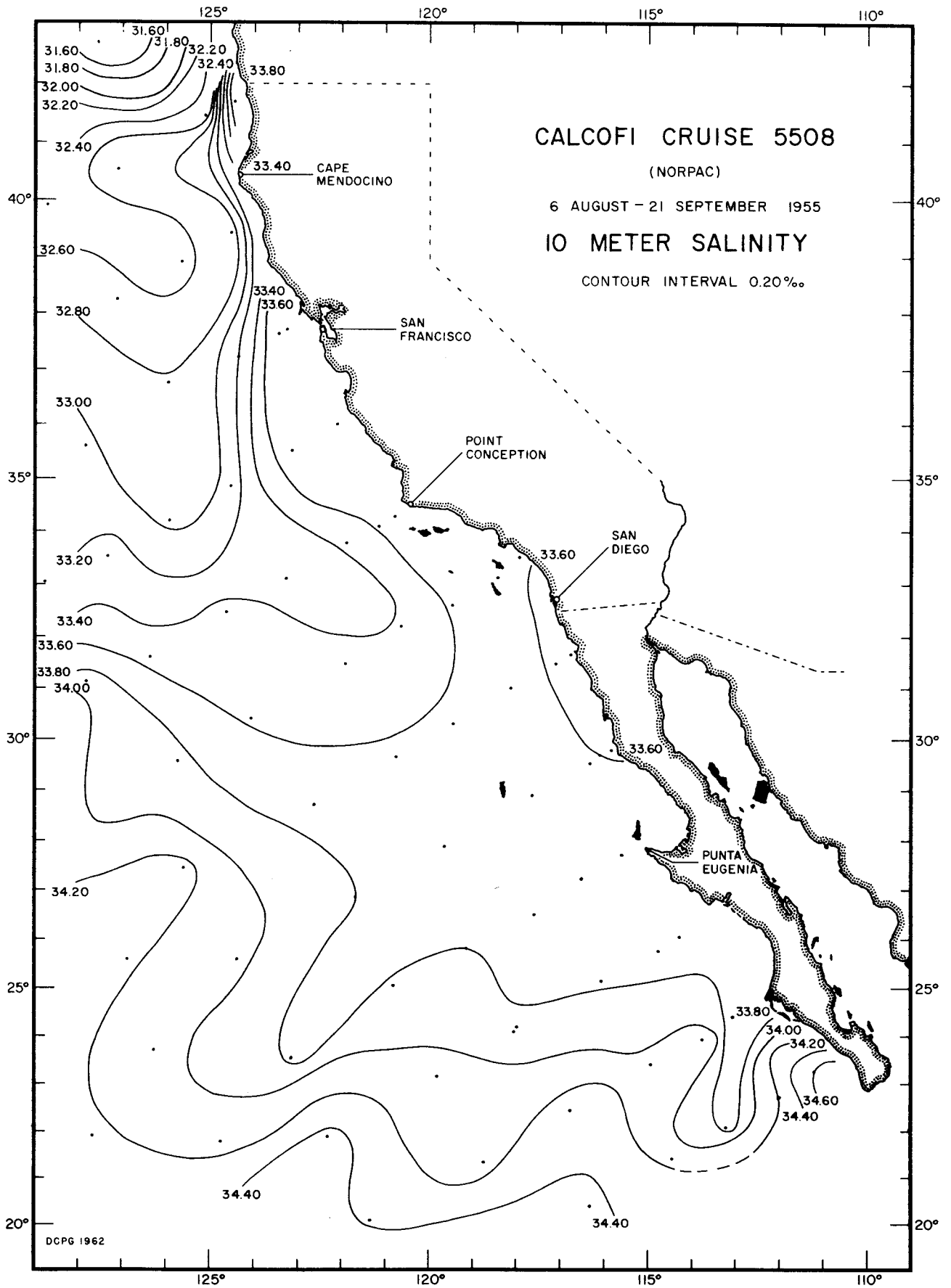
CONTOUR INTERVAL 0.20 ‰

DCPG 1962

10m S
5506



10m S
5507



10m S
5508

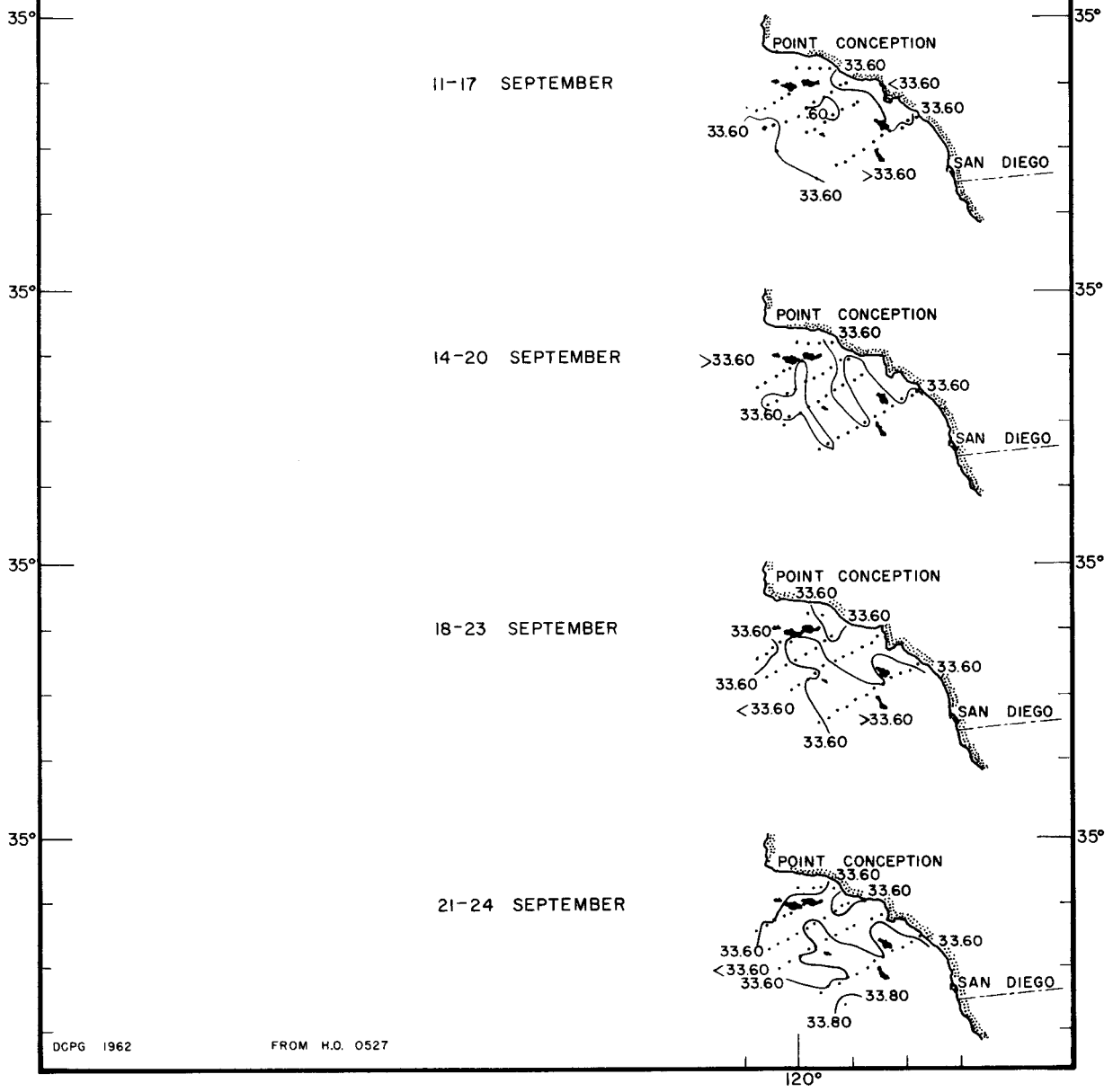
120°

CALCOFI CRUISE 5509

11-24 SEPTEMBER 1955

10 METER SALINITY

CONTOUR INTERVAL 0.20‰

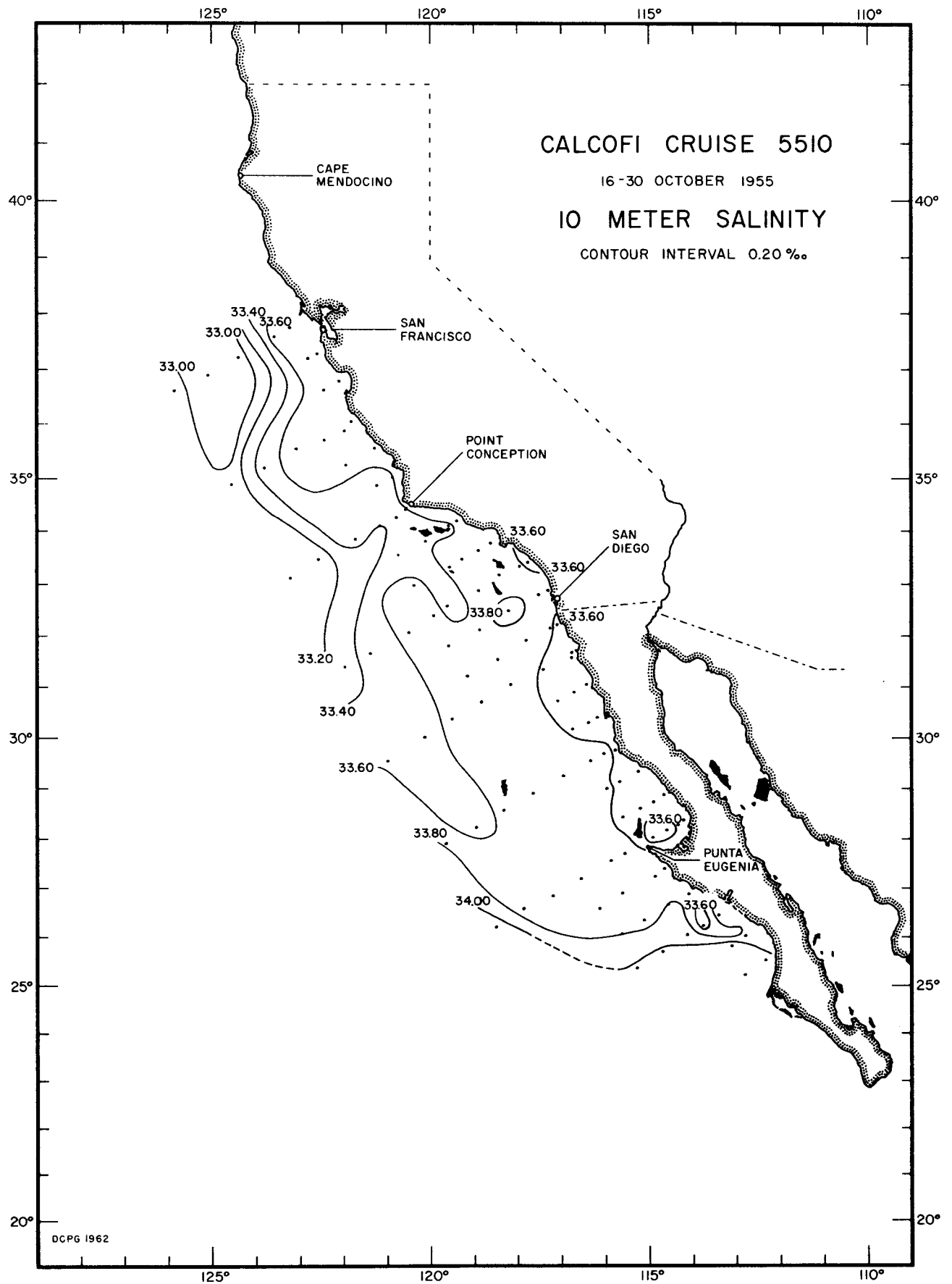


DCPG 1962

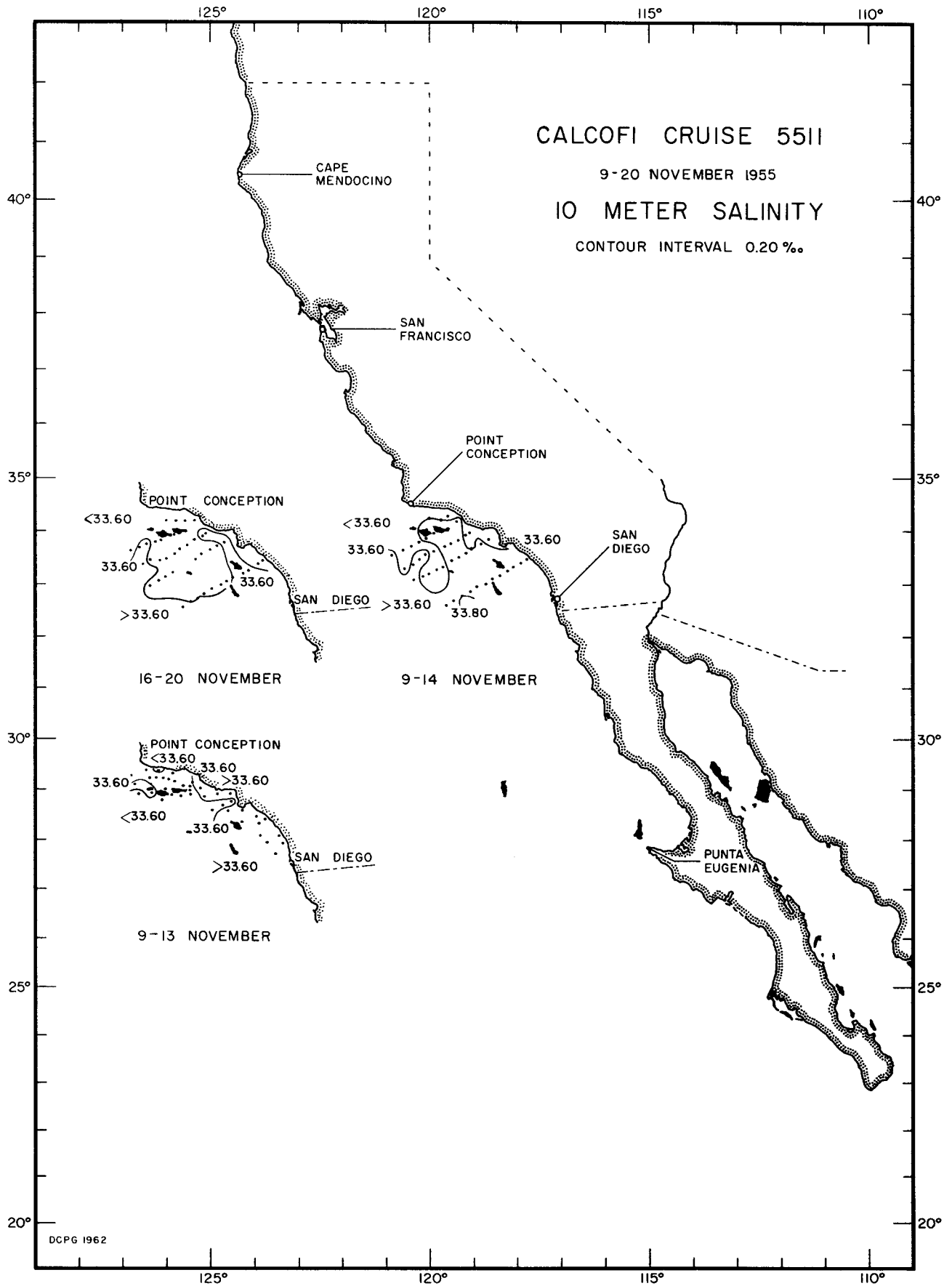
FROM H.O. 0527

120°

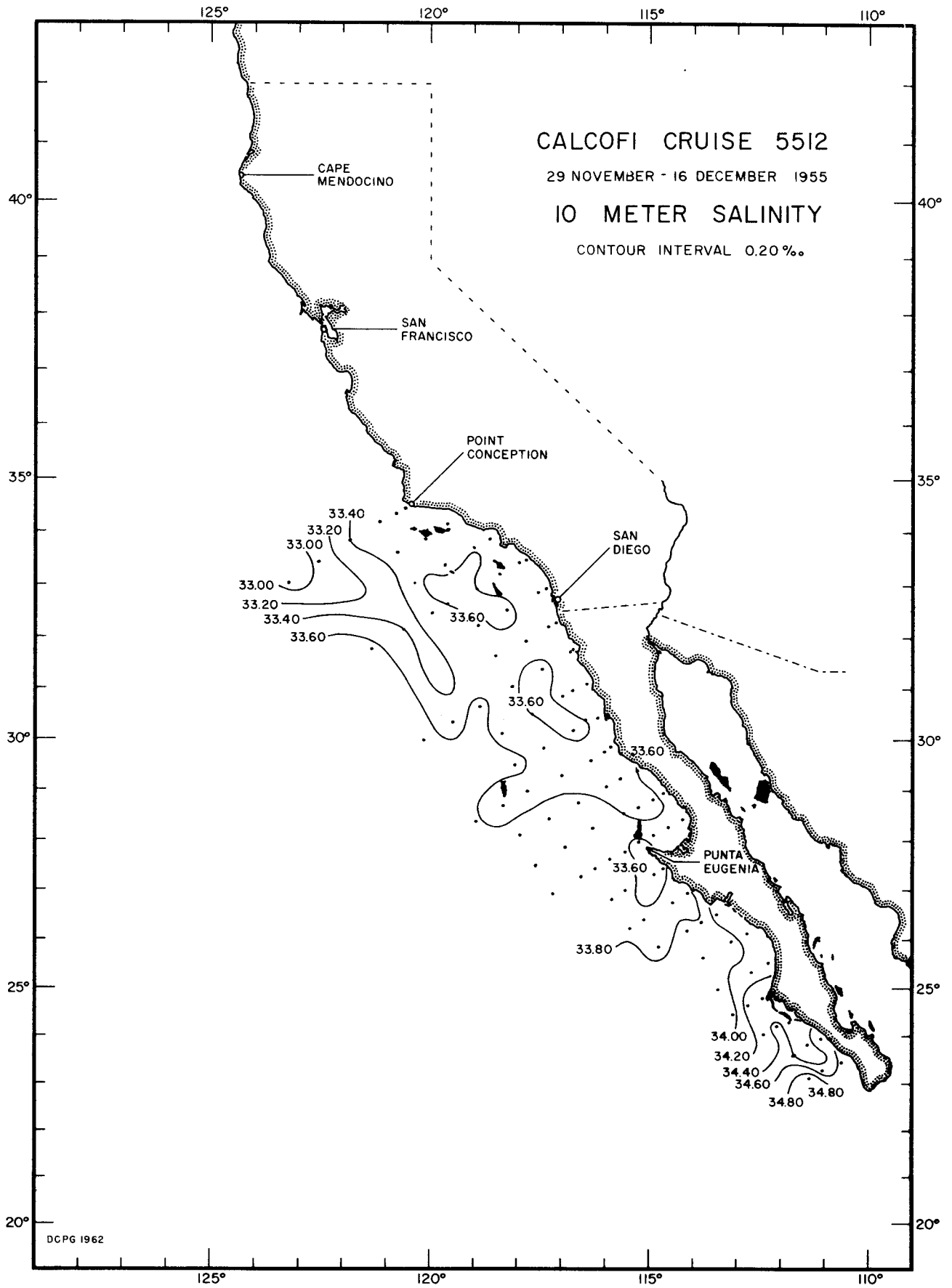
10m S
5509



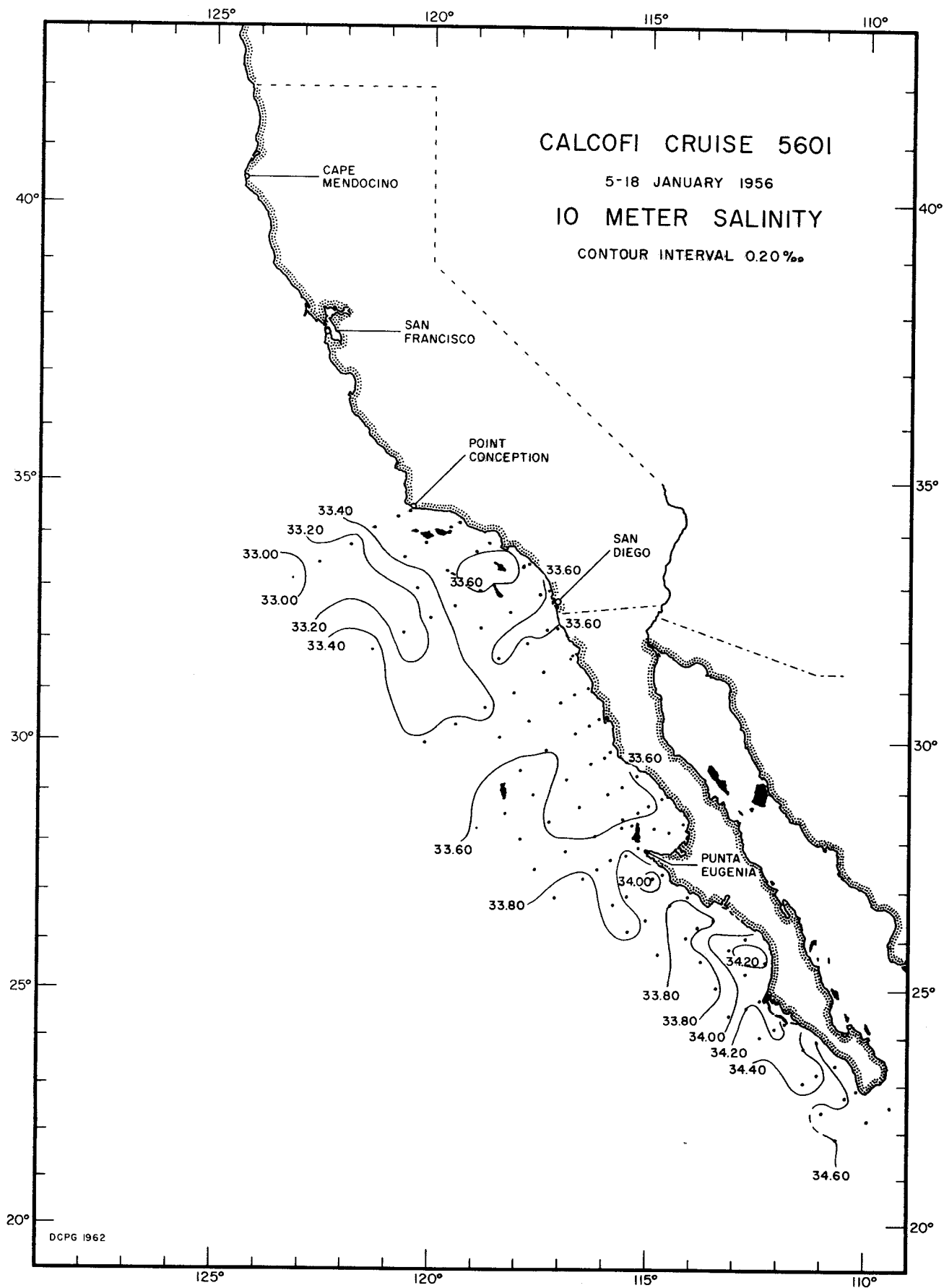
10m S
5510



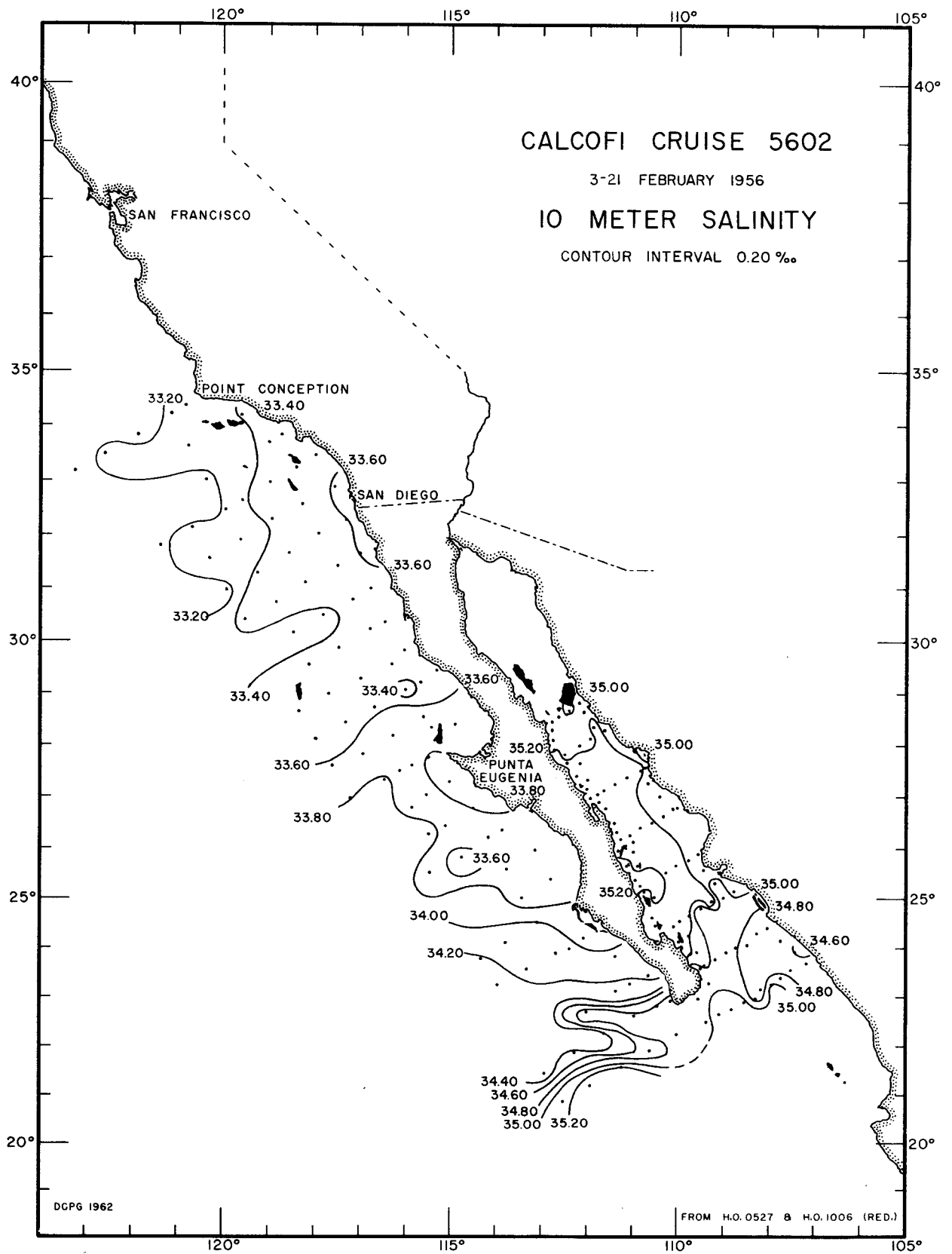
10m S
5511



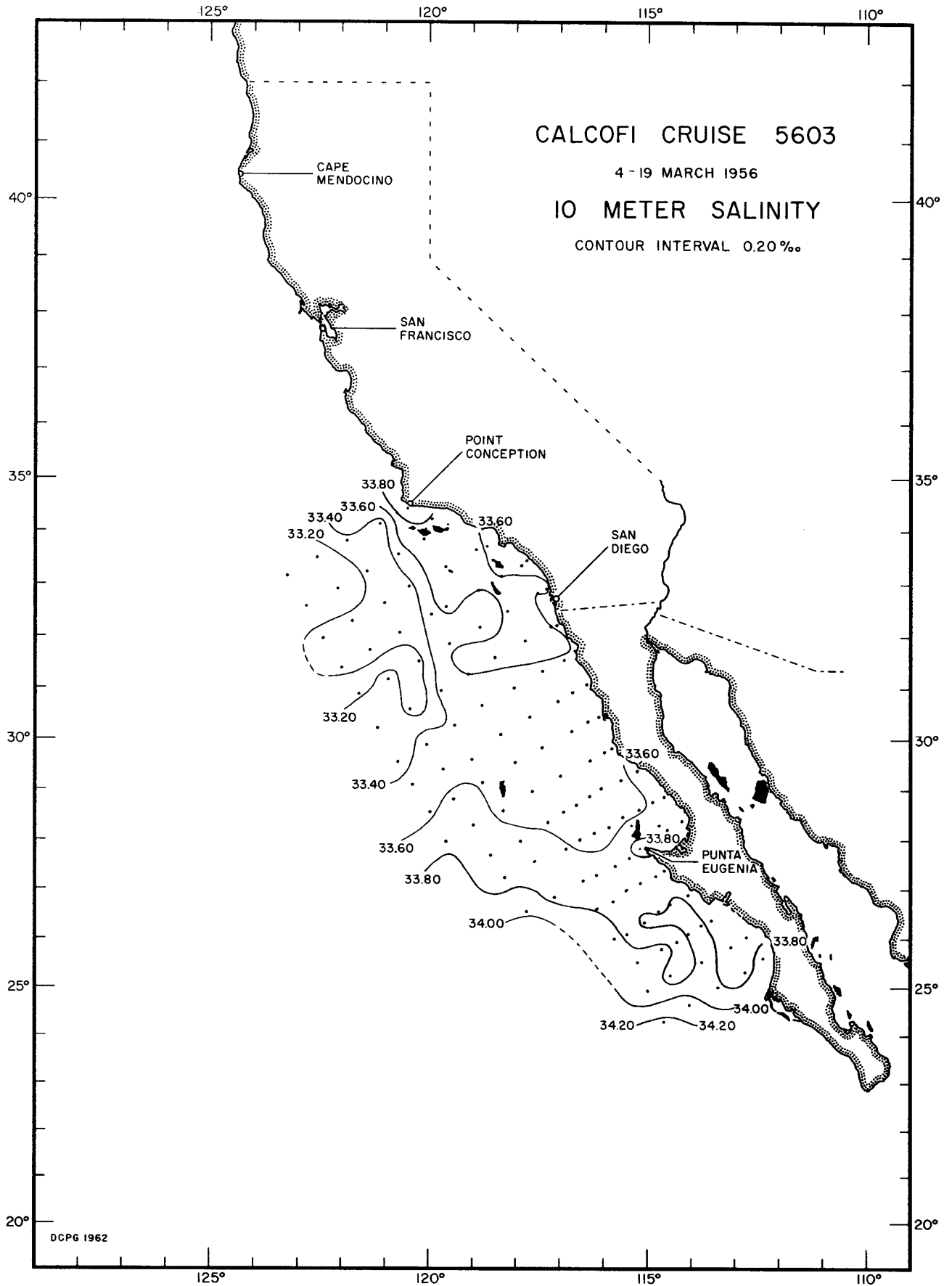
10m S
5512



10m S
5601



10m S
5602



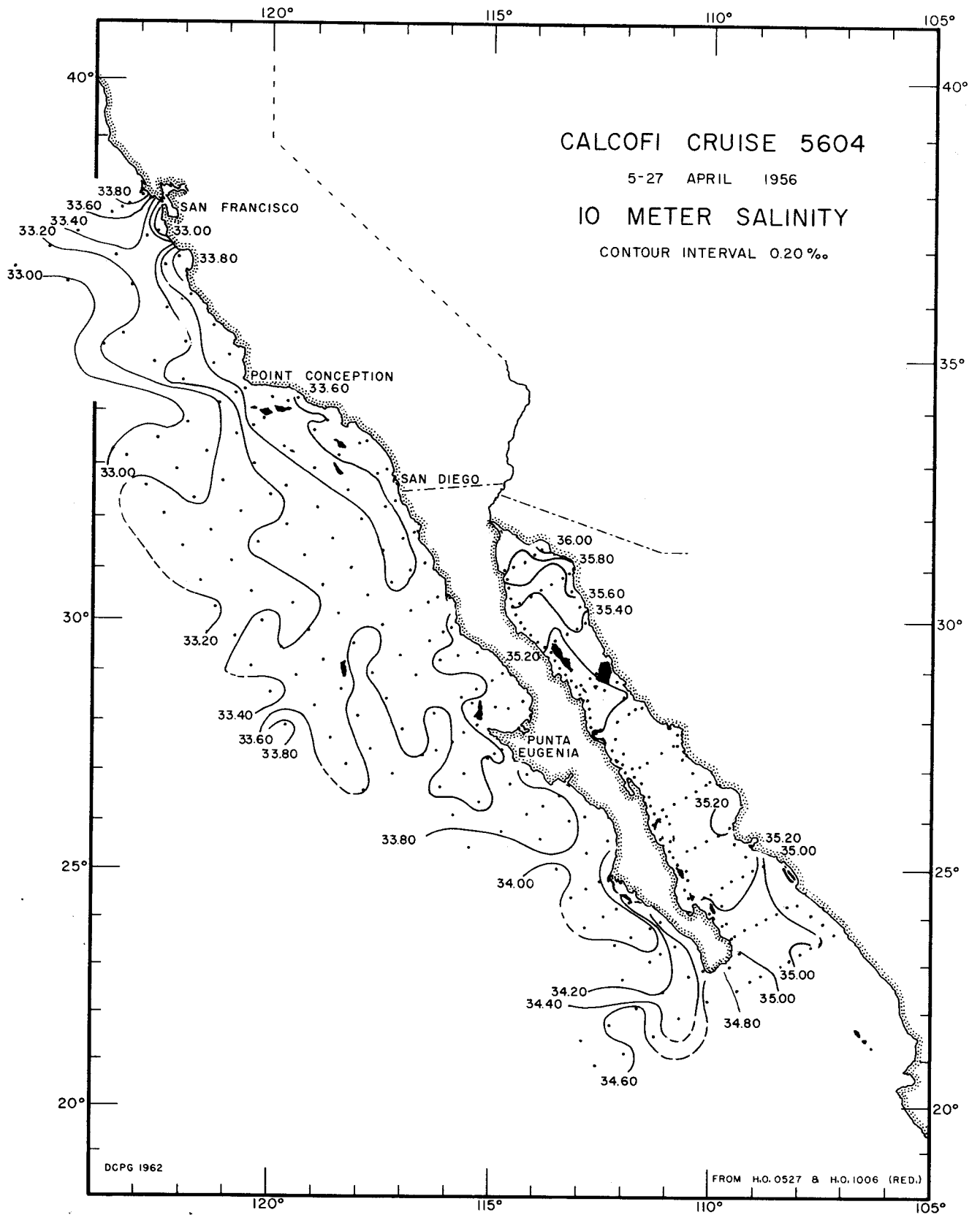
CALCOFI CRUISE 5603

4-19 MARCH 1956

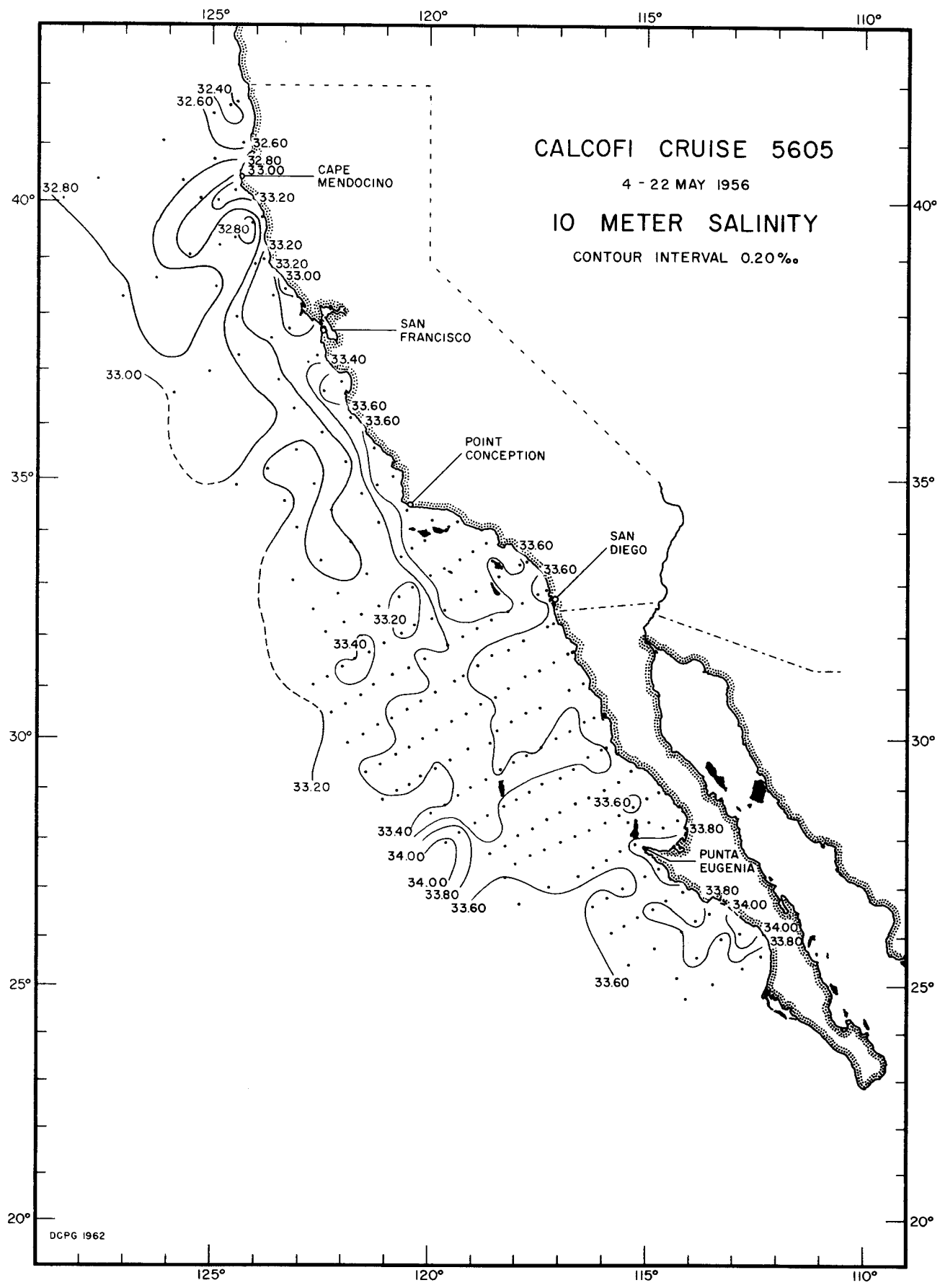
10 METER SALINITY

CONTOUR INTERVAL 0.20‰

10m S
5603



10m S
 5604



CALCOFI CRUISE 5605

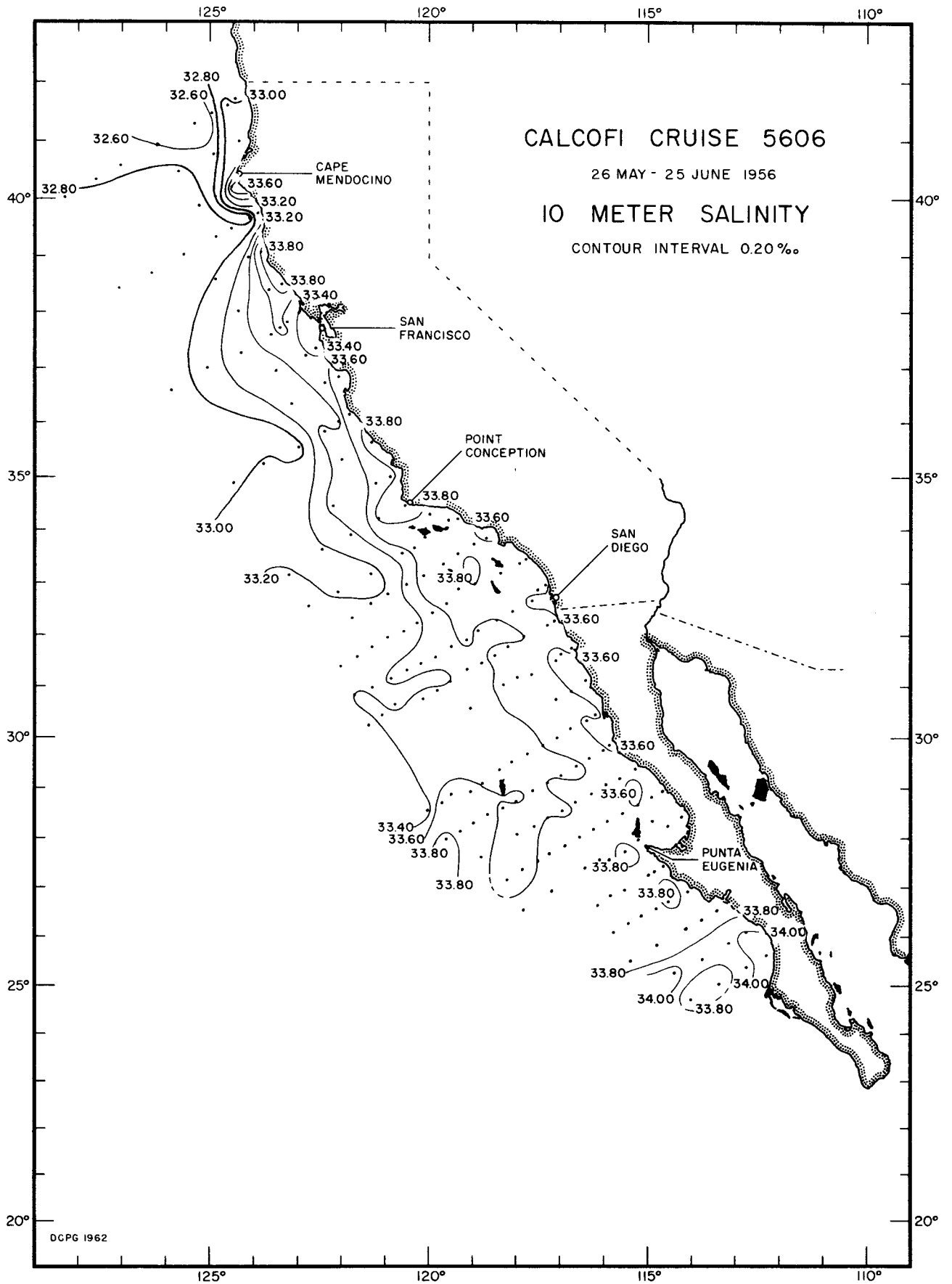
4 - 22 MAY 1956

10 METER SALINITY

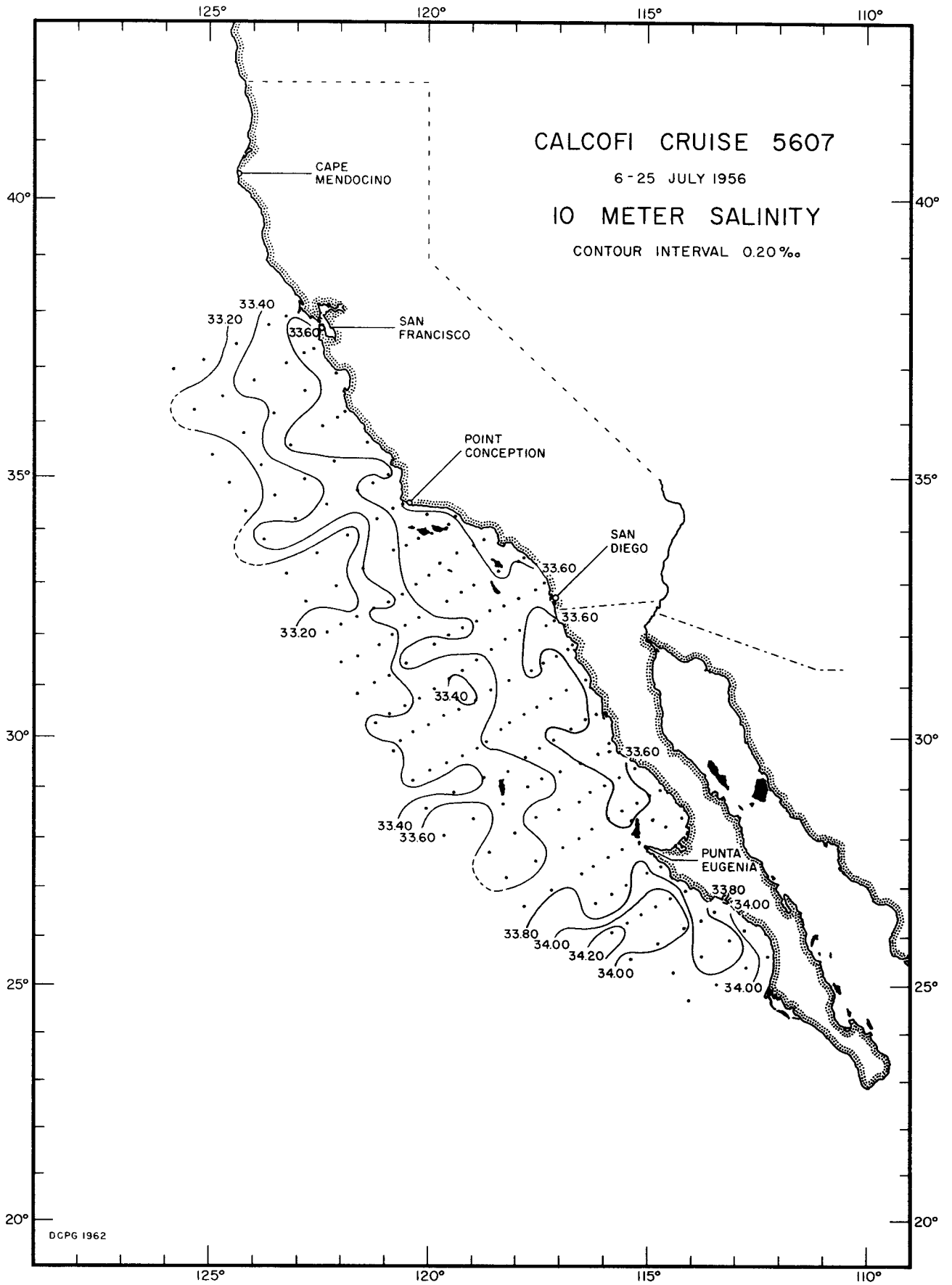
CONTOUR INTERVAL 0.20‰

DCPG 1962

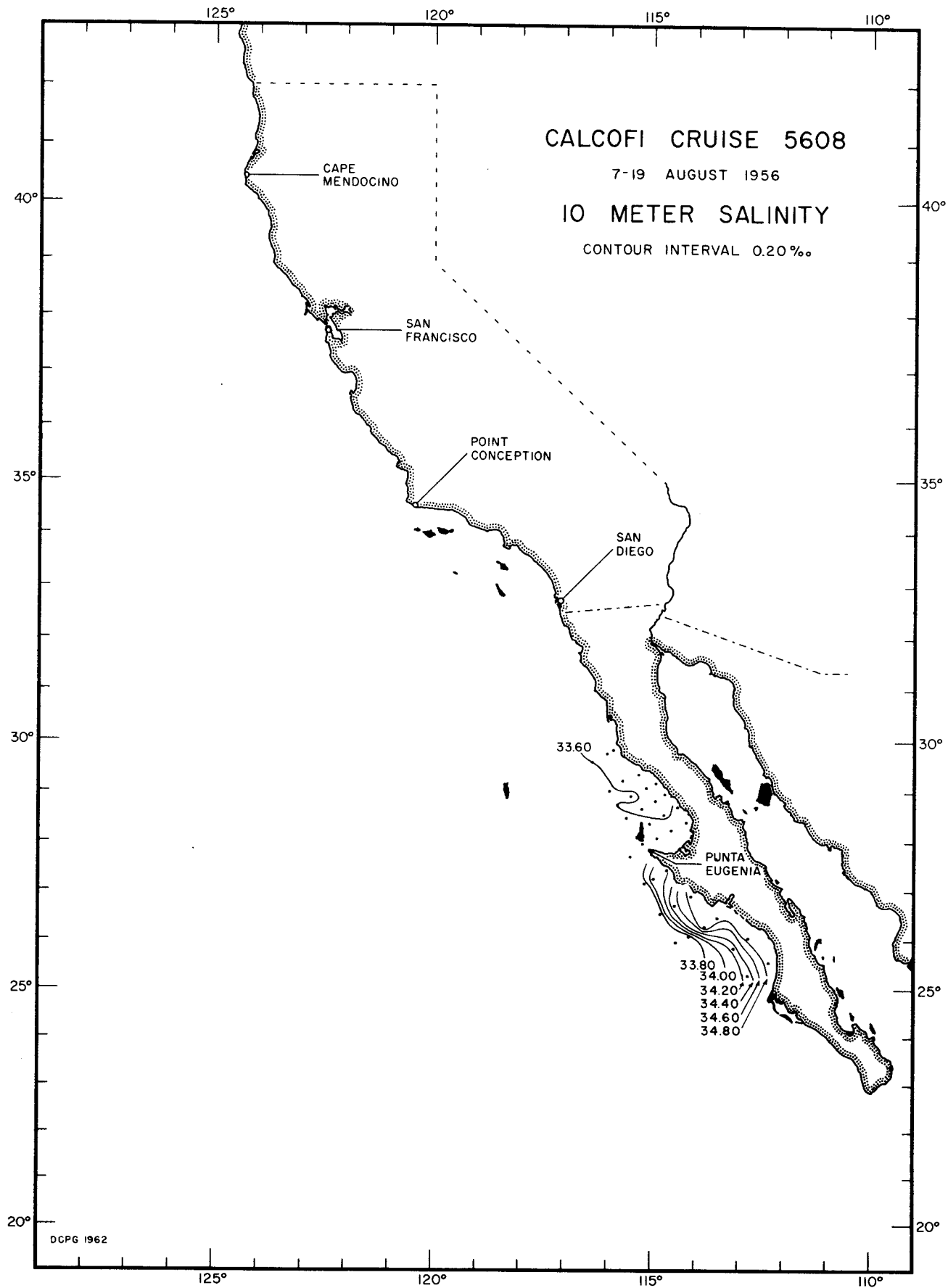
10m S
5605



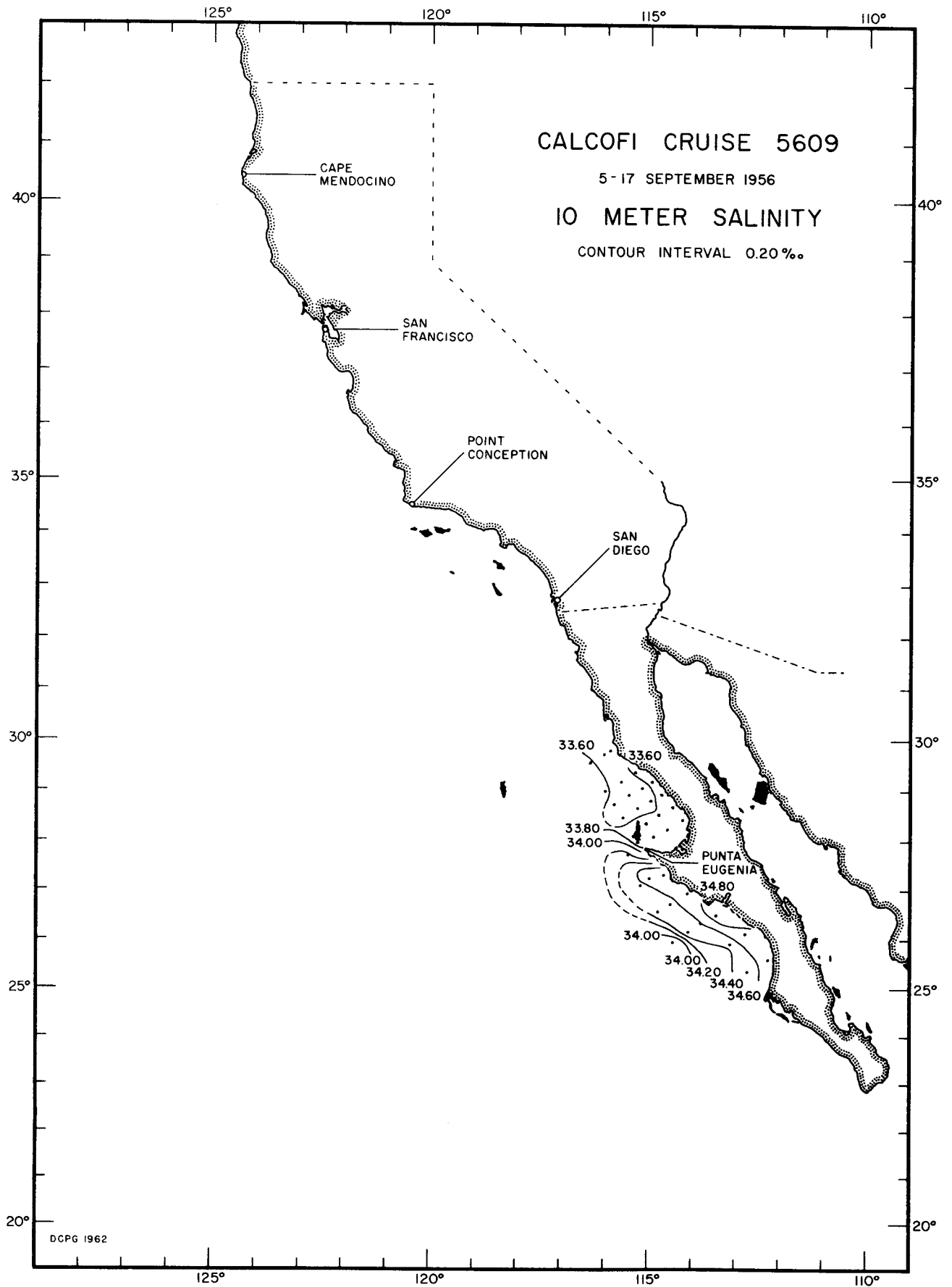
10m S
5606



10m S
5607



10m S
5608



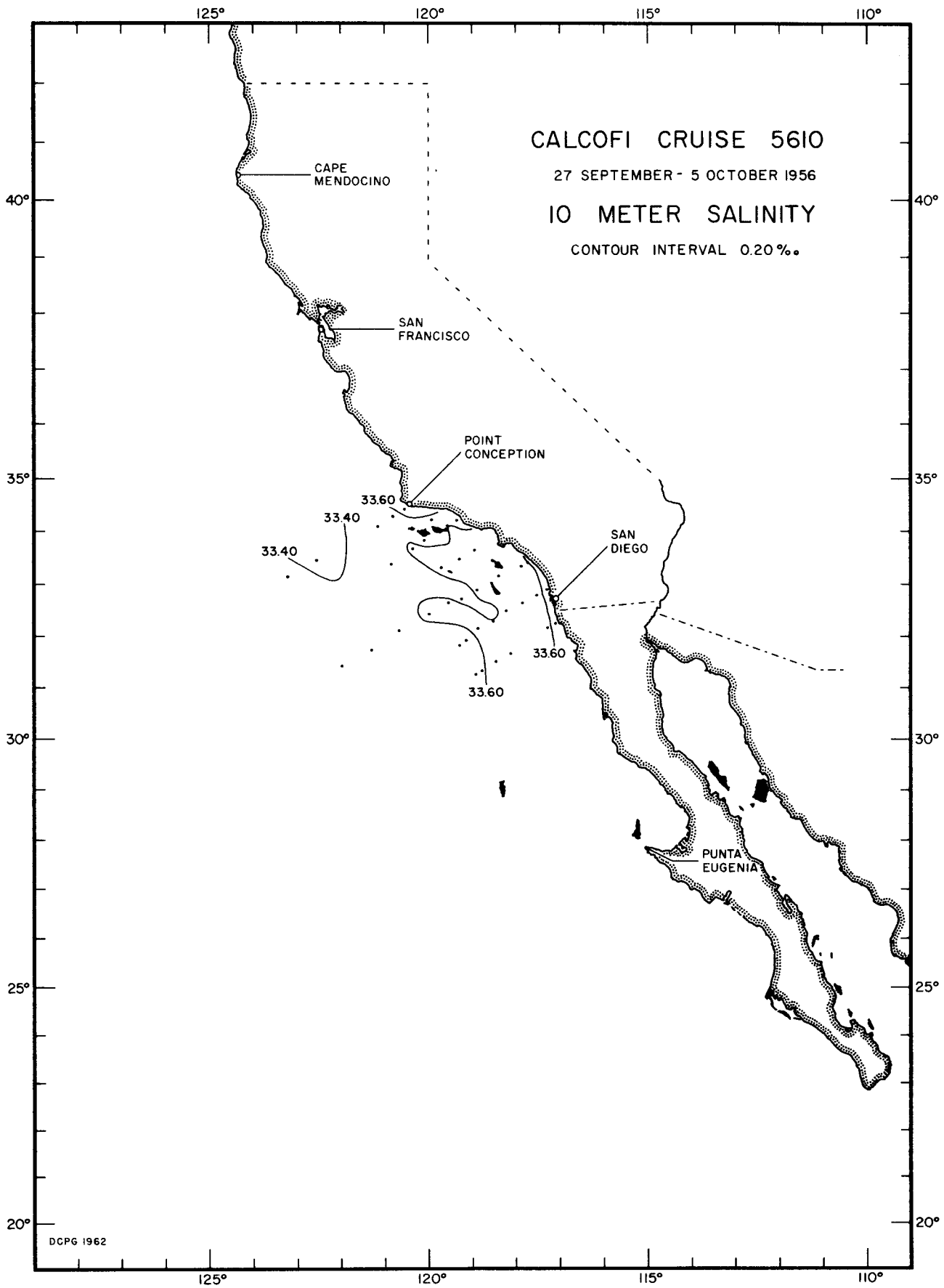
CALCOFI CRUISE 5609

5-17 SEPTEMBER 1956

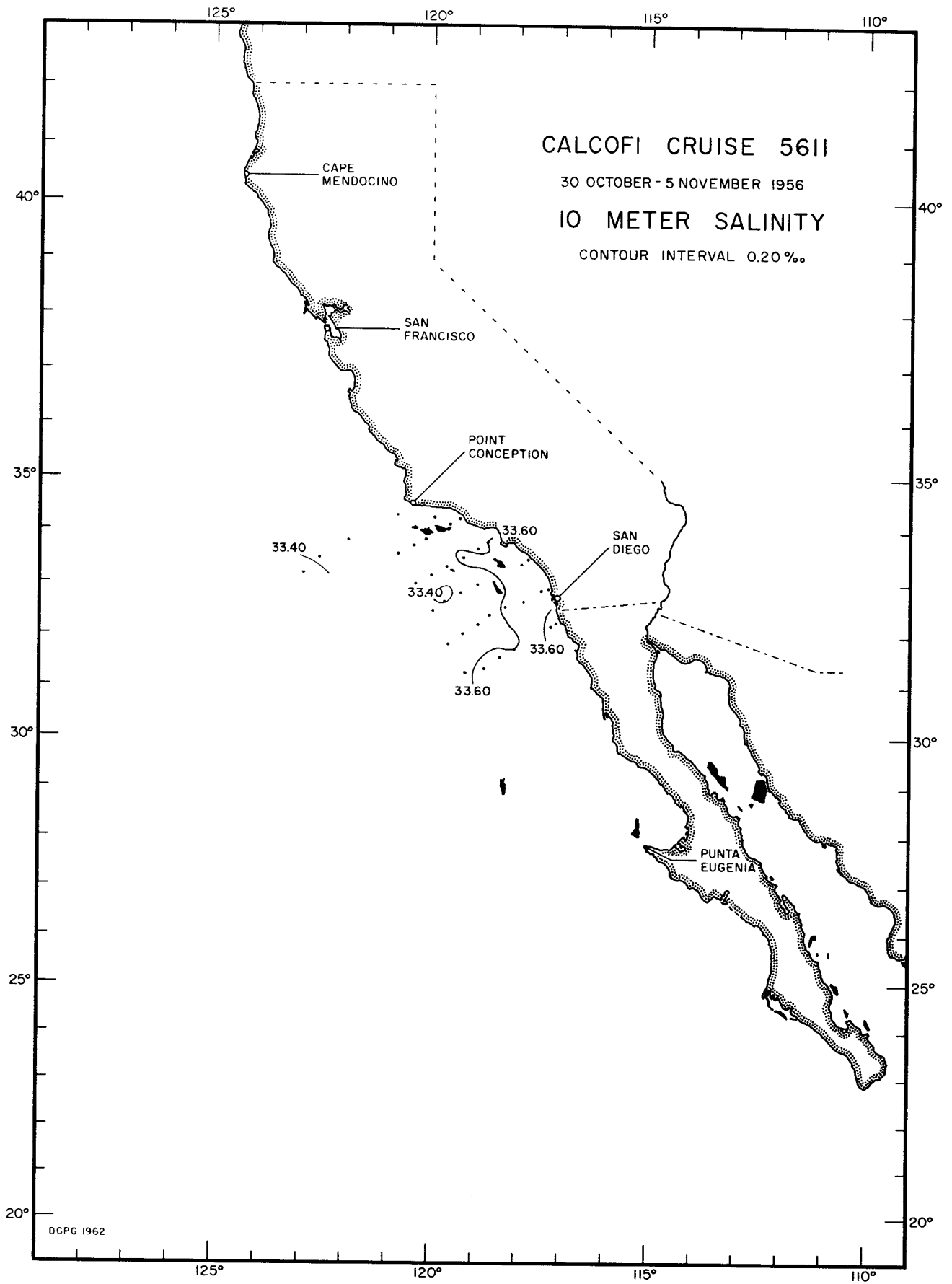
10 METER SALINITY

CONTOUR INTERVAL 0.20 ‰

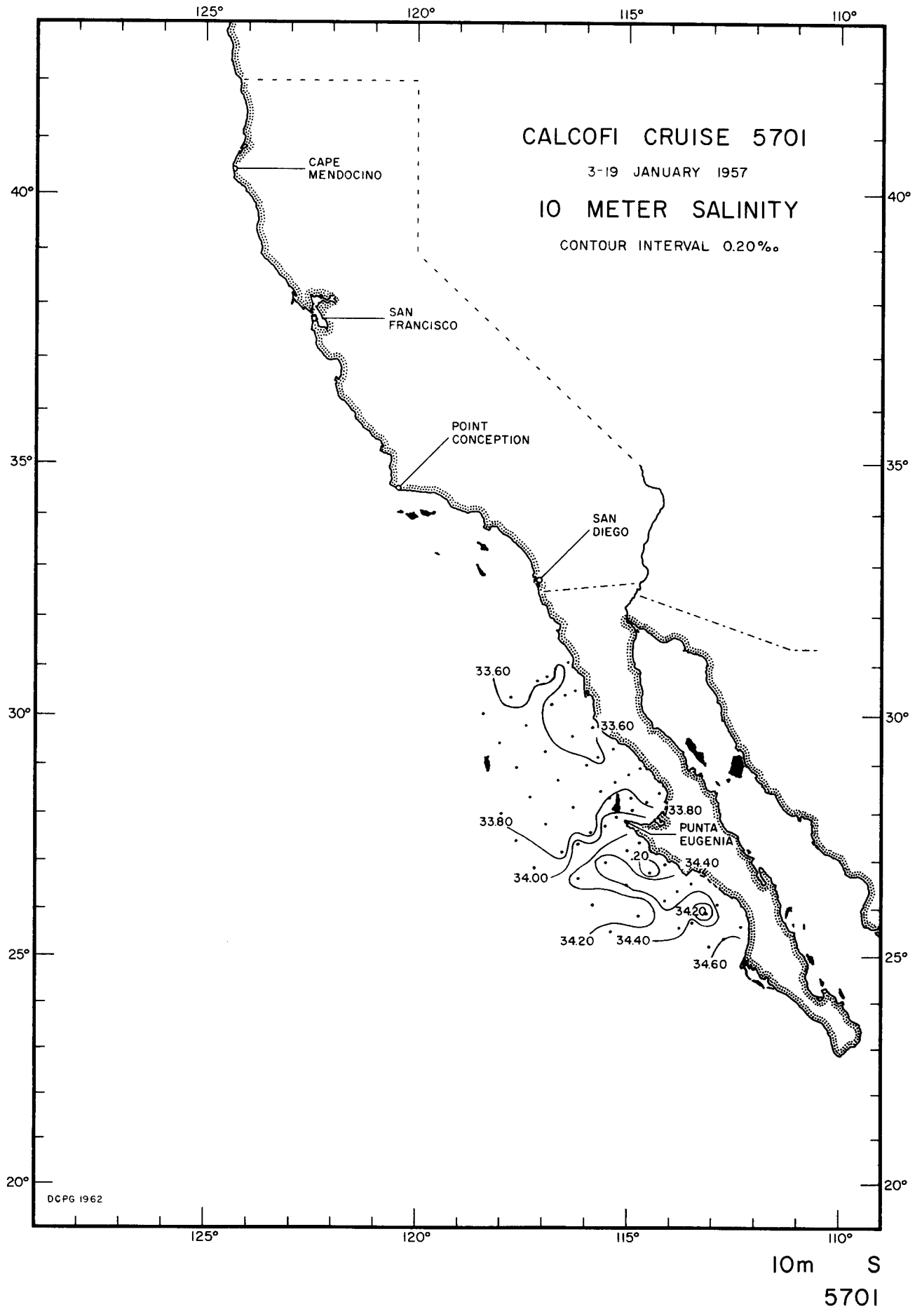
10m S
5609

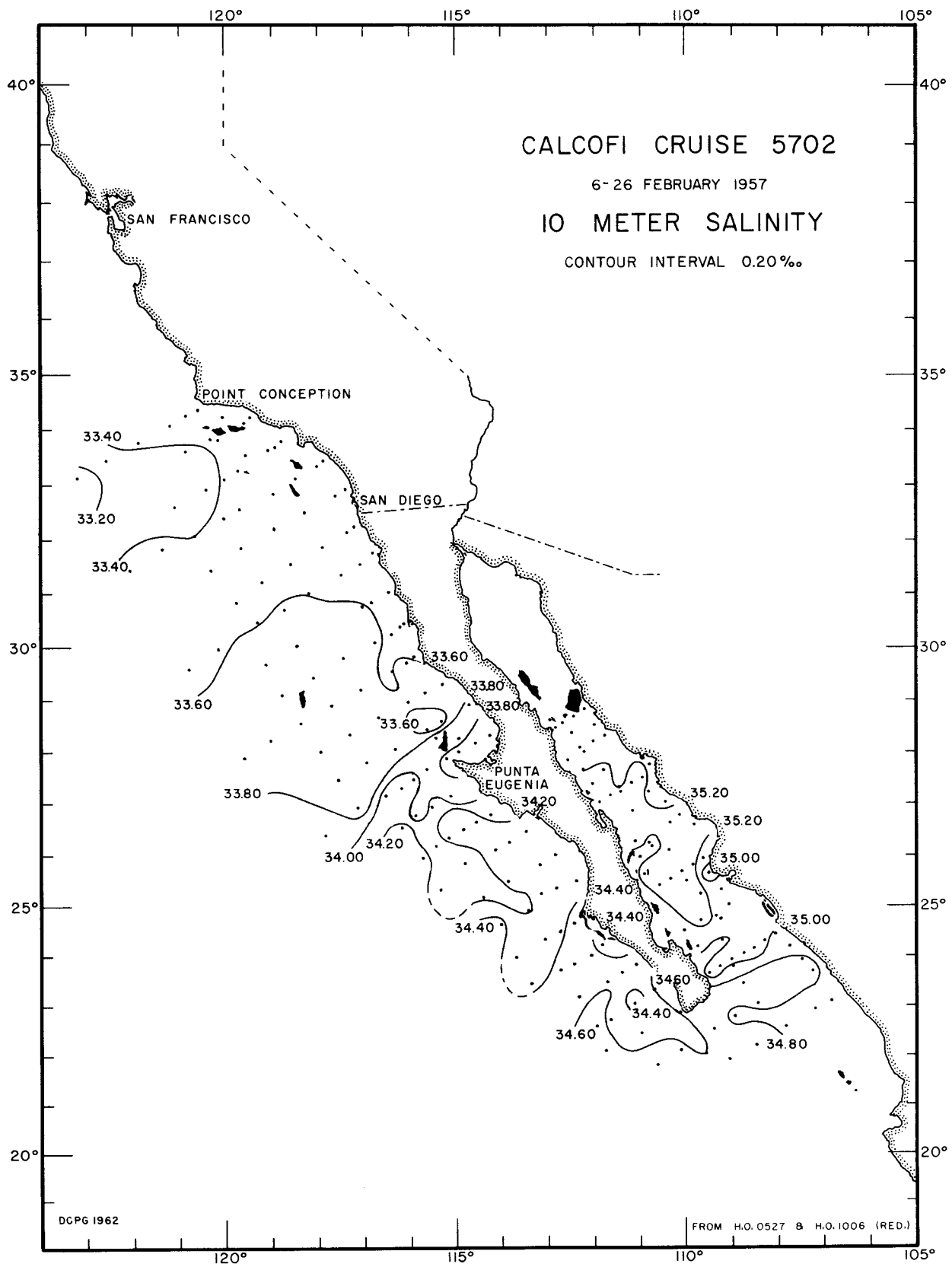


10m S
5610

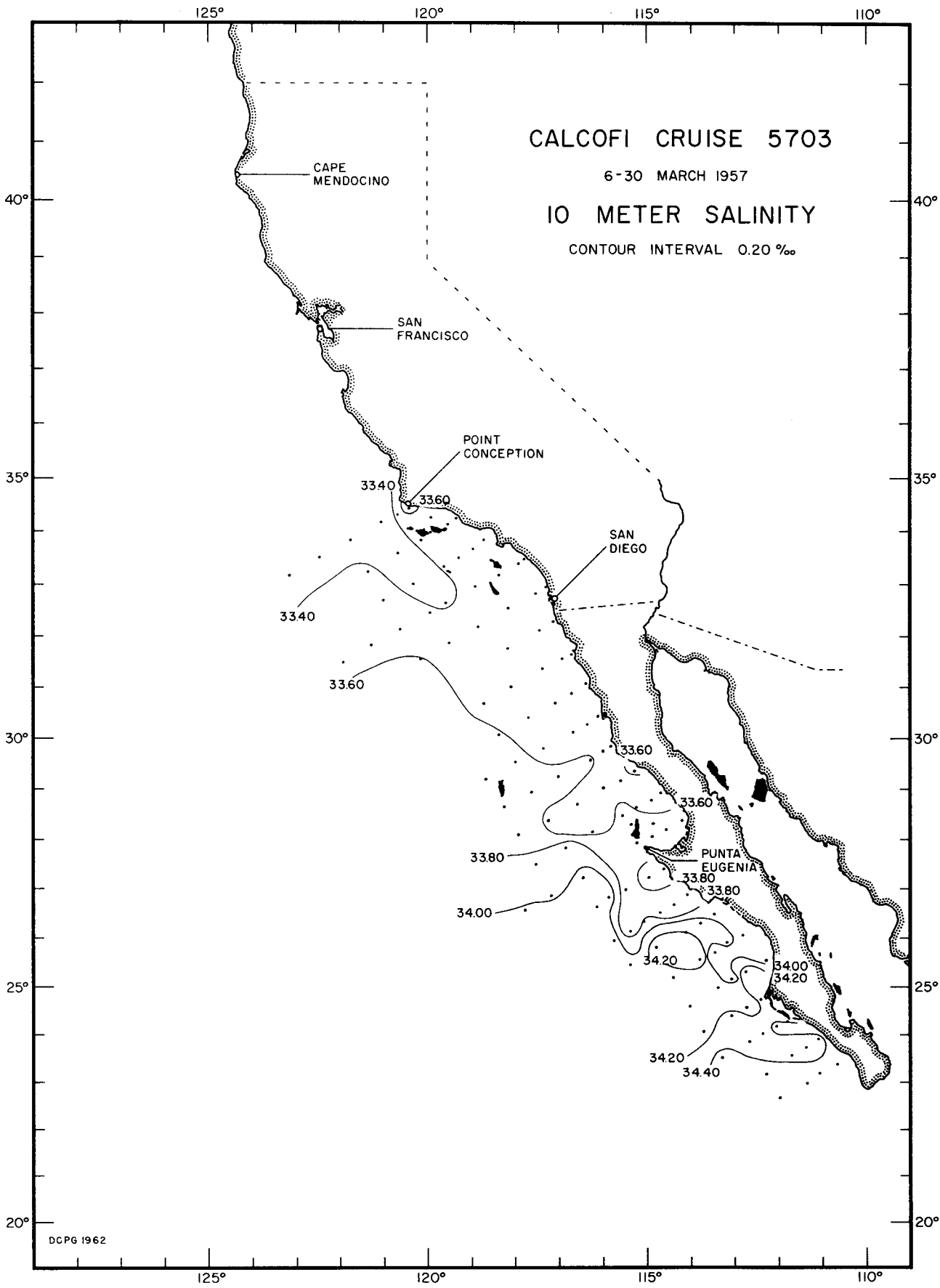


10m S
5611

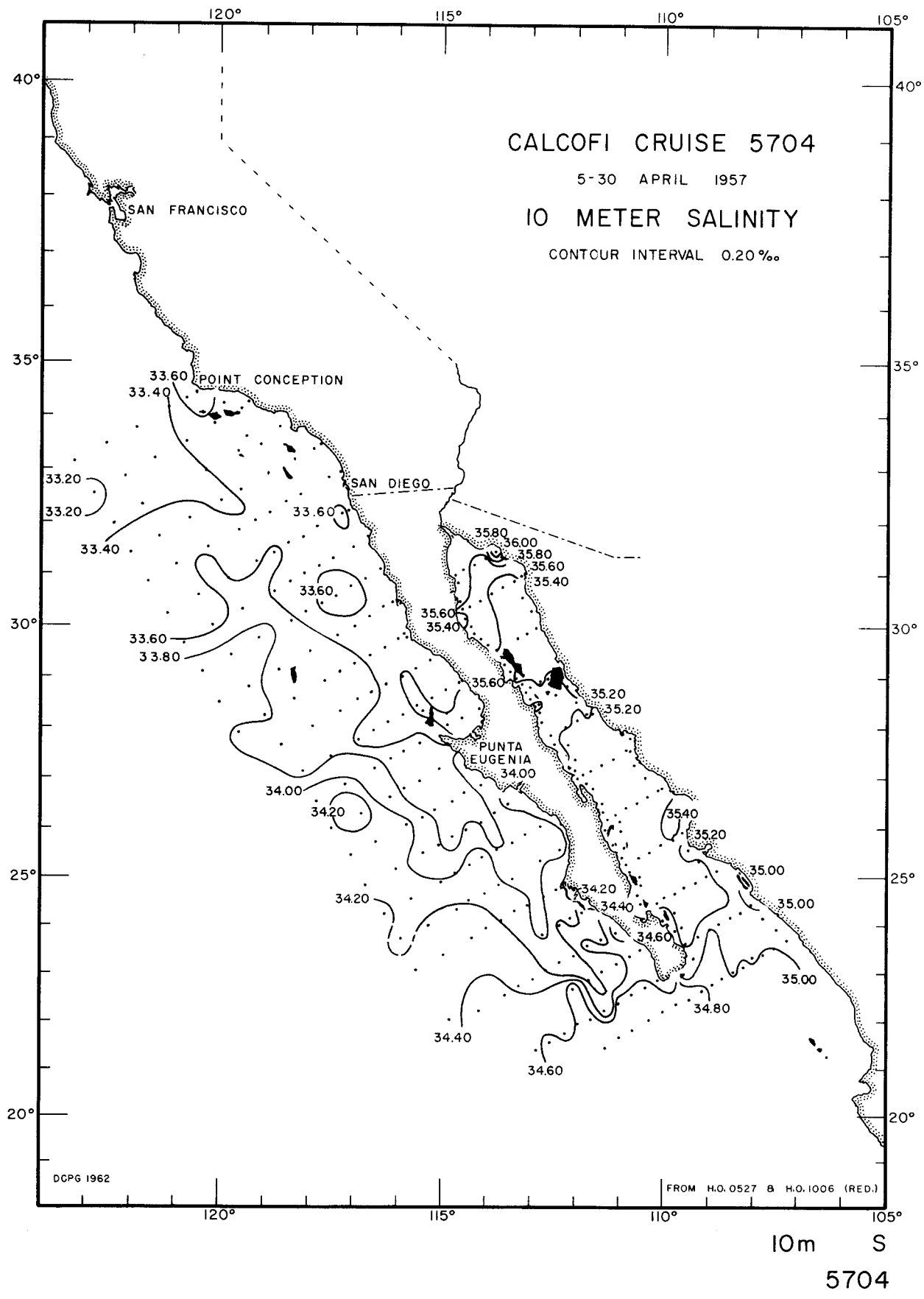


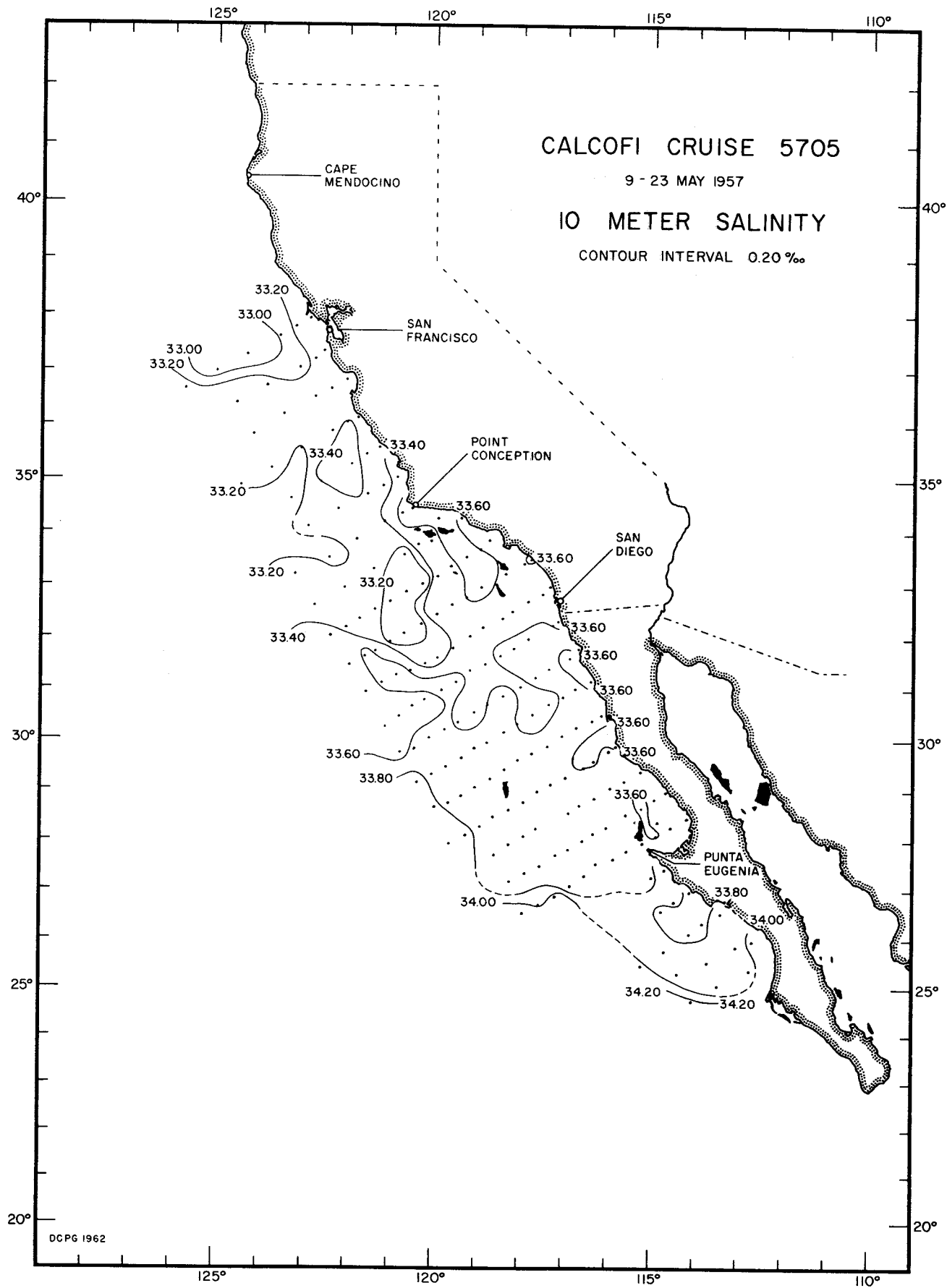


10m S
5702

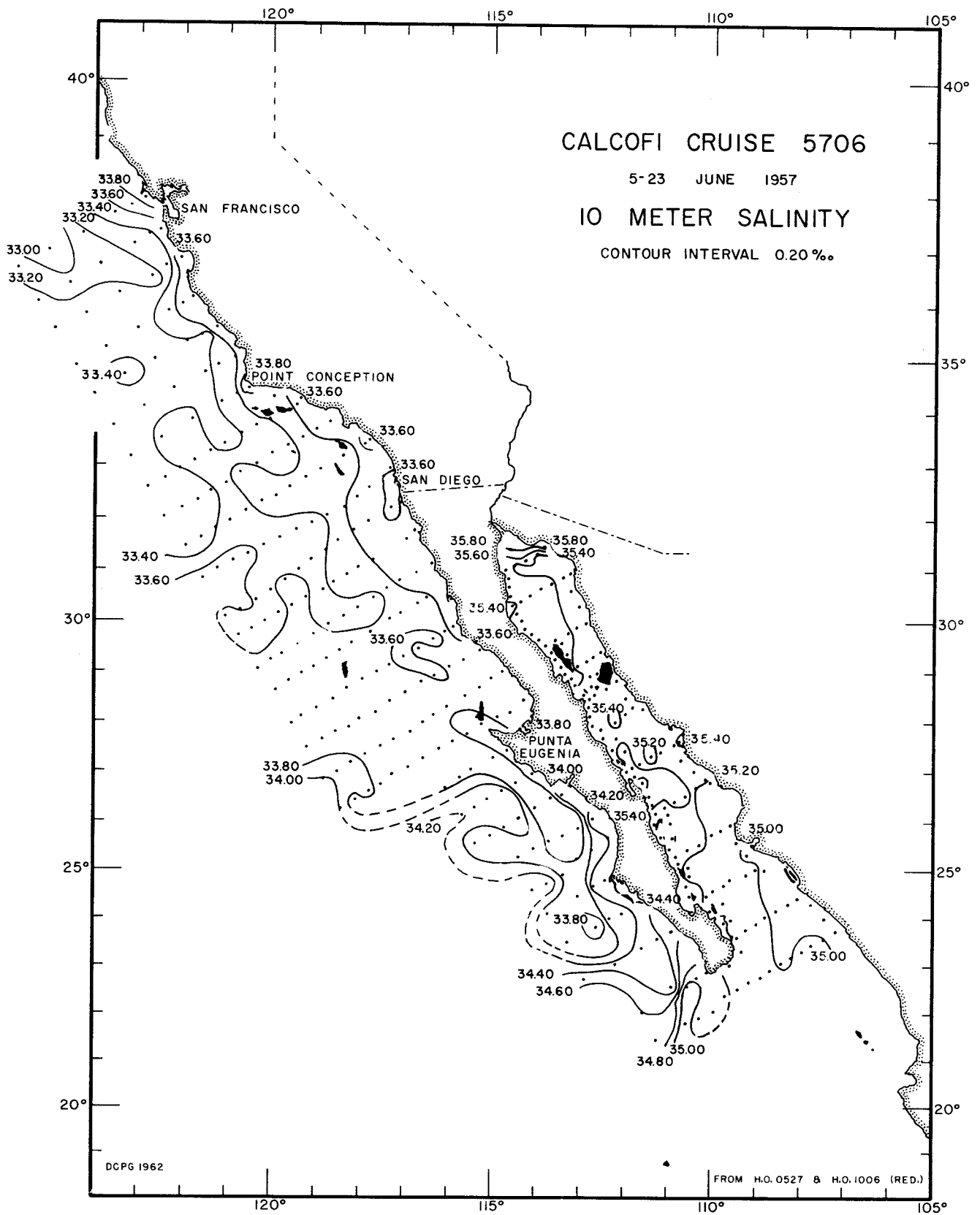


10m S
5703

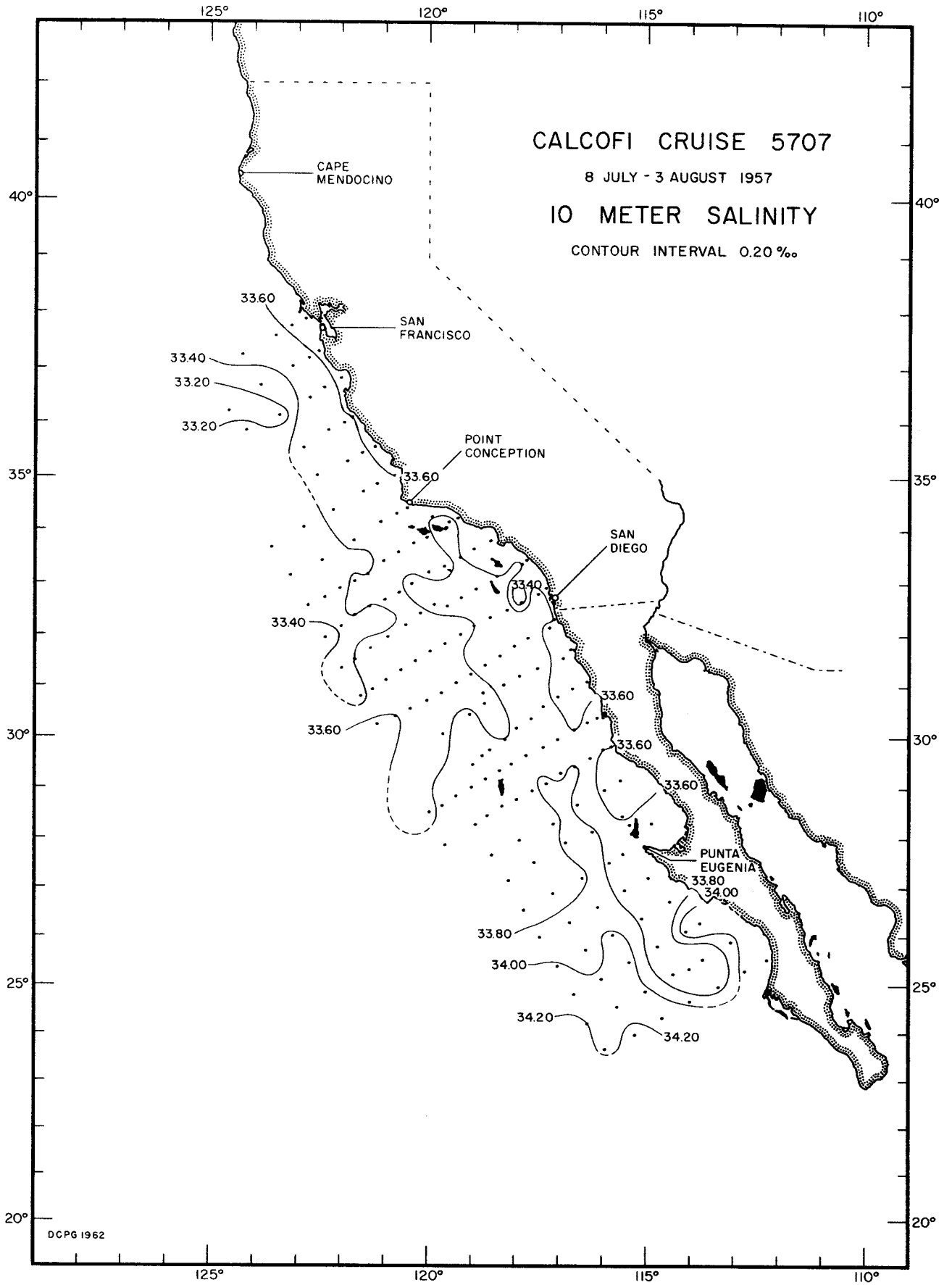




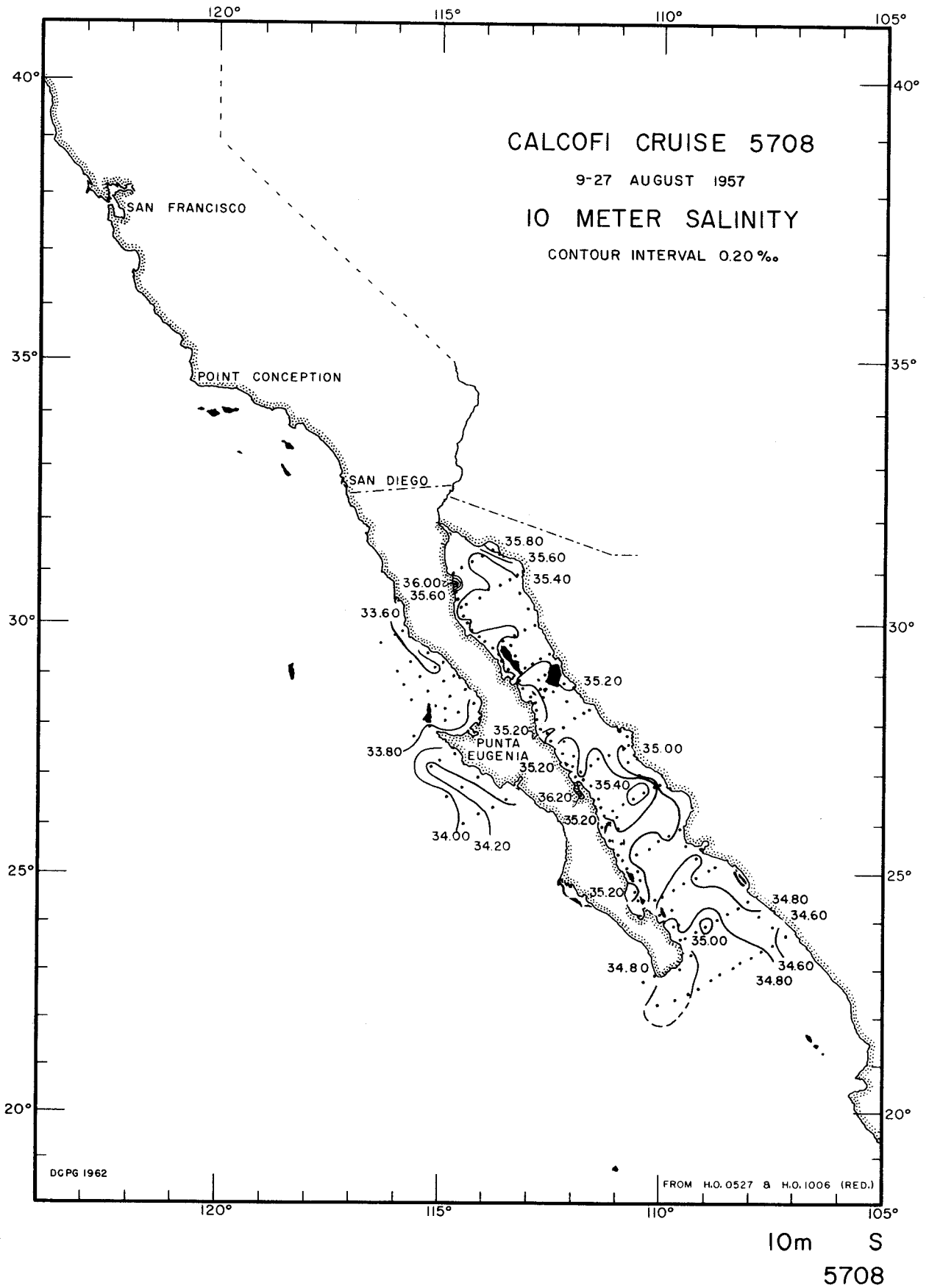
10m S
5705

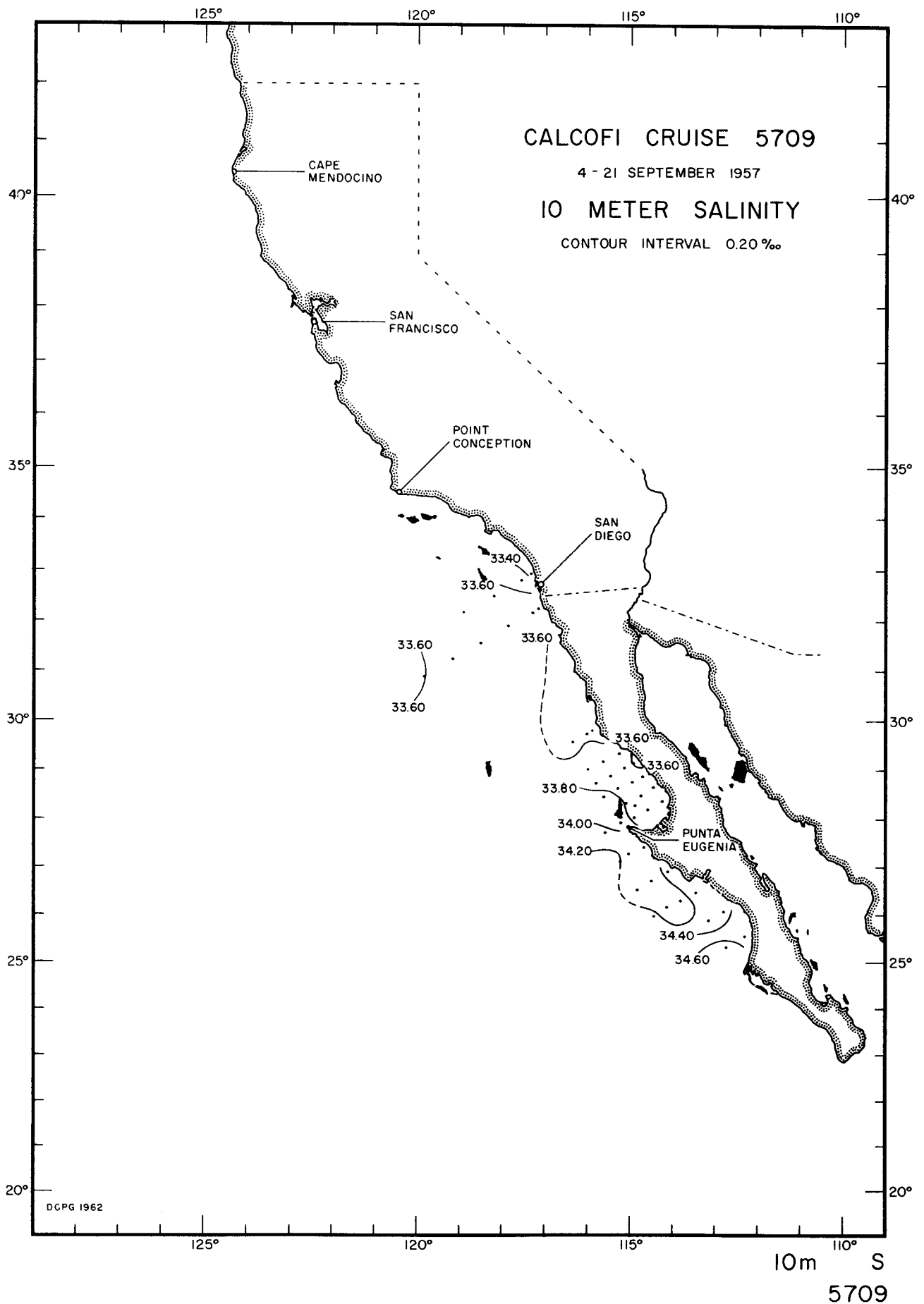


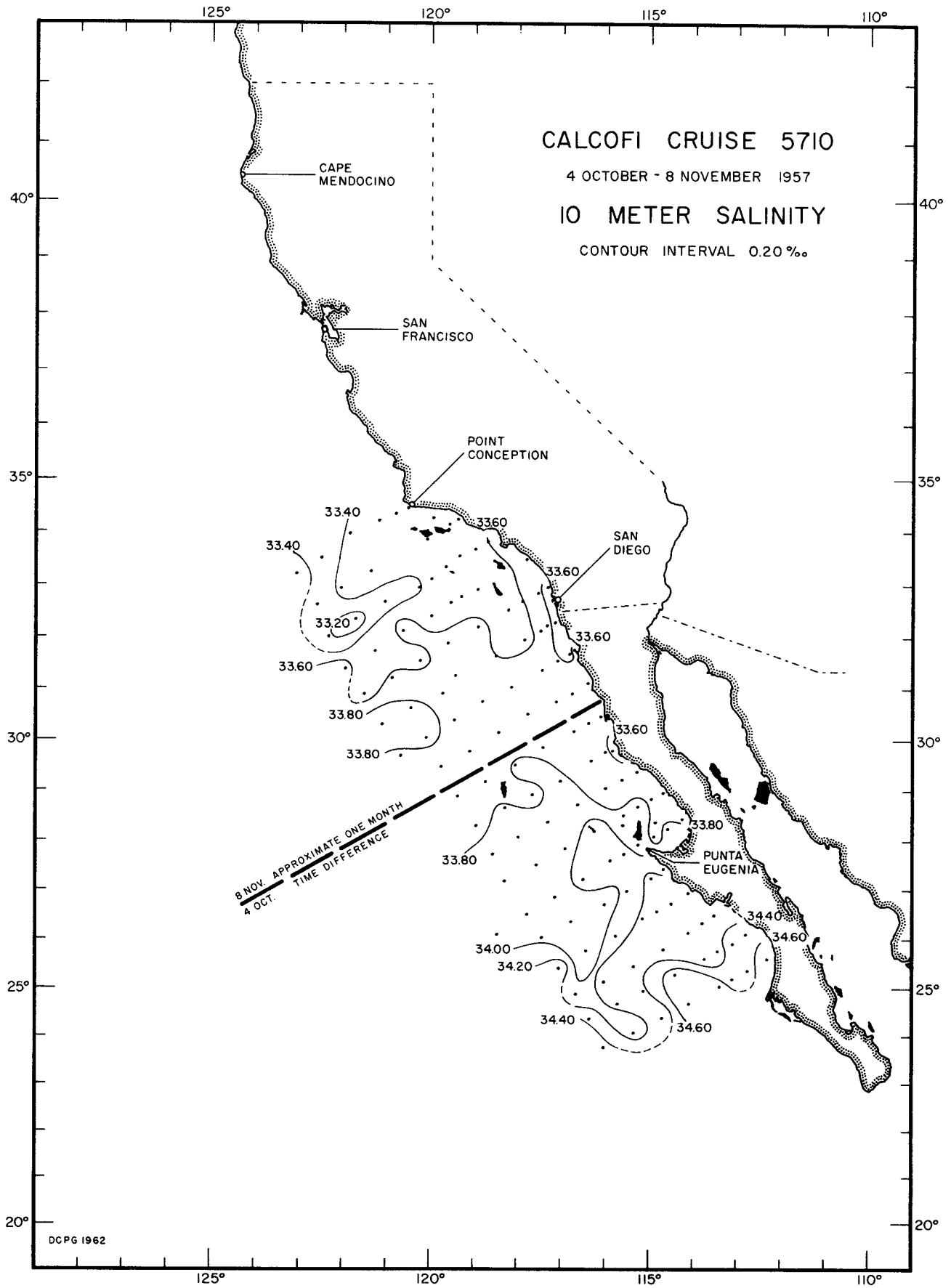
10m S
5706



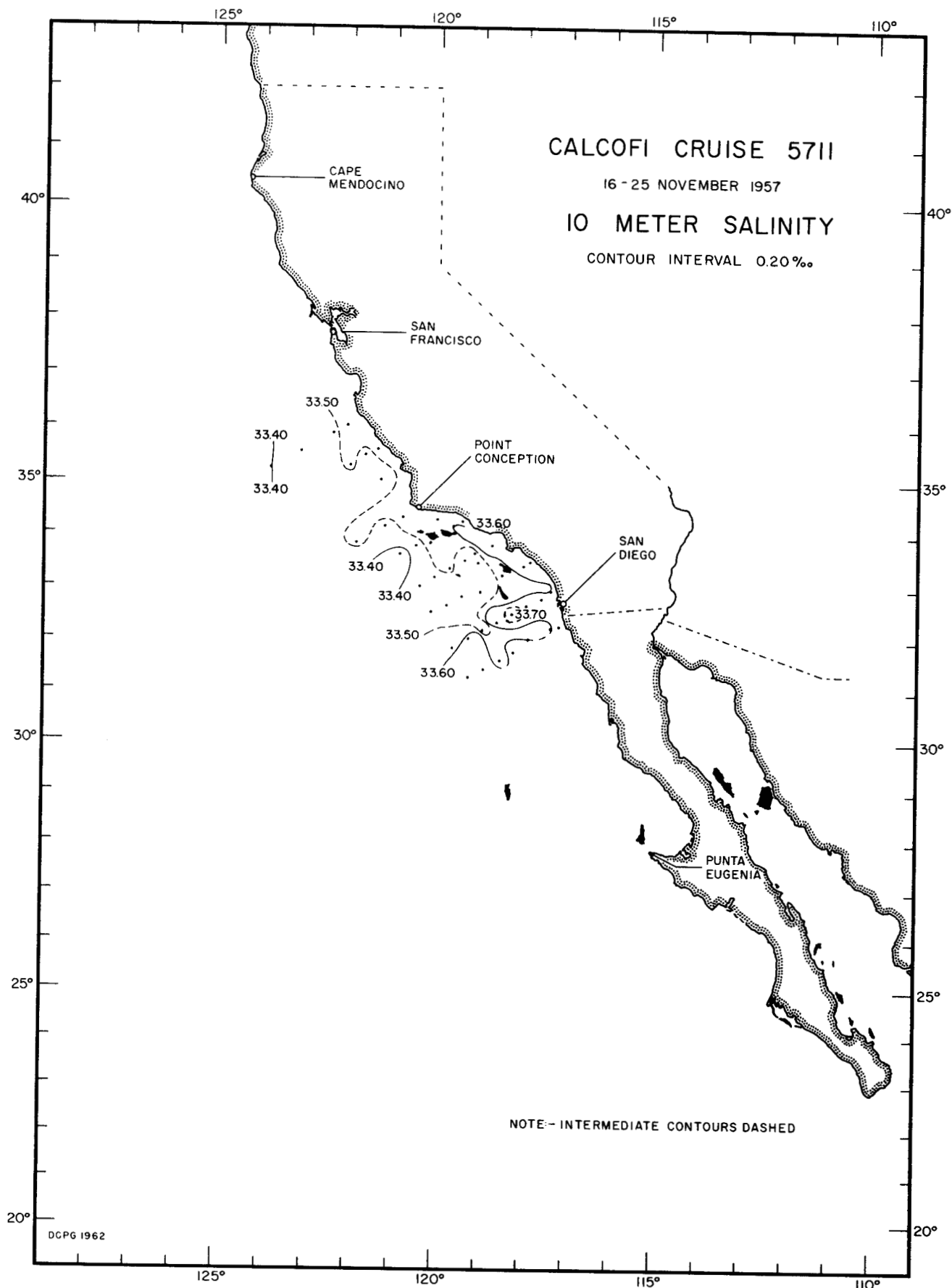
10m S
5707



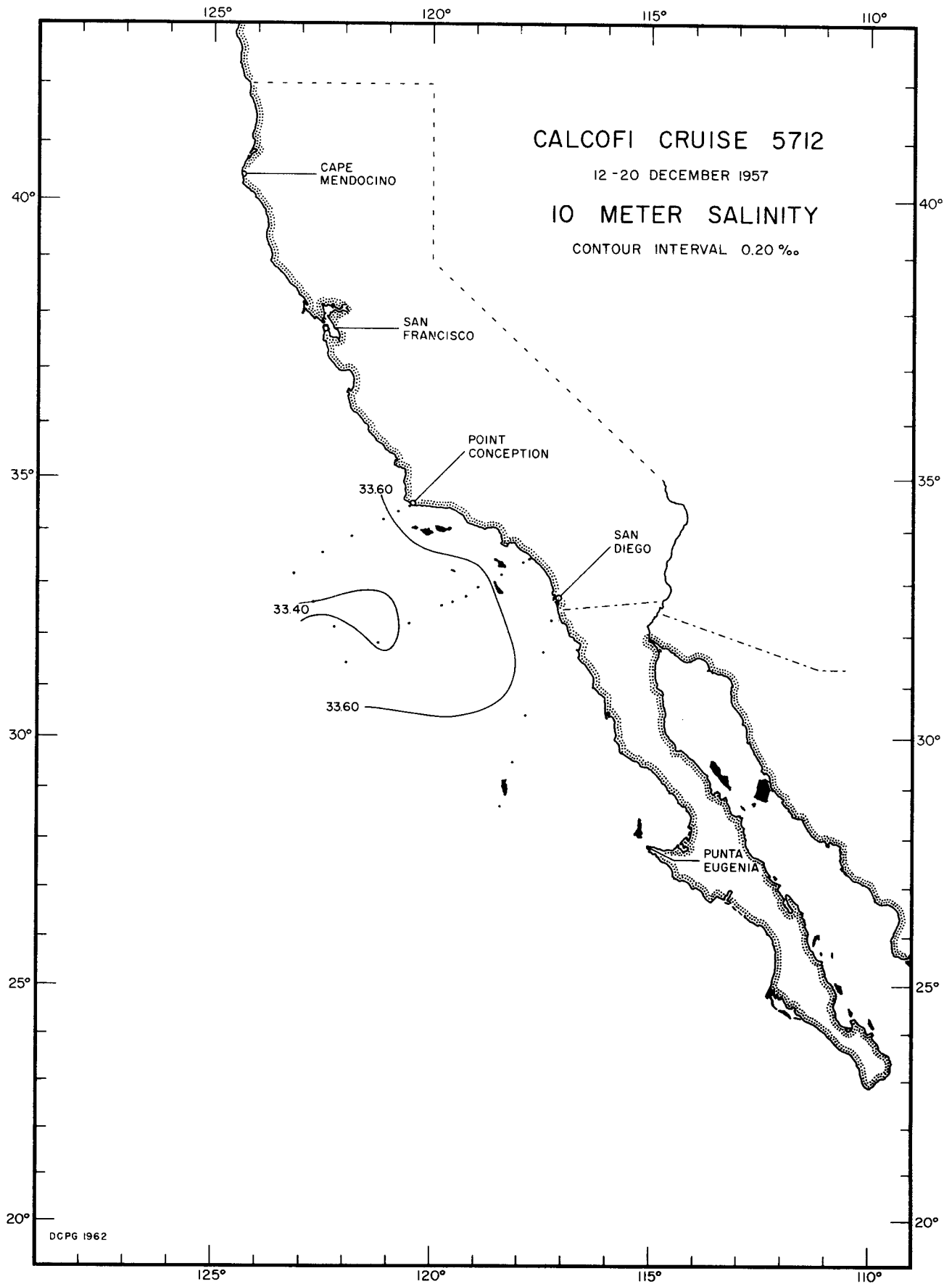




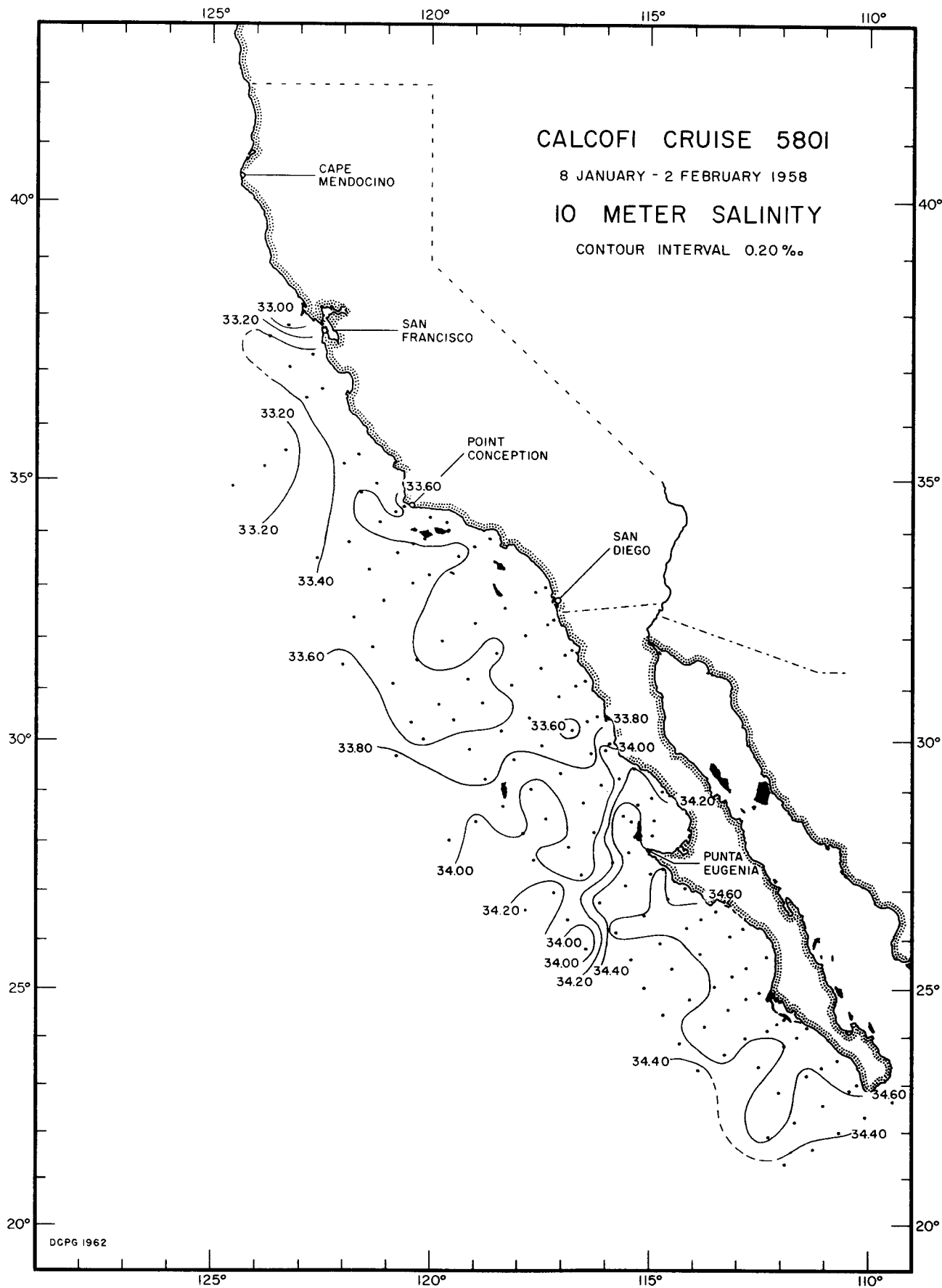
10m S
5710



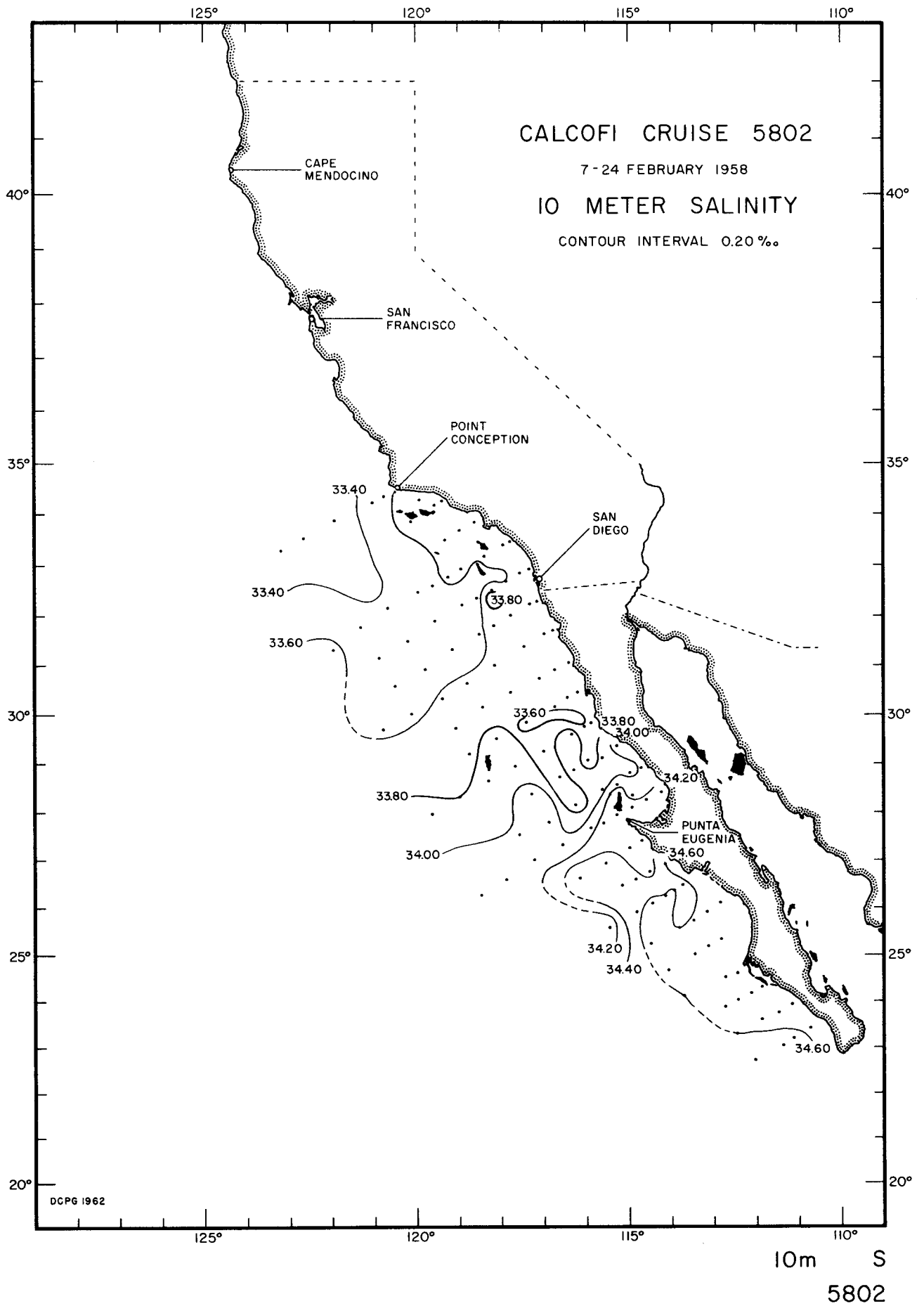
10m S
5711

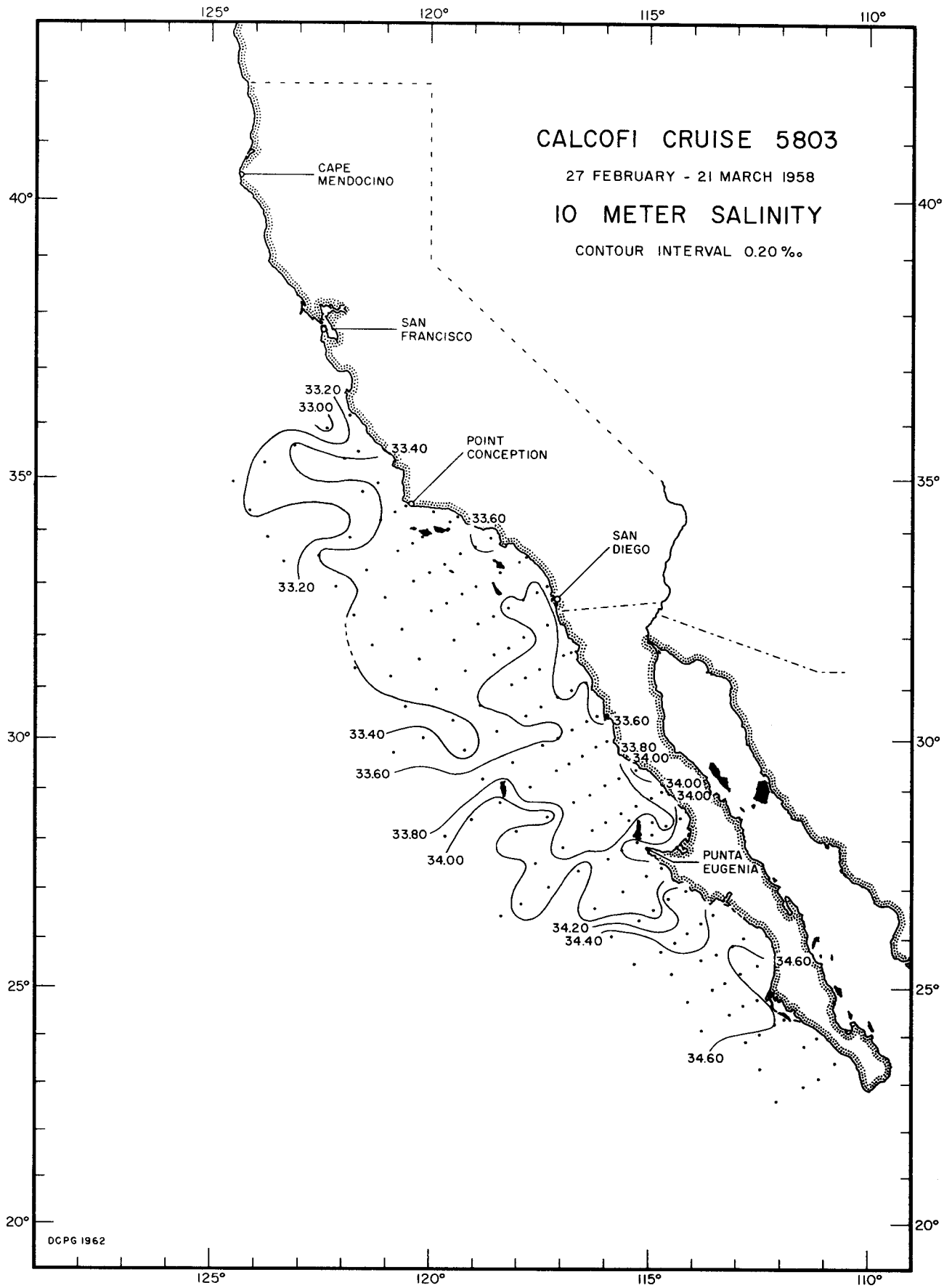


10m S
5712

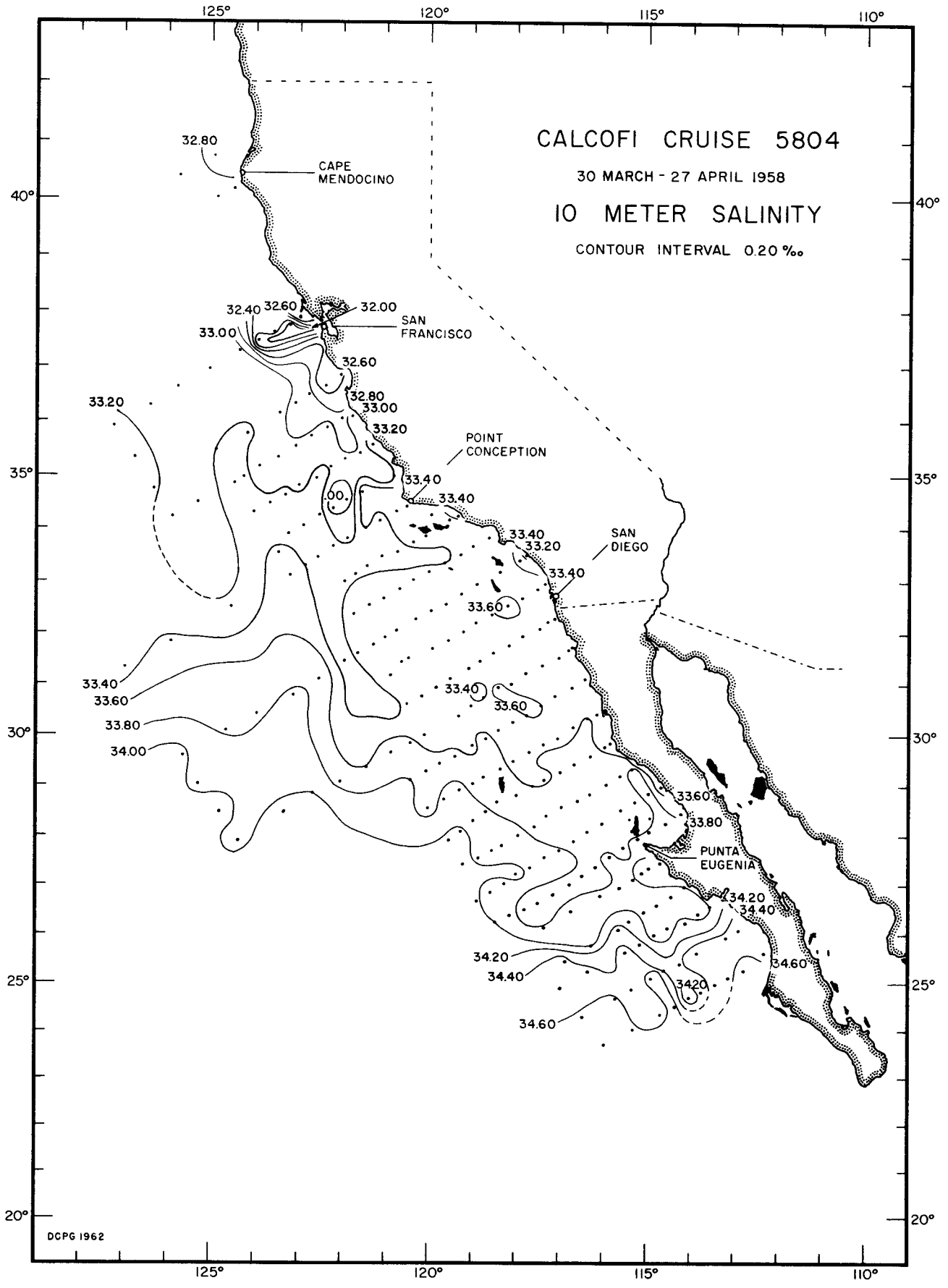


10m S
580I





10m S
 5803



CALCOFI CRUISE 5804

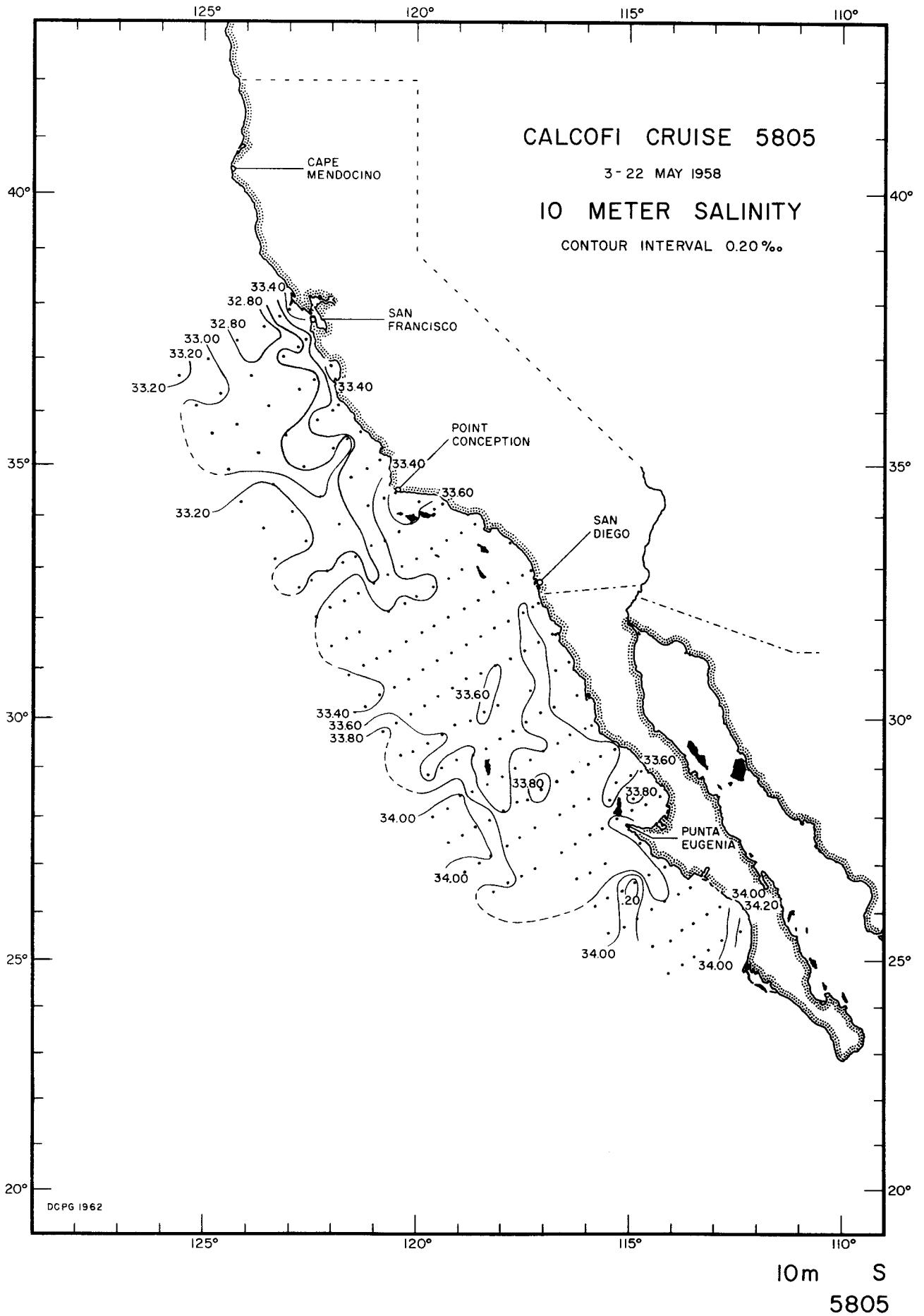
30 MARCH - 27 APRIL 1958

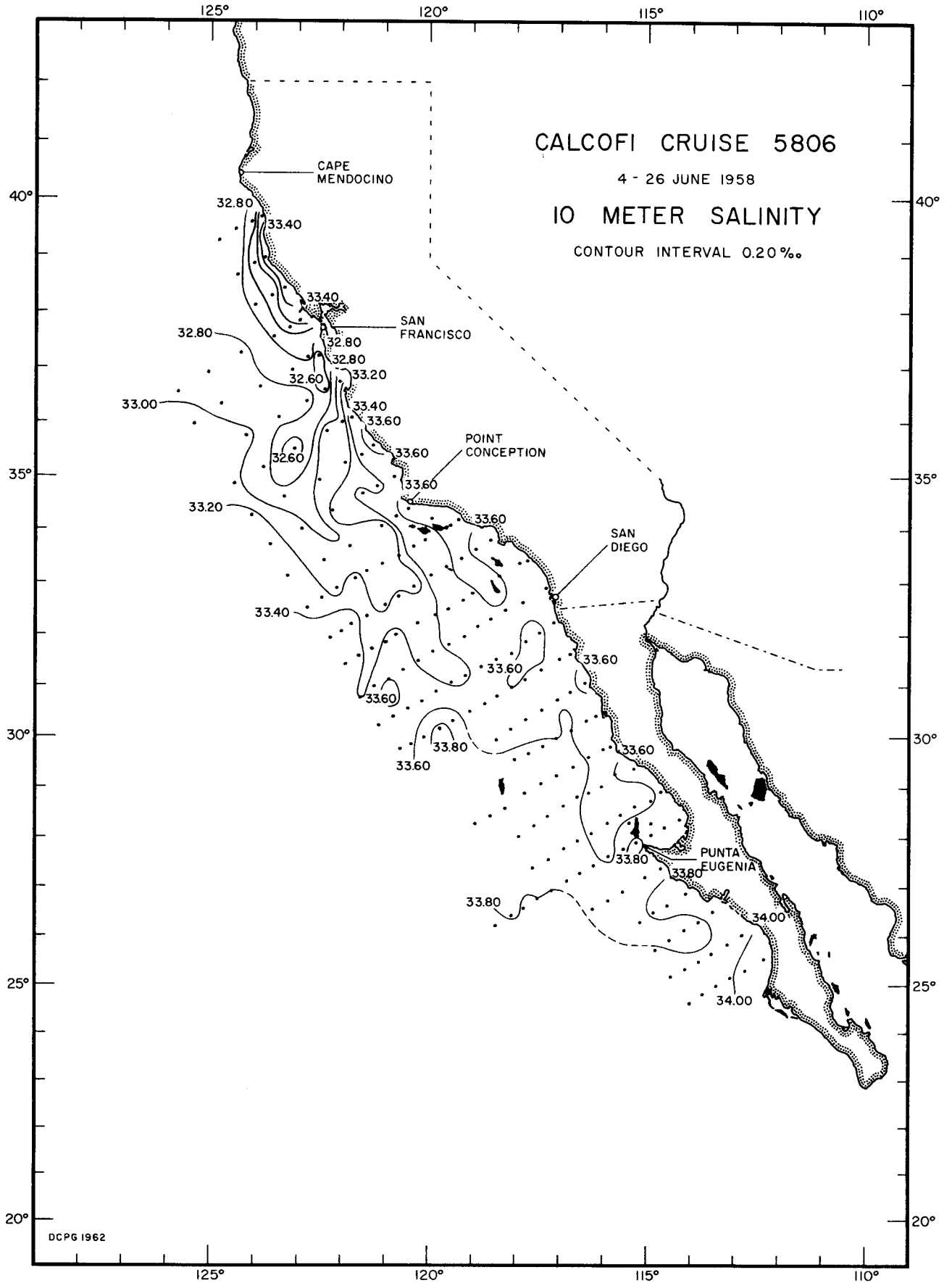
10 METER SALINITY

CONTOUR INTERVAL 0.20 ‰

DCPG 1962

10m S
5804





CALCOFI CRUISE 5806

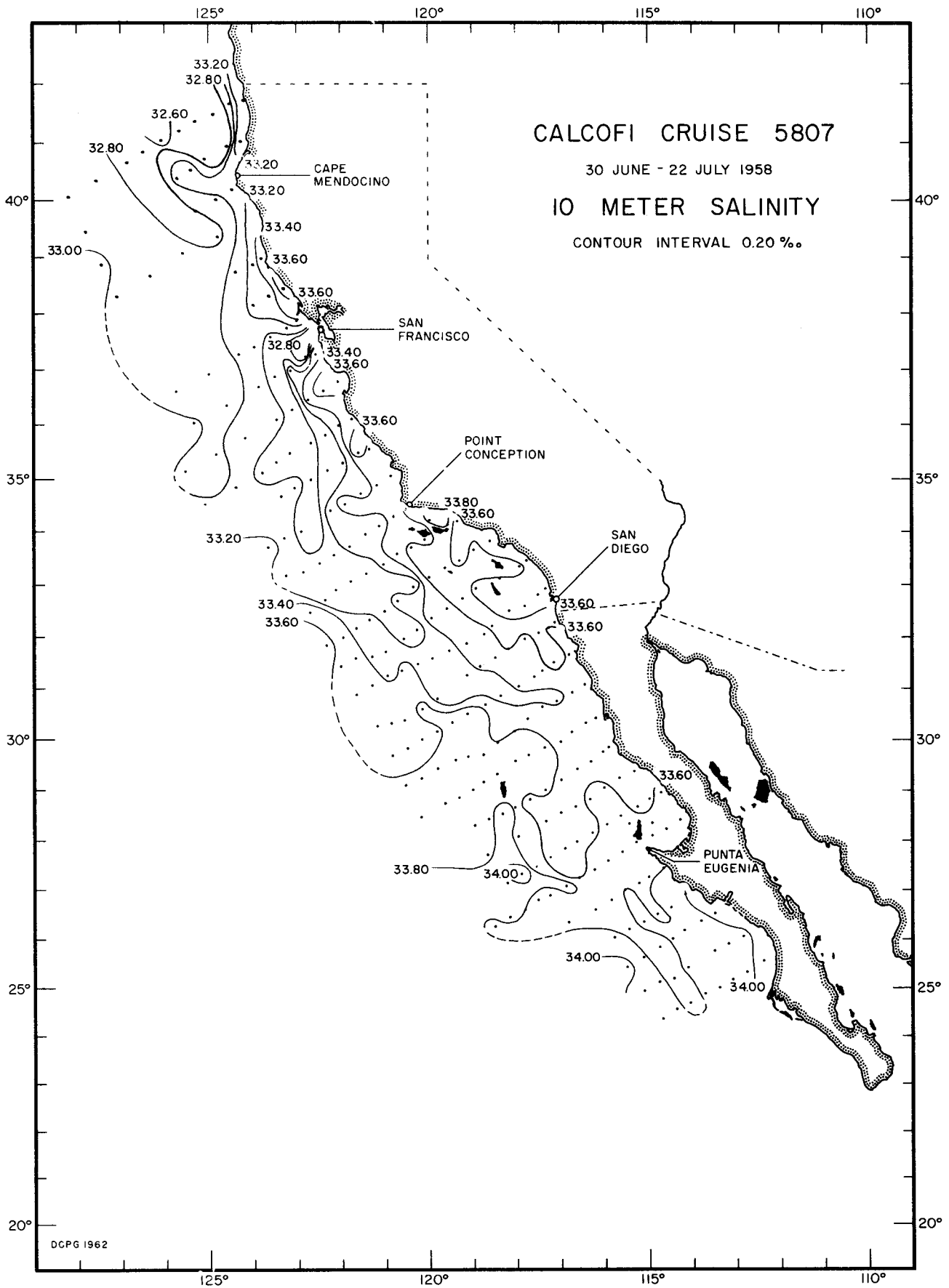
4 - 26 JUNE 1958

10 METER SALINITY

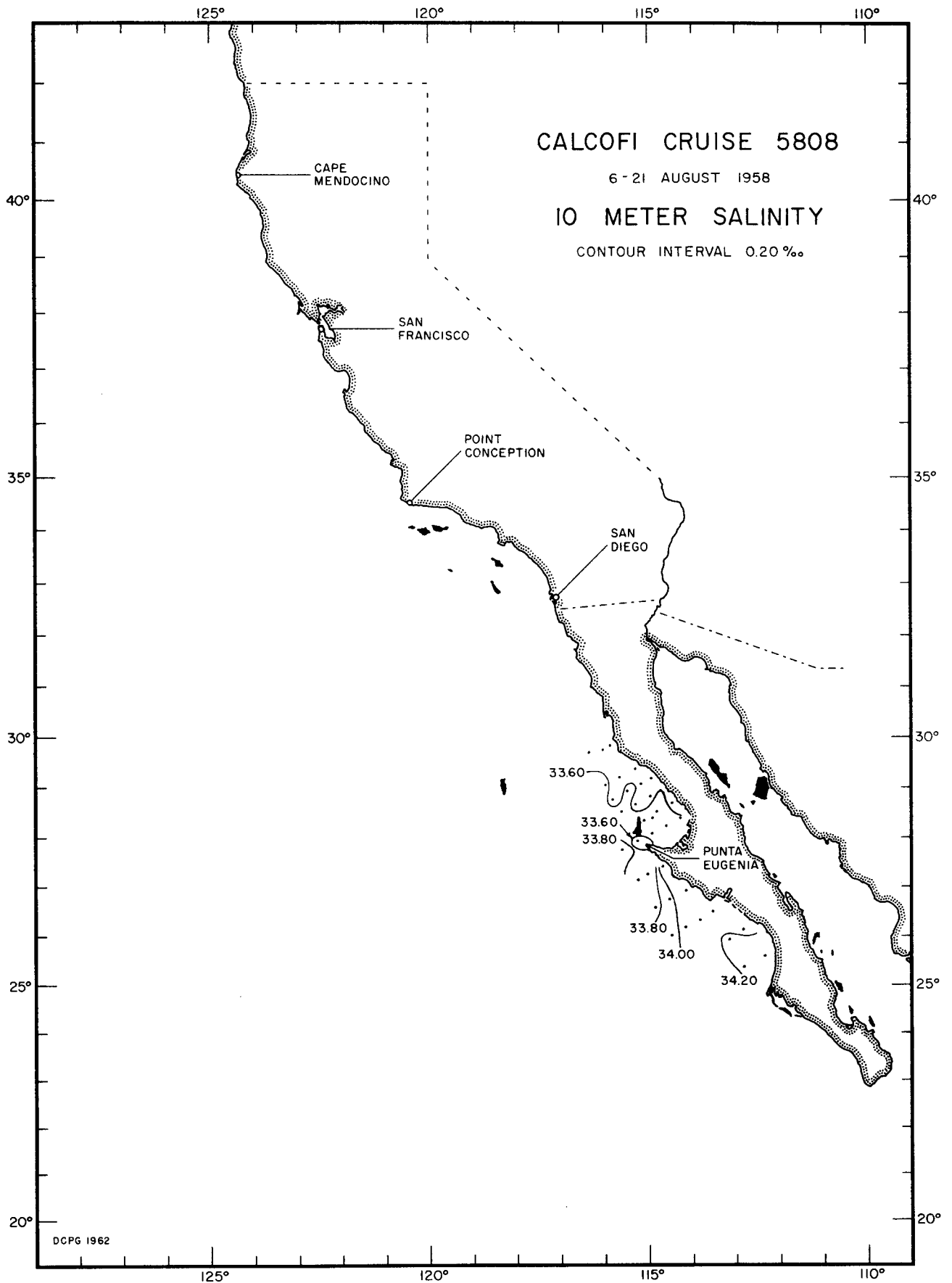
CONTOUR INTERVAL 0.20 ‰

DCPG 1962

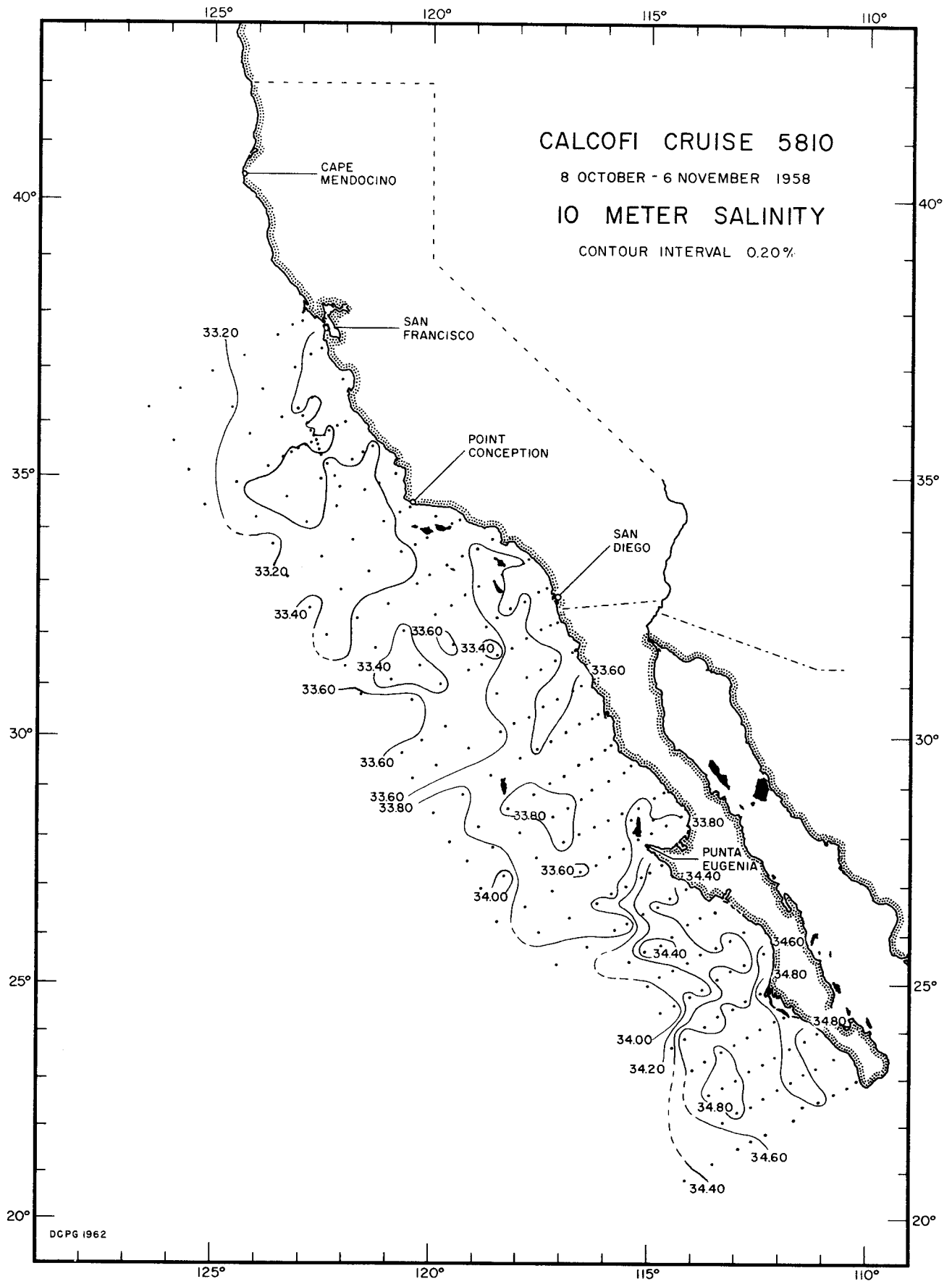
10m S
5806



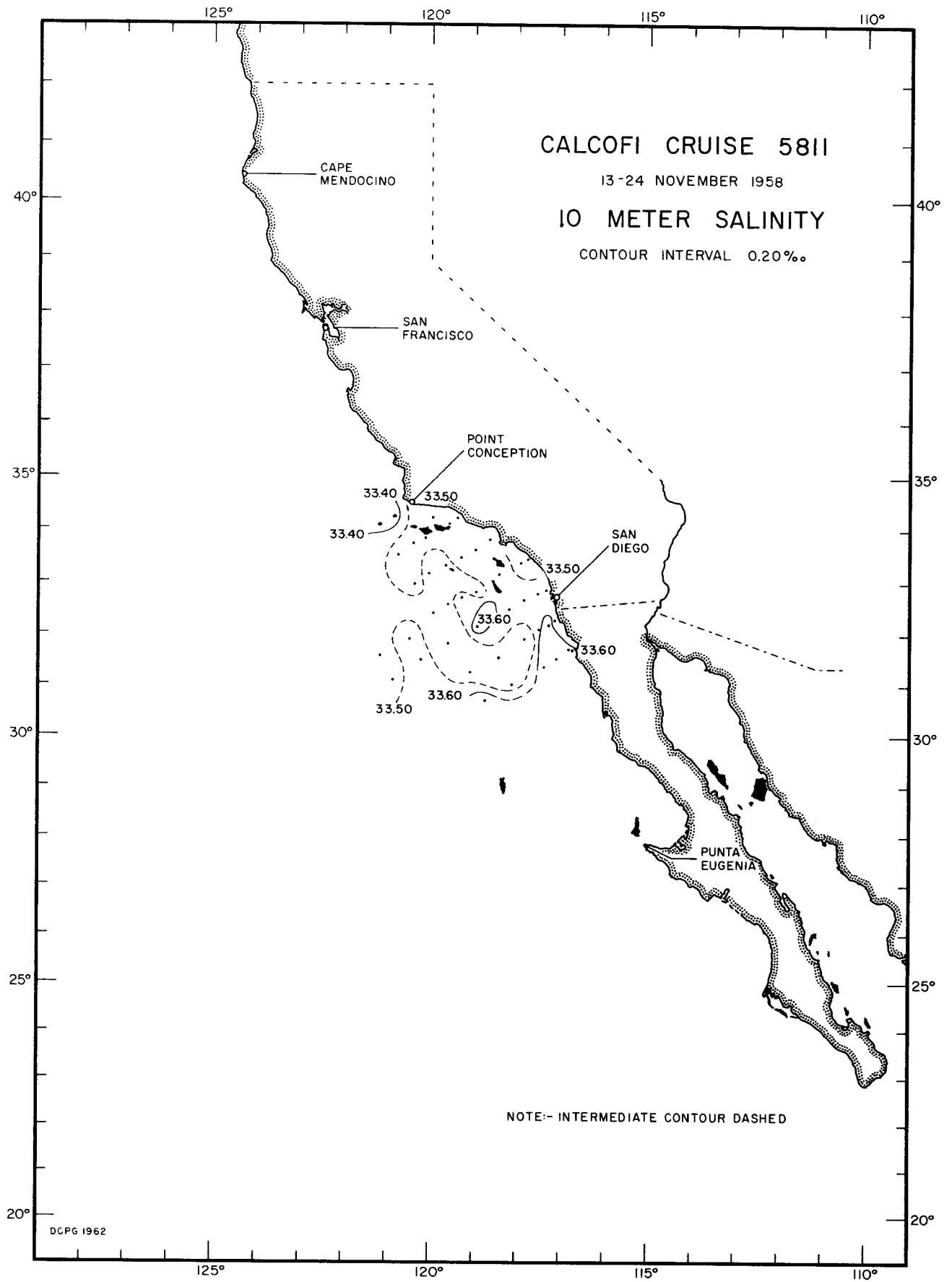
10m S
5807

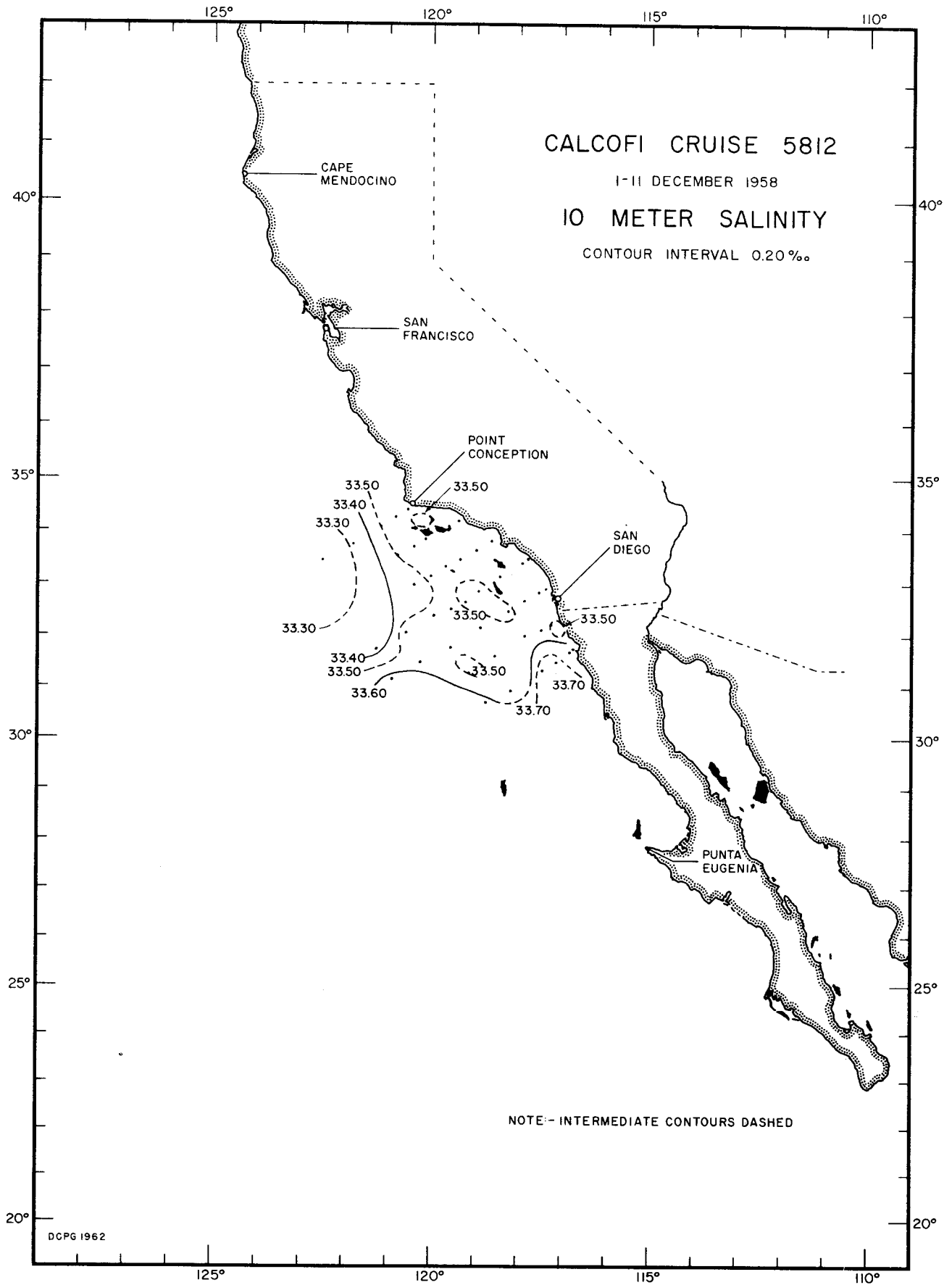


10m S
5808

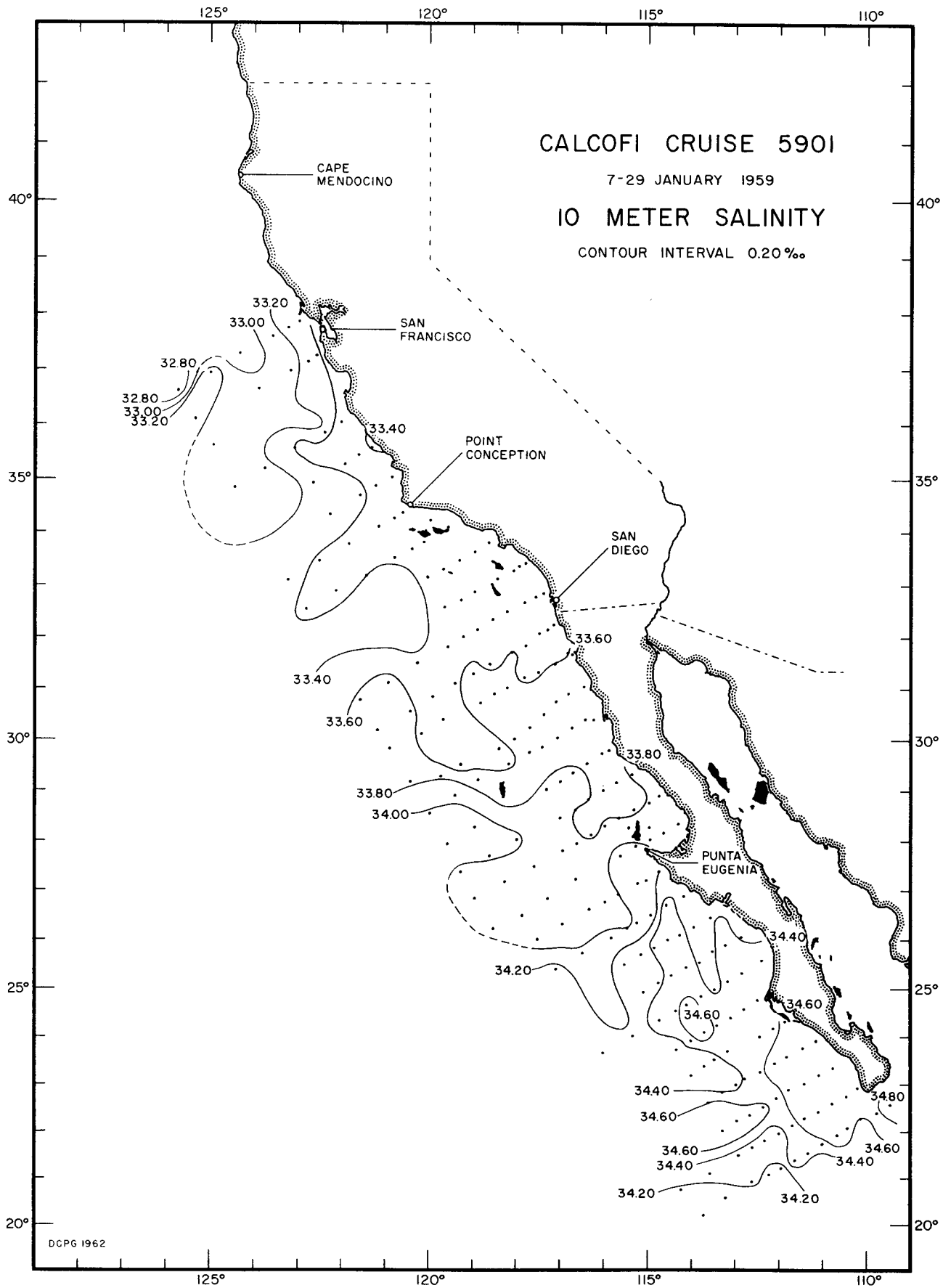


10m S
5810





10m S
5812



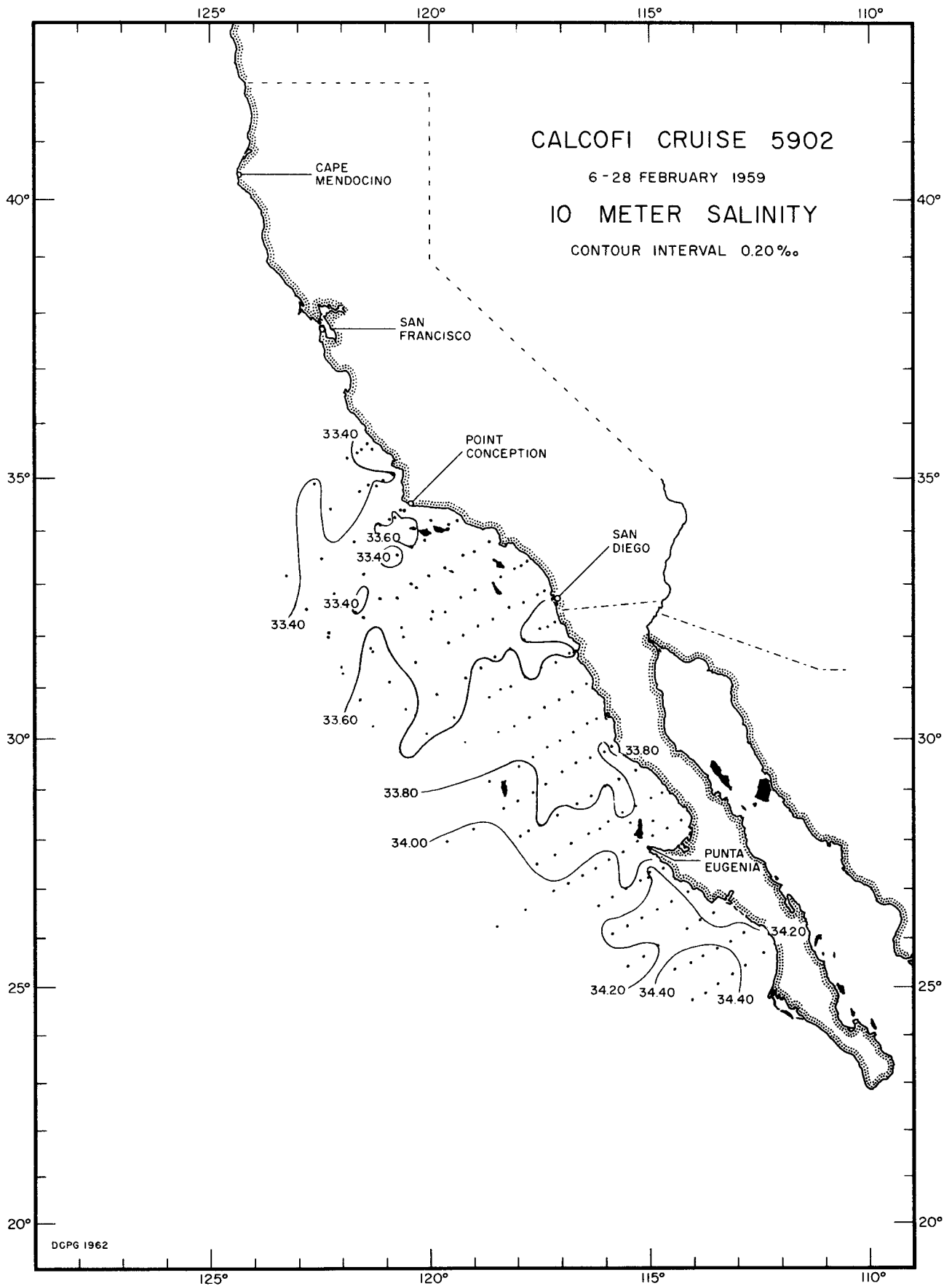
CALCOFI CRUISE 5901

7-29 JANUARY 1959

10 METER SALINITY

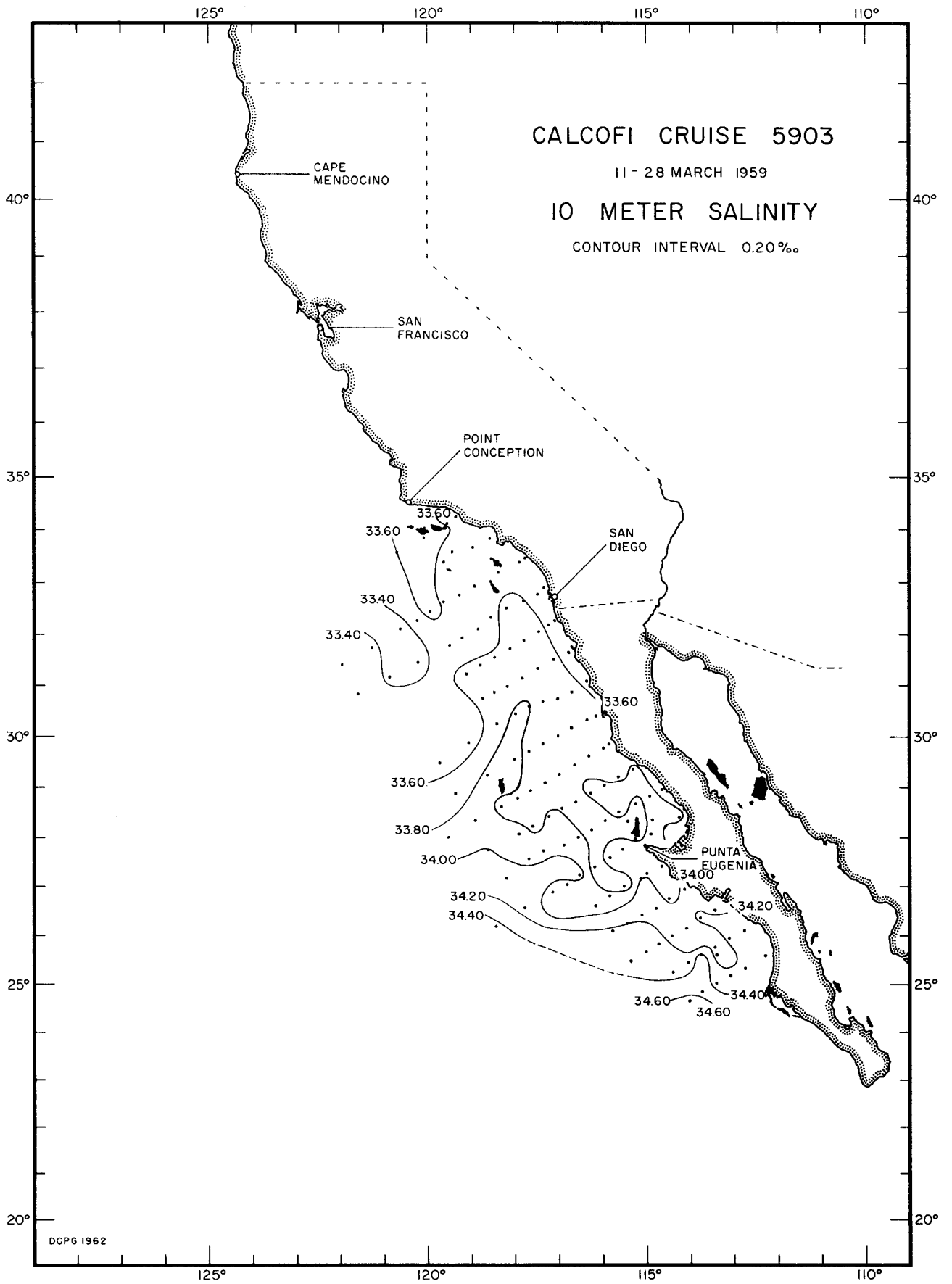
CONTOUR INTERVAL 0.20‰

10m S
5901

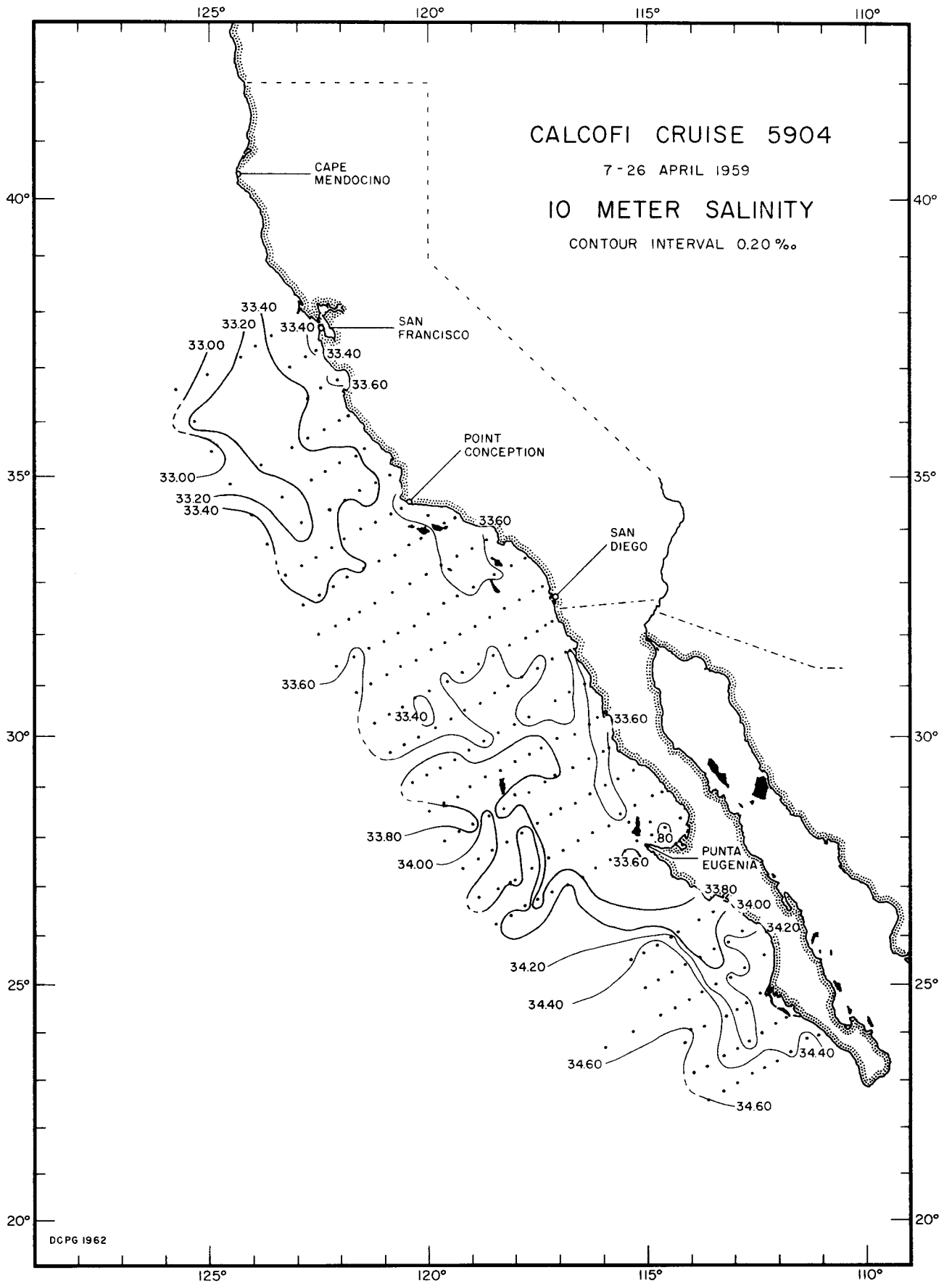


DCPG 1962

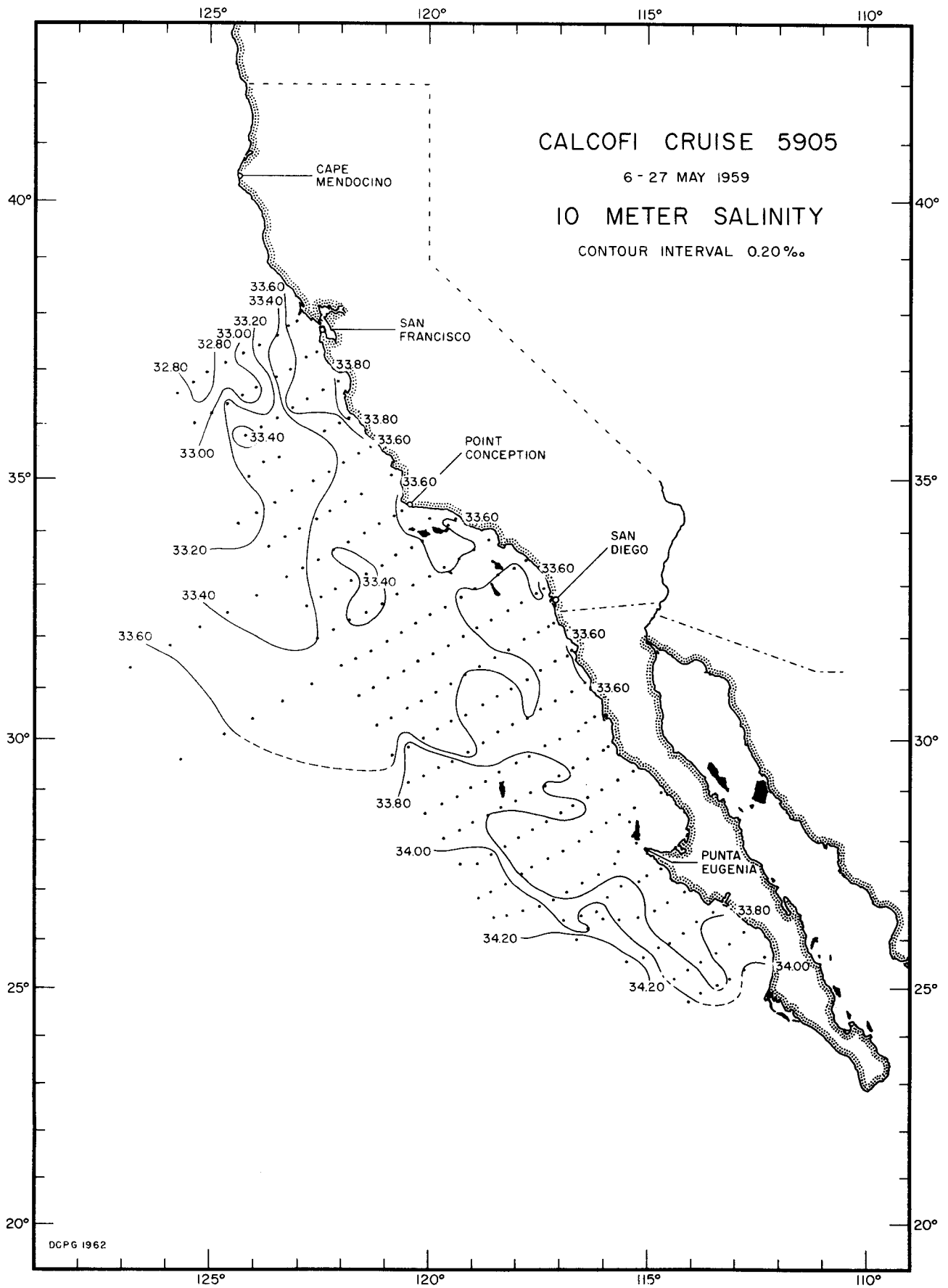
10m S
5902



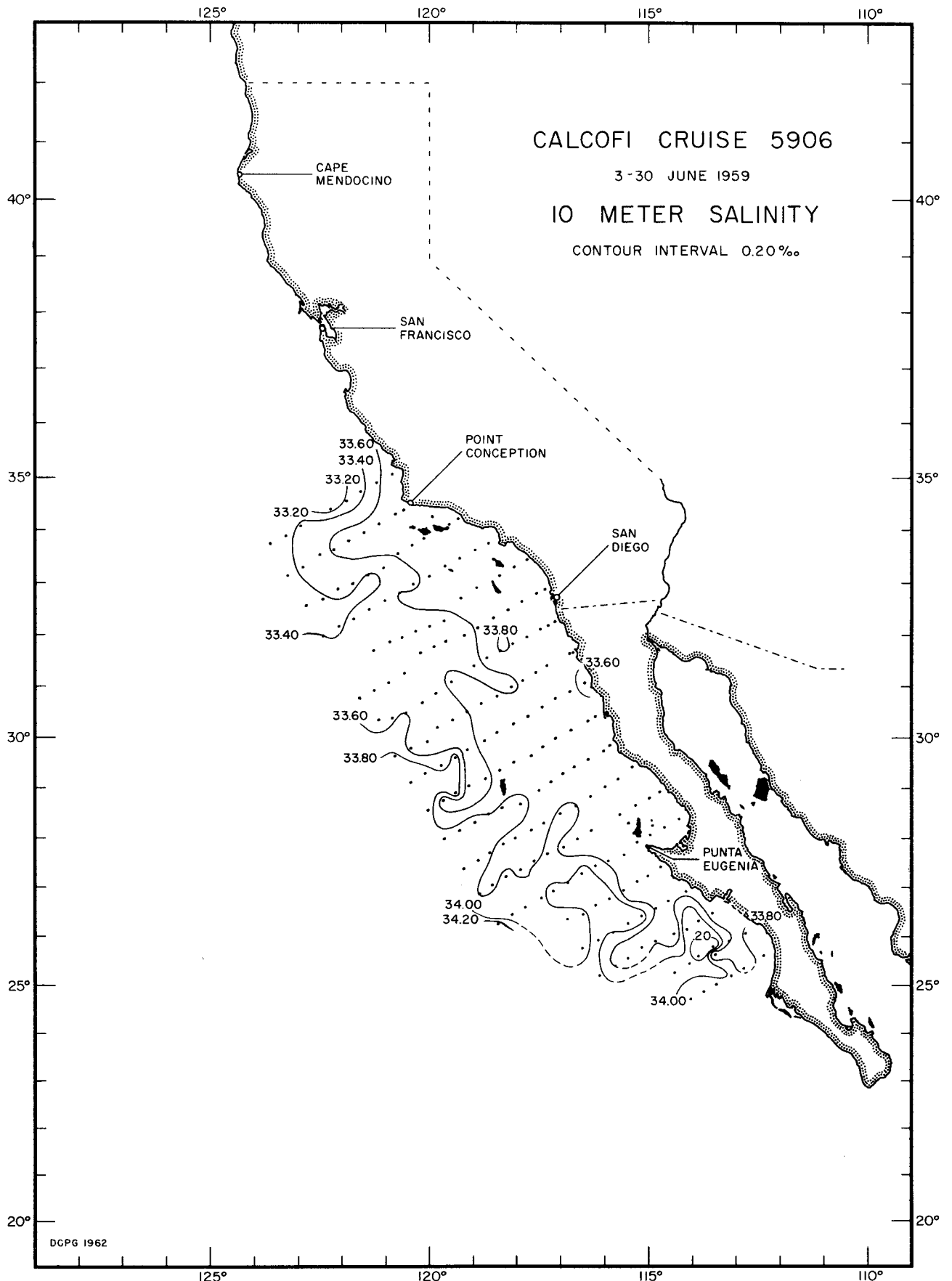
10m S
5903



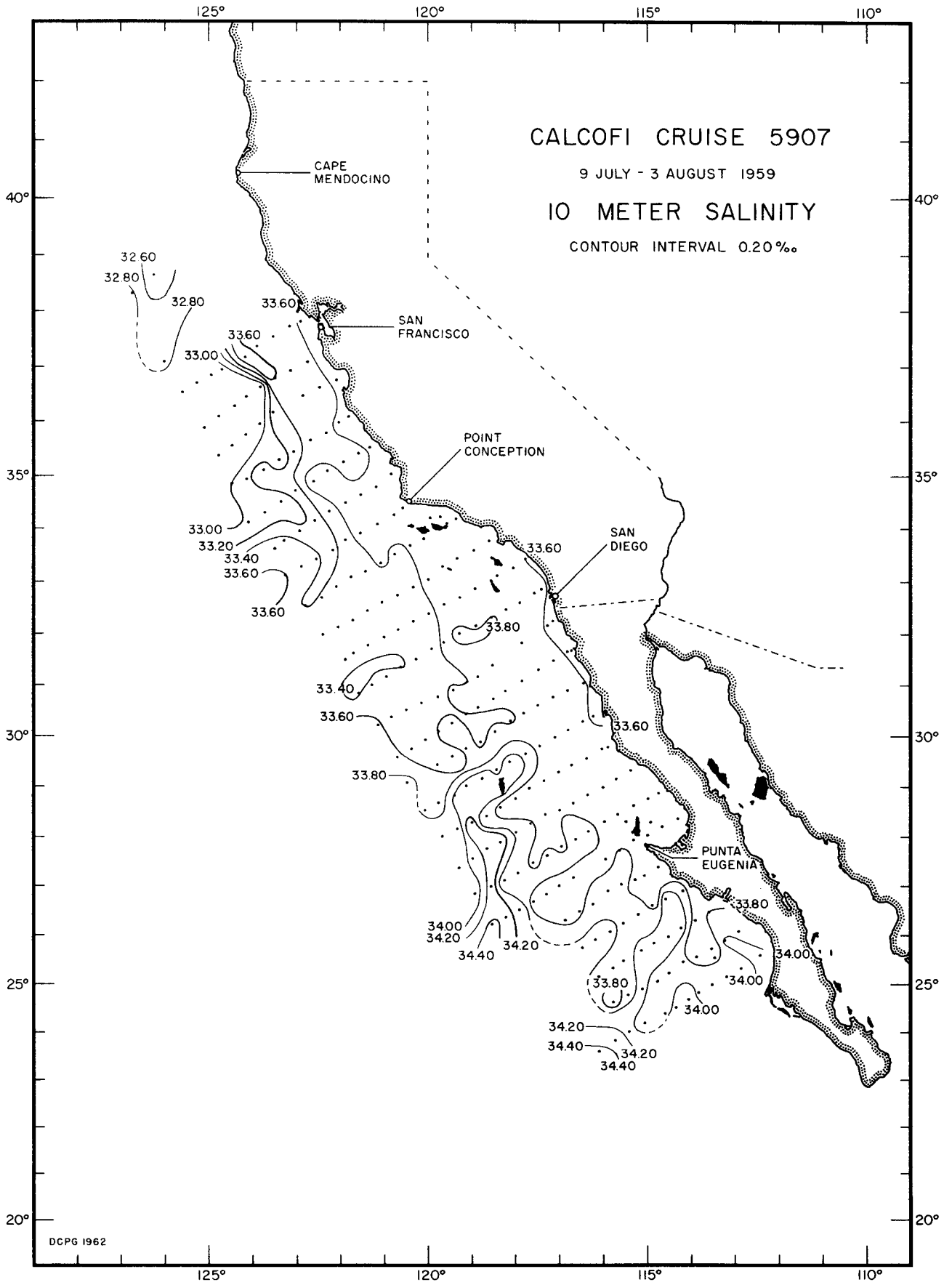
10m S
5904



10m S
5905

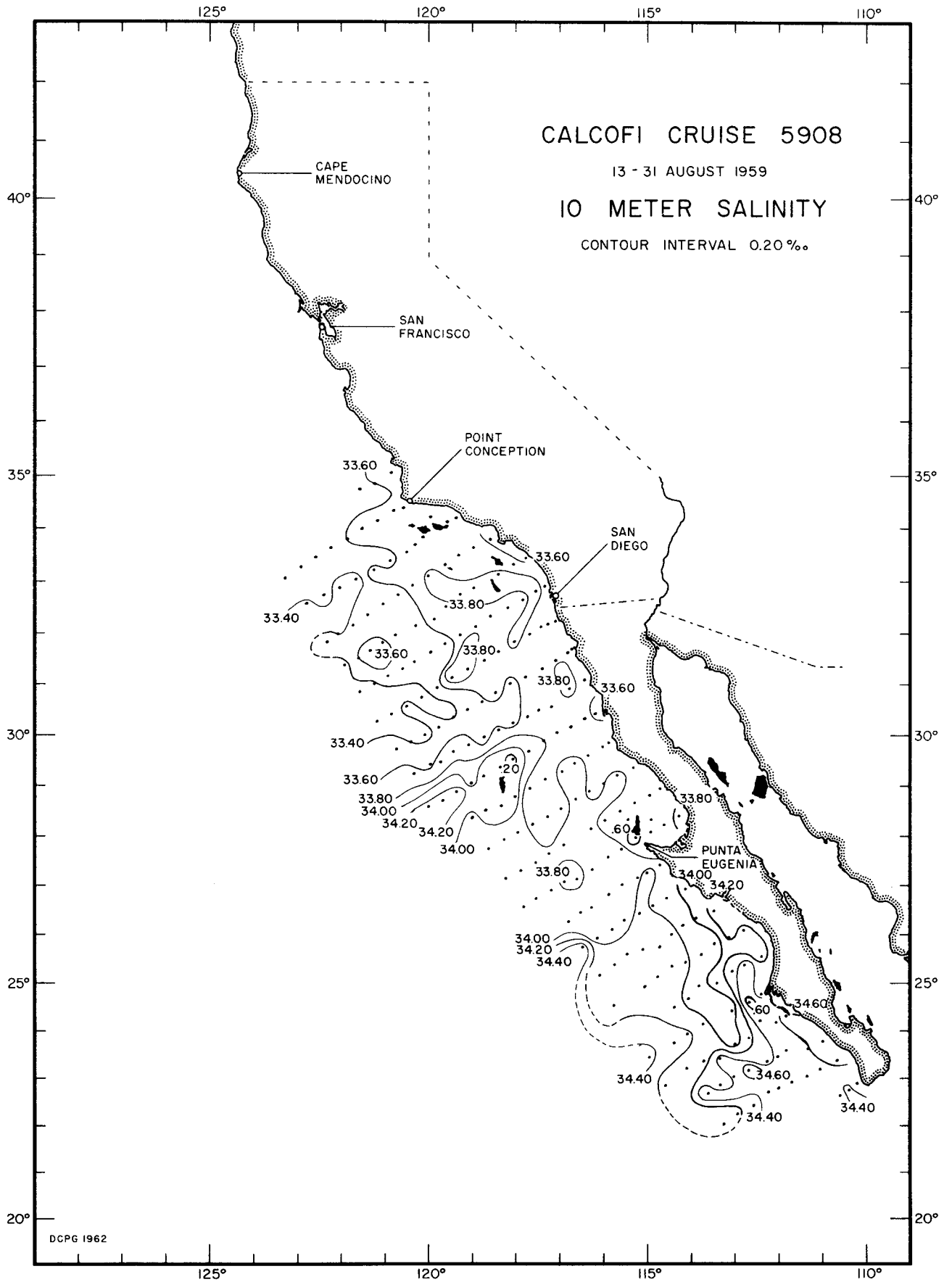


10m S
5906

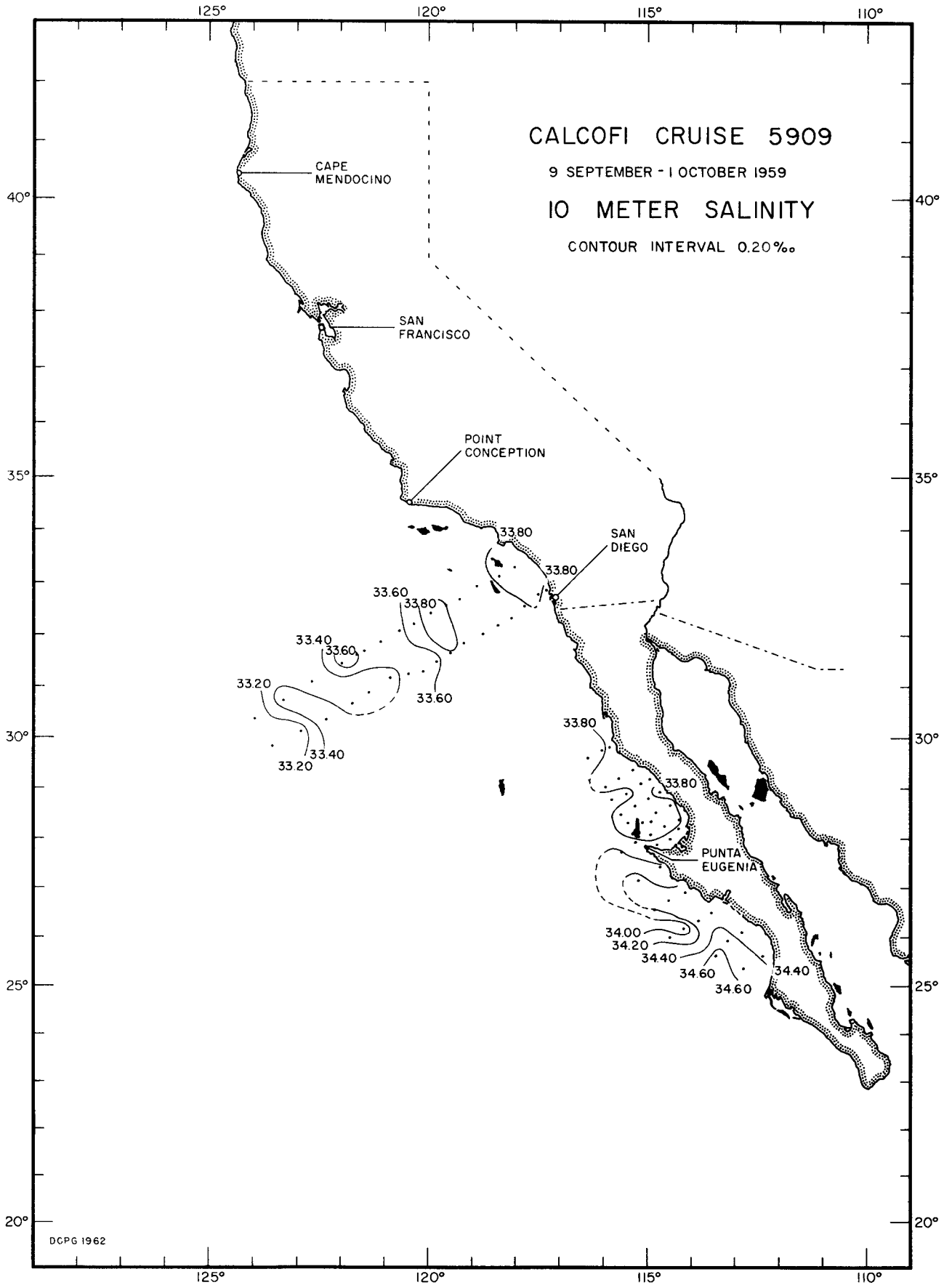


DCPG 1962

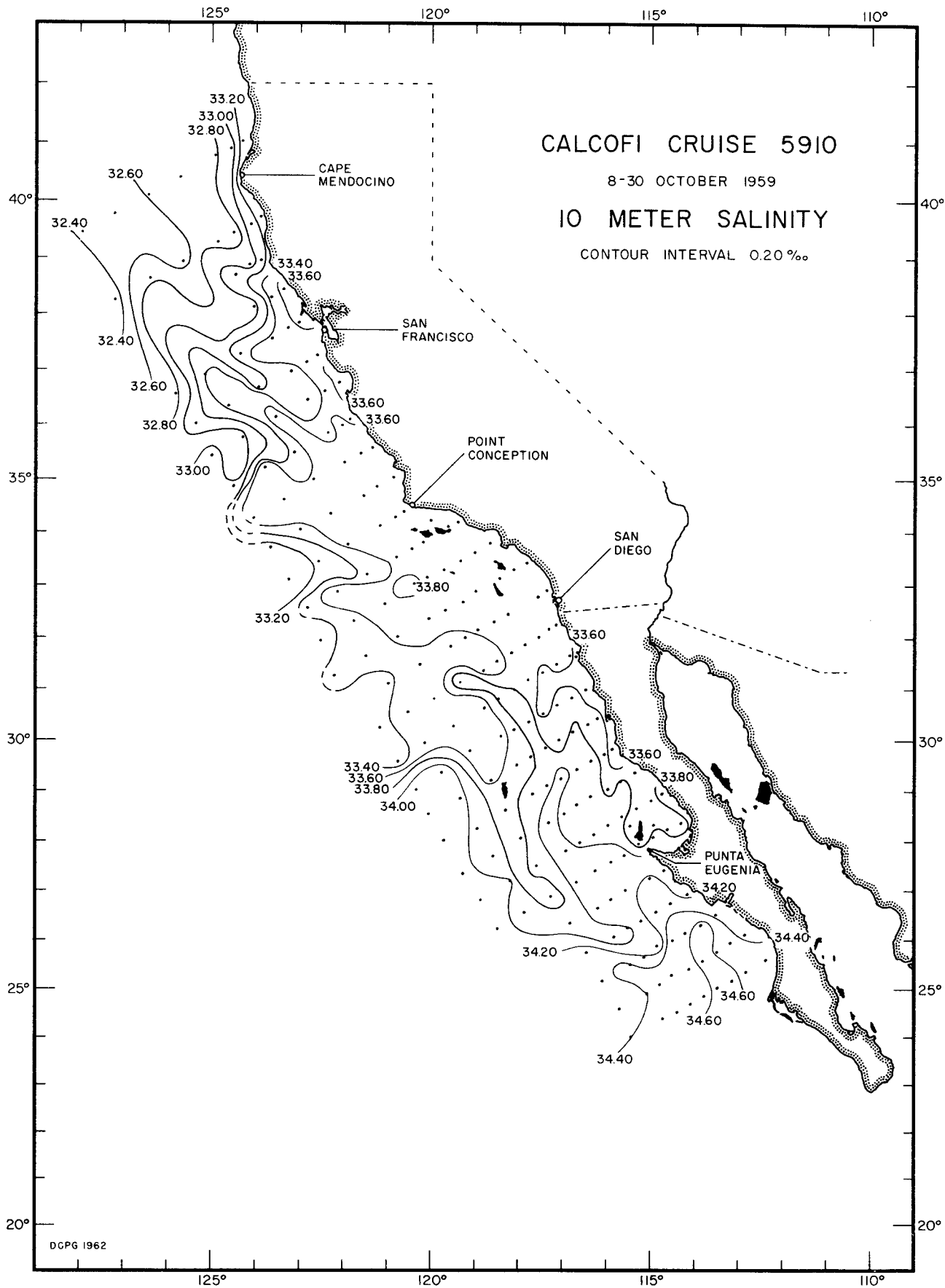
10m S
5907



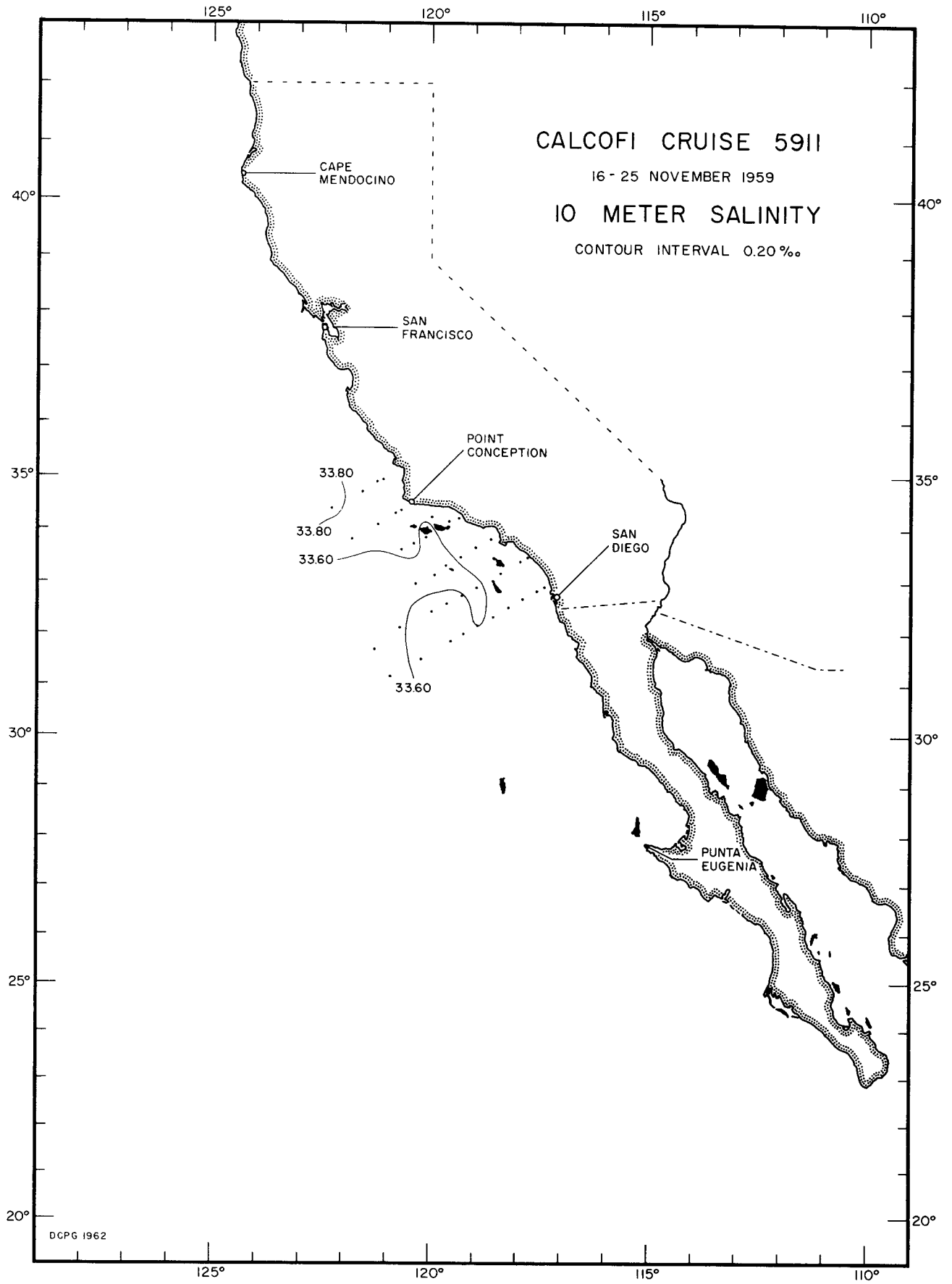
10m S
5908



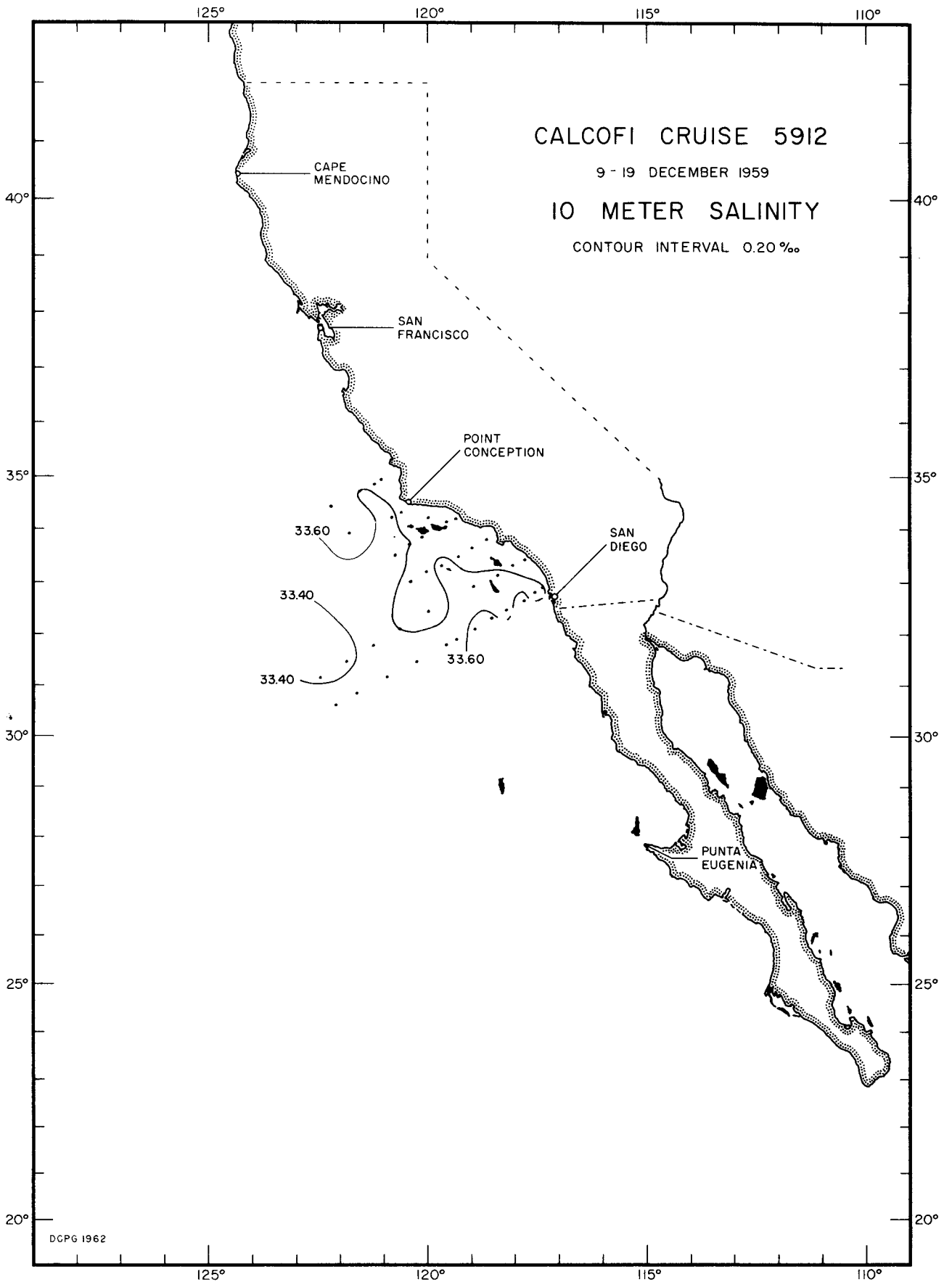
10m S
5909



10m S
5910

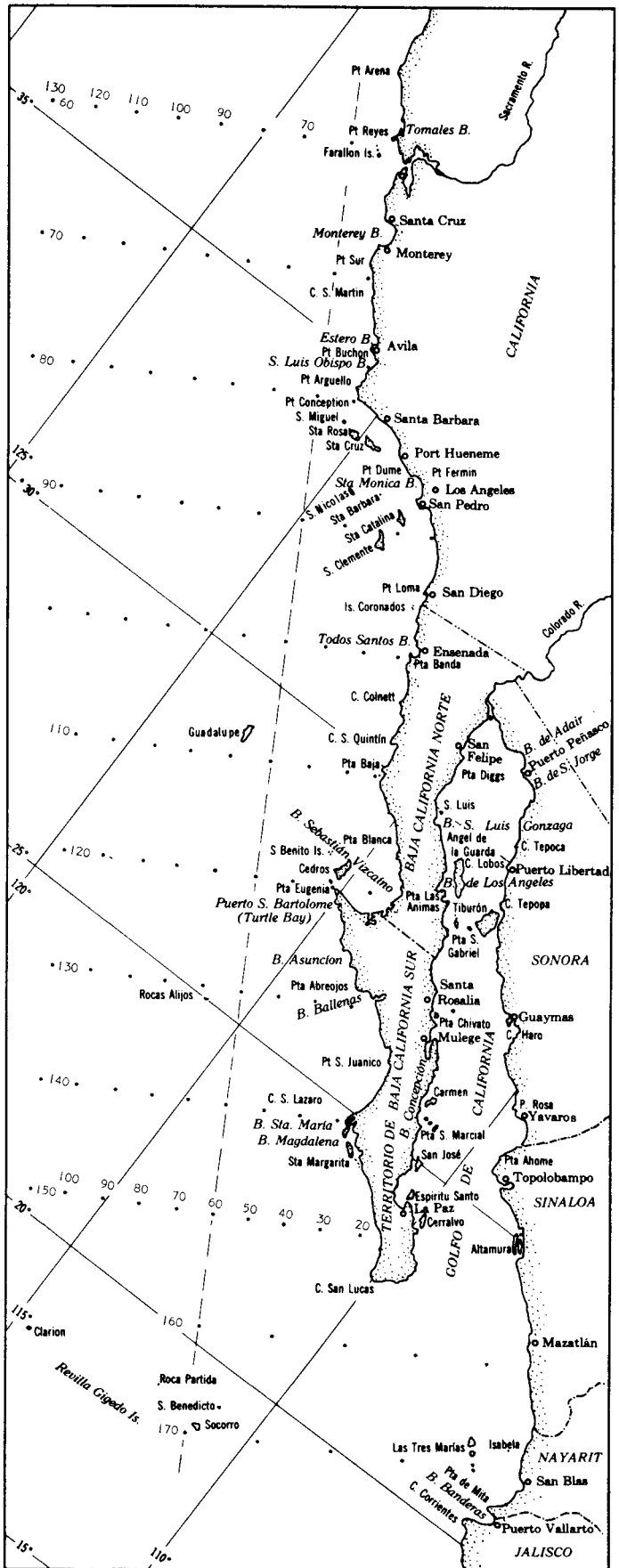
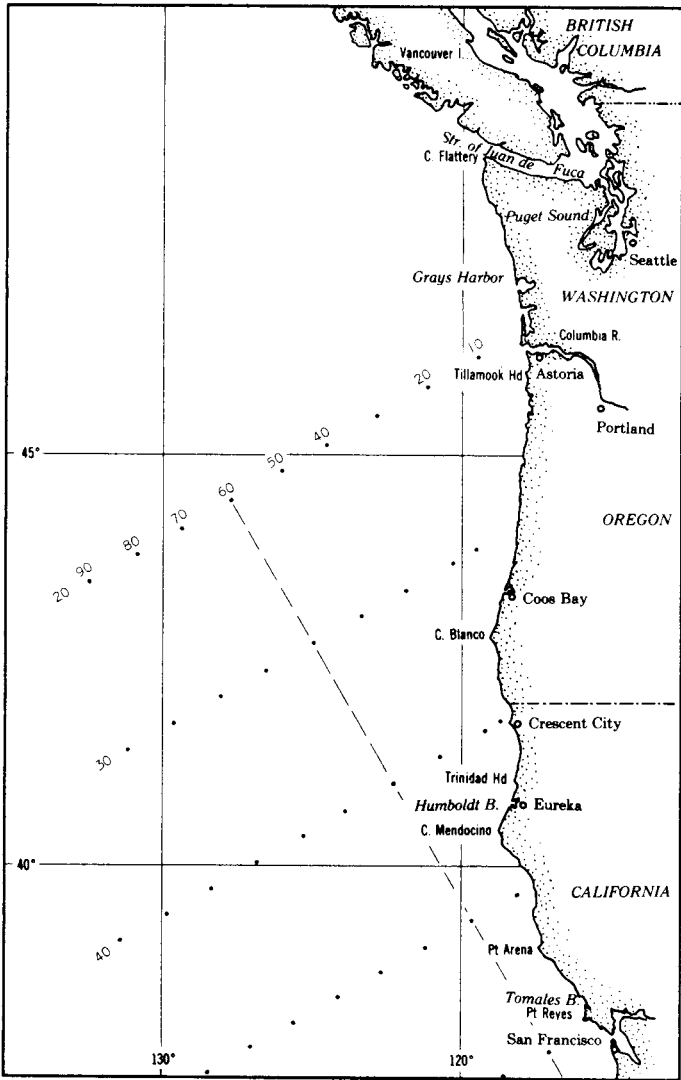


10m S
5911



5912





These maps are designed to show essential details of the area most intensively studied by the California Cooperative Oceanic Fisheries Investigations. This is approximately the same area as is shown in color on the front cover. Geographical place names are those most commonly used in the various publications emerging from the research. The cardinal station lines extending southwestward from the coast are shown. They are 120 miles apart. Additional lines are utilized as needed and can be as closely spaced as 12 miles apart and still have individual numbers. The stations along the lines are numbered with respect to the station 60 line, the numbers increasing to the west and decreasing to the east. Most of them are 40 miles apart, and are numbered in groups of 10. This permits adding stations as close as 4 miles apart as needed. An example of the usual identification is 120.65. This station is on line 120, 20 nautical miles southwest of station 60.

The projection of the front cover is Lambert's Azimuthal Equal Area Projection. The detail maps are a Mercator projection.