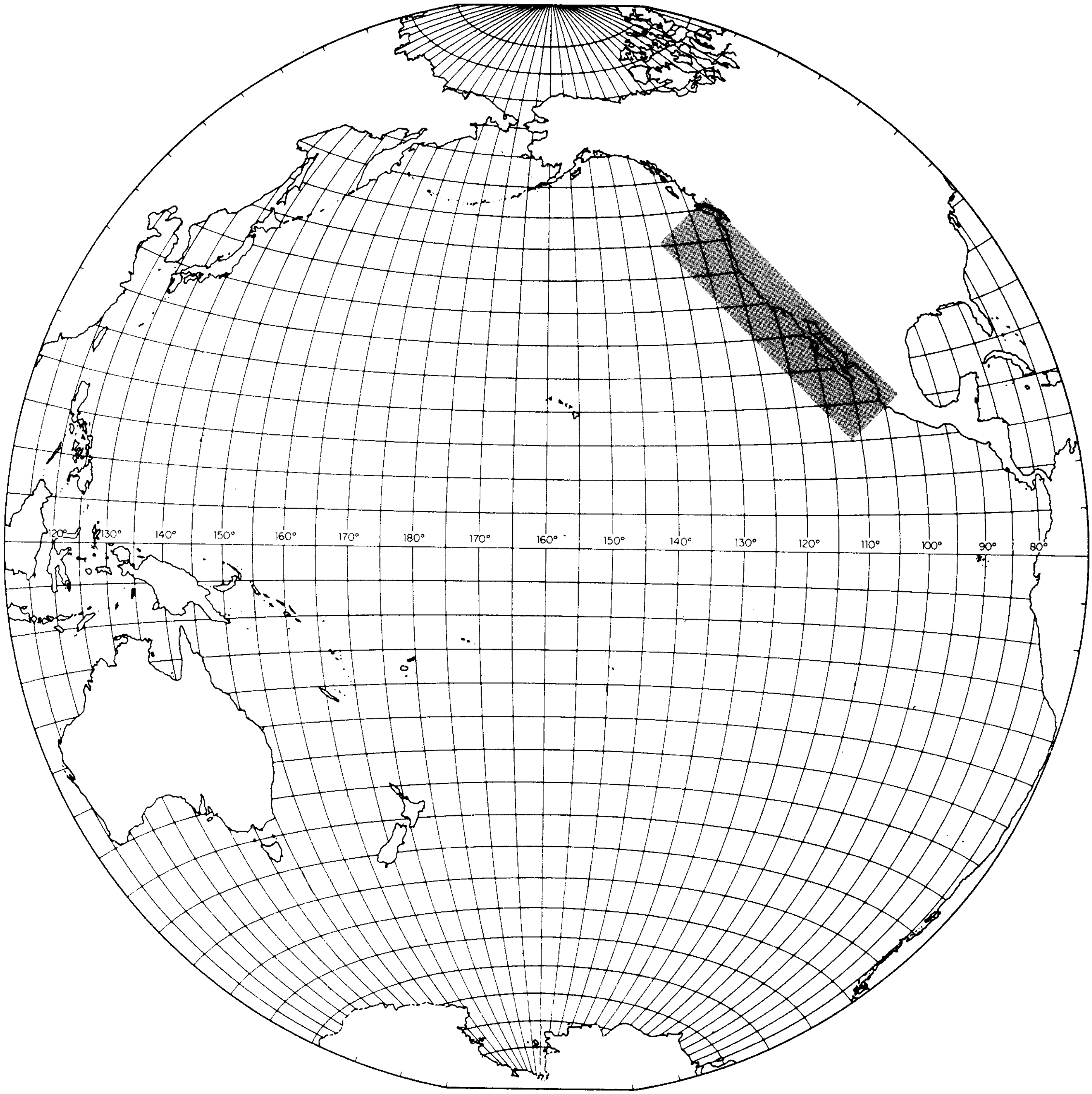
STATE OF CALIFORNIA
MARINE RESEARCH COMMITTEE



CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS

ATLAS No. 4

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STATE OF CALIFORNIA
MARINE RESEARCH COMMITTEE

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

December, 1966

THE CALCOFI ATLAS SERIES

This is the fourth in a series of atlases containing hydrographic and plankton data from the region of the California Current. The field work was carried out by the California Cooperative Oceanic Fisheries Investigations,[1] a program sponsored by the State of California under the direction of the State's Marine Research Committee. The cooperating agencies in the program are:

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

CalCOFI atlases[2] are issued as individual units as they become available. They provide processed physical, chemical and biological measurements of the California Current region. Each number may contain one or more contributions. A general description of the CalCOFI program with its objectives appears in the preface of Atlas No. 2.

This atlas was prepared by the Data Collection and Processing Group of the Marine Life Research Program, Scripps Institution of Oceanography.

CalCOFI Atlas Editorial Staff:

Abraham Fleminger and Hans T. Klein, Editors
John G. Wyllie, Principal analyst, physical-chemical oceanographic data

Atlases in this series are:

CalCOFI Atlas No. 1
Anonymous. CalCOFI atlas of 10-meter temperatures and salinities 1949 through 1959.

CalCOFI Atlas No. 2
Fleminger, A. Distributional atlas of calanoid copepods in the California Current region, Part 1.

CalCOFI Atlas No. 3
Alvariño, A. Distributional atlas of Chaetognatha in the California Current region.

CalCOFI Atlas No. 4
Wyllie, J. G. Geostrophic flow of the California Current at the surface and at 200 meters.

[1] Usually abbreviated CalCOFI, sometimes CALCOFI or CCOFI.
[2] For citation this issue in the series should be referred to as CalCOFI Atlas No. 4.

CONTENTS

GEOSTROPHIC FLOW OF THE CALIFORNIA CURRENT AT THE SURFACE AND AT 200 METERS

John G. Wyllie[1]

Introduction

In this atlas attention is directed to the geostrophic flow at the surface and at 200 meters[2] relative to currents at 500 meters as computed from temperature-salinity-depth data.

More than 280 charts have been prepared covering the period from early 1949 through the spring of 1965 (Fig. 1). These charts bring together most of the data available on the geostrophic flow of the California Current. Future research into the behavior of this current system, so vital for a full understanding of the eastern North Pacific Ocean, should be aided by this compilation of charts.

For readers not acquainted with the term geostrophic flow, the following comment is offered. The geostrophic flow, calculated from temperature-salinity-depth data, provides a reliable approximation of the actual motion of the water when this motion is considered over a period of time of a day or more. Forces which result in shorter-term current variations are omitted from the calculations. An example would be the tidal forces. The current measured at any particular moment can differ widely from the geostrophic flow, but the resultant of a series of measurements

[1] Scripps Institution of Oceanography, University of California, San Diego, La Jolla, California.

[2] The terms meters and decibars (db) can be used interchangeably for practical purposes. For example, the pressure at a depth of 200 meters is very close to 200 decibars, so the more familiar term meters is used although decibars, a pressure term, is correct.

taken over a period of time will tend to approach the geostrophic flow (Reid and Schwartzlose, 1962; Reid, Schwartzlose and Brown, 1963). As a result, for example, the drift of plankton may better be estimated from the geostrophic flow than from an instantaneous current measurement.

	01	02	03	04	05	06	07	08	09	10	11	12	
49				●	●	●	●	●	●	●	●		49
50		●	●	●	●	●	●	●	●		●		50
51		●	●	●	●		●		●	●			51
52	●	●	●	●	●	●	●	●	●	●	●		52
53	●	●	●	●	●	●	●	●	●	●	●	●	53
54	●	●	●	●	●	●	●	●	●	●		●	54
55		●		●		●		●		●		●	55
56		G		G		●						G	56
57		G		G		G	●	G	●	●	●	●	57
58	●	●	●	●	●		●	●	●	●	●	●	58
59	●	●	●	2	●	●	●	●	●	●	●	●	59
60	●	●	●	●	●	●	●	●		●			60
61	●			●	●		●			2			61
62	●			●			●			●			62
63	●			●			●			●			63
64	●			●			●			●			64
65	●			●									65
	01	02	03	04	05	06	07	08	09	10	11	12	

Figure 1. Months for which cruise charts are available. Key to the boxed index: The numbers for the rows (years) combined with those for the columns (months) form the cruise numbers.
● = 0/500 and 200/500-db charts
2 = the same as ● but two cruises this month
G = 0/500 and 200/500-db charts with the Gulf of California included

Analysis of Charts

In the analysis of the charts only data published in OCEANIC OBSERVATIONS OF THE PACIFIC, which contain data for the years 1949 through 1959 (Scripps Institution of Oceanography, various years of publication), and in subsequent final data reports of the CalCOFI program were used. The final analysis of each chart was checked against charts adjacent in time, against corresponding charts from other years and against the monthly means. Contouring, being subjective by nature, cannot be done without alternative possibilities presenting themselves. Some decisions can be supported with rational arguments but some are arbitrary and their validity depends upon the judgement and experience of the analyst.

Monthly mean charts for both the surface and 200 meters are included. The station values upon which the contours are based are simple arithmetic means of observed data with no attempt made to fill in missing data with interpolated values.

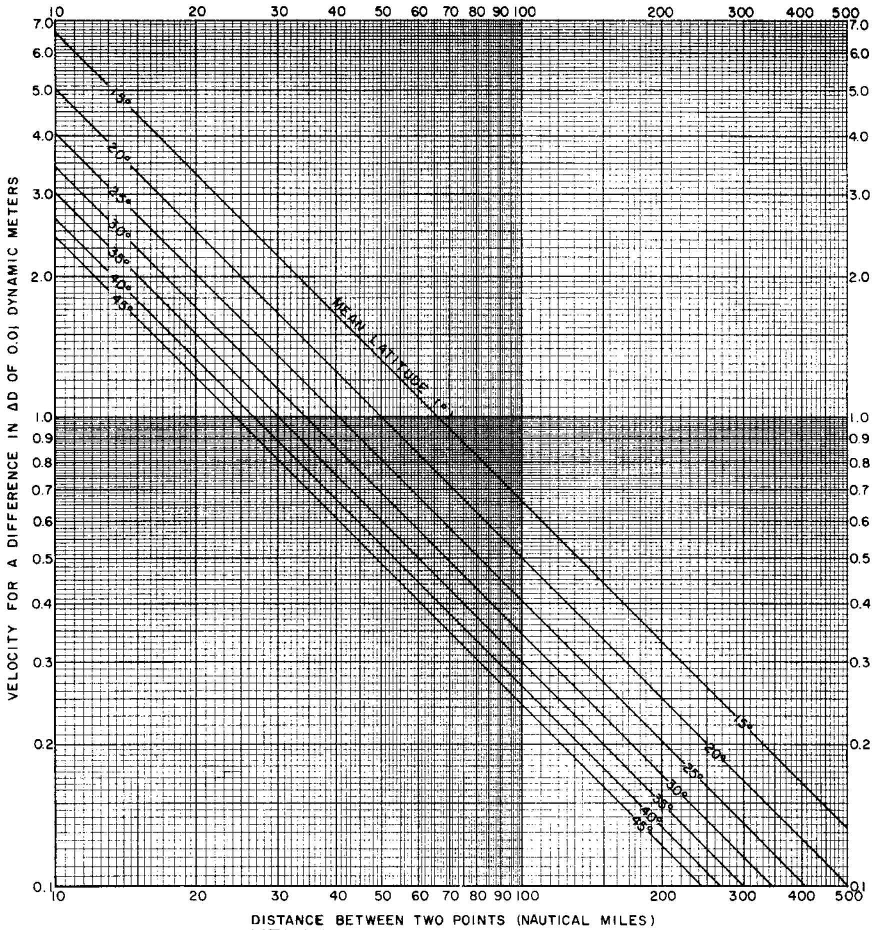
In addition, a chart of 500 over 1000 db and one of 1000 over 2000 db is included. The data for these were carefully checked and the salinity data were determined by salinometer. These charts are presented for the purpose of estimating the validity of the 500 meter (decibar) level as a time-independent, zero-velocity, reference plane. The 1000 over 2000-db chart indicates little or no motion at a depth of 1000 meters relative to 2000 meters. Motion is indicated, however, at 500 meters relative to 1000 meters. Since the charts of the atlas are referred to 500 db and not 1000 db, a correction factor can be applied, if desired, as indicated on the 500 over 1000-db chart. This correction will usually intensify the flow a small amount.

The contour interval on the 200 over 500-db charts is 0.02 dyn. m but 0.04 dyn. m on the 0 over 500-db charts.[1] This convention must be remembered when calculating speed from the chart contours; otherwise, the current speeds will be in error. Figure 2 provides a convenient graph and conversion table for estimating current speed. It is a modification of a graph developed by G. I. Roden (unpublished).

Basic Pattern of the California Current

This work reflects moderately scaled features of the oceans, i. e., features whose minimum size is of the order of tens of miles in contrast to features whose minimum size is of the order of hundreds of miles or, in the other direction, hundreds of feet. Coastal currents very near shore may not be reflected in the data because of this scale problem or because other factors, not included in the calculation of geostrophic flow, are dominant in the immediate coastal regions. It should also be realized that the majority of charts reflect conditions only in the eastern portion of the California Current since cruises seldom covered the entire region in any given month.

[1] Dynamic meters (dyn. m) is an oceanographic expression of work per unit mass and depends upon the units used for length and time. When the length is expressed in meters and the time in seconds the unit of work per unit of mass is the dynamic decimeter. The unit used is the dynamic meter.



VELOCITY OF GEOSTROPHIC FLOW
(NAUTICAL MILES PER DAY)

cm/sec	0	1	2	3	4	5	6	7	8	9
0	KNOTS / N.M/DAY	0.02 / 0.47	0.04 / 0.93	0.06 / 1.40	0.08 / 1.86	0.10 / 2.33	0.12 / 2.80	0.14 / 3.26	0.16 / 3.73	0.17 / 4.20
10	0.19 / 4.66	0.21 / 5.13	0.23 / 5.59	0.25 / 6.06	0.27 / 6.53	0.29 / 6.99	0.31 / 7.46	0.33 / 7.93	0.35 / 8.39	0.37 / 8.86
20	0.39 / 9.32	0.41 / 9.79	0.43 / 10.26	0.45 / 10.72	0.47 / 11.19	0.49 / 11.66	0.51 / 12.12	0.52 / 12.59	0.54 / 13.05	0.56 / 13.52
30	0.58 / 13.99	0.60 / 14.45	0.62 / 14.92	0.64 / 15.38	0.66 / 15.85	0.68 / 16.32	0.70 / 16.78	0.72 / 17.25	0.74 / 17.72	0.76 / 18.18
40	0.78 / 18.65	0.80 / 19.11	0.82 / 19.58	0.84 / 20.05	0.85 / 20.51	0.87 / 20.98	0.89 / 21.45	0.91 / 21.91	0.93 / 22.38	0.95 / 22.84
50	0.97 / 23.31	0.99 / 23.78	1.01 / 24.24	1.03 / 24.71	1.05 / 25.17	1.07 / 25.64	1.09 / 26.11	1.11 / 26.57	1.13 / 27.04	1.15 / 27.51
60	1.17 / 27.98	1.18 / 28.44	1.20 / 28.90	1.22 / 29.37	1.24 / 29.84	1.26 / 30.30	1.28 / 30.77	1.30 / 31.24	1.32 / 31.70	1.34 / 32.17
70	1.36 / 32.63	1.38 / 33.10	1.40 / 33.57	1.42 / 34.03	1.44 / 34.50	1.46 / 34.96	1.48 / 35.43	1.50 / 35.90	1.52 / 36.36	1.53 / 36.83
80	1.55 / 37.30	1.57 / 37.76	1.59 / 38.23	1.61 / 38.69	1.63 / 39.16	1.65 / 39.63	1.67 / 40.09	1.69 / 40.56	1.71 / 41.03	1.73 / 41.49
90	1.75 / 41.96	1.77 / 42.42	1.79 / 42.89	1.81 / 43.36	1.83 / 43.82	1.85 / 44.29	1.86 / 44.76	1.88 / 45.22	1.90 / 45.69	1.92 / 46.15
100	1.94 / 46.62	1.96 / 47.09	1.98 / 47.55	2.00 / 48.02	2.02 / 48.48	2.04 / 48.95	2.06 / 49.42	2.08 / 49.88	2.10 / 50.35	2.12 / 50.82

CONVERSION TABLE
(CENTIMETERS / SECOND - KNOTS - NAUTICAL MILES / DAY)

1 cm/sec = 0.019 kts = 0.466 NAUTICAL MILES / DAY
1 kt = 24 NAUTICAL MILES / DAY = 51.48 cm/sec
1 NAUTICAL MILE / DAY = 0.042 kts = 2.14 cm/sec

Figure 2. Graph for estimating current speed. Table for converting cm/sec, knots, nautical miles per day.

As there appears to be a large amount of variation within the California Current system great care must be exercised in arriving at general conclusions from "instantaneous" current measurements or even from data collected on a limited number of cruises. A seasonal pattern does exist, but there is considerable year-to-year variation. The variation in strength of the California Current is probably controlled by the strength and the direction of flow of the West Wind Drift at the time it is influenced by the presence of the continent of North America. The monthly mean charts therefore serve only as guidelines to seasonal trends. Some of the trends appear to be as follows: the southward-flowing California Current moves inshore during April-May, eliminating the coastal countercurrent at the surface and, at times, at 200 meters. The coastal countercurrent depends upon this seasonal onshore-offshore migration of the south-flowing California Current. When offshore, the surface countercurrent develops; when onshore, the surface countercurrent is absent although the Southern California cyclonic eddy usually persists. The California Current begins as the southern branch of the West Wind Drift. Within the area of our charts the first impingement of the California Current on the west coast is found in the vicinity of Cape Mendocino. South-flowing surface water is found in the area most of the year. From this point south the main current swings offshore, except in April-May, turning eastward at 30-33 degrees north latitude and approaches the northern coast of Baja California in the vicinity of Cabo Colnett-Punta Baja.[1] This inshore flow is usually weakest during late summer and late fall, the time when a surface coastal countercurrent is most likely to appear in the region. South of the Cabo Colnett-Punta Baja region the main stream tends to swing offshore. It may turn inshore again somewhere north of Bahia Magdalena but, by this time, it is often indistinct and difficult to identify.

At 200 meters the main south-flowing current is usually farther offshore than at the surface. This may account for the greater persistence of north-flowing water in the deeper portion of the coastal countercurrent.

An atlas of this nature requires the efforts of many people over a long period of time. This atlas is a direct result of the work of the Data Collection and Processing Group at Scripps Institution of Oceanography. The author wishes to thank Joseph L. Reid, Jr., for his advice during the analysis of the many charts, Ronald Lynn for the use of his conveniently tabulated data and Arnold Mantyla for his helpful suggestions in discussions concerning the basic pattern of the California Current.

[1] See place-name map on inside of back cover.

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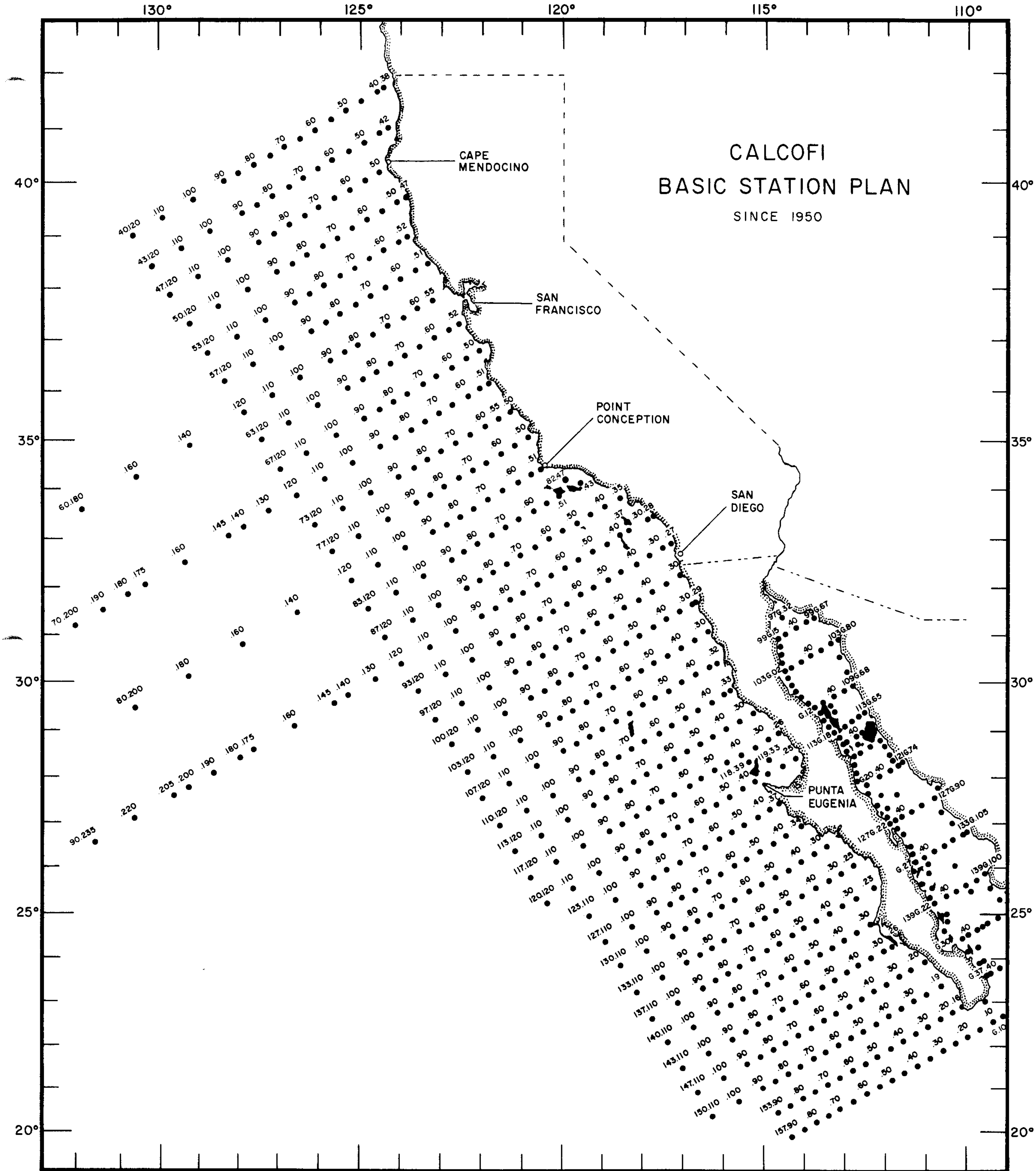
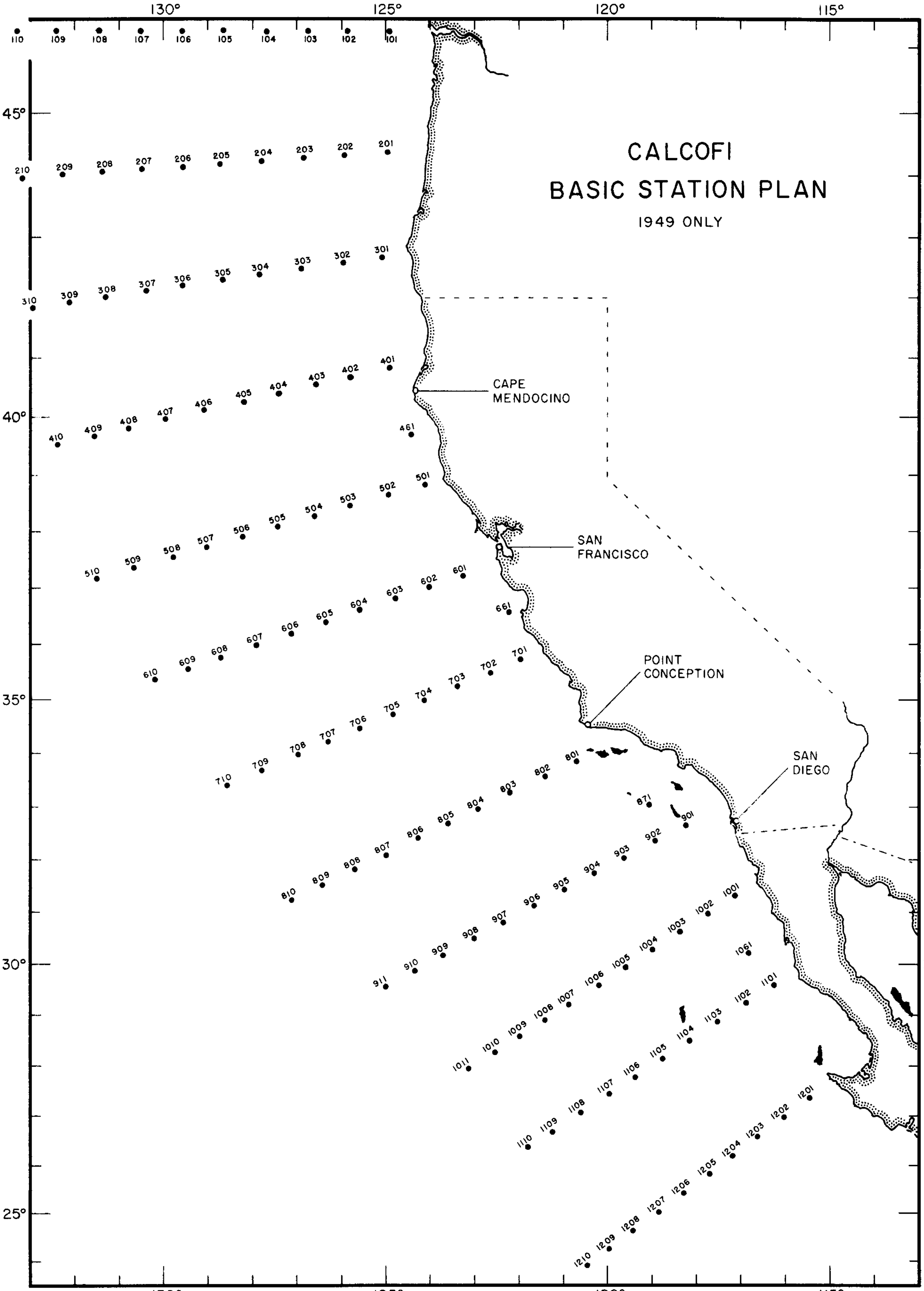


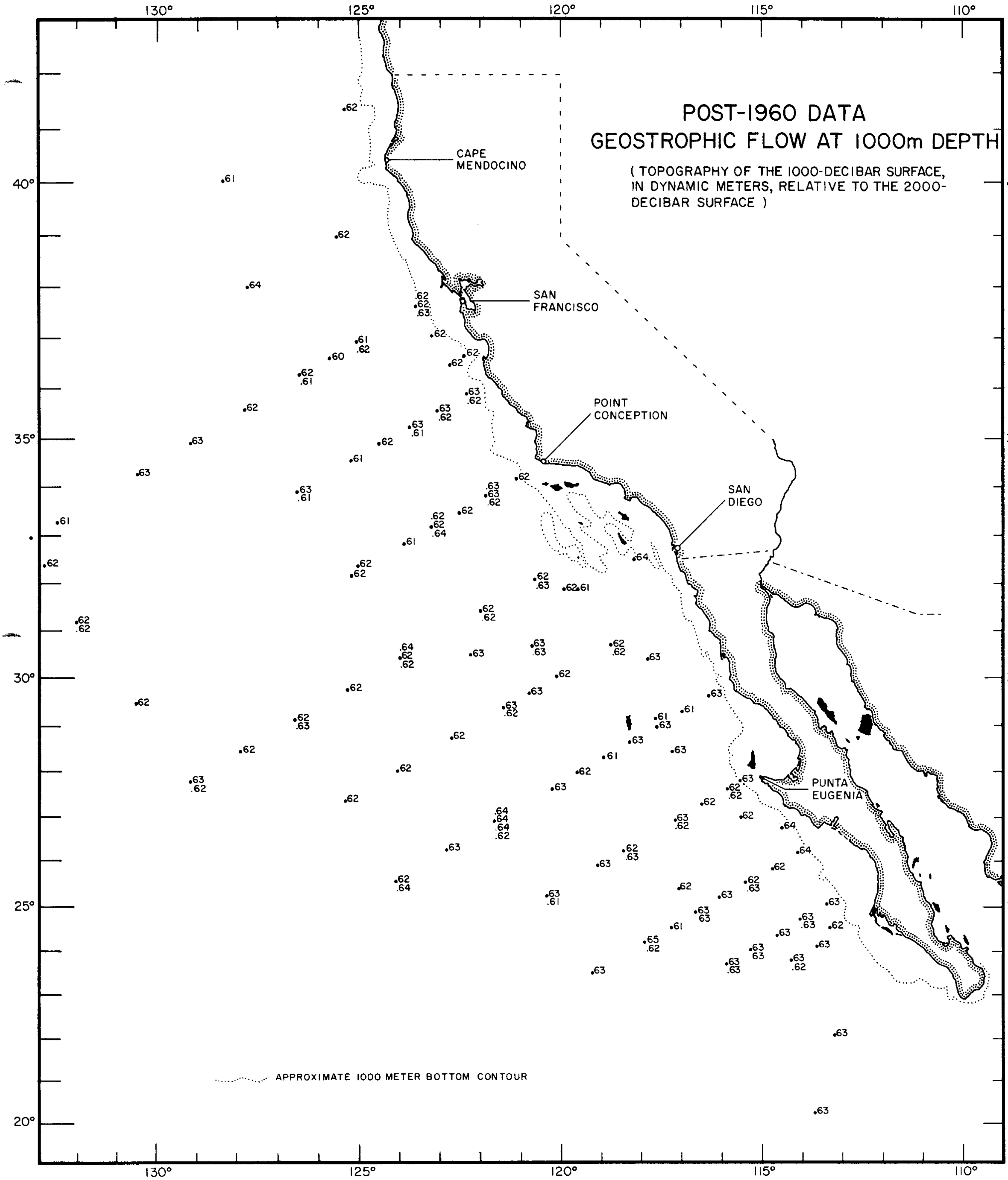
CALCOFI

BASIC STATION PLAN
SINCE 1950

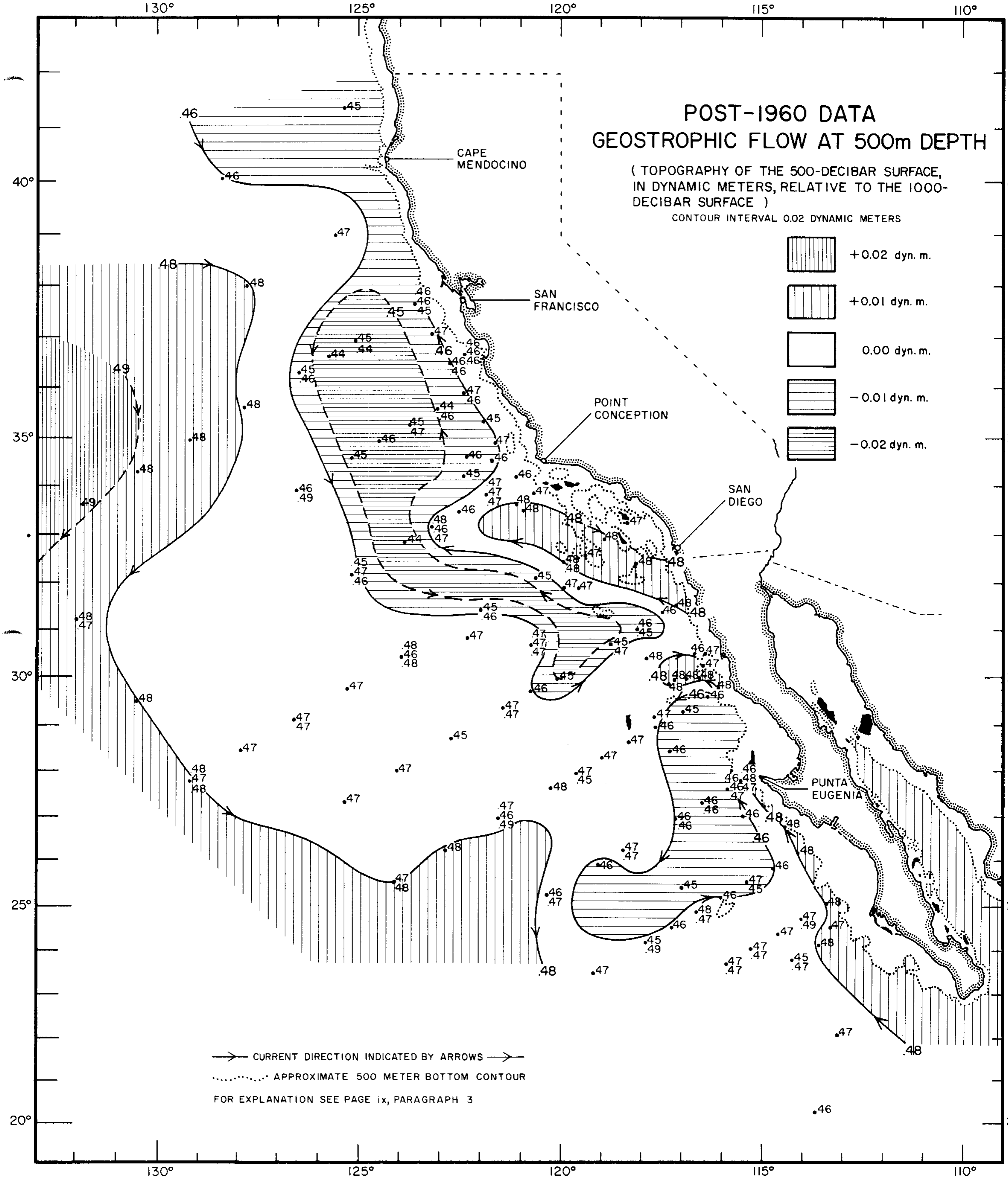


CALCOFI BASIC STATION PLAN

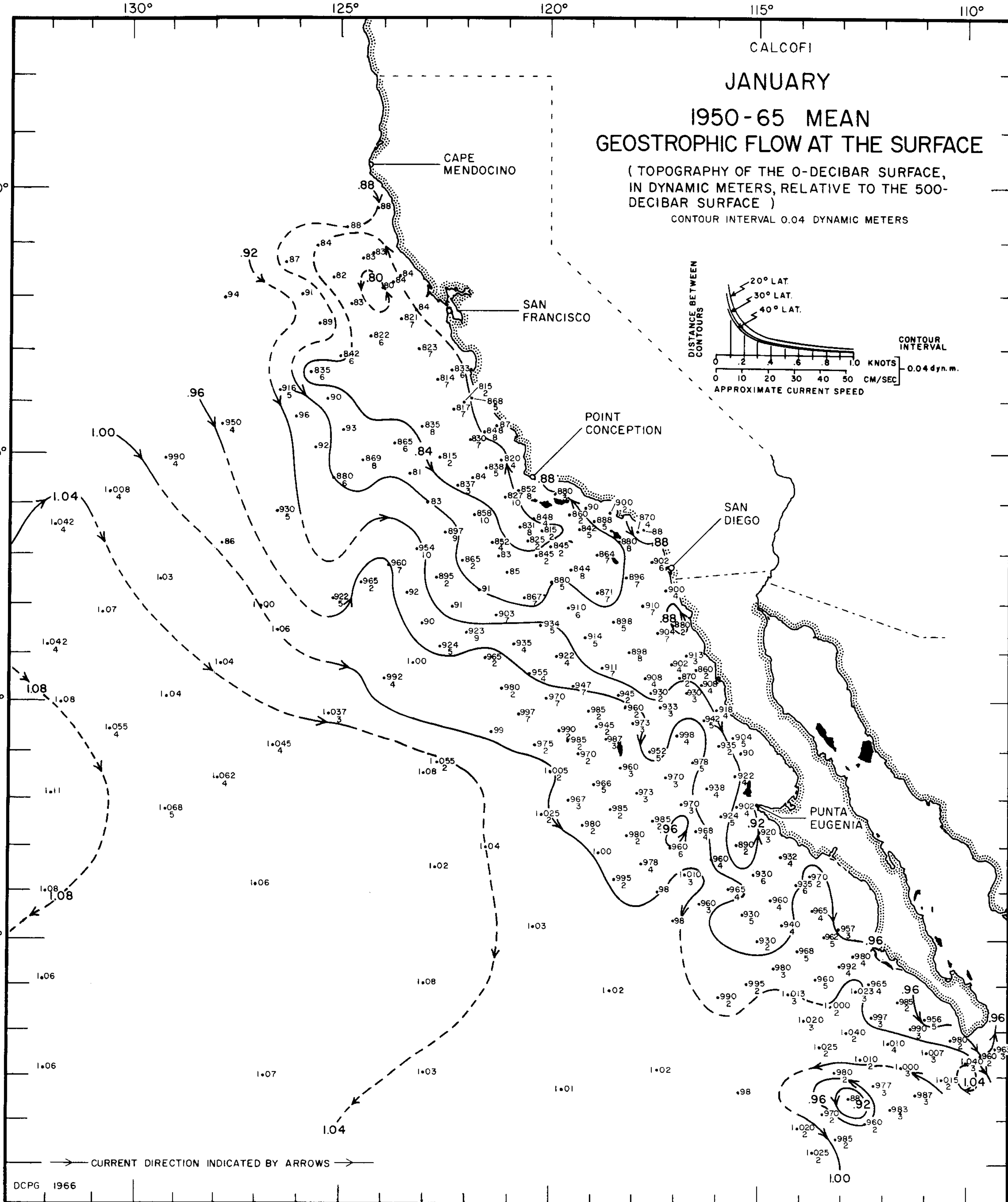
1949 ONLY


POST-1960 DATA
GEOSTROPHIC FLOW AT 1000m DEPTH
(TOPOGRAPHY OF THE 1000-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 2000-DECIBAR SURFACE)
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
APPROXIMATE 1000 METER BOTTOM CONTOUR
130°
125°
120°
115°
110°
40°
35°
30°
25°
20°

1000/2000 db


POST-1960 DATA
GEOSTROPHIC FLOW AT 500m DEPTH
(TOPOGRAPHY OF THE 500-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 1000-DECIBAR SURFACE)
CONTOUR INTERVAL 0.02 DYNAMIC METERS
+0.02 dyn. m.
+0.01 dyn. m.
0.00 dyn. m.
−0.01 dyn. m.
−0.02 dyn. m.
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
130°
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
APPROXIMATE 500 METER BOTTOM CONTOUR
FOR EXPLANATION SEE PAGE ix, PARAGRAPH 3

500/1000 db



MEAN 0/500 db

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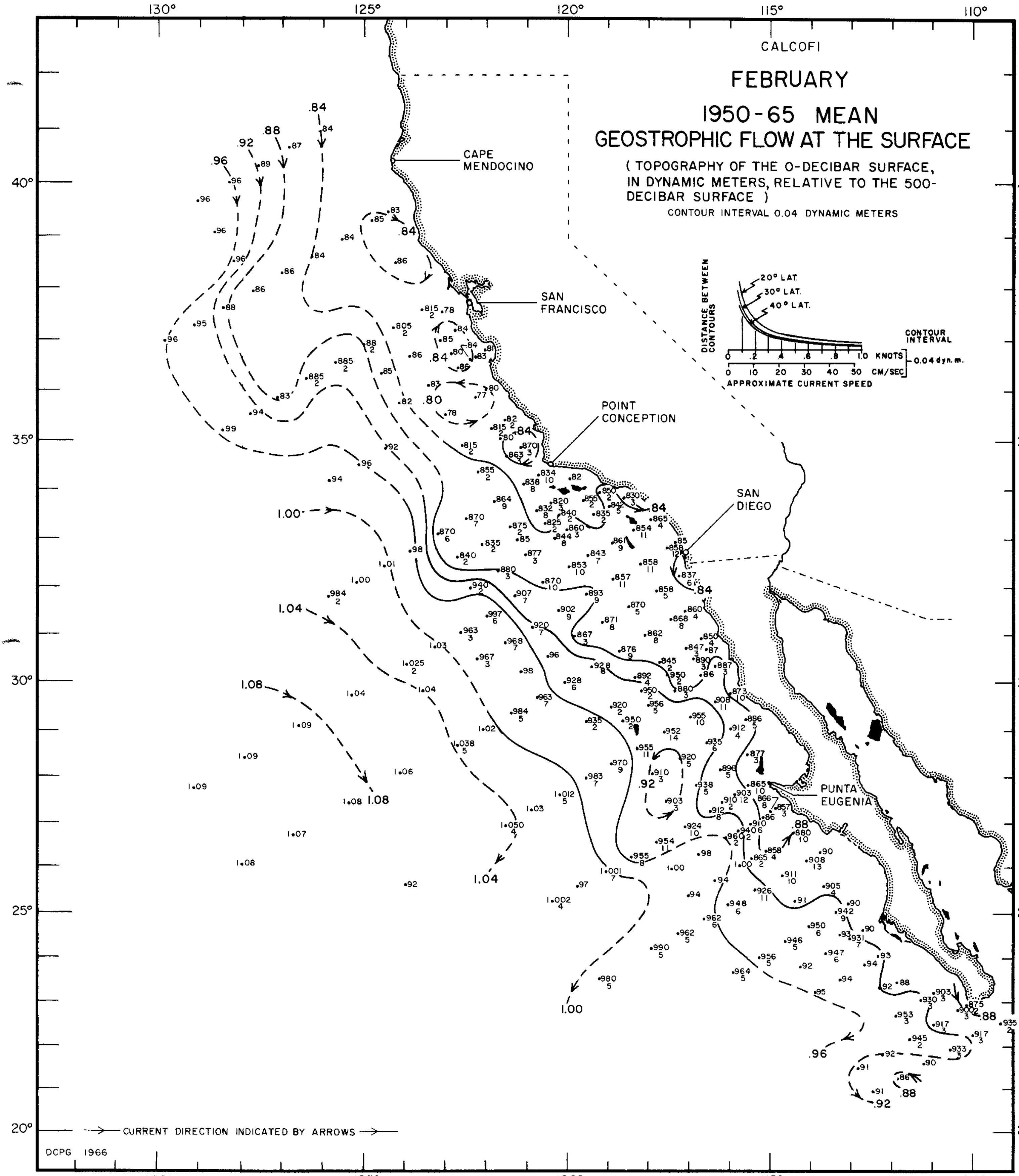

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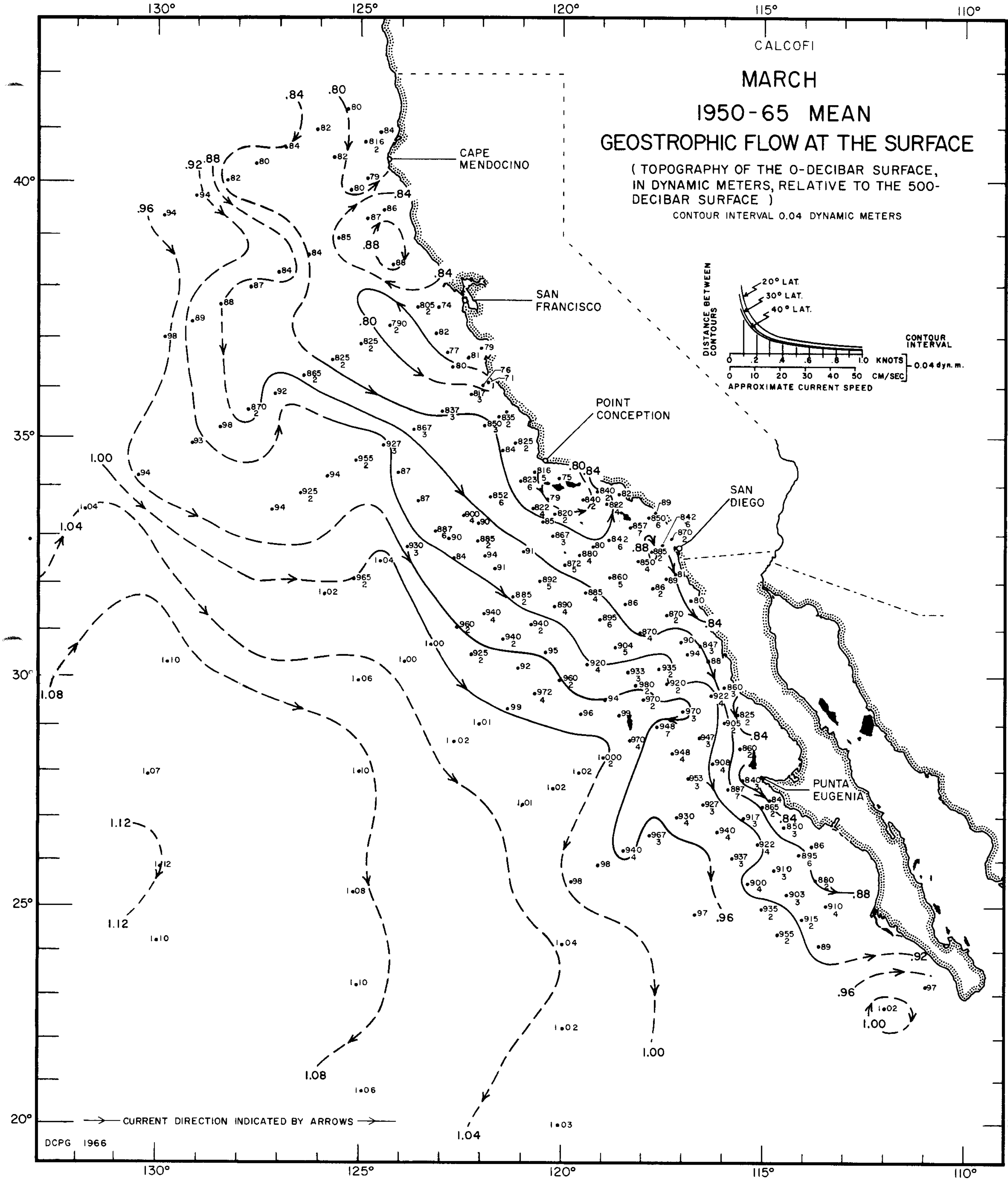

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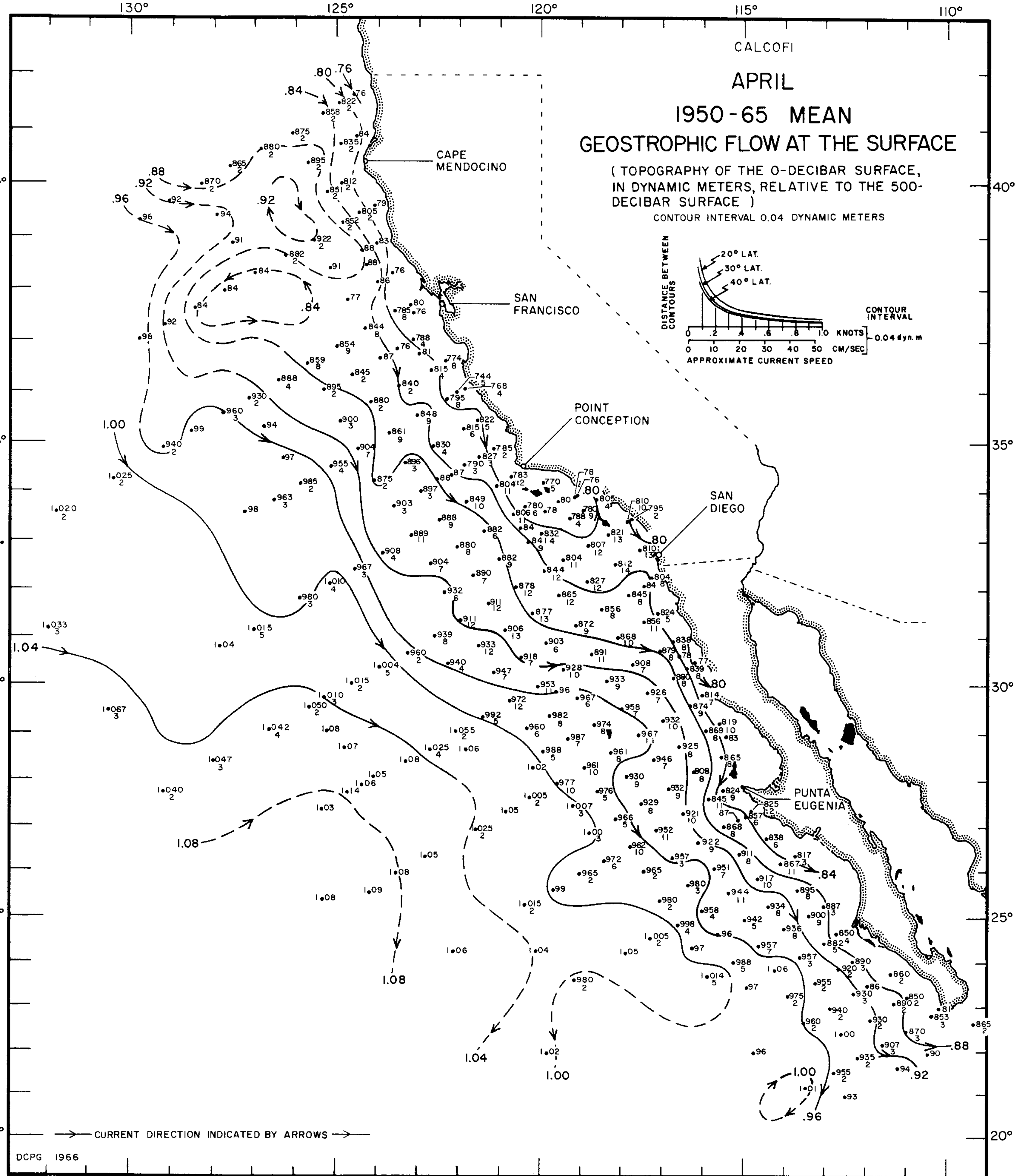

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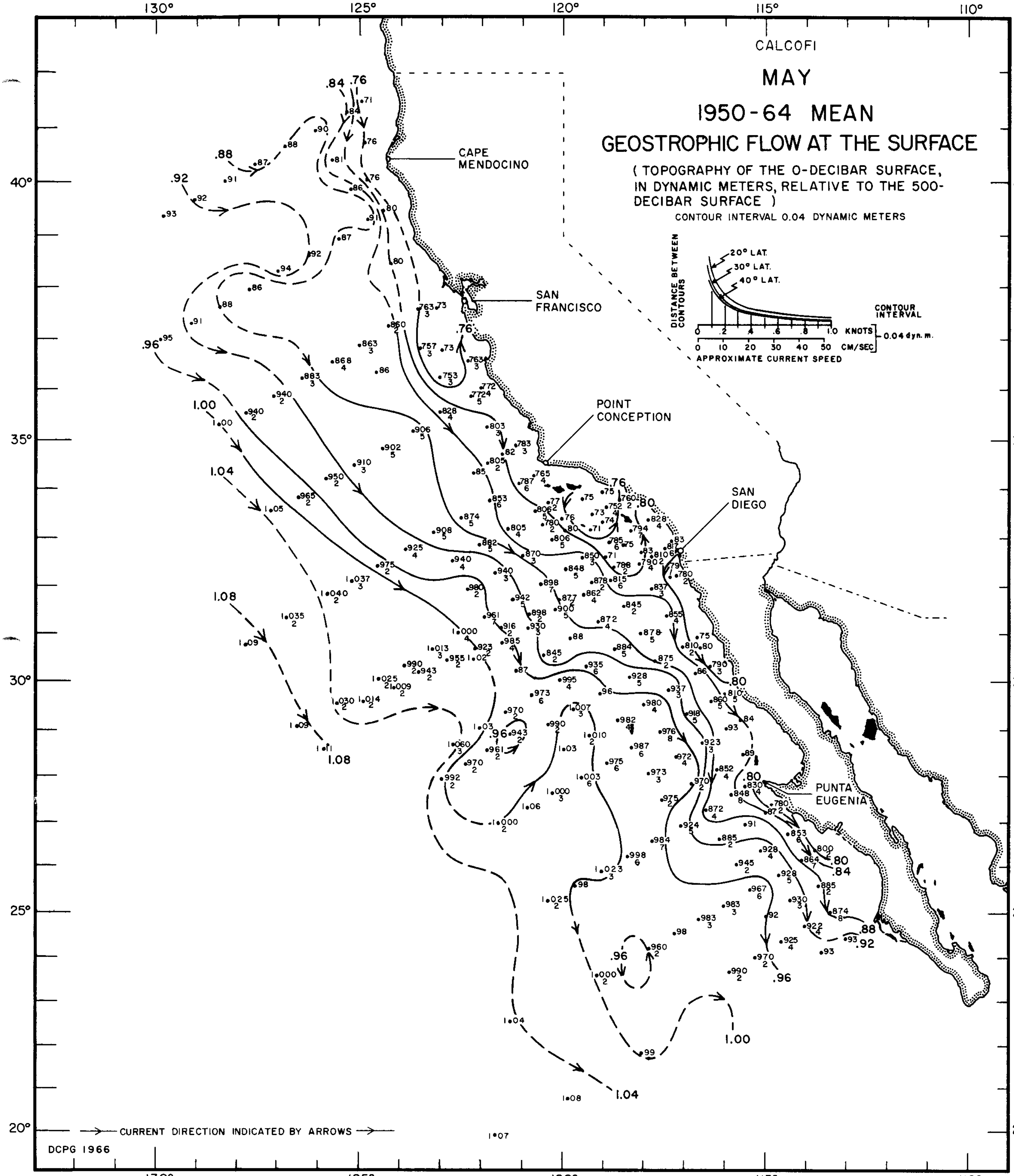

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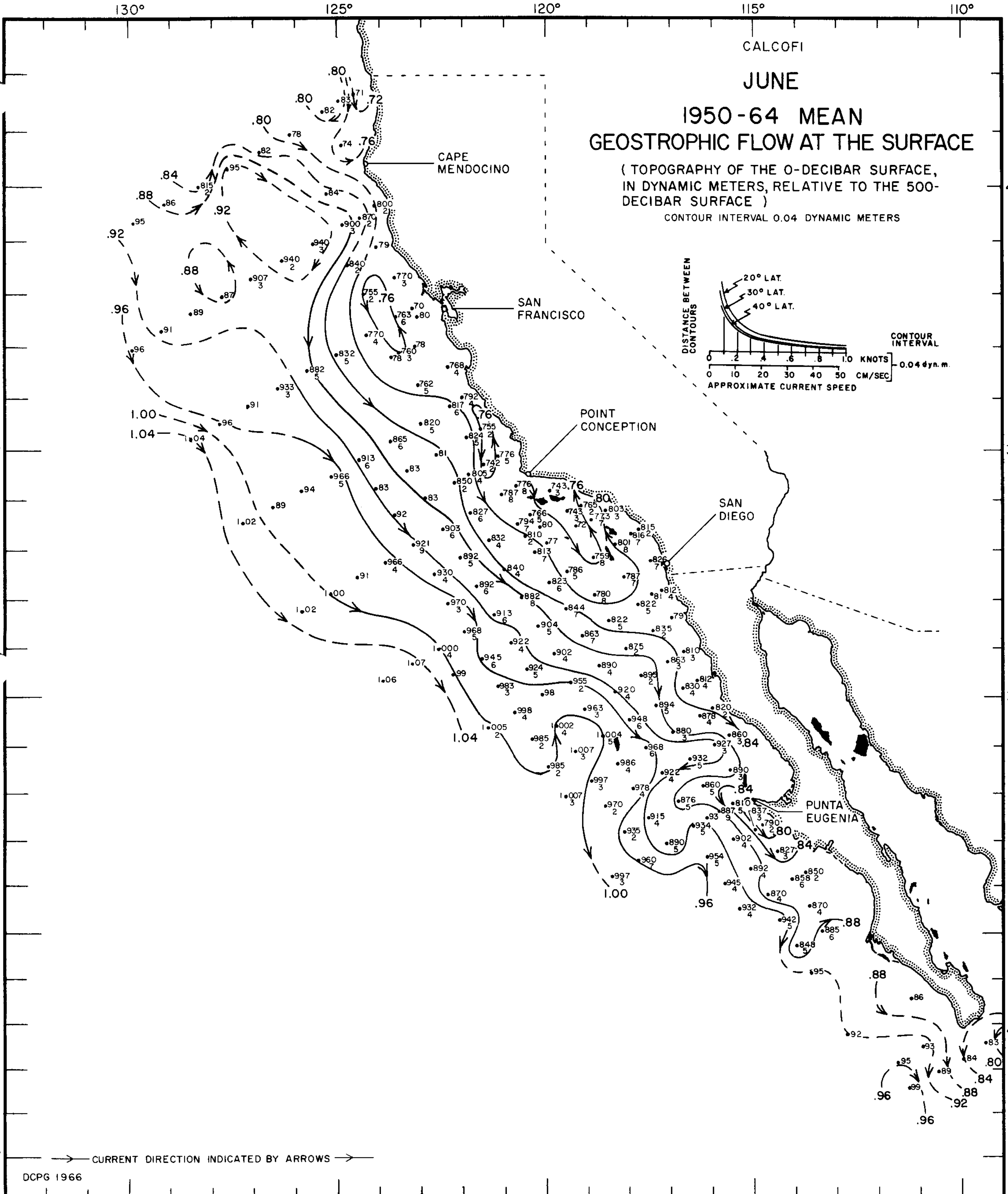

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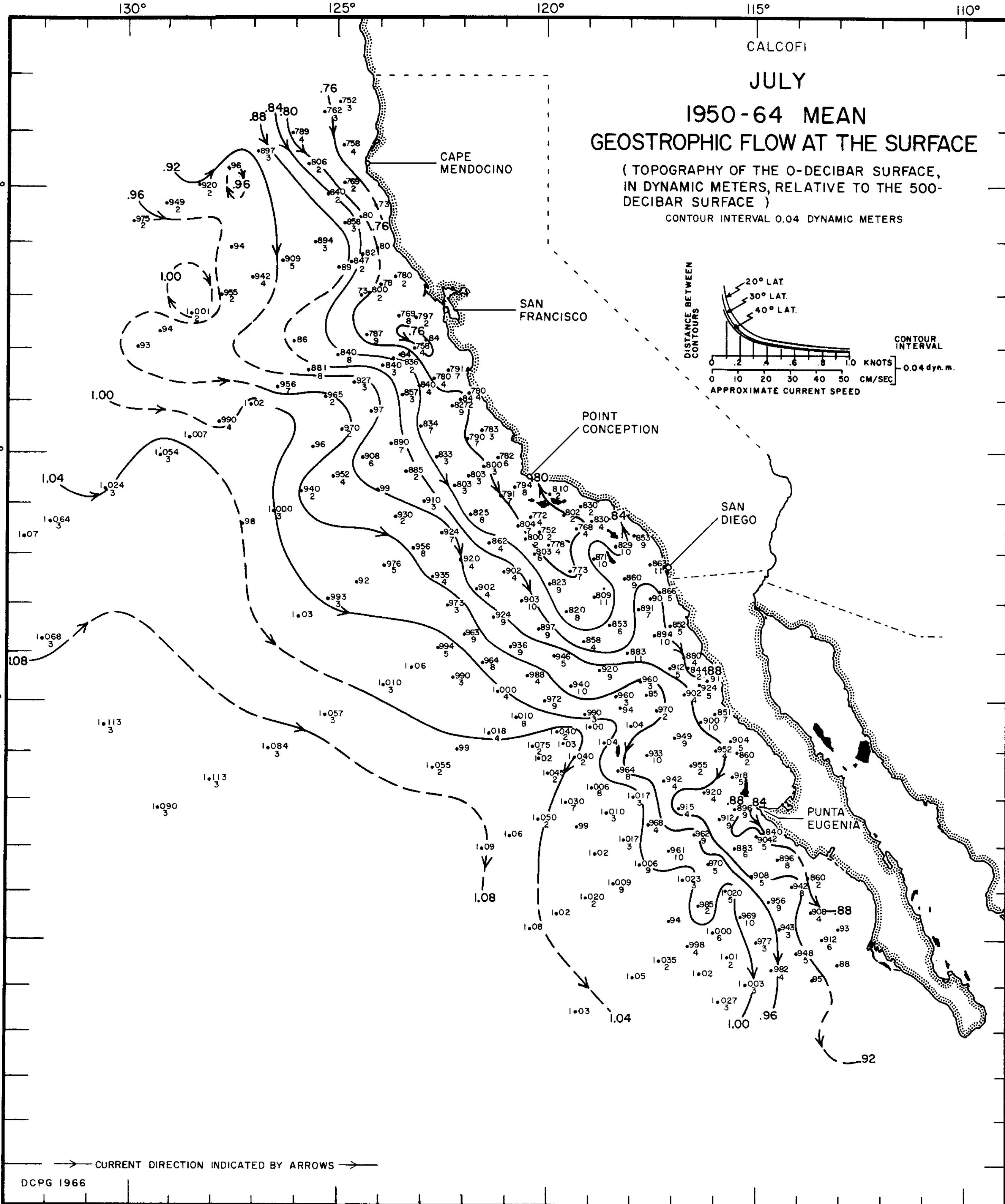

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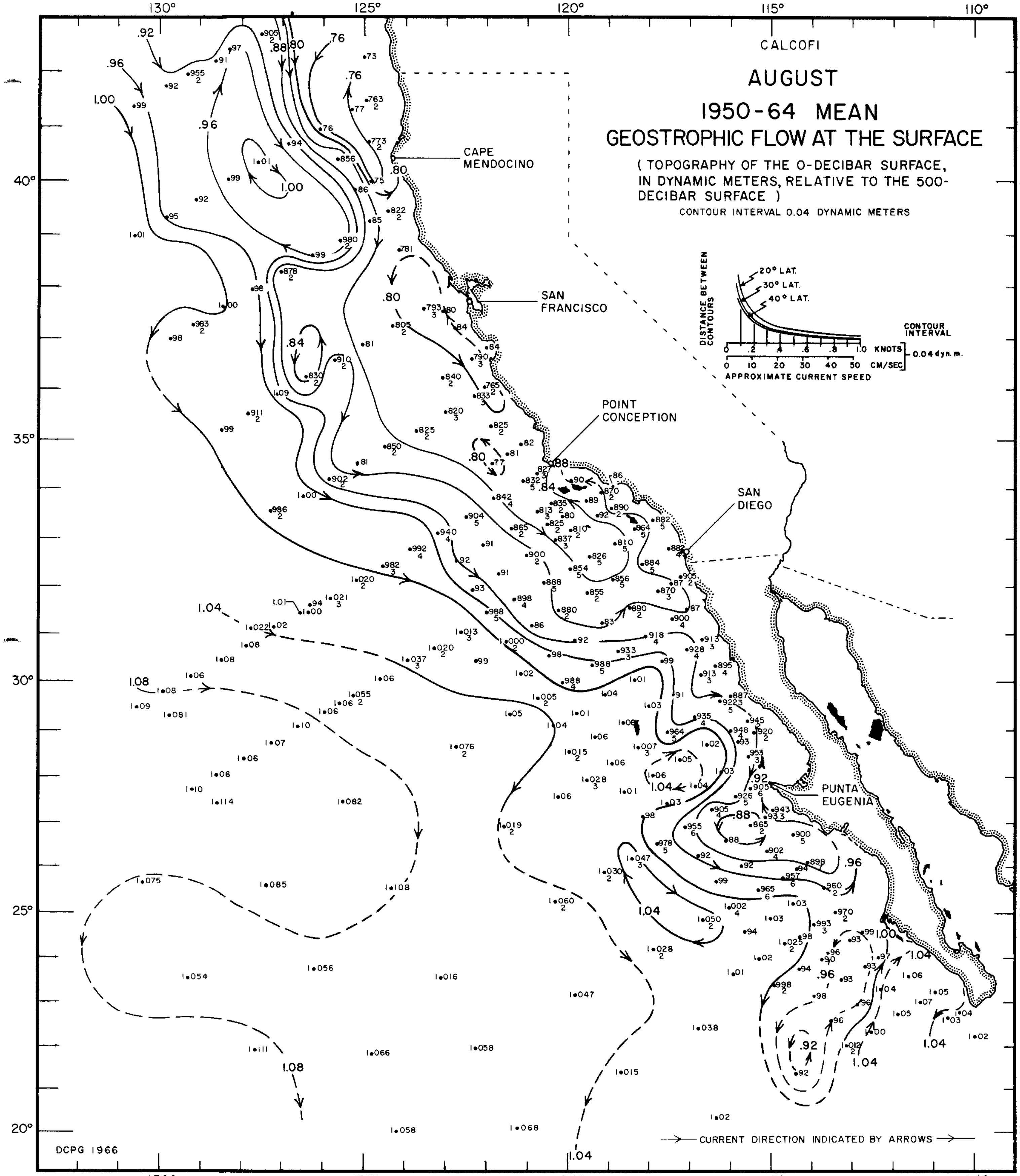

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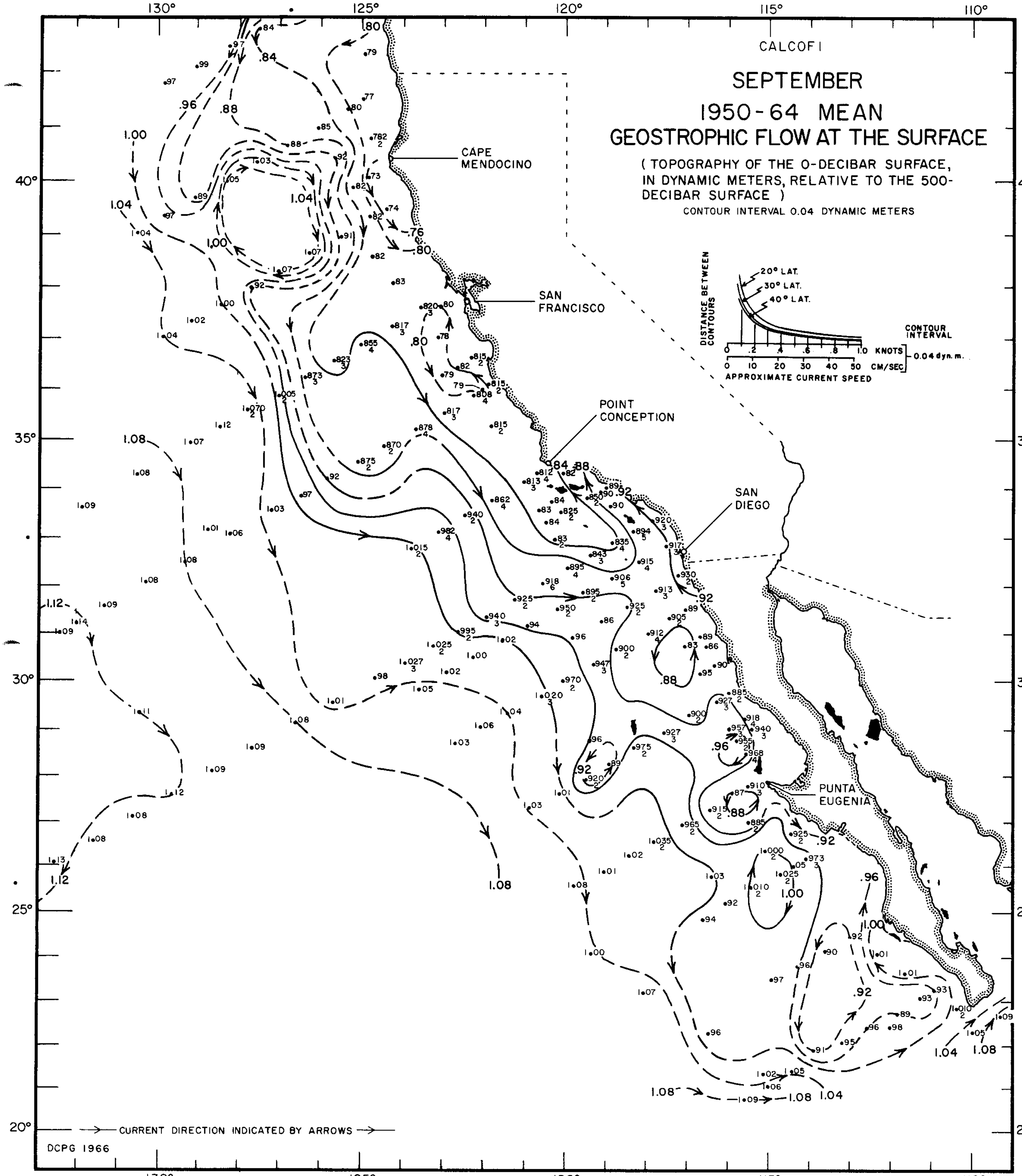

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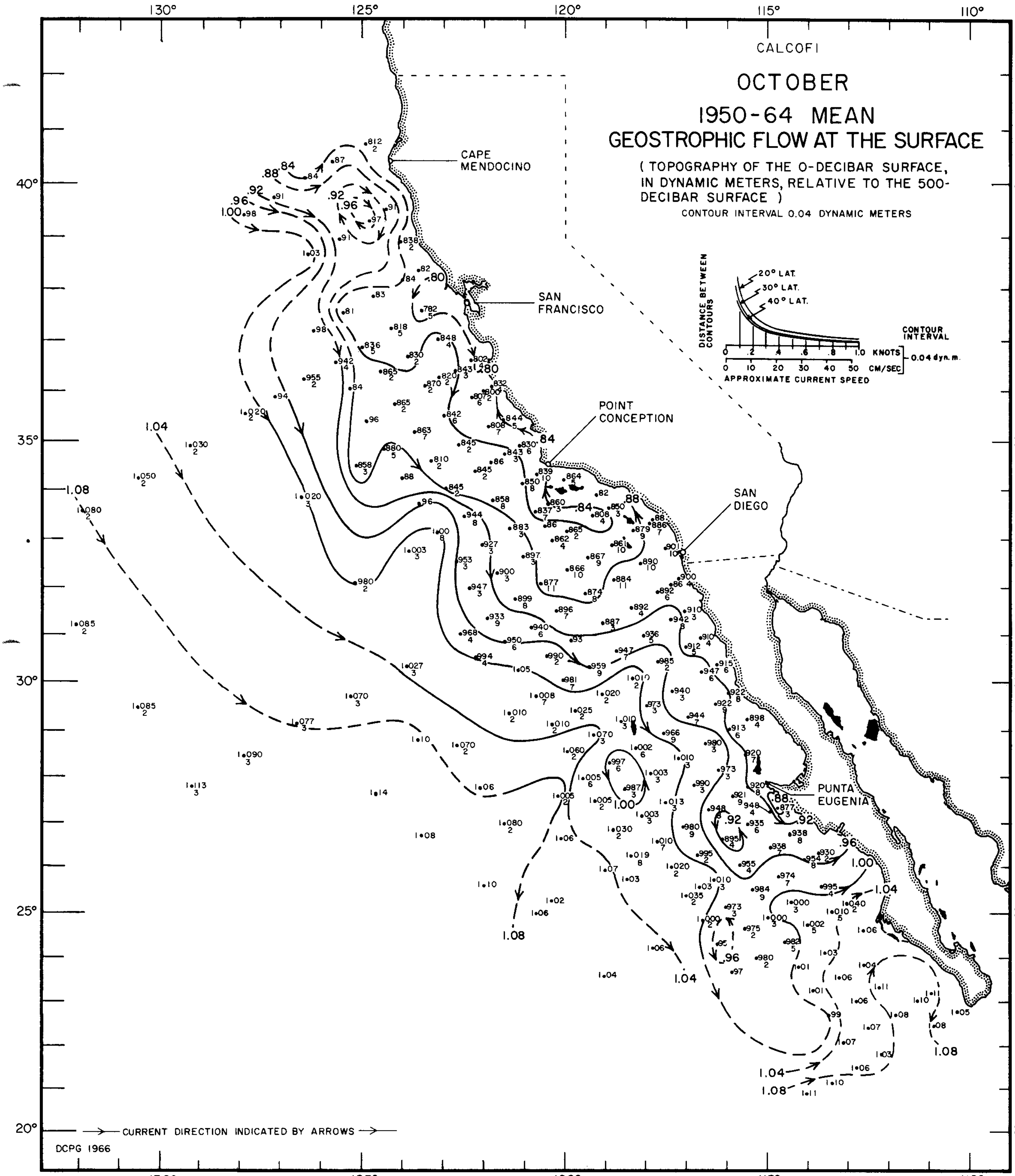

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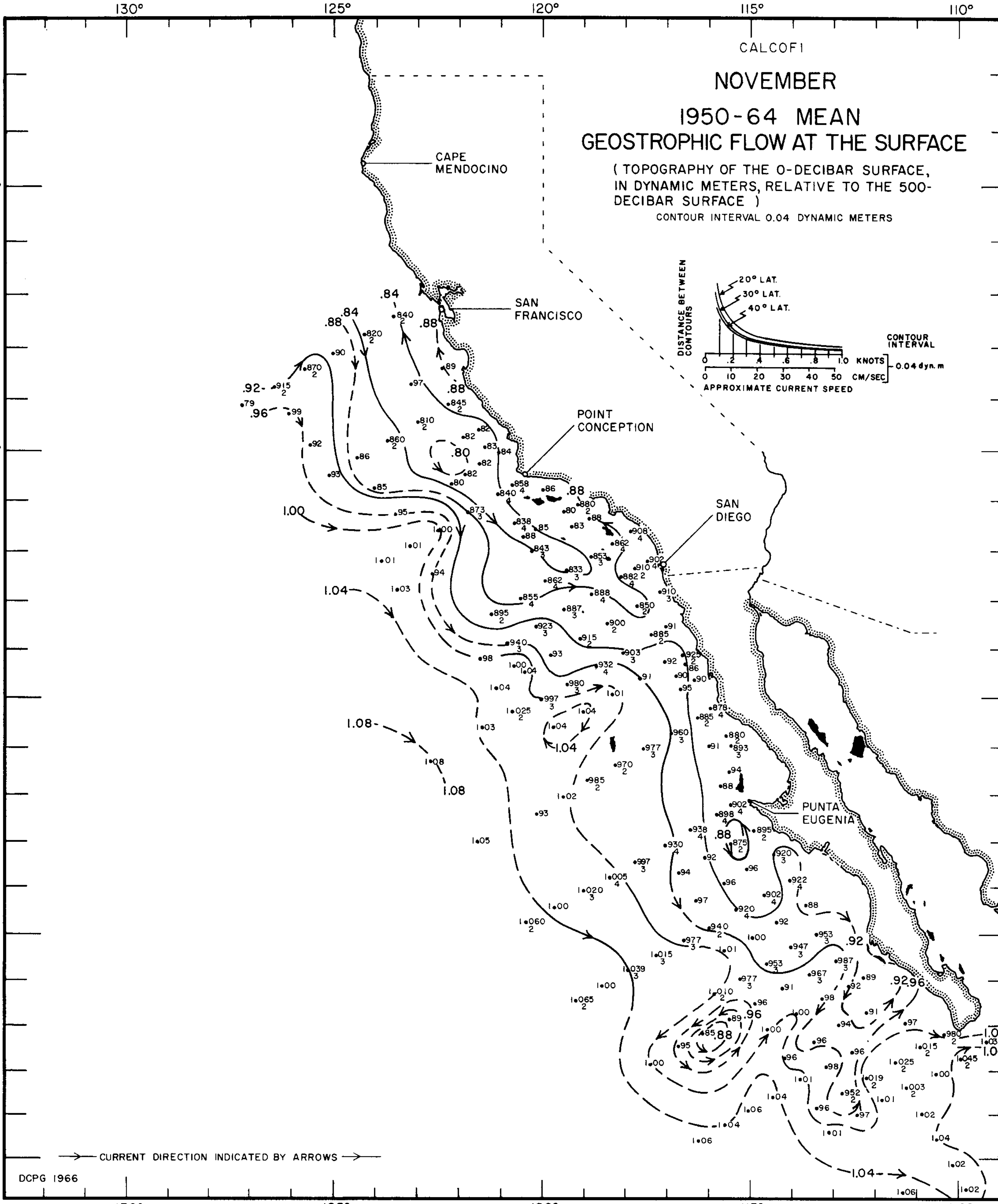

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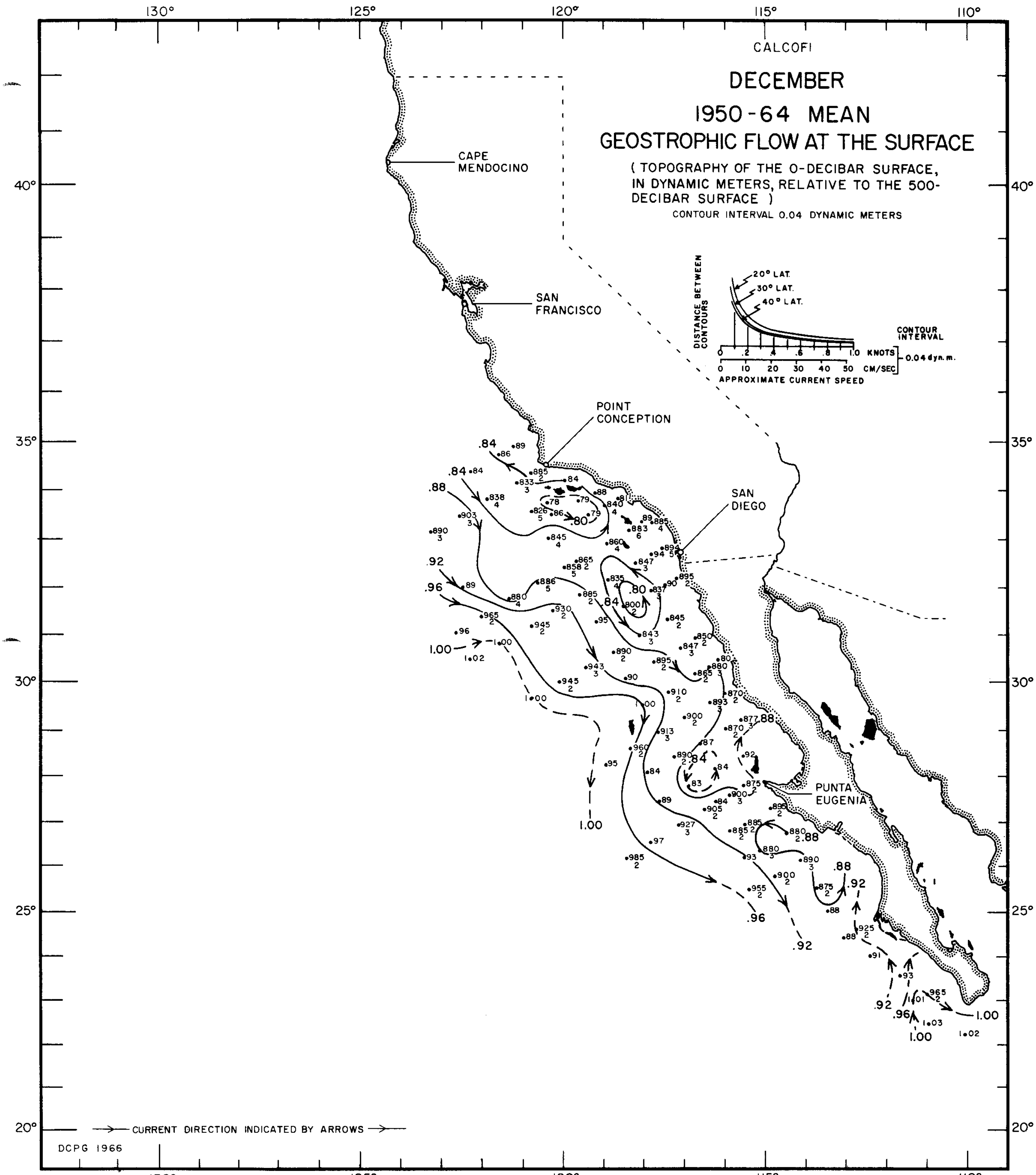

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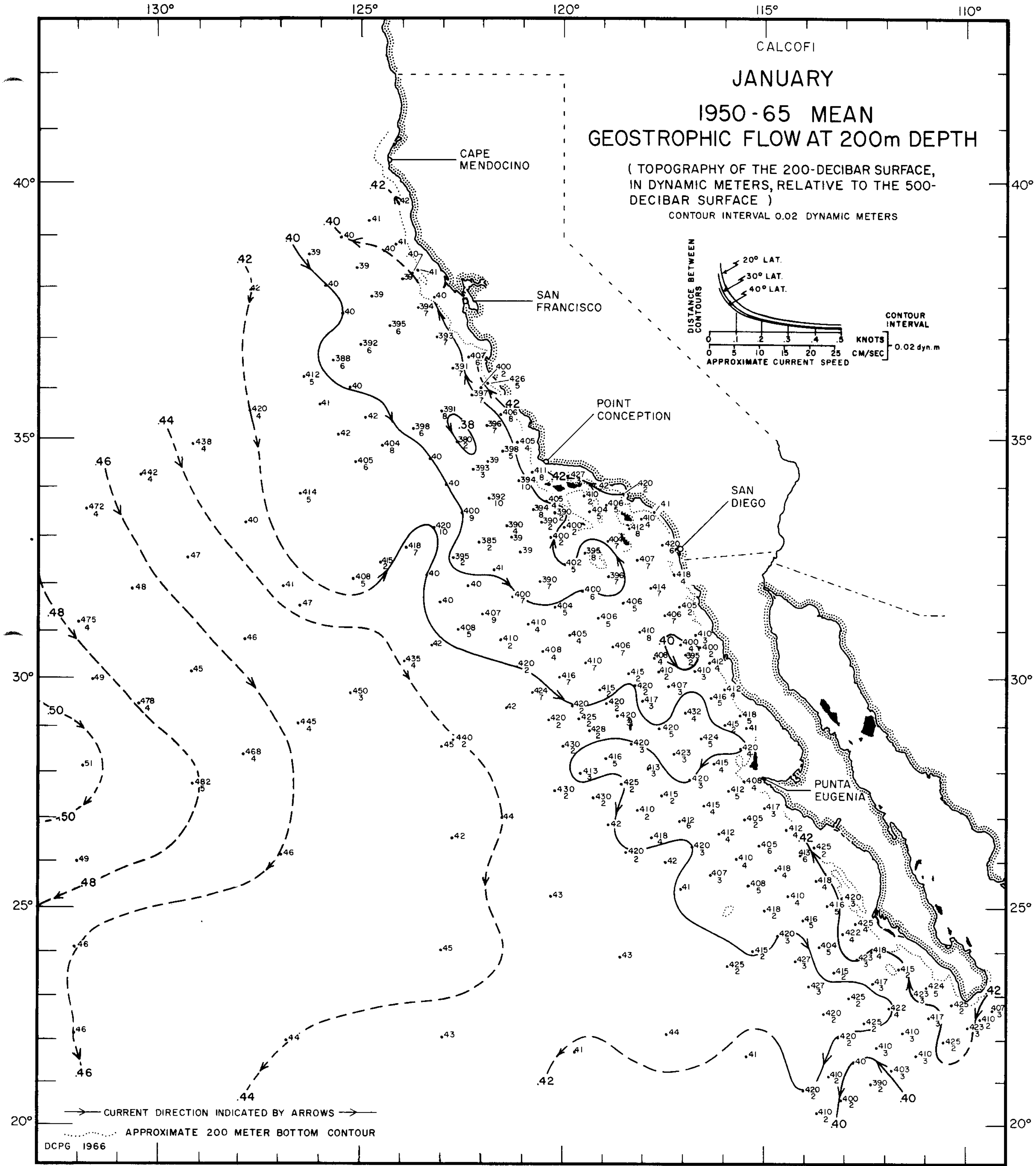

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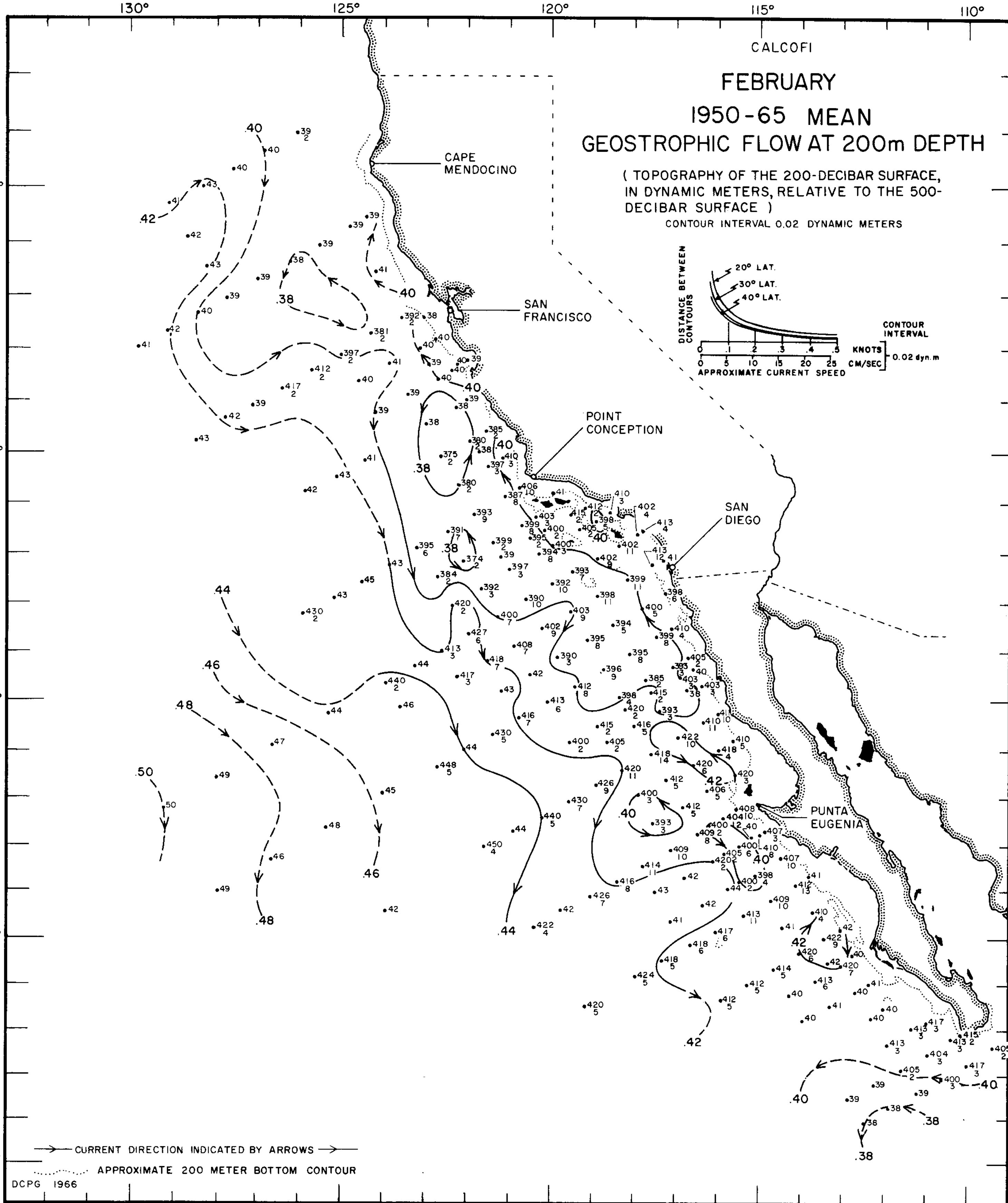
JANUARY



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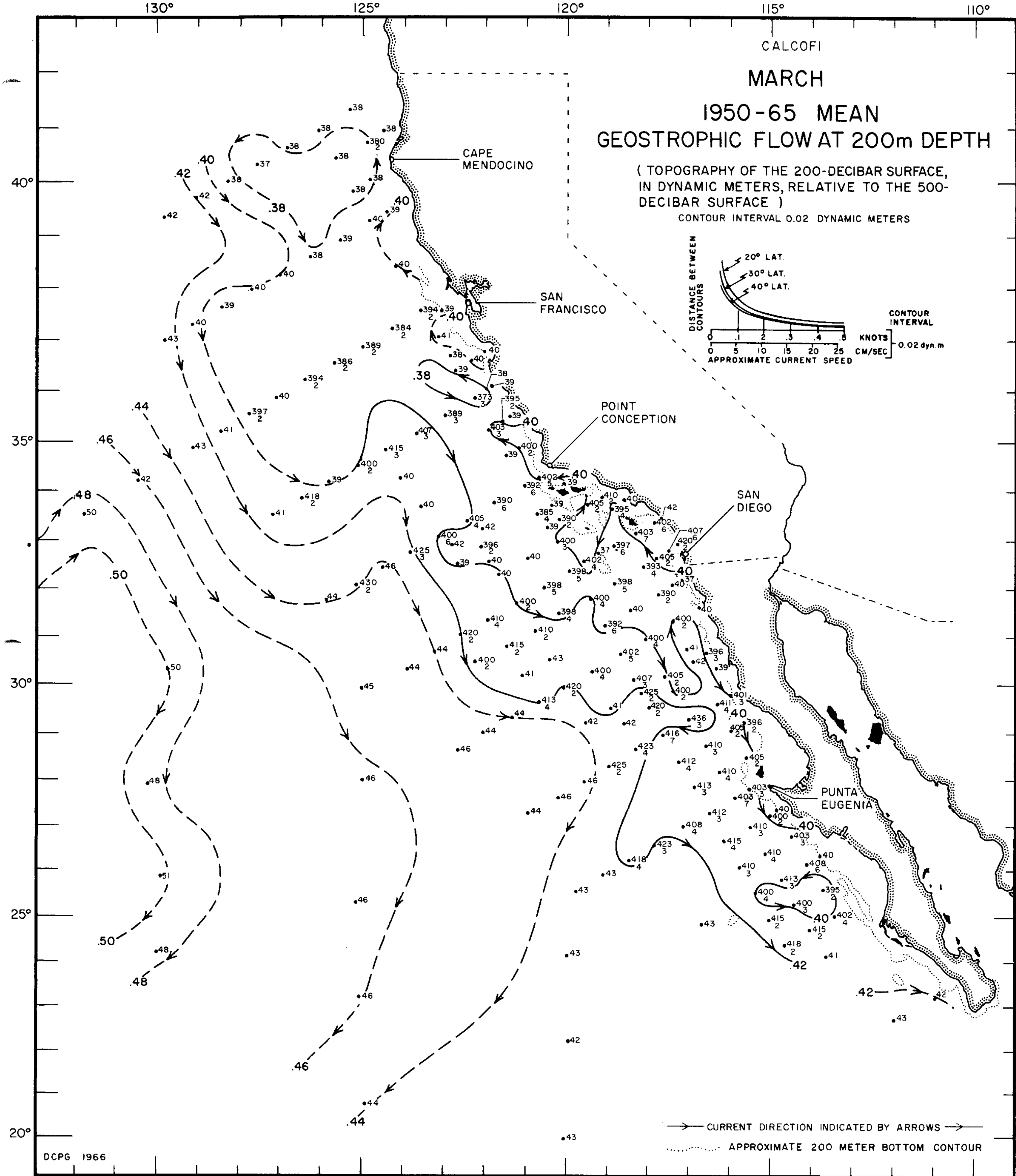

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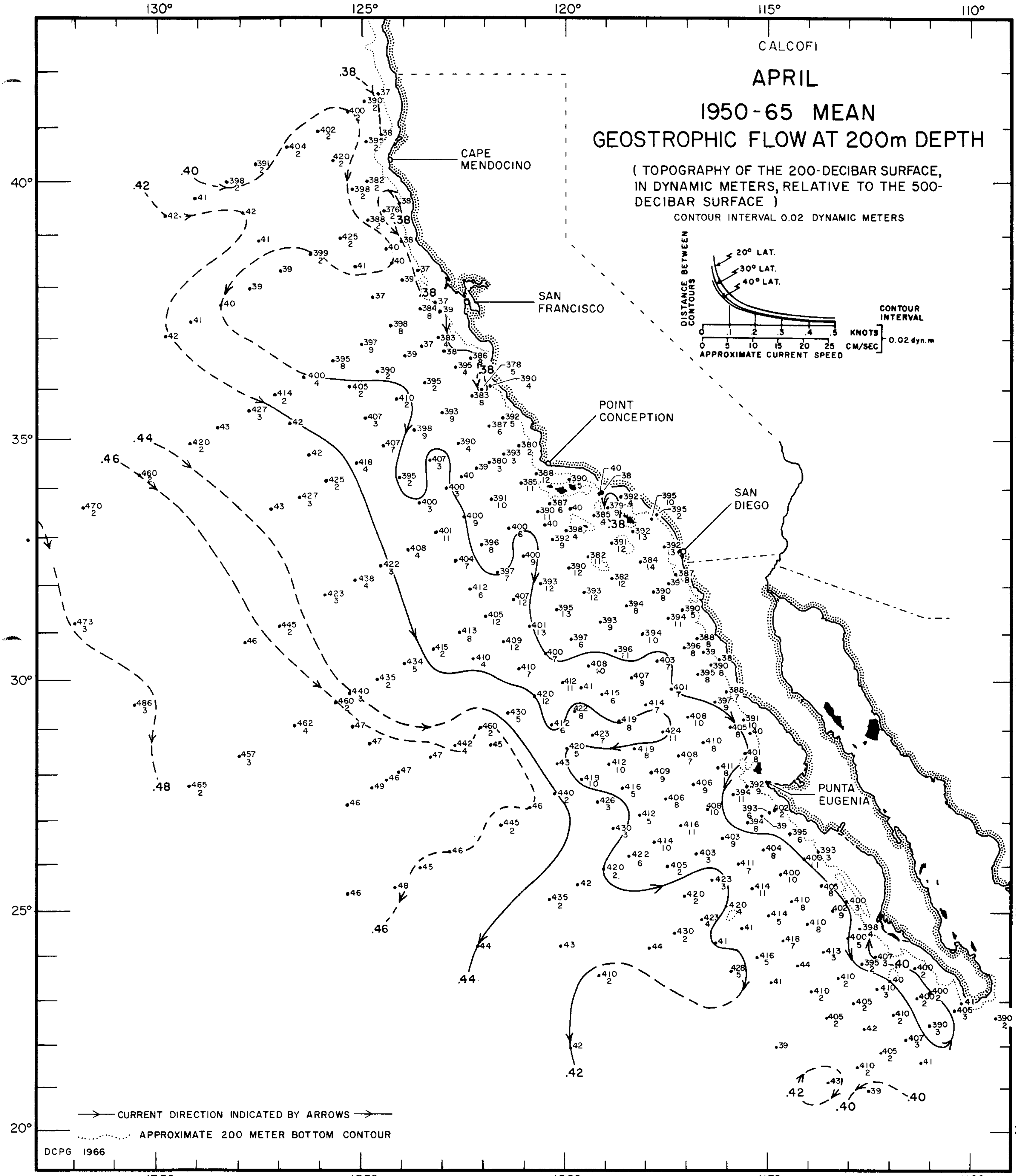

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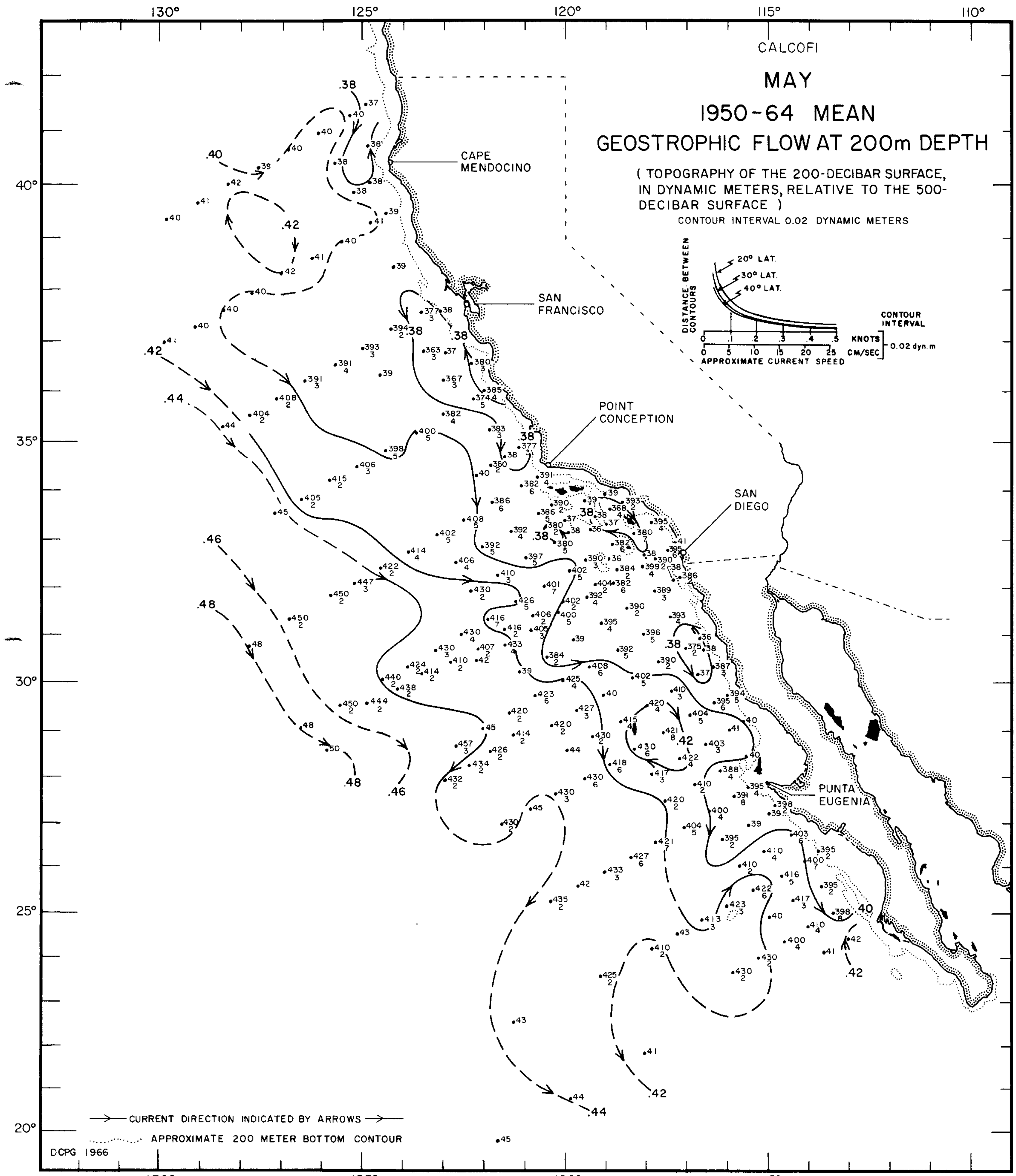

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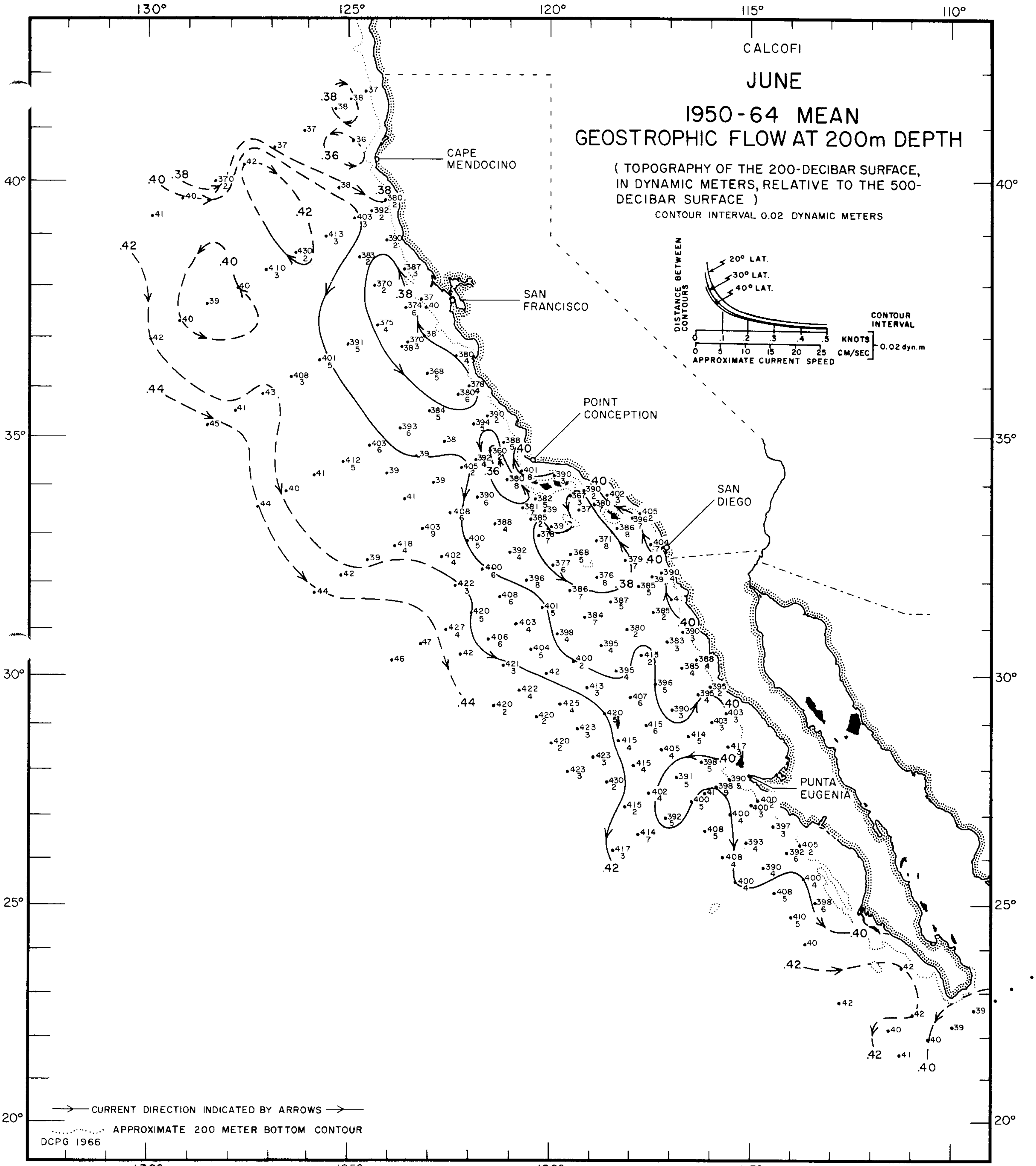
MAY



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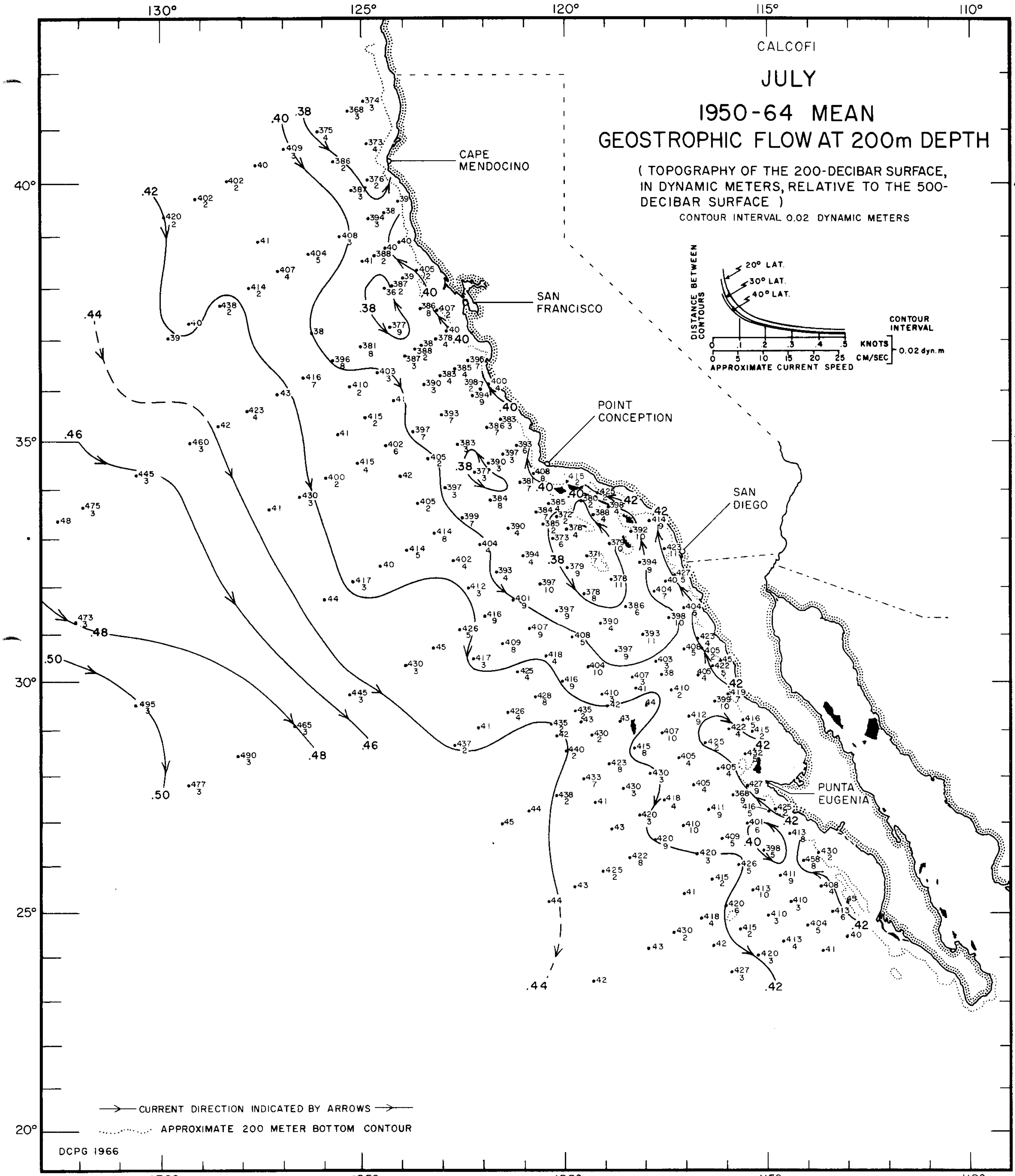

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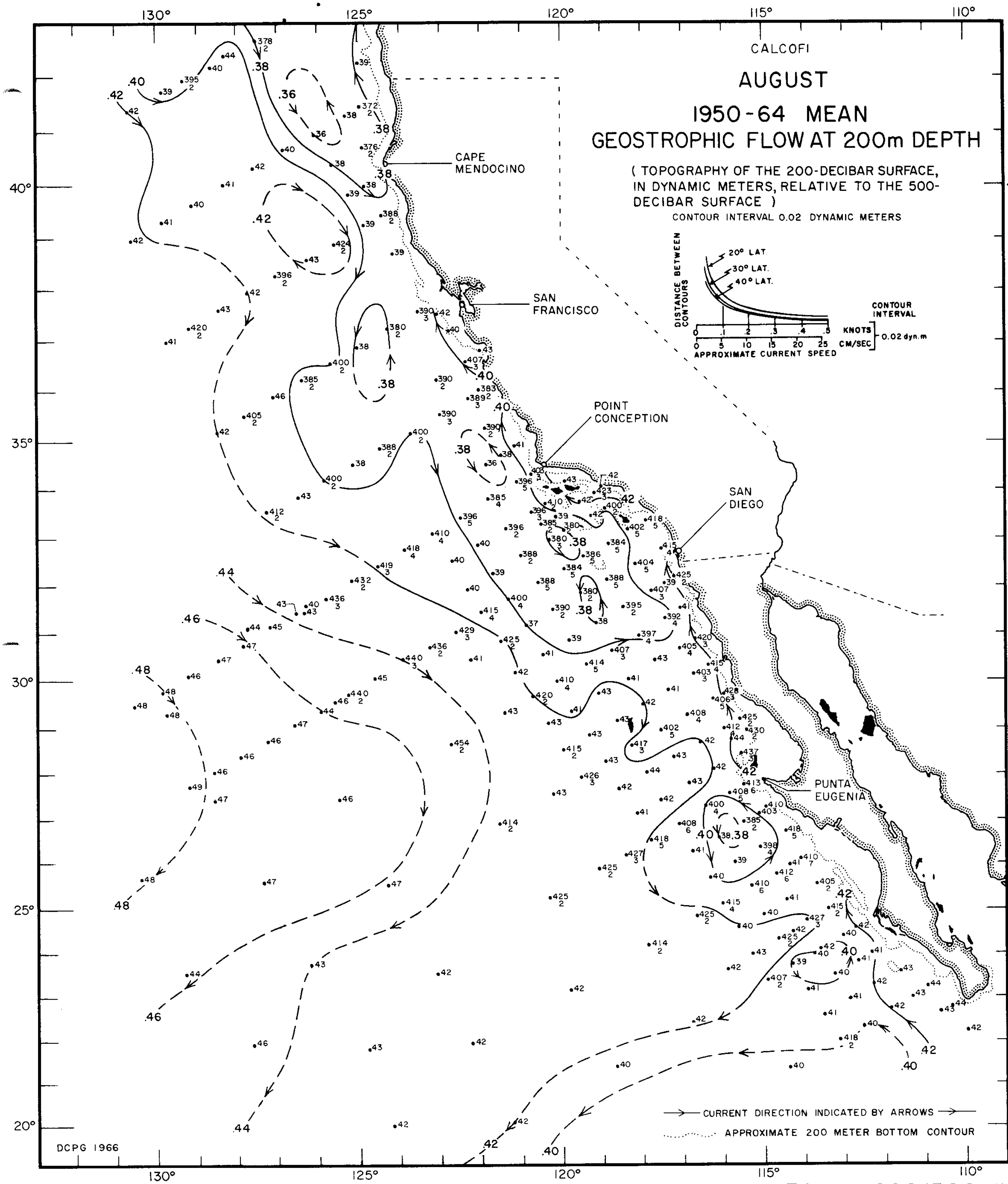

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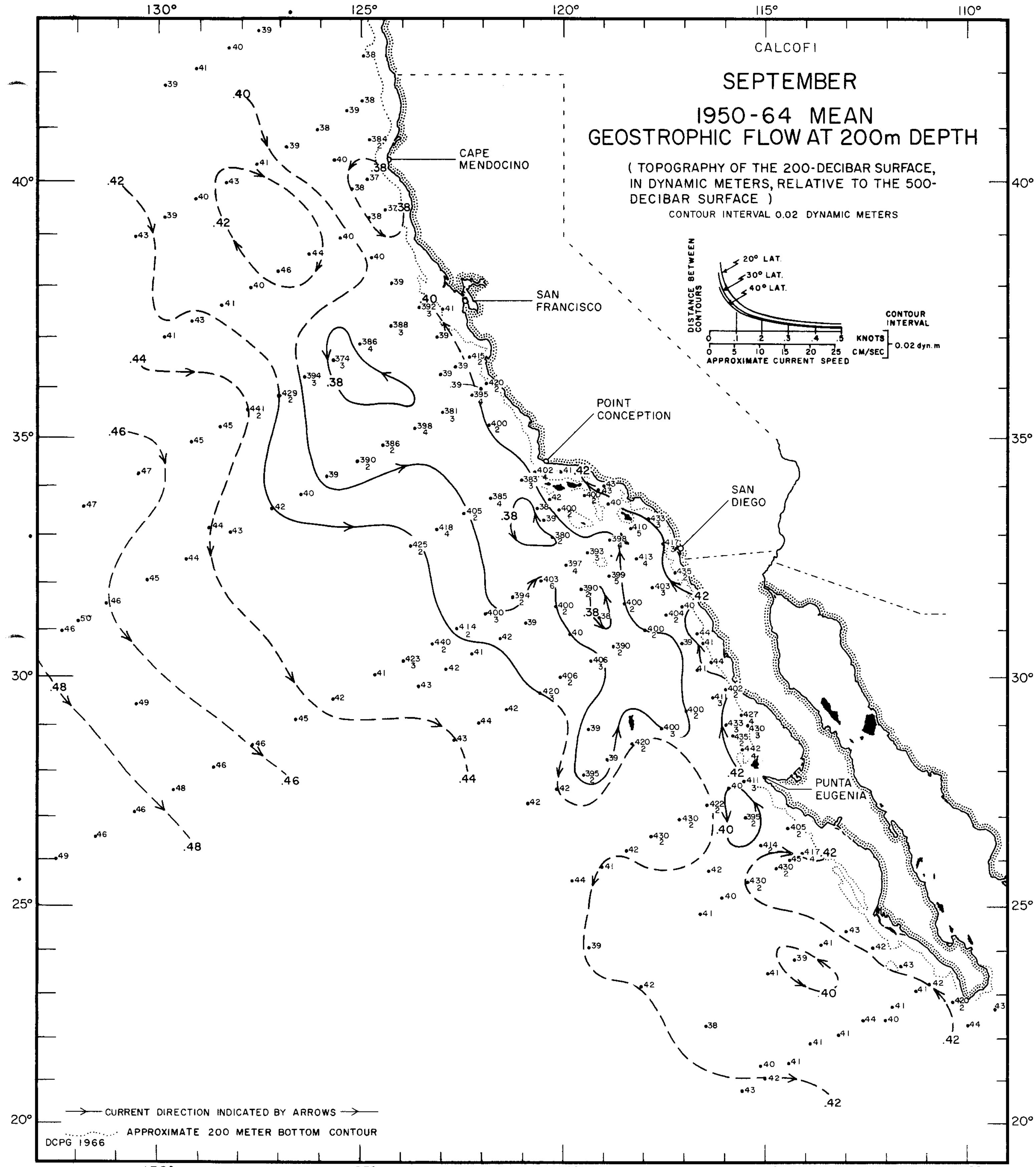

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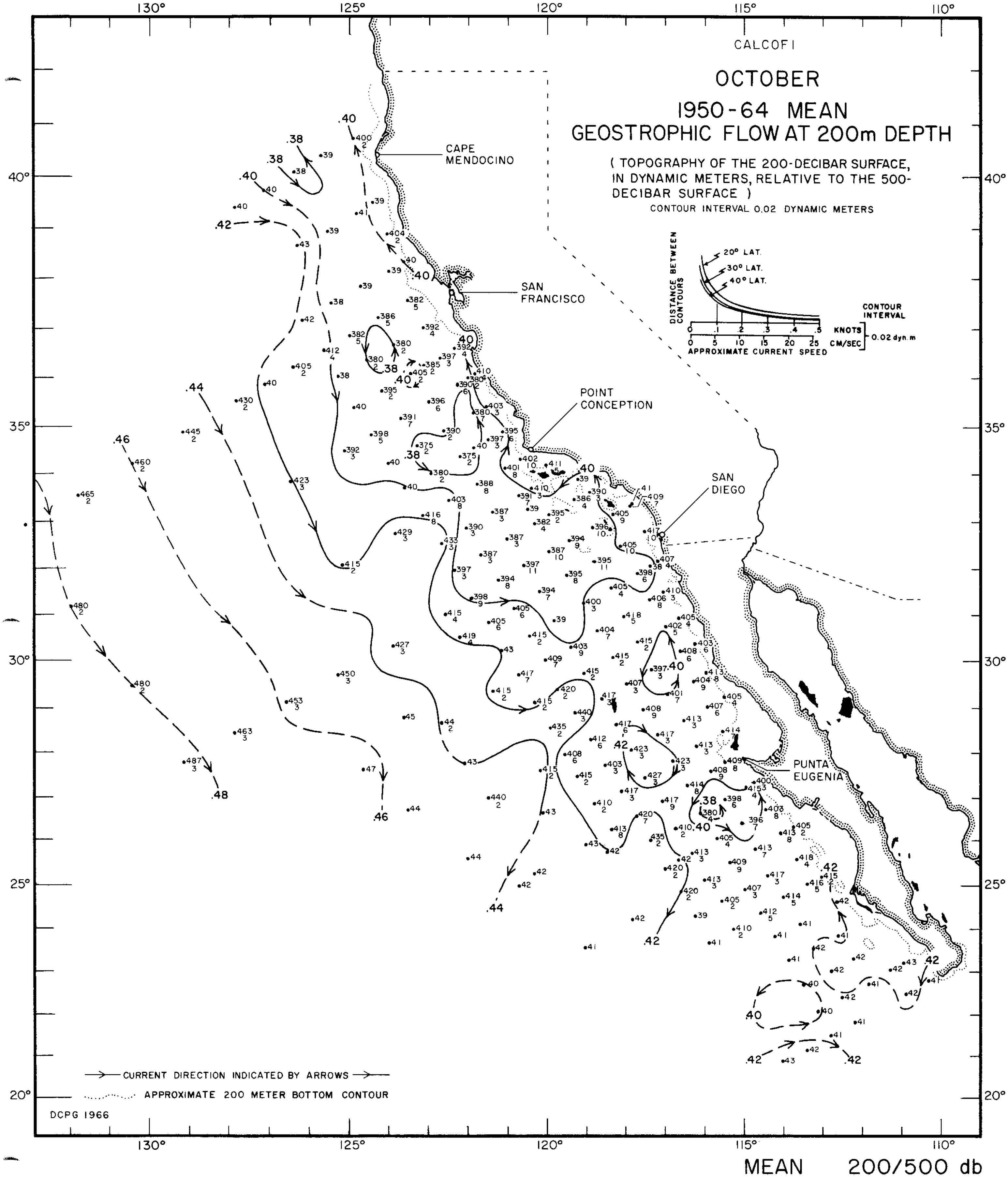

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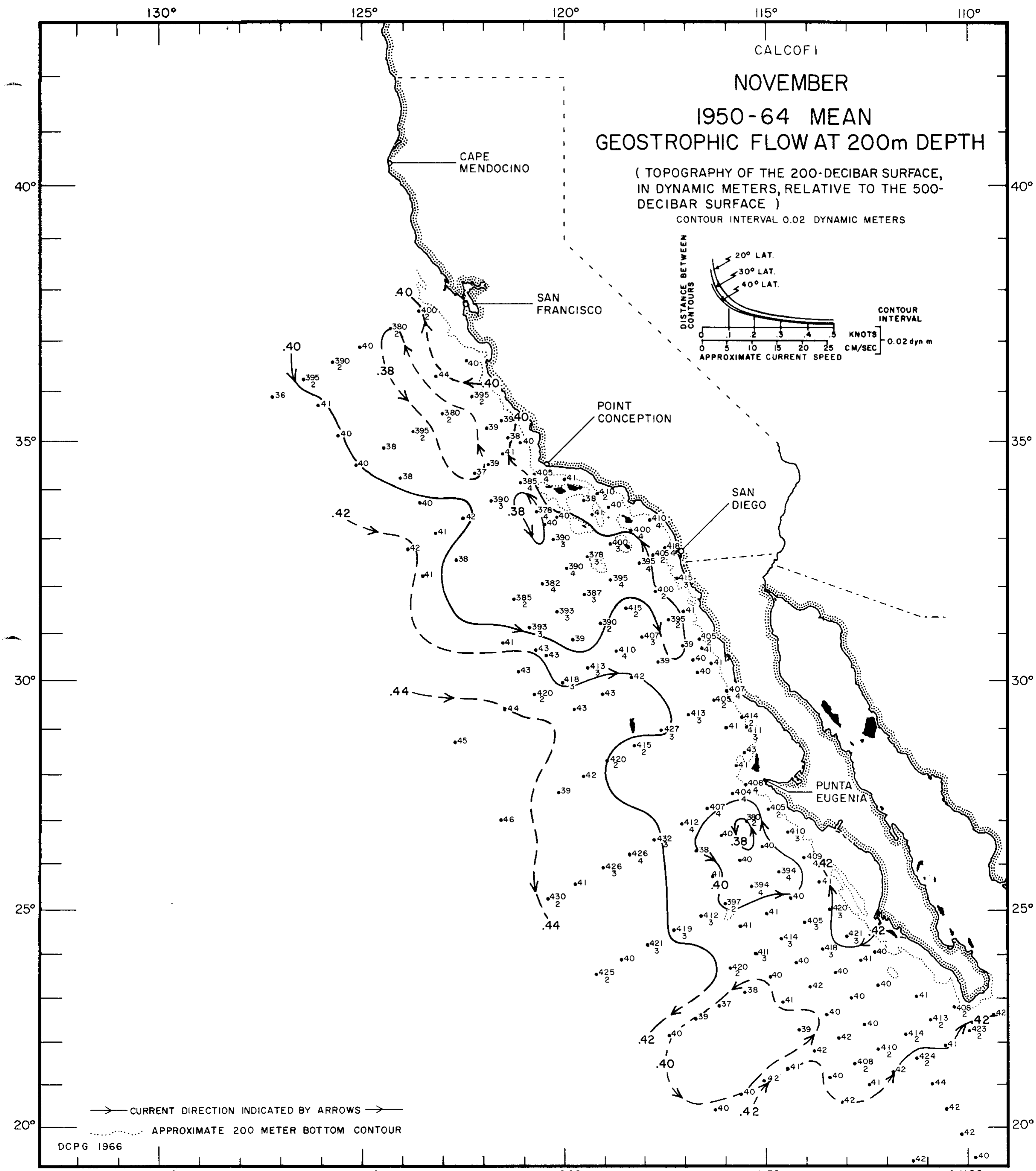
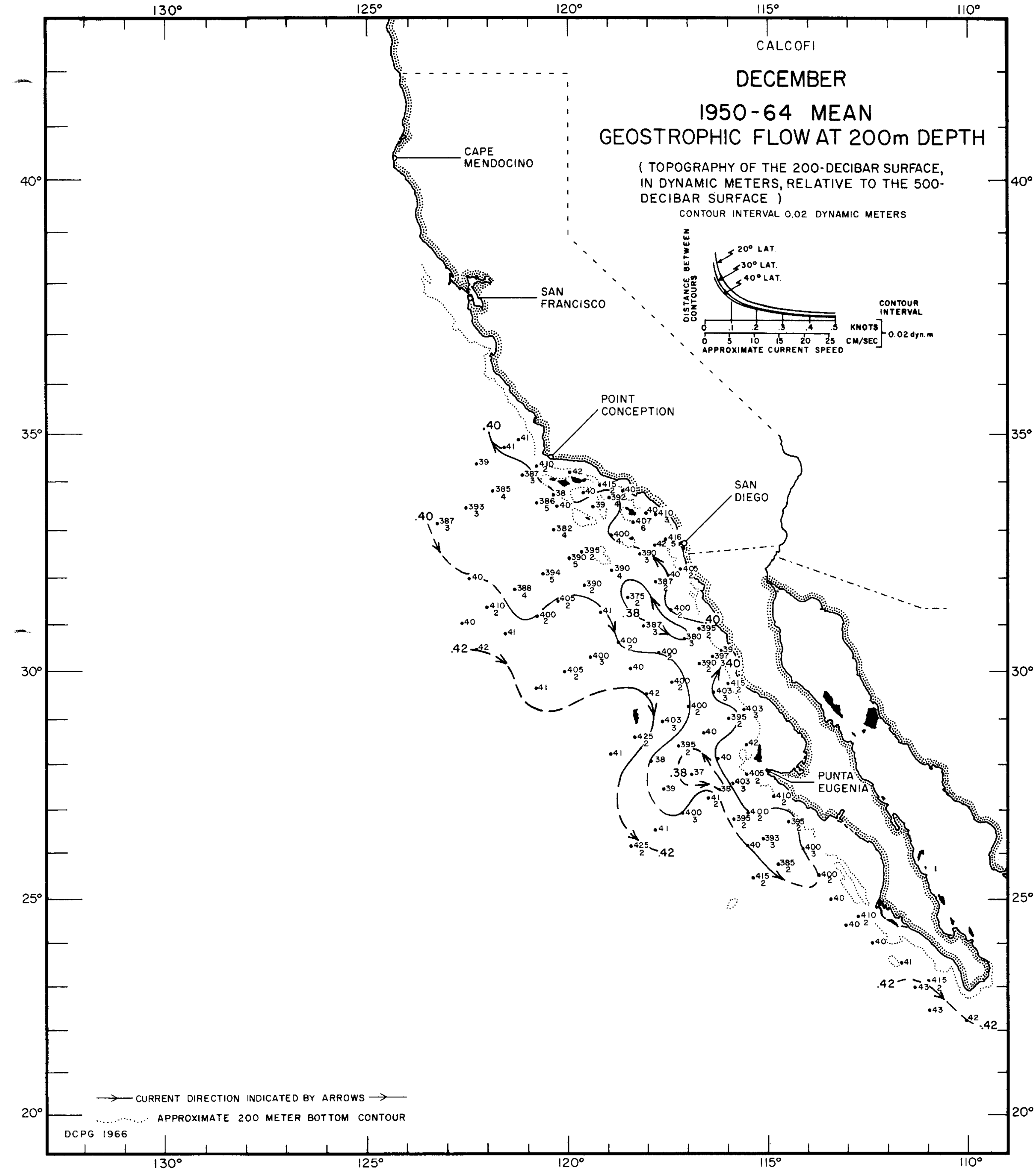
OCTOBER



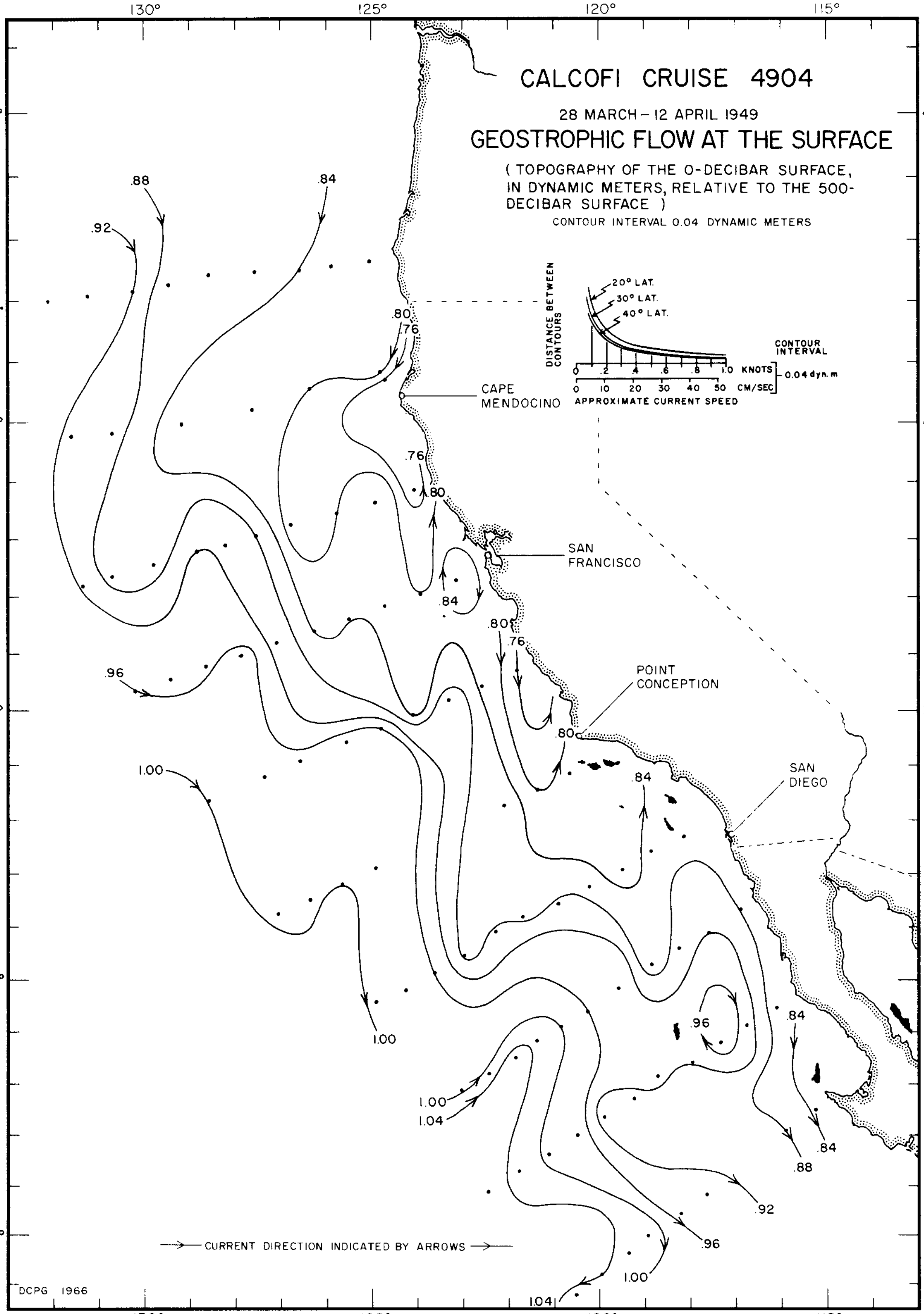
MEAN 200/500 db

NOVEMBER



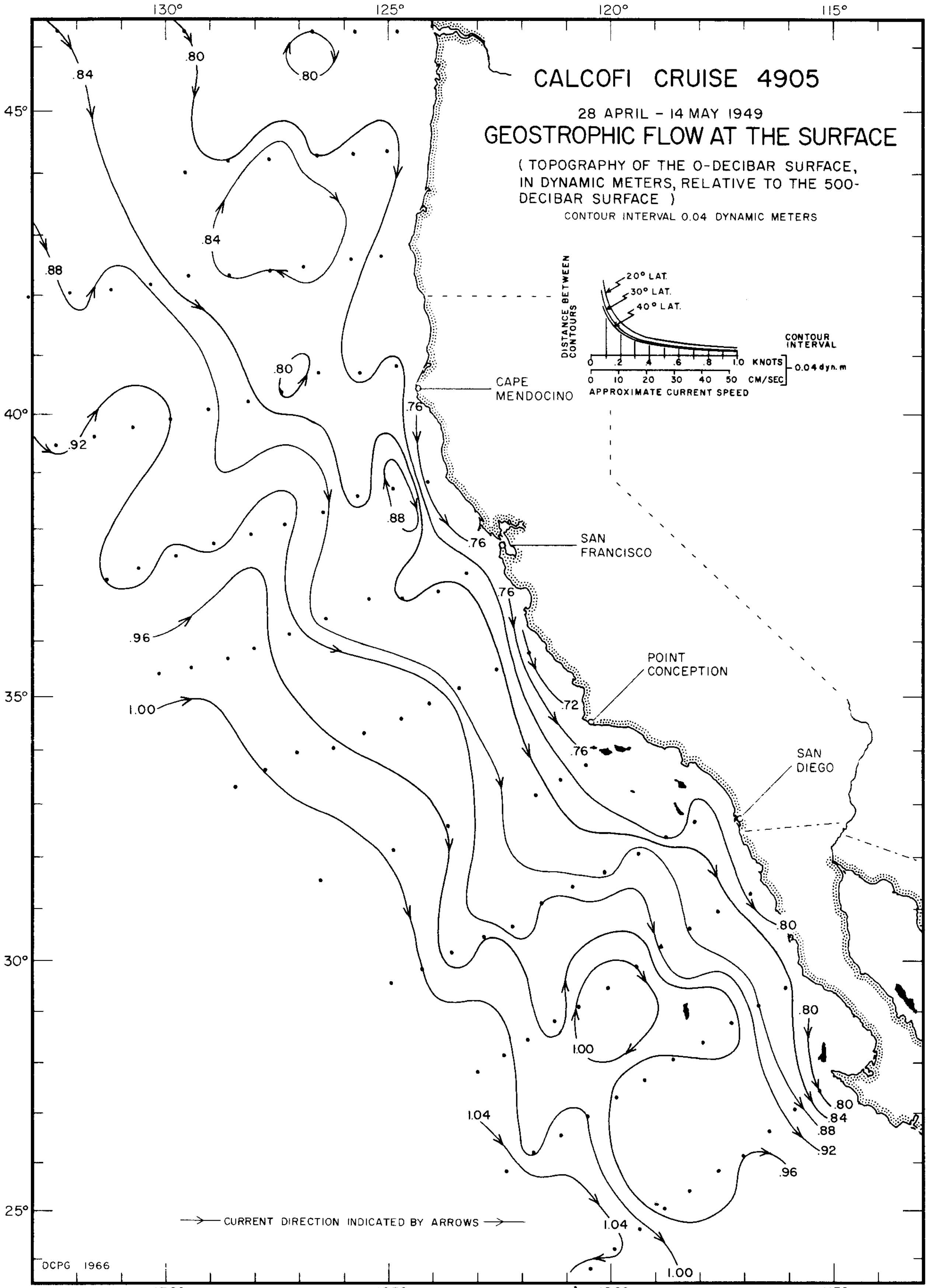
MEAN 200/500 db

DECEMBER

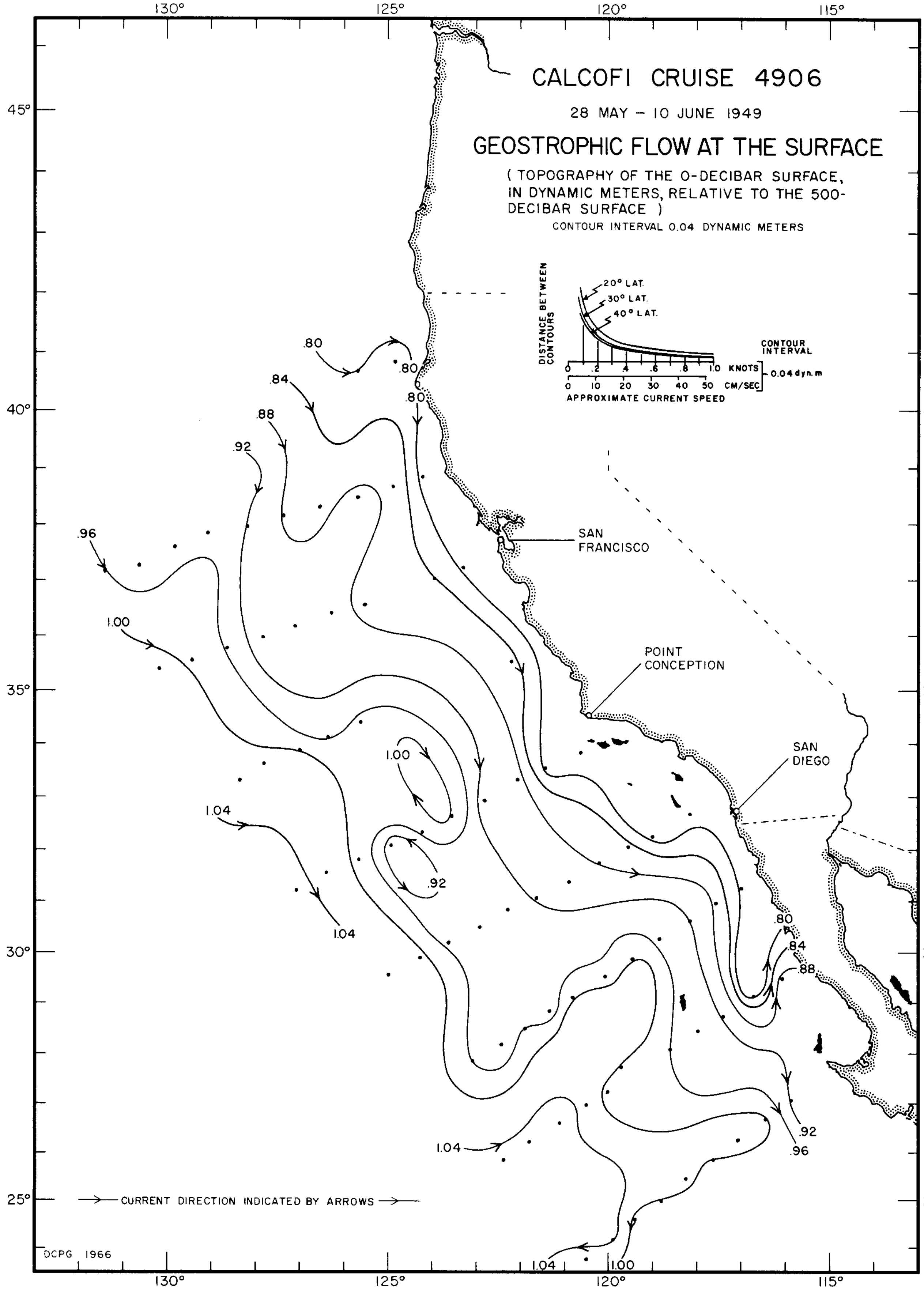


CALCOFI CRUISE 4904
28 MARCH – 12 APRIL 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°
.88
.84
.92
.80
.76
.96
1.00
1.04

0/500 db
4904

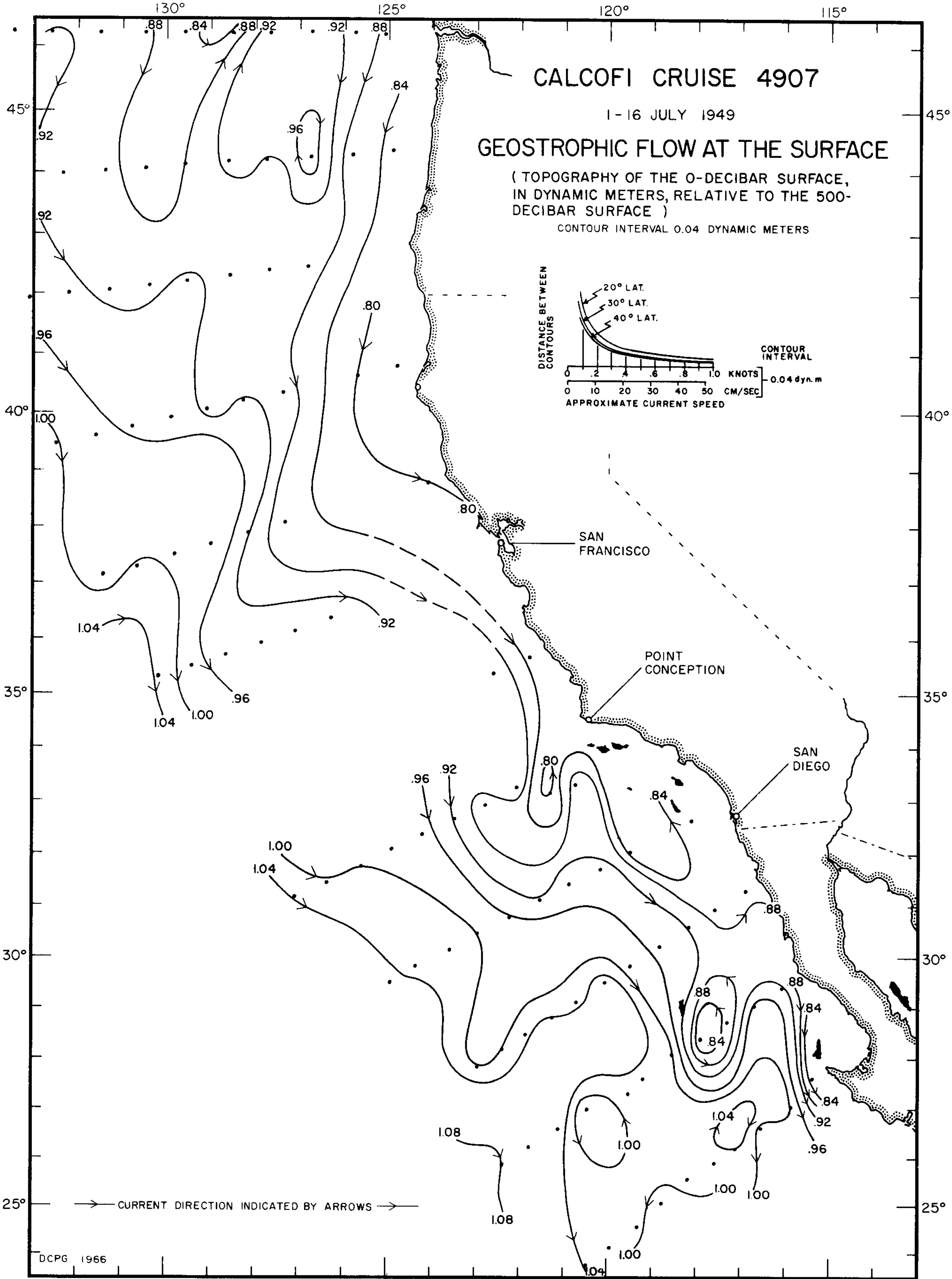

CALCOFI CRUISE 4905
28 APRIL - 14 MAY 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

0/500 db
4905

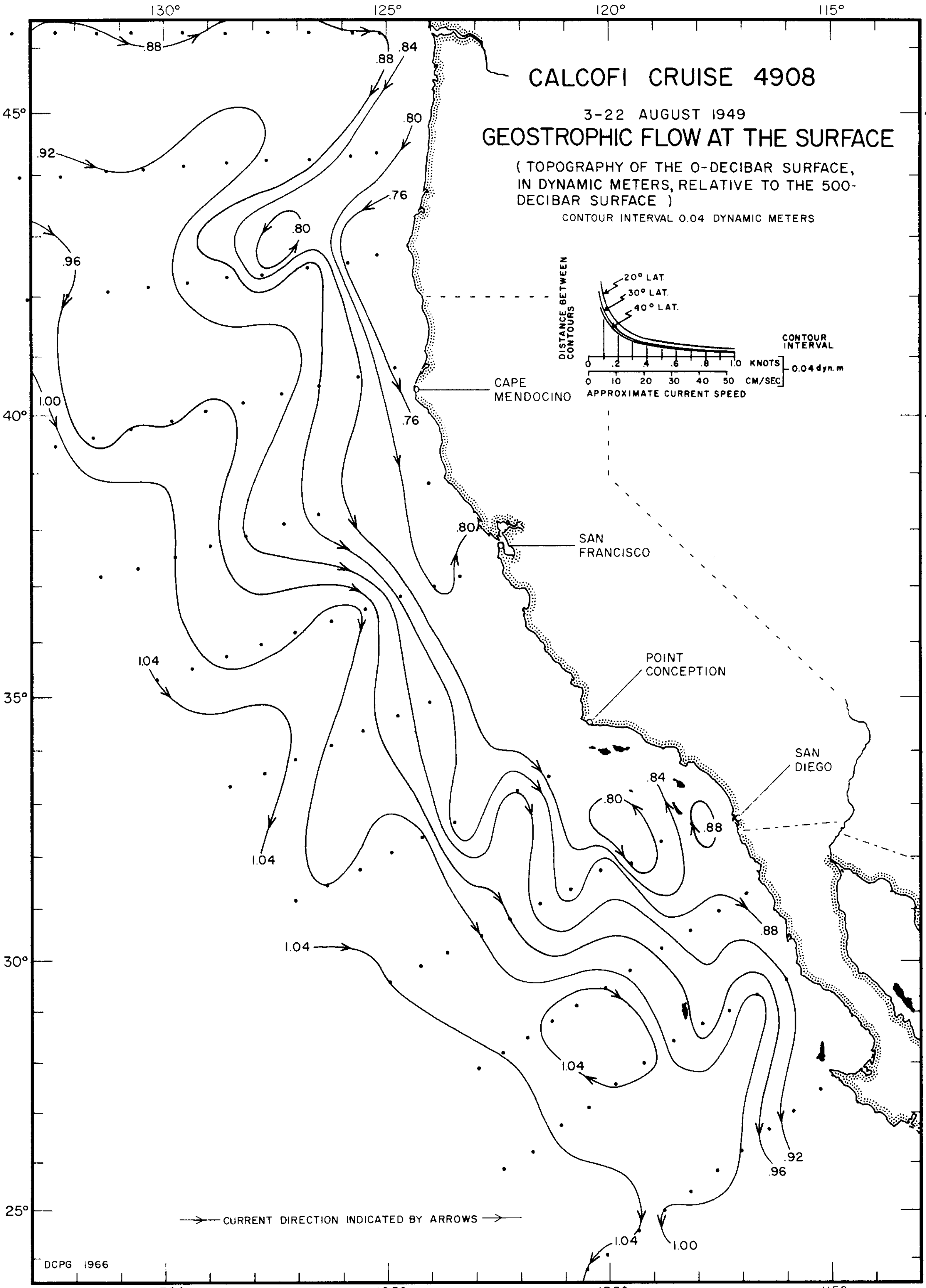

CALCOFI CRUISE 4906
28 MAY – 10 JUNE 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°
.80
.84
.88
.92
.96
1.00
1.04

0/500 db

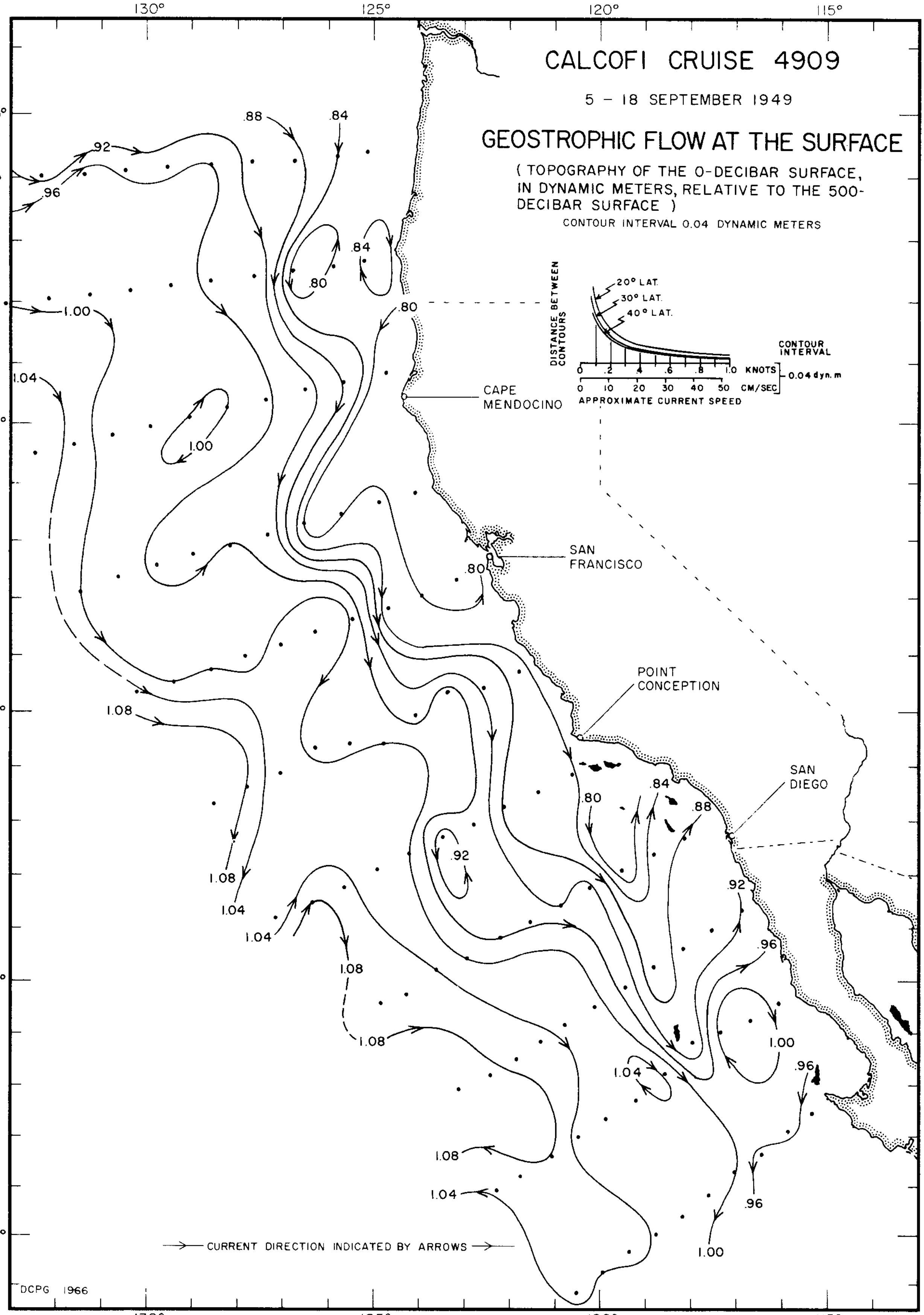
4906


CALCOFI CRUISE 4907
1 - 16 JULY 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0.04 dyn. m
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130° 125° 120° 115°
45° 40° 35° 30° 25°

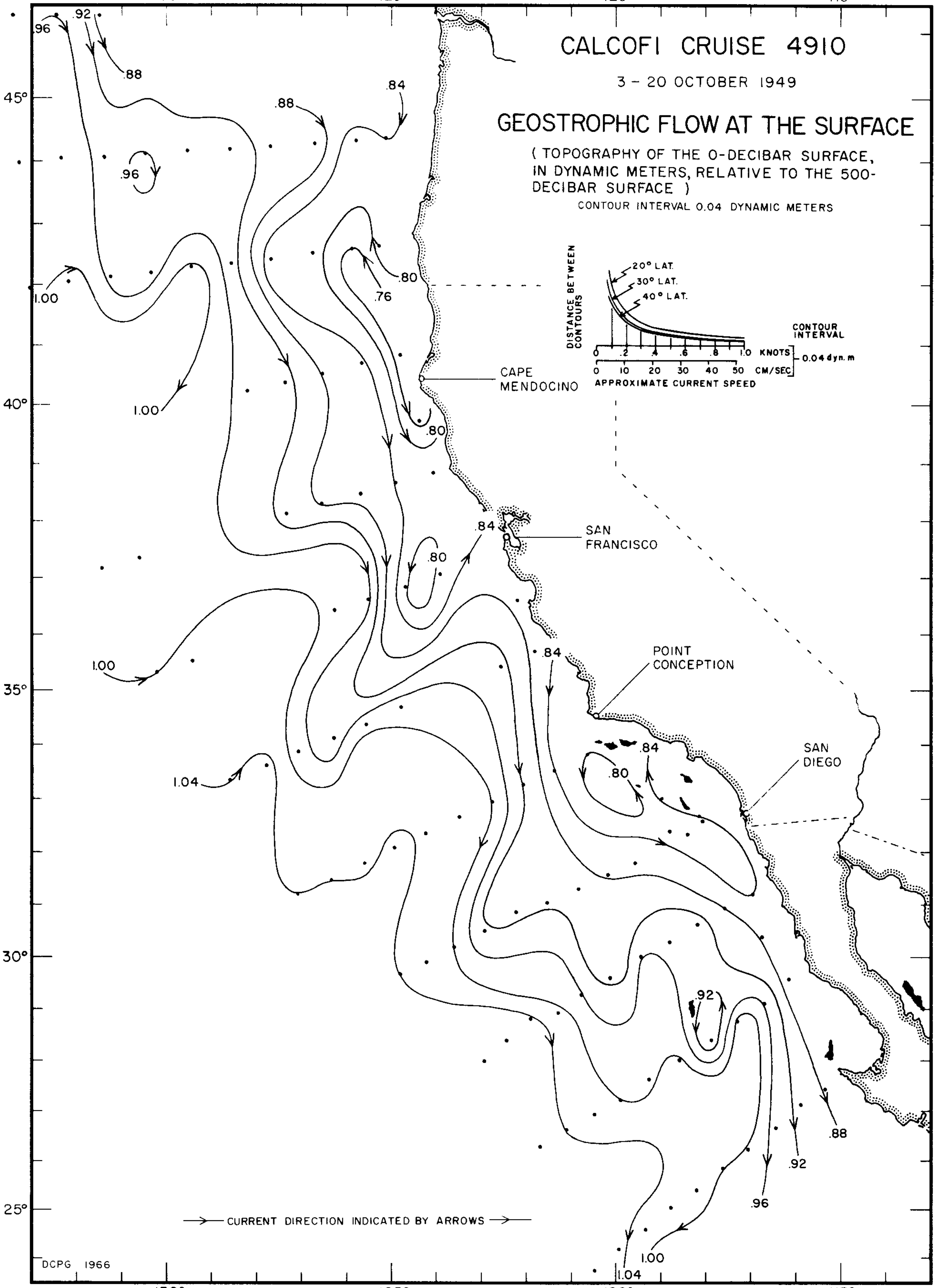
0/500 db
4907


CALCOFI CRUISE 4908
3-22 AUGUST 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

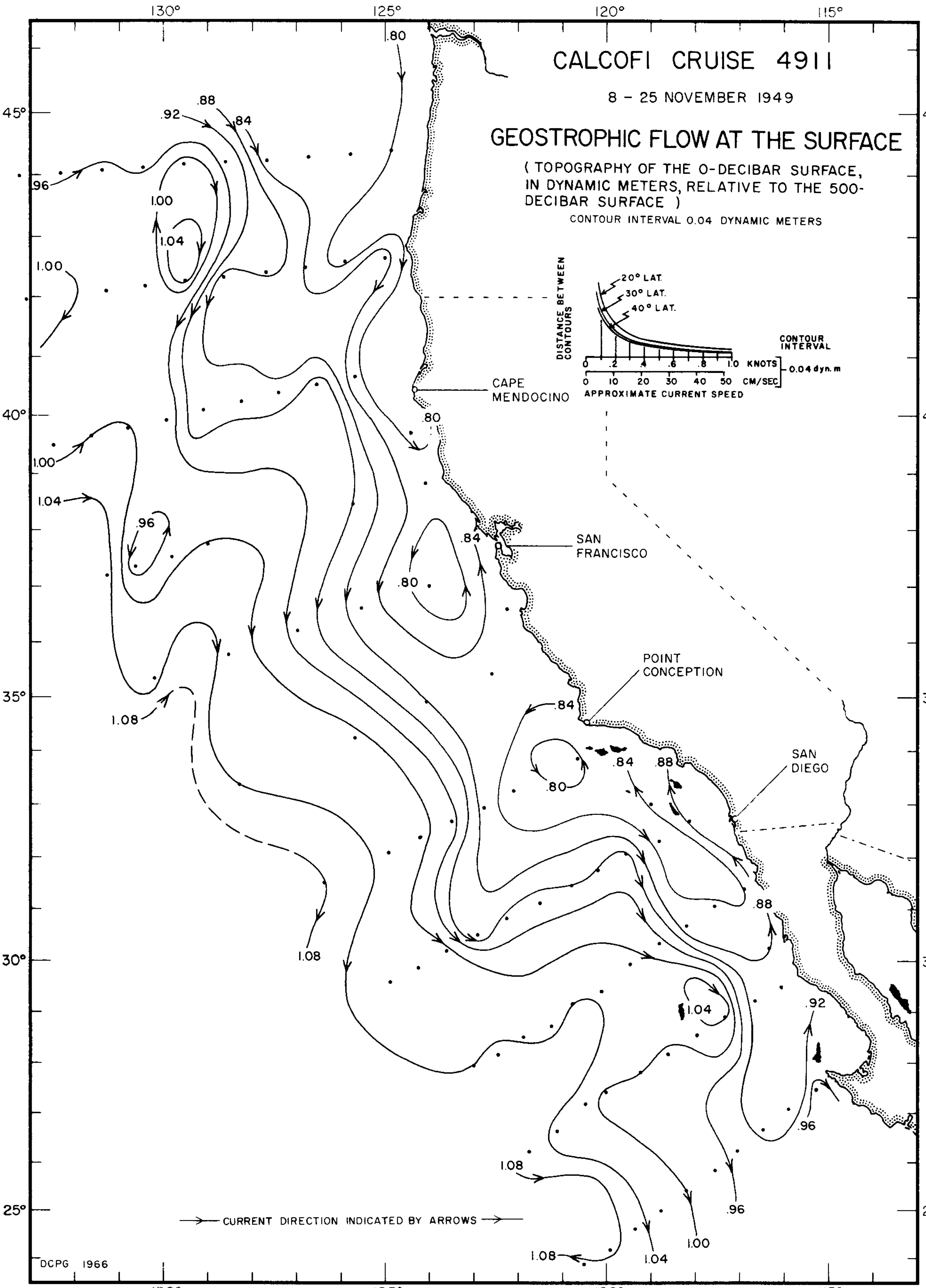
0/500 db
4908


CALCOFI CRUISE 4909
5 - 18 SEPTEMBER 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

0/500 db
4909

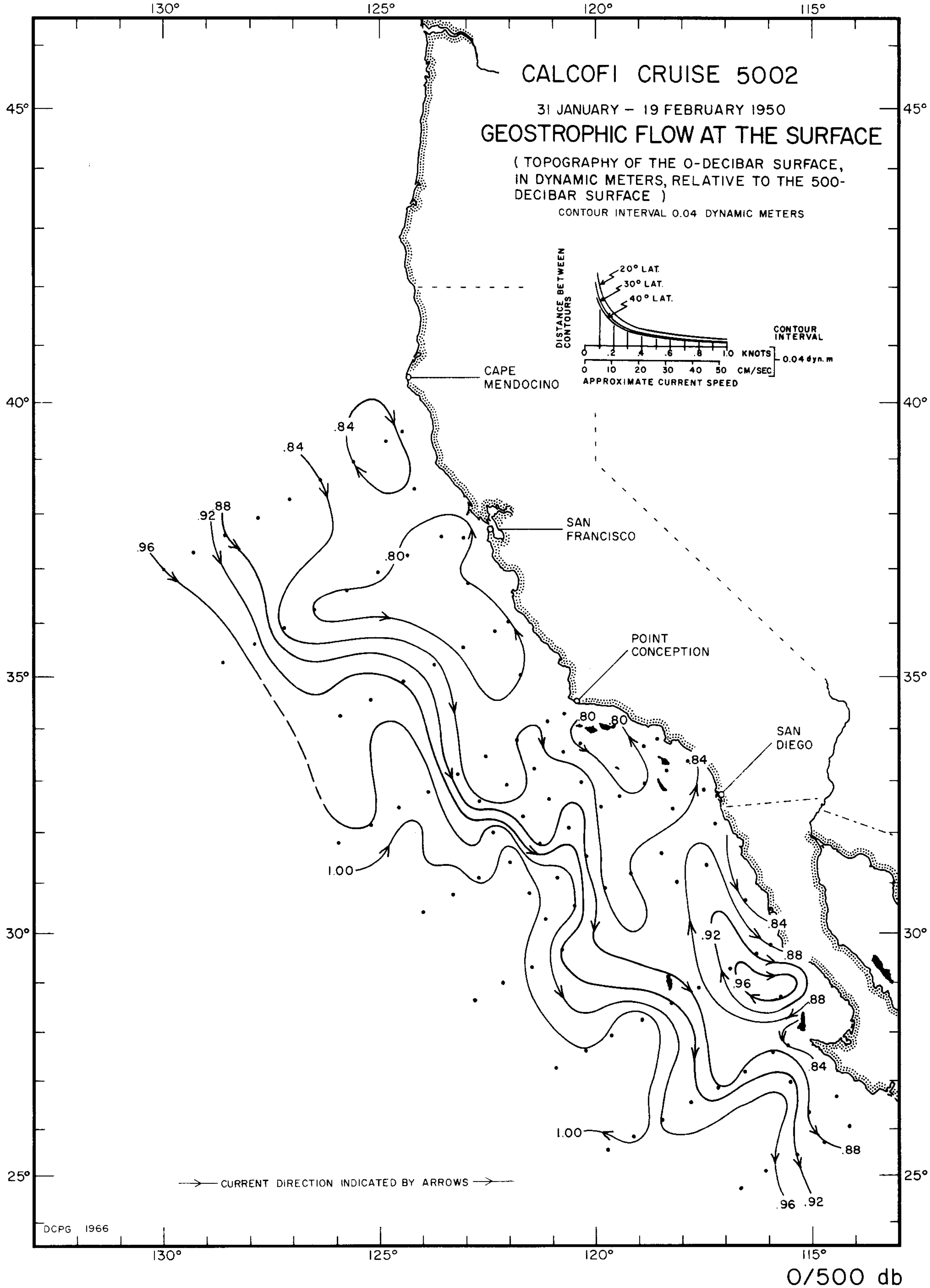

CALCOFI CRUISE 4910
3 - 20 OCTOBER 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

0/500 db
4910


CALCOFI CRUISE 4911
8 - 25 NOVEMBER 1949
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

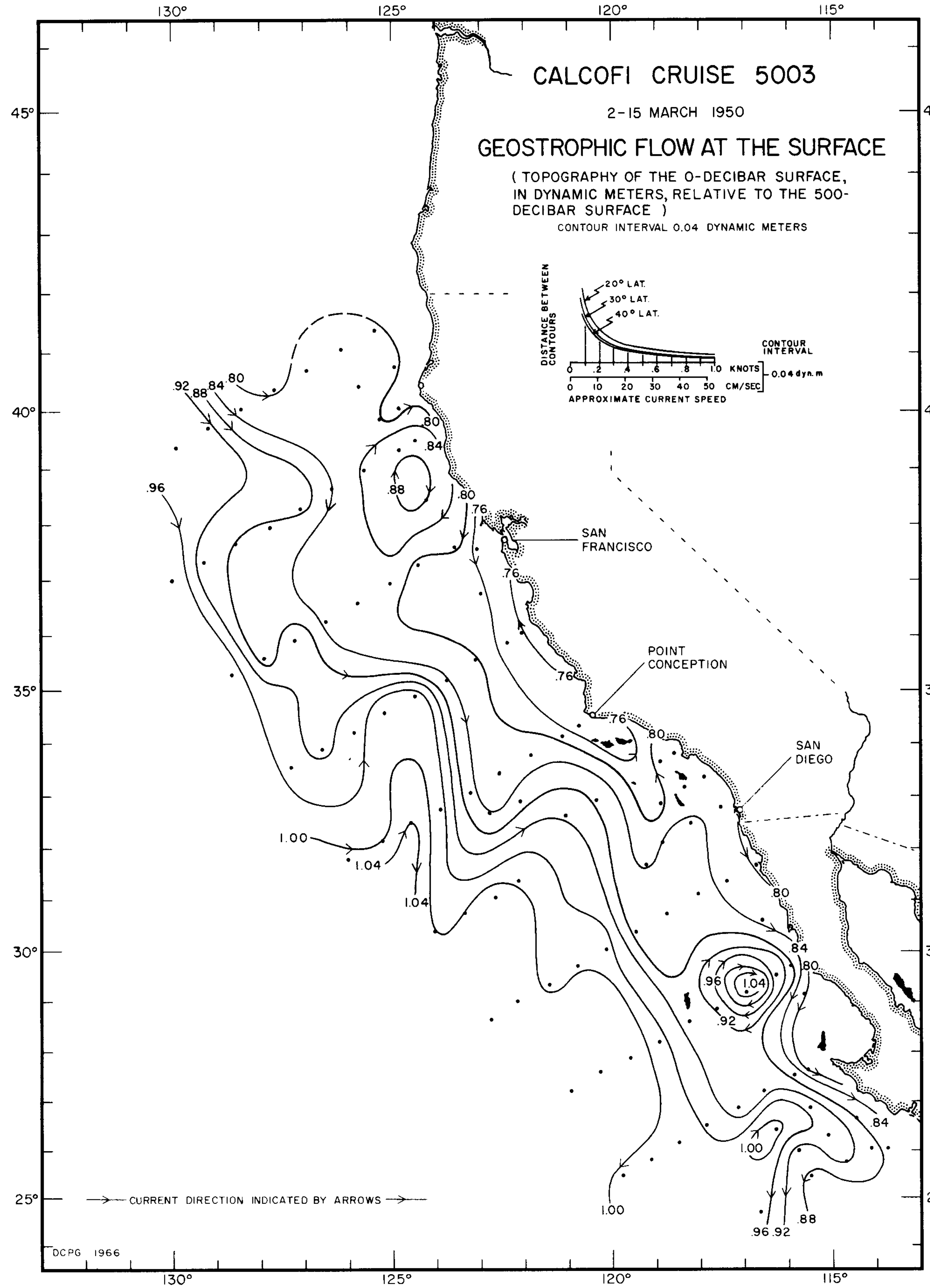
0/500 db

4911


CALCOFI CRUISE 5002
31 JANUARY – 19 FEBRUARY 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
130° 125° 120° 115°
45° 40° 35° 30° 25°
.84
.84
.88
.92
.96
.80
.80
.80
.84
1.00
.92
.96
.84
.88
.88
.84
1.00
.88
.96 .92
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

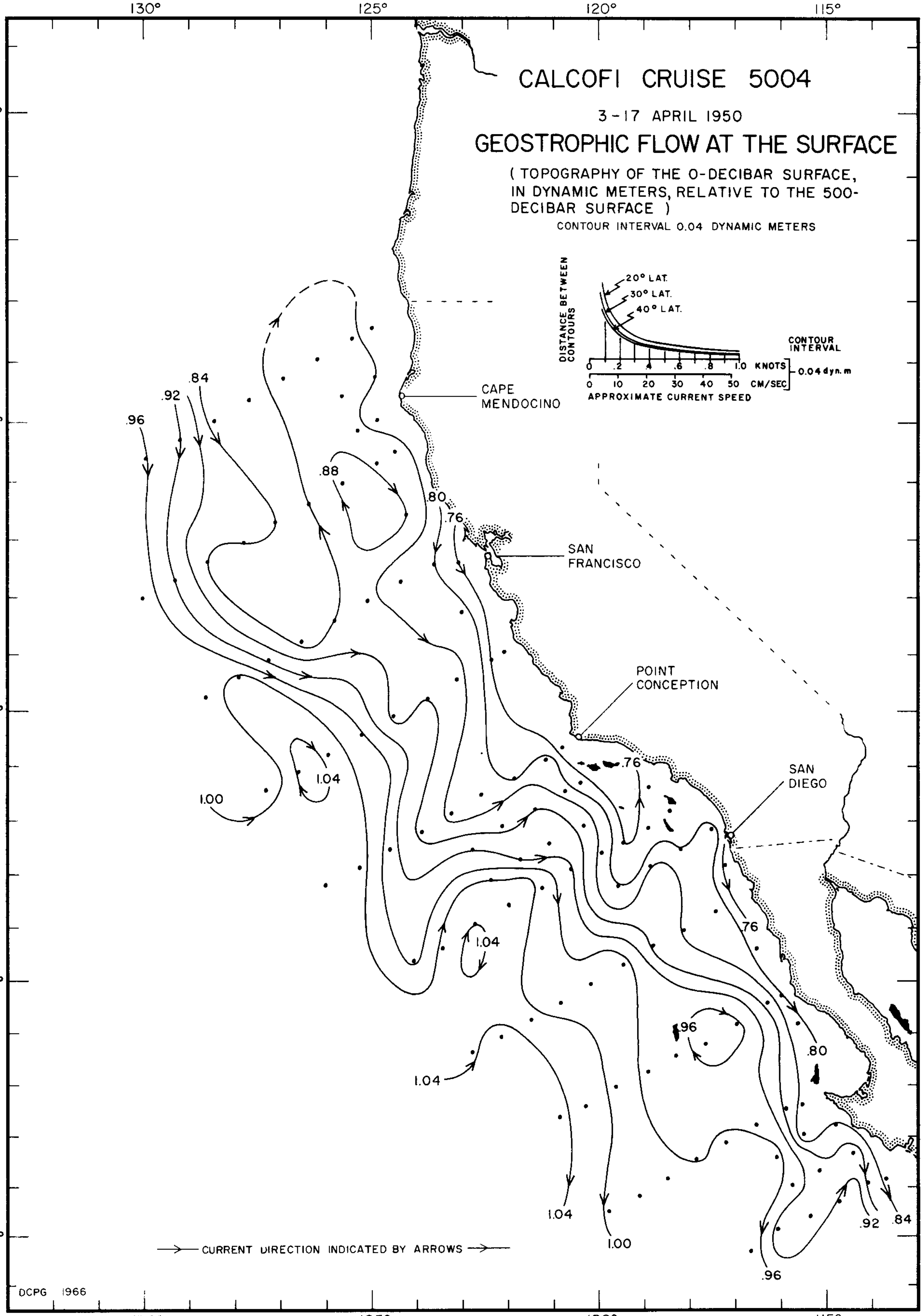
5002



CALCOFI CRUISE 5003
2-15 MARCH 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

0/500 db

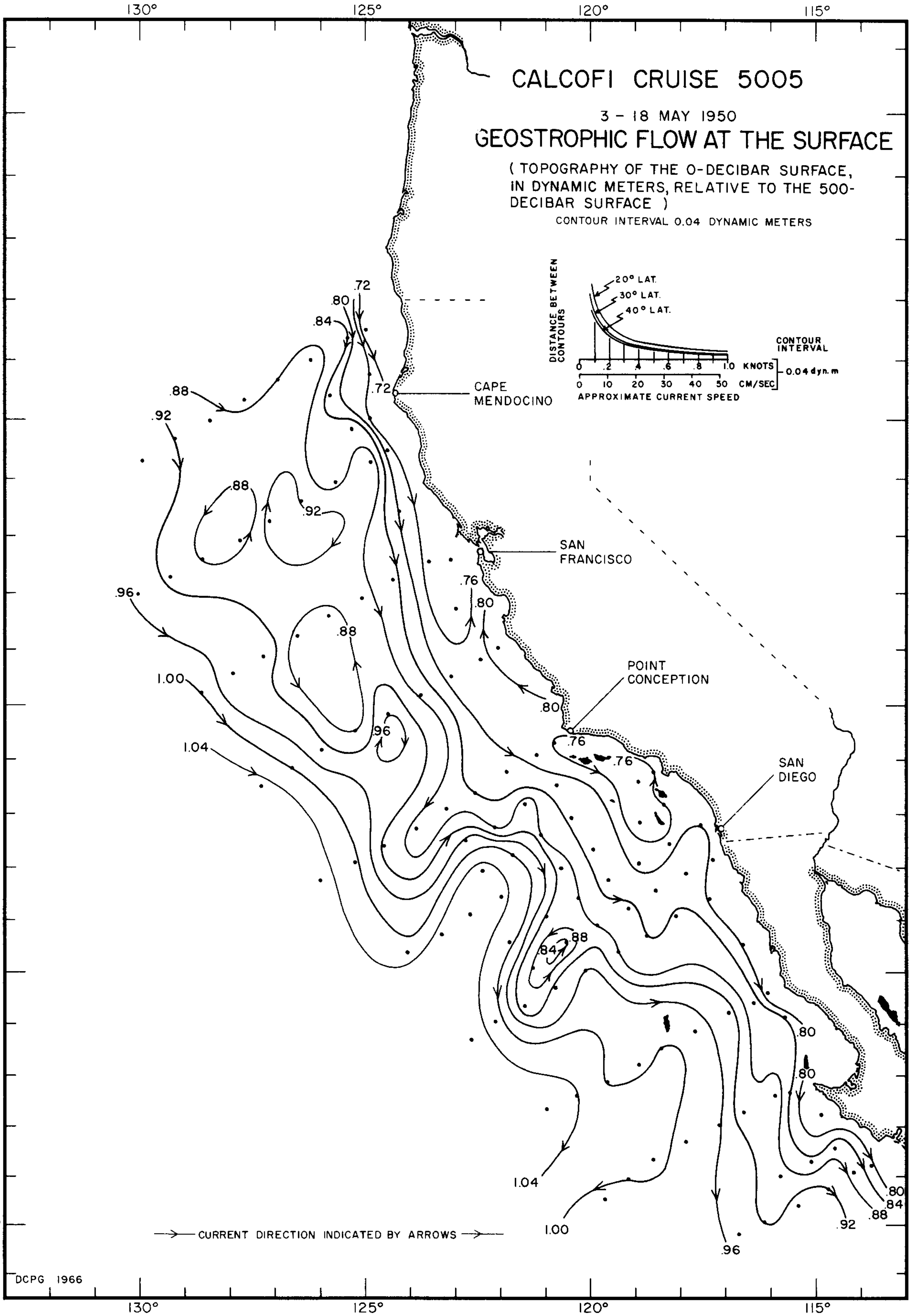
5003



CALCOFI CRUISE 5004
3-17 APRIL 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
130°
125°
120°
115°
45°
40°
35°
30°
25°
.96
.92
.84
.88
.80
.76
1.04
1.00
.96
.80
.92
.84
1.04
1.00
.96
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

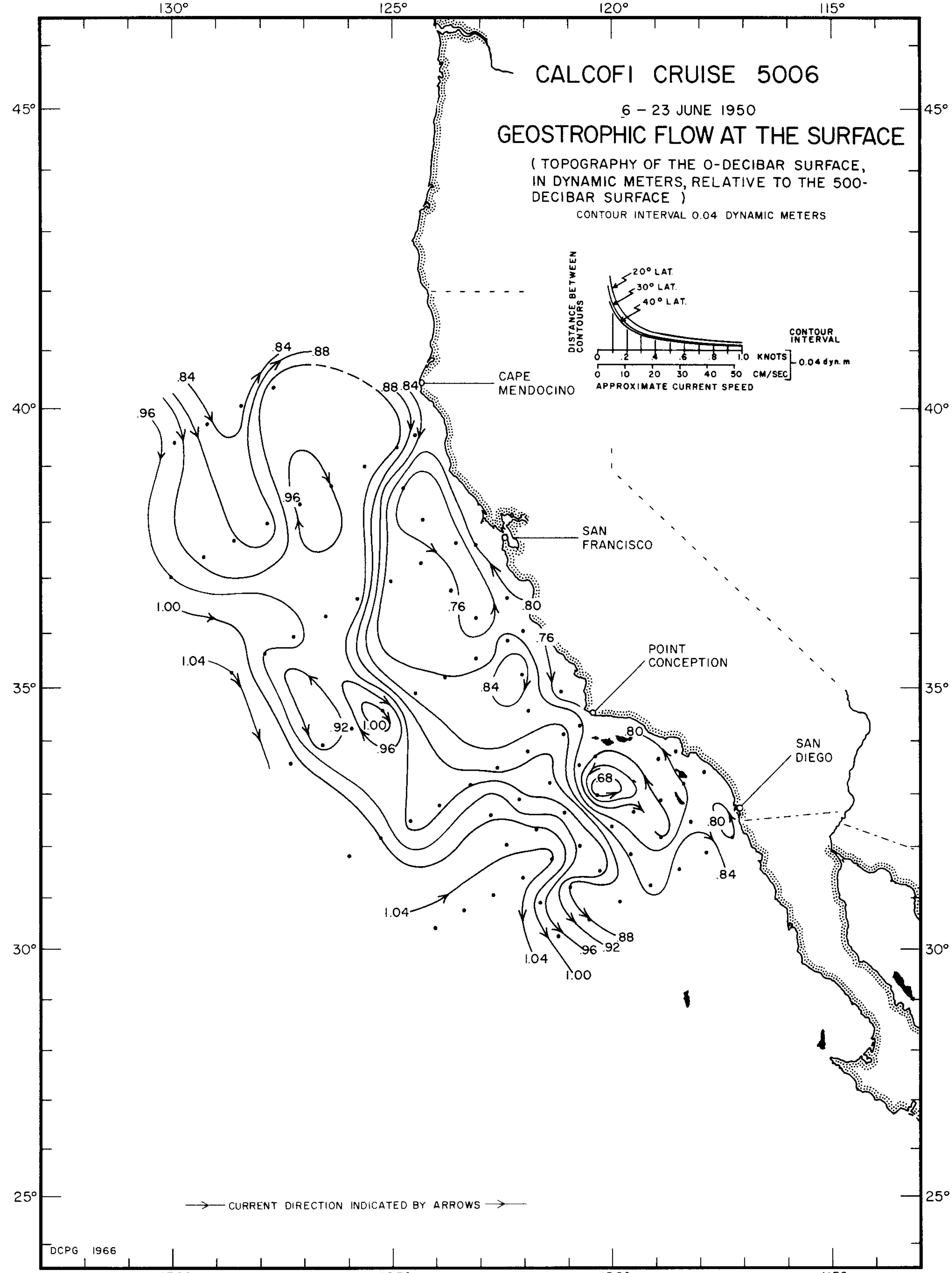
0/500 db

5004

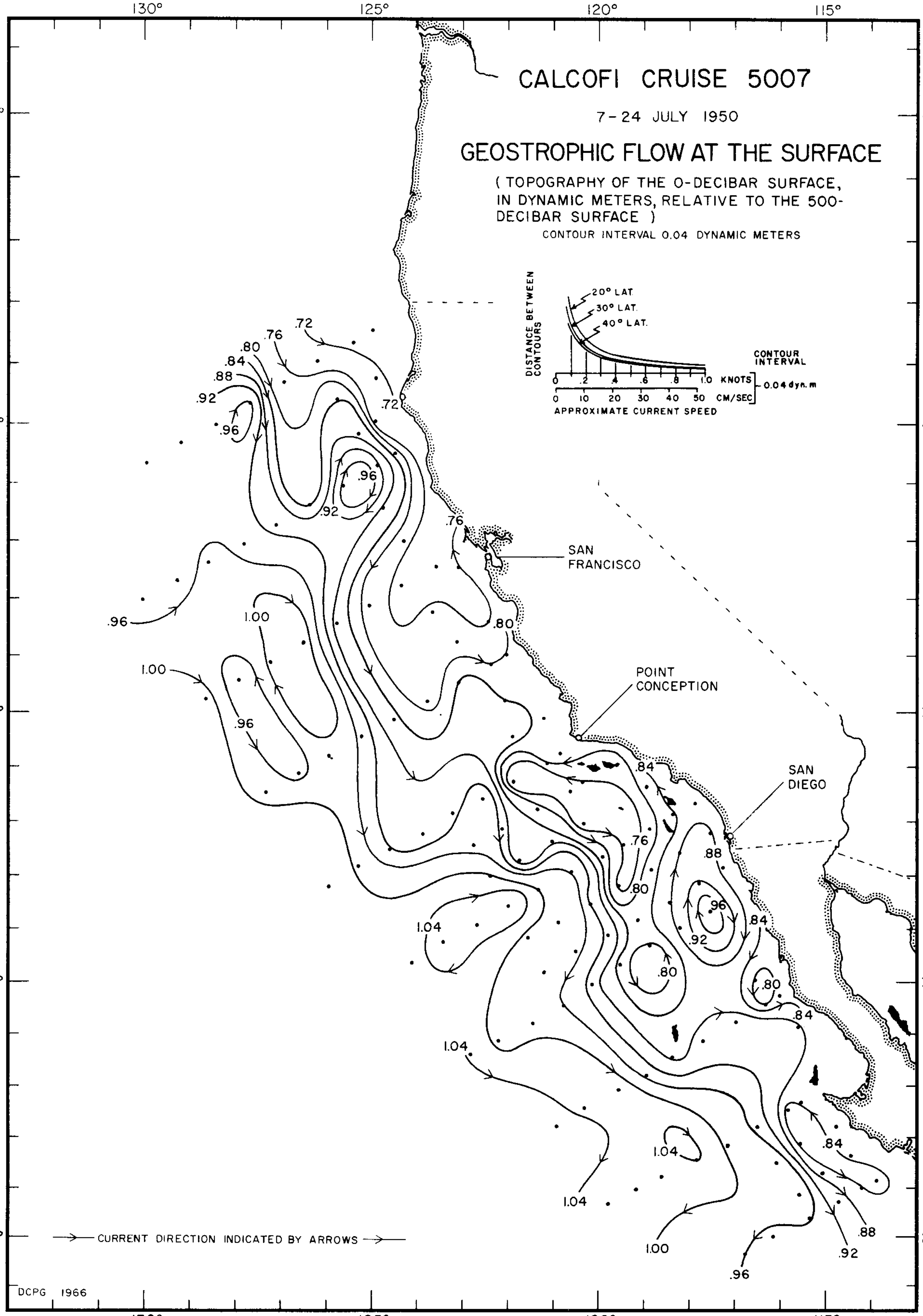

CALCOFI CRUISE 5005
3 - 18 MAY 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
130°
125°
120°
115°
45°
40°
35°
30°
25°
DCPG 1966

0/500 db

5005

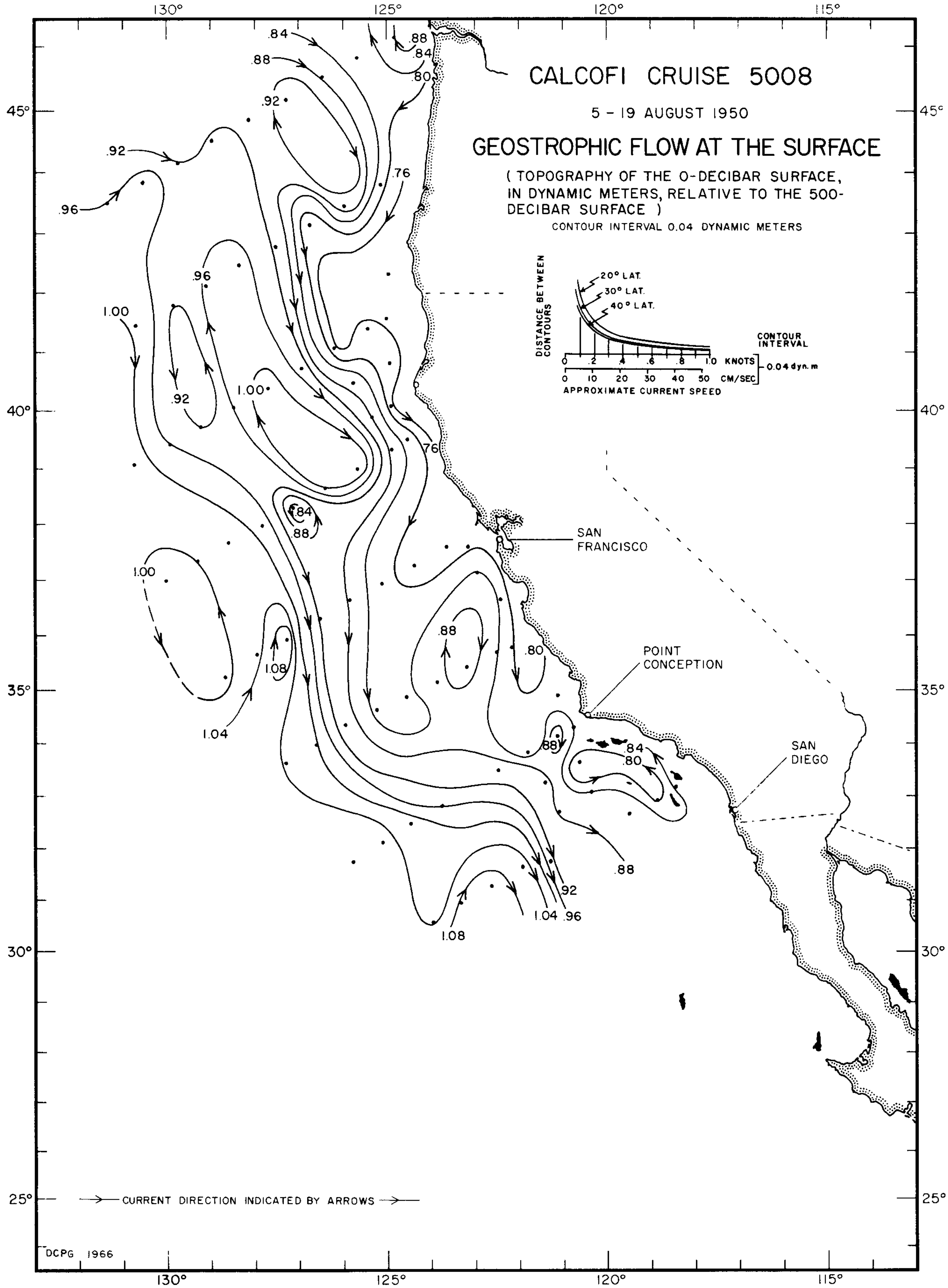

CALCOFI CRUISE 5006
6 – 23 JUNE 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
130°
125°
120°
115°
45°
40°
35°
30°
25°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5006

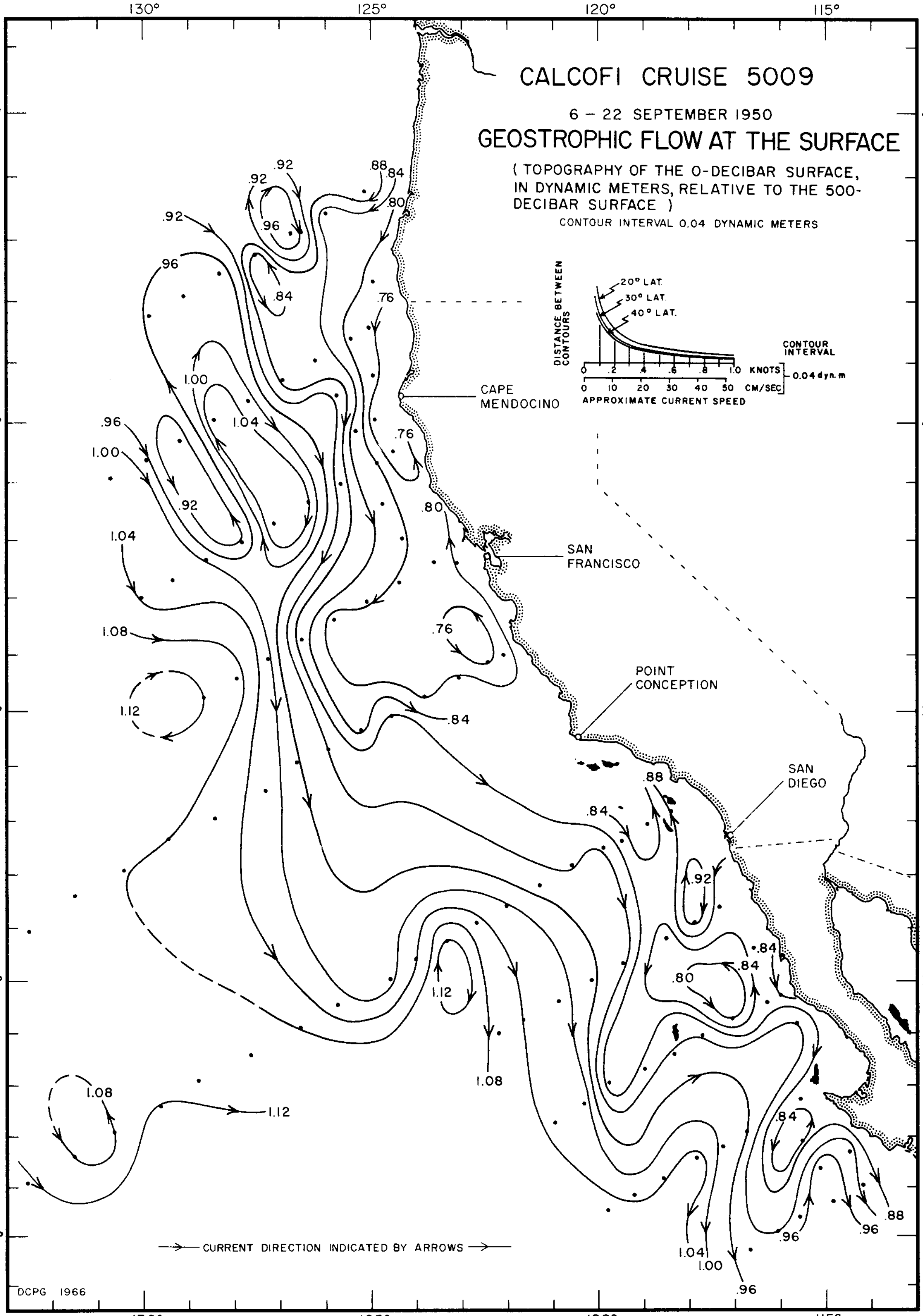

CALCOFI CRUISE 5007
7-24 JULY 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

0/500 db

5007


CALCOFI CRUISE 5008
5 - 19 AUGUST 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

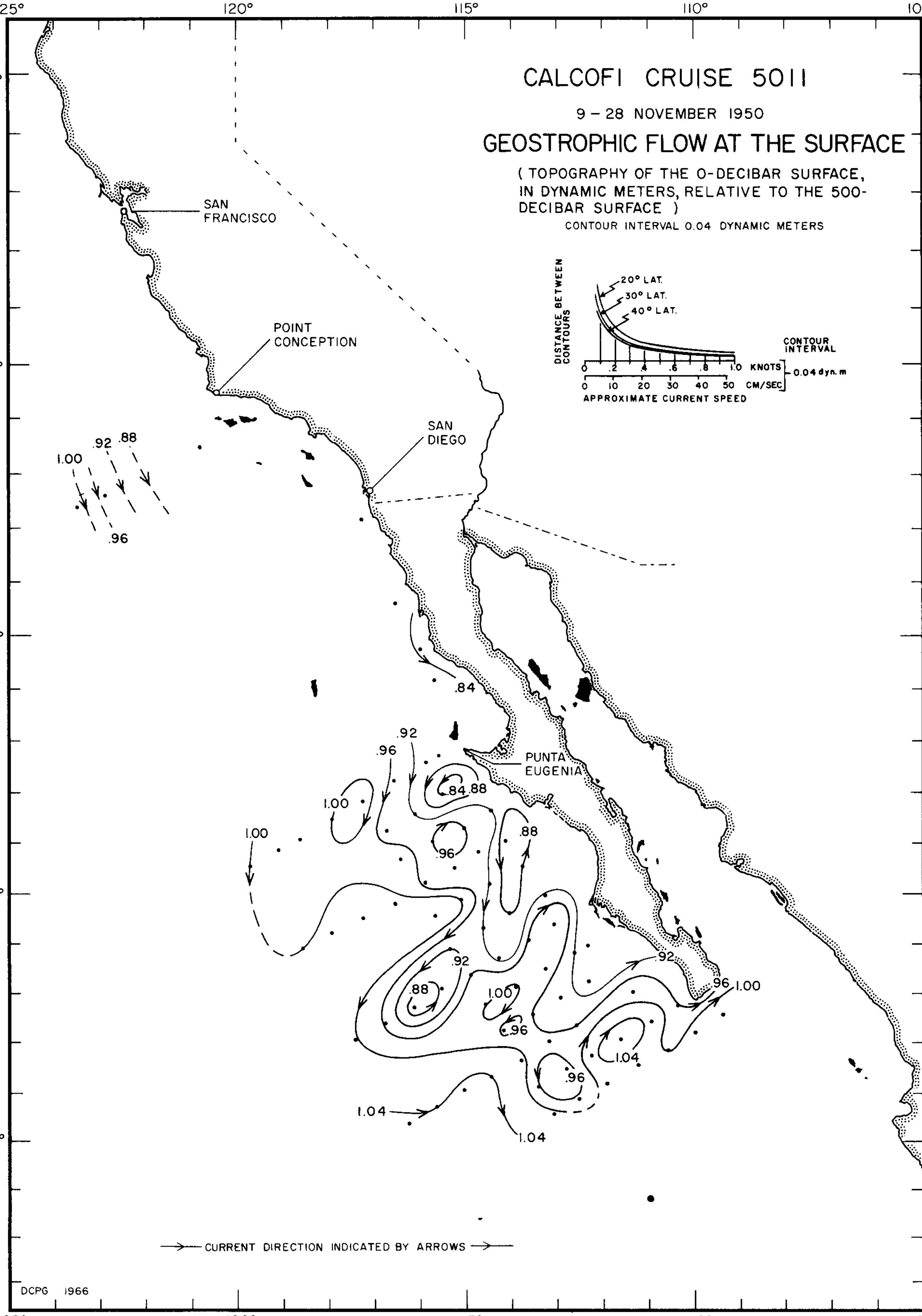
0/500 db
5008



CALCOFI CRUISE 5009
6 – 22 SEPTEMBER 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
130°
125°
120°
115°
45°
40°
35°
30°
25°

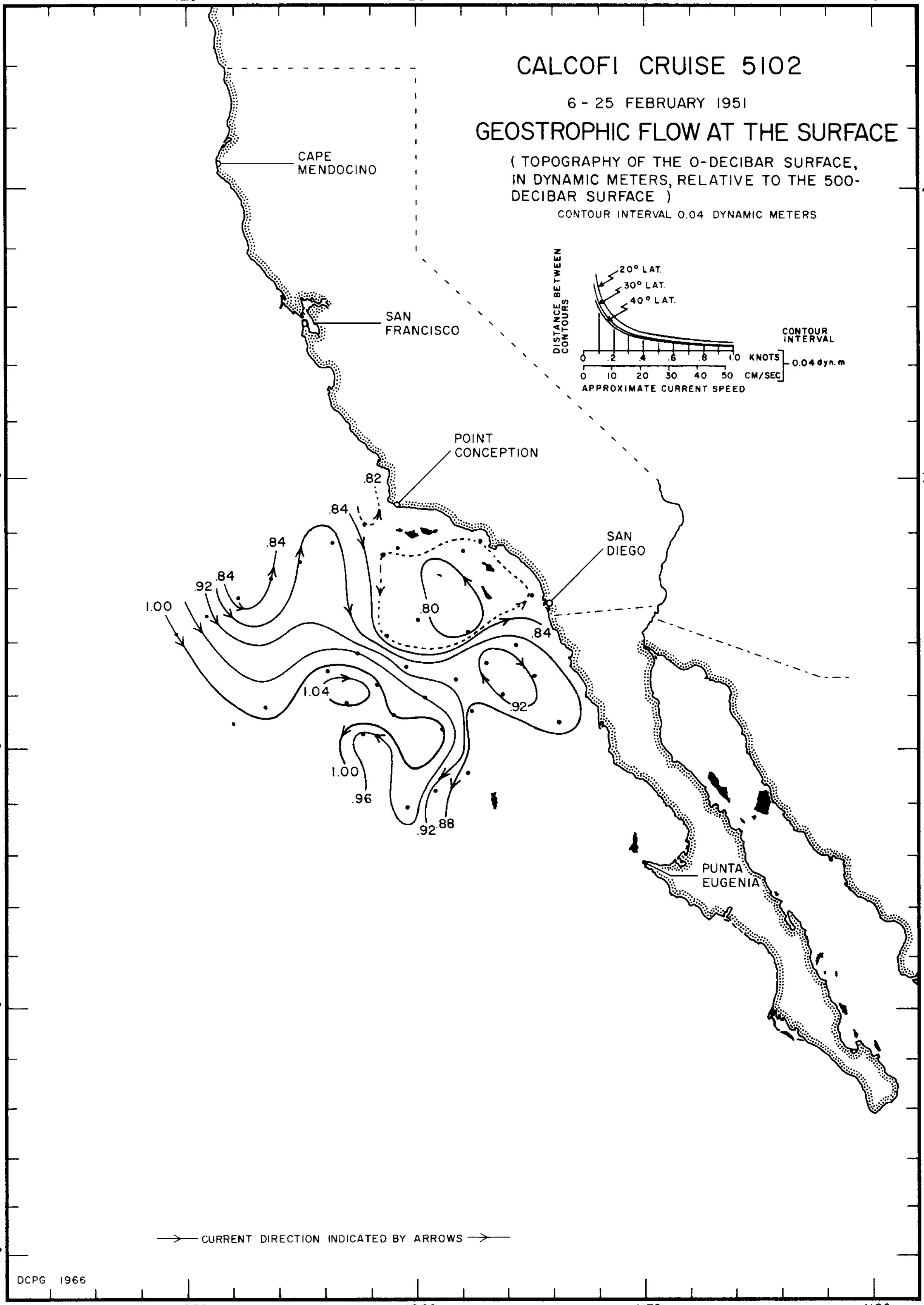
0/500 db

5009


CALCOFI CRUISE 5011
9 – 28 NOVEMBER 1950
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
105°
40°
35°
30°
25°
20°

0/500 db

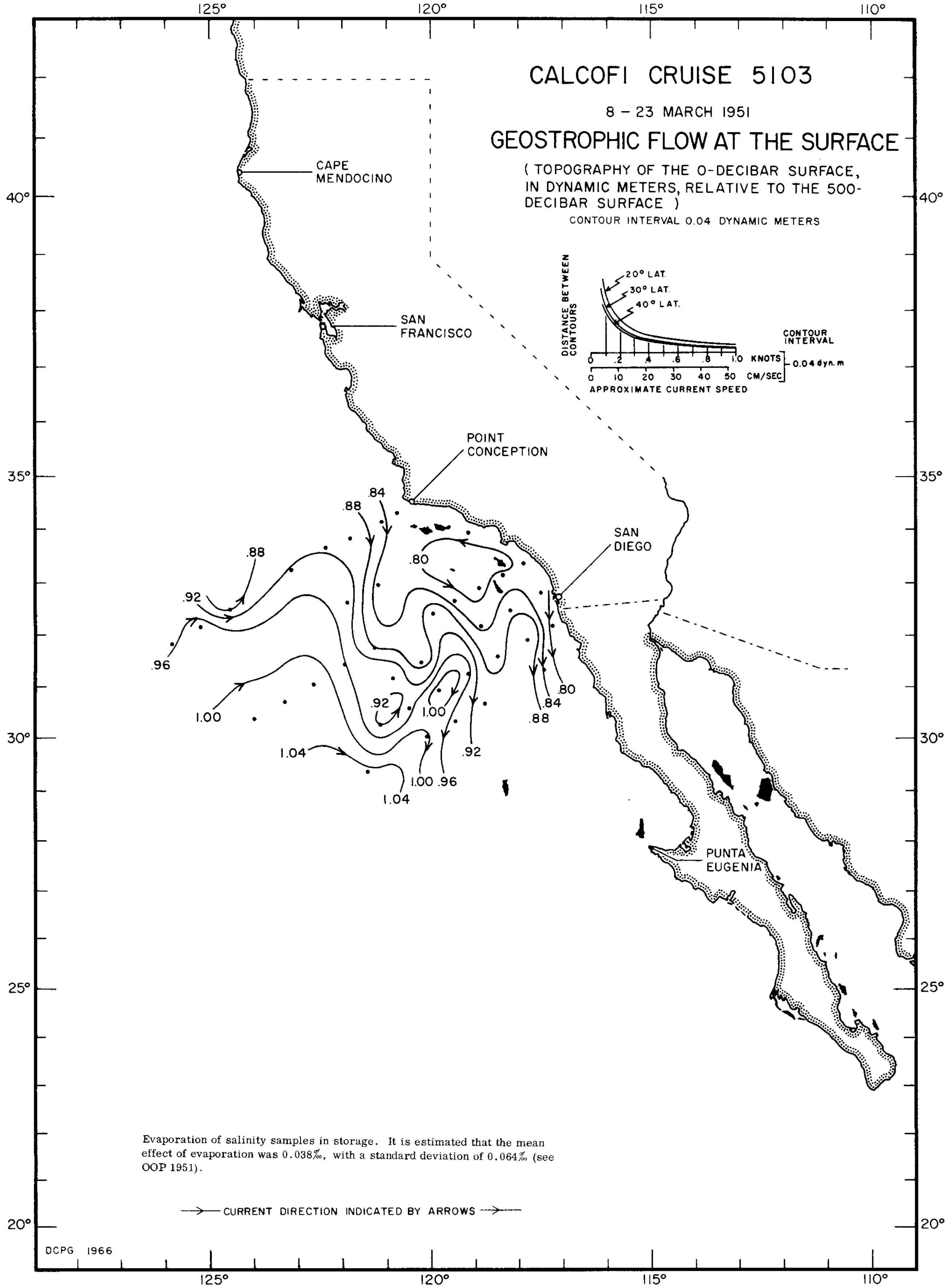
5011



CALCOFI CRUISE 5102
6 - 25 FEBRUARY 1951
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
125°
120°
115°
110°
40°
35°
30°
25°
20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.82
.84
.80
.92
1.00
1.04
.96
.88
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

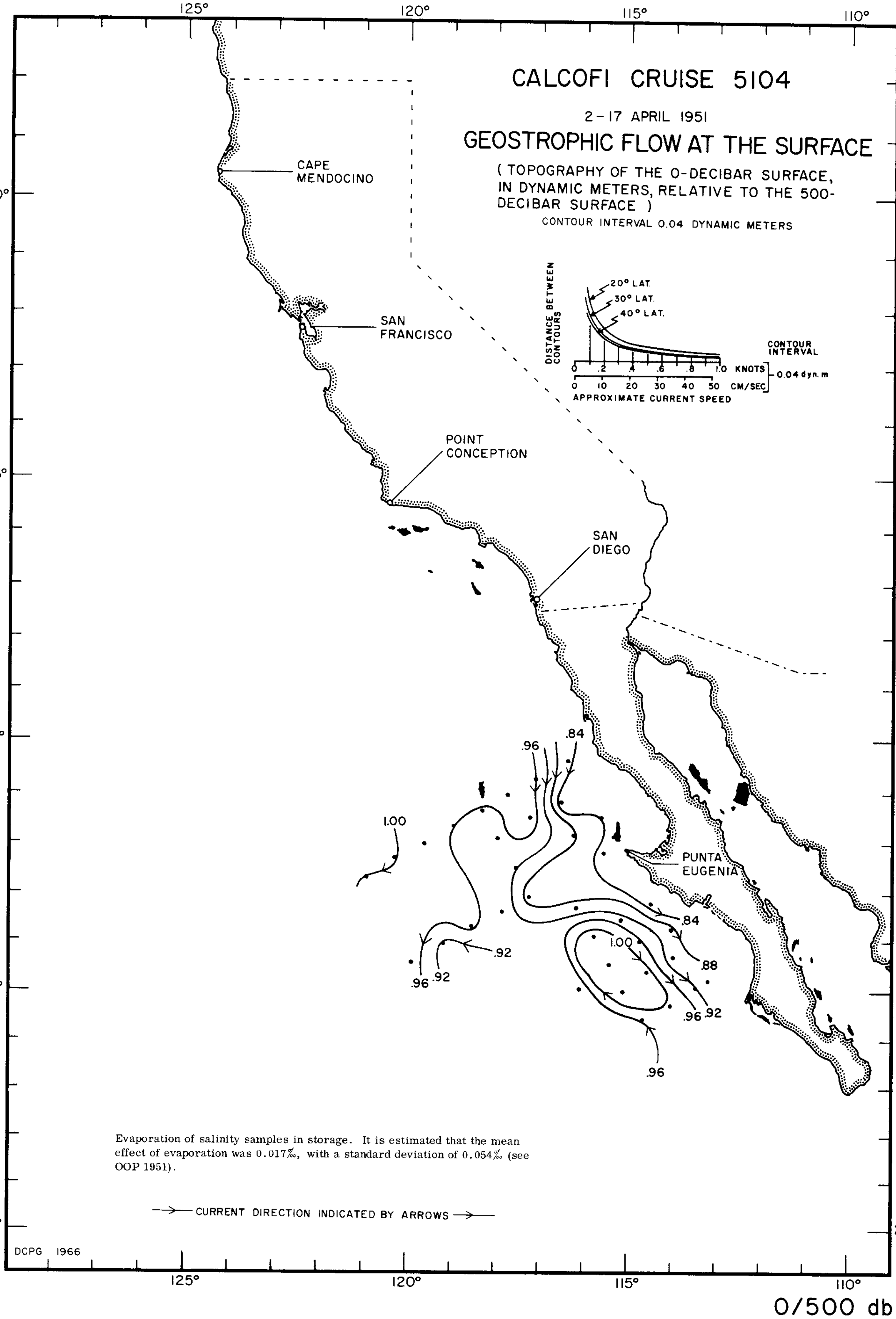
0/500 db

5102


CALCOFI CRUISE 5103
8 – 23 MARCH 1951
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.038‰, with a standard deviation of 0.064‰ (see OOP 1951).
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

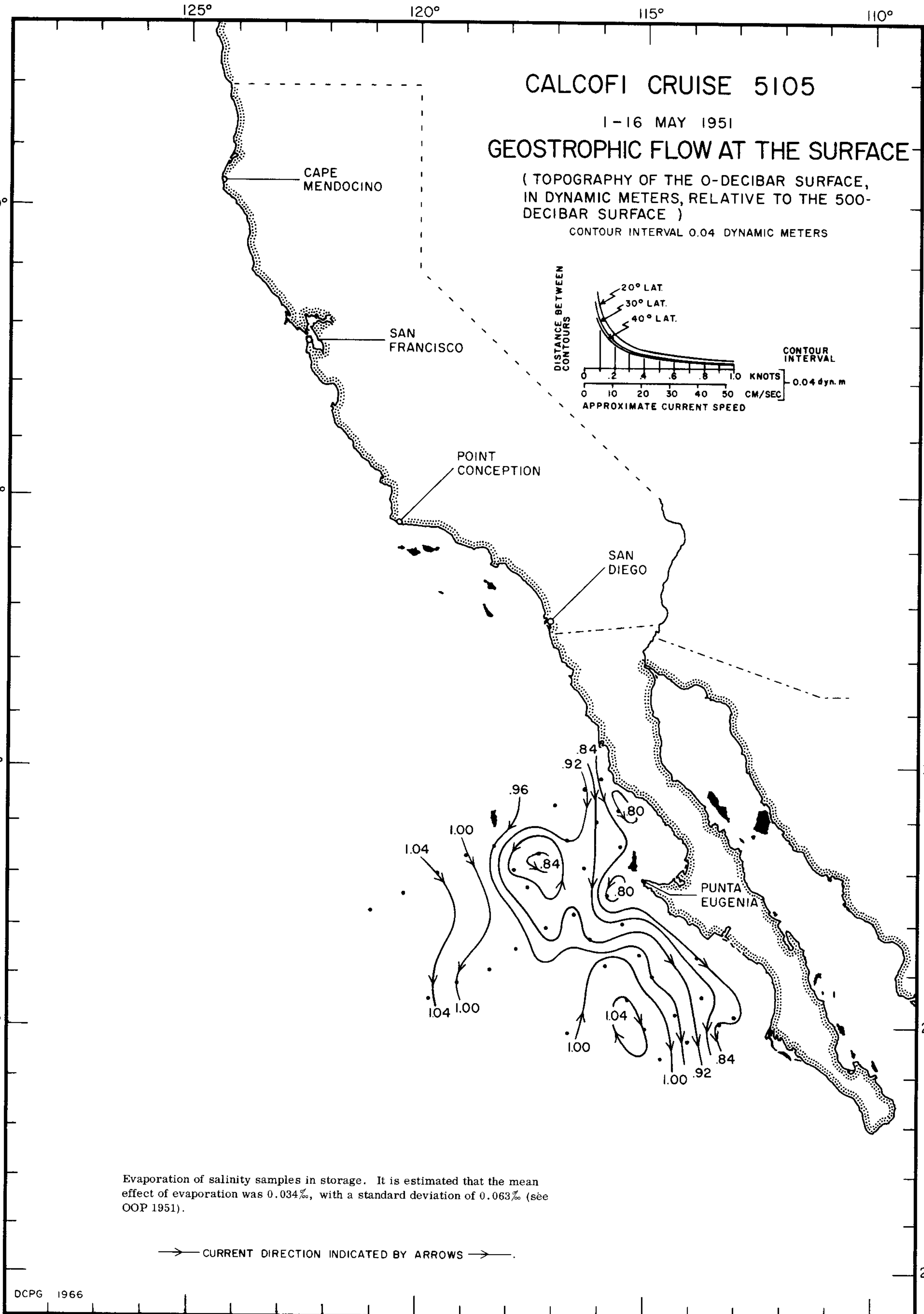
0/500 db

5103


CALCOFI CRUISE 5104
2-17 APRIL 1951
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.96
.84
1.00
.84
.88
.92
.96
.92
.96
.92
1.00
.96
.92
.96
Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.017‰, with a standard deviation of 0.054‰ (see OOP 1951).
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

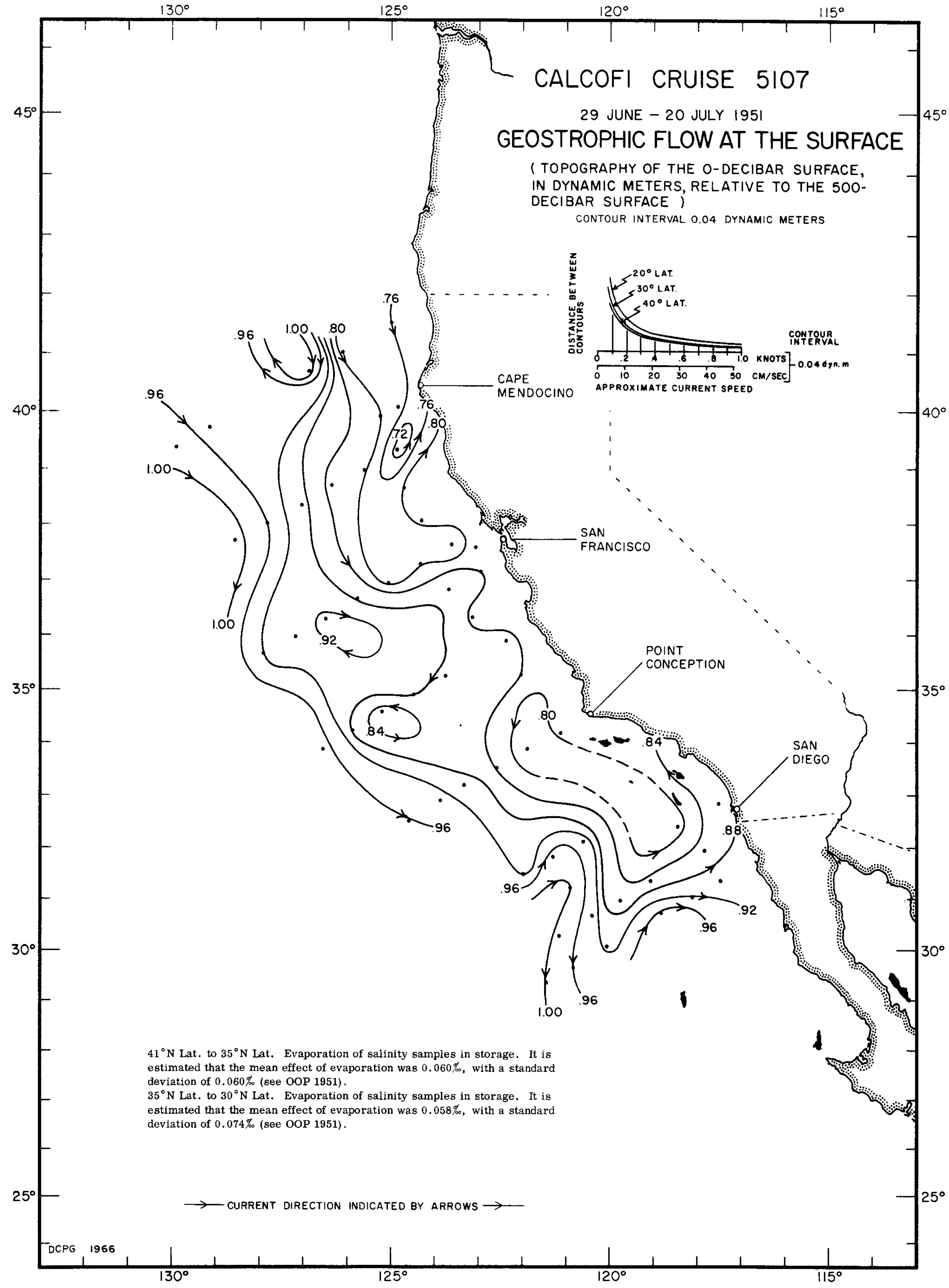
0/500 db

5104

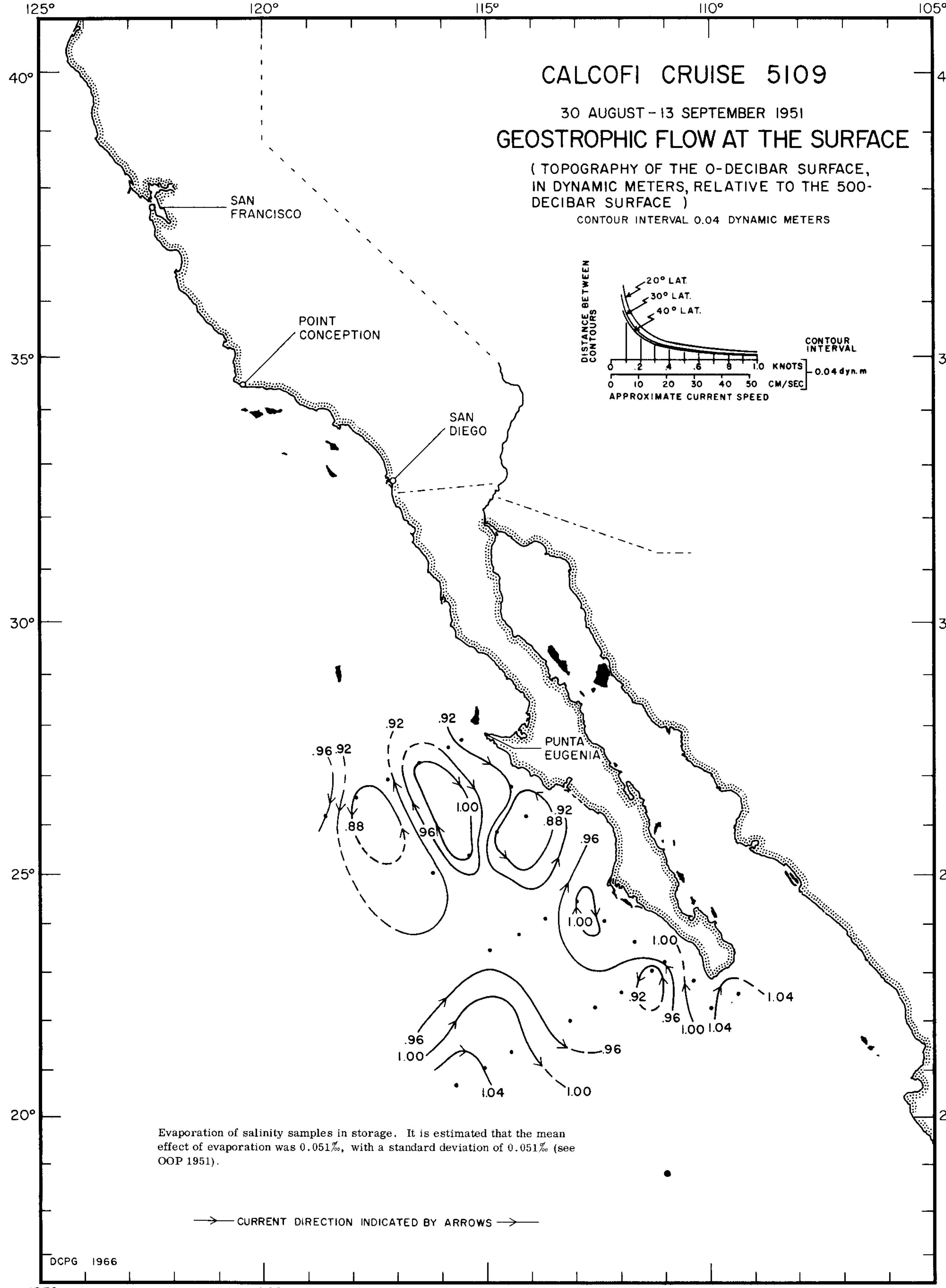

CALCOFI CRUISE 5105
1-16 MAY 1951
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.84
.92
.96
.80
1.00
1.04
.84
.80
1.04
1.00
1.04
1.00
1.00
.92
.84
1.00
Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.034‰, with a standard deviation of 0.063‰ (see OOP 1951).
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

5105


CALCOFI CRUISE 5107
29 JUNE – 20 JULY 1951
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn. m
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
130° 125° 120° 115°
45° 40° 35° 30° 25°
.76
.96
1.00
.80
.72
.92
.84
.88
41°N Lat. to 35°N Lat. Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.060‰, with a standard deviation of 0.060‰ (see OOP 1951).
35°N Lat. to 30°N Lat. Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.058‰, with a standard deviation of 0.074‰ (see OOP 1951).
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

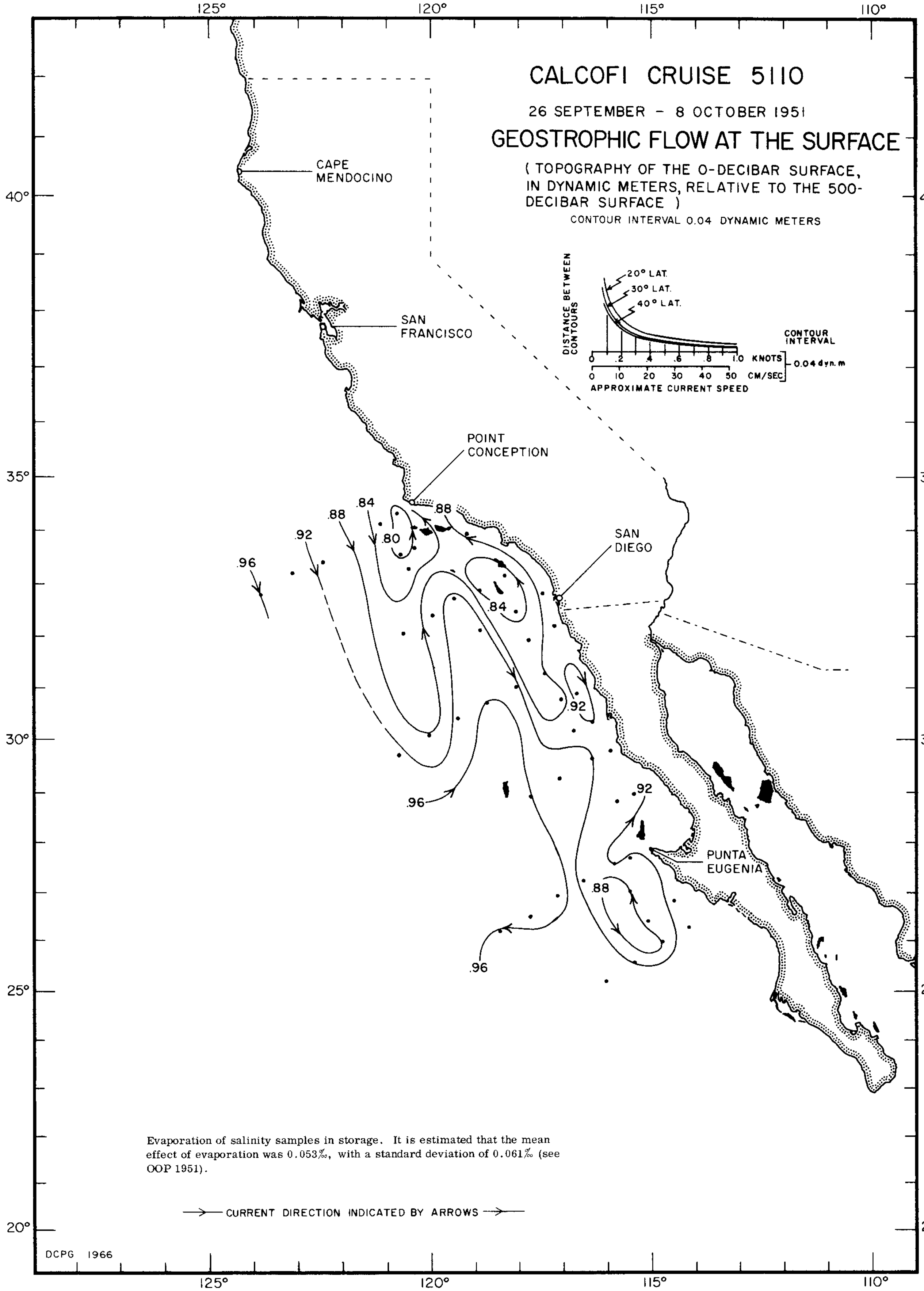
0/500 db
5107



Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.051‰, with a standard deviation of 0.051‰ (see OOP 1951).

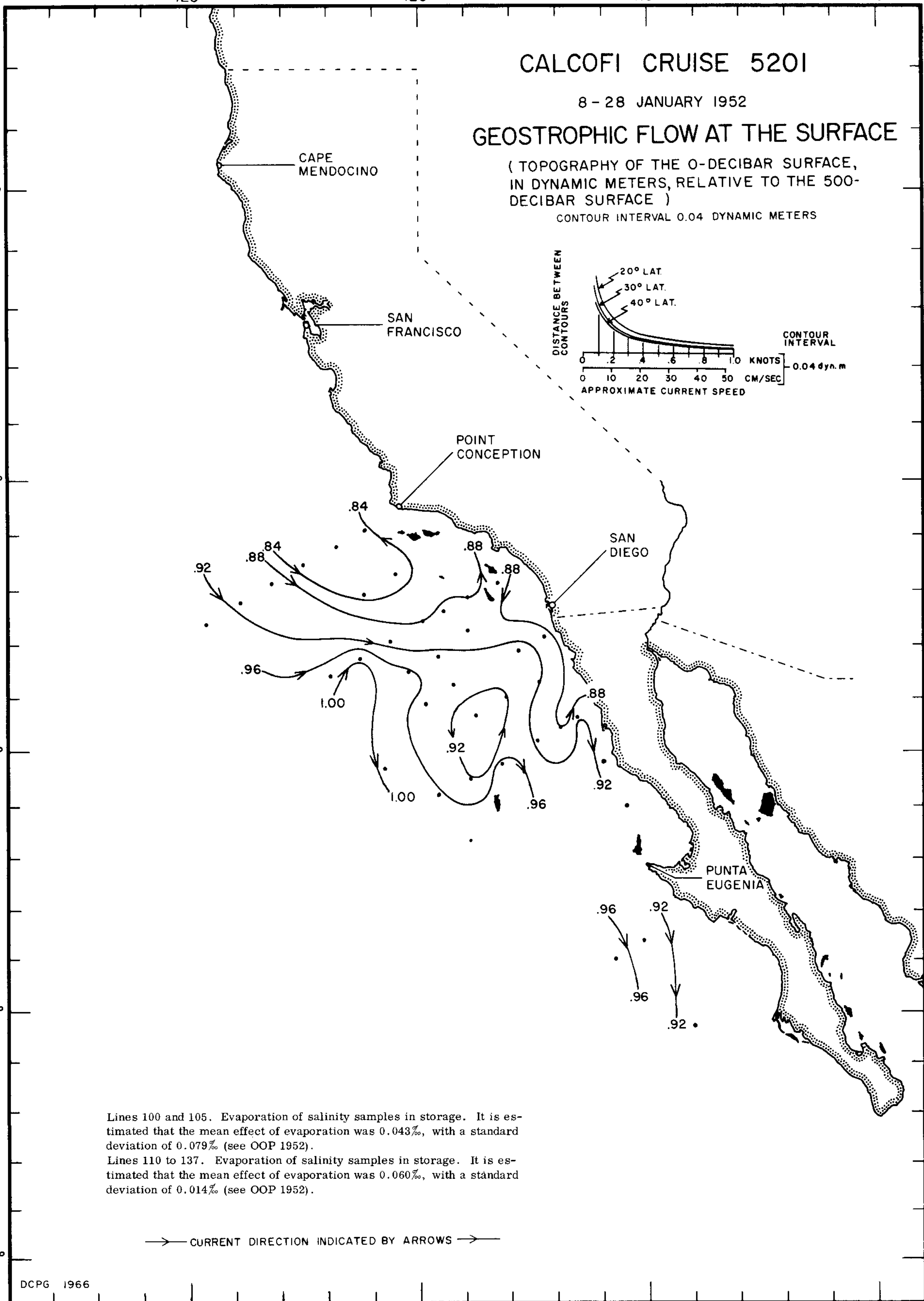
0/500 db

5109


CALCOFI CRUISE 5110
26 SEPTEMBER – 8 OCTOBER 1951
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.80
.84
.88
.92
.96
Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.053‰, with a standard deviation of 0.061‰ (see OOP 1951).
→ CURRENT DIRECTION INDICATED BY ARROWS →
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

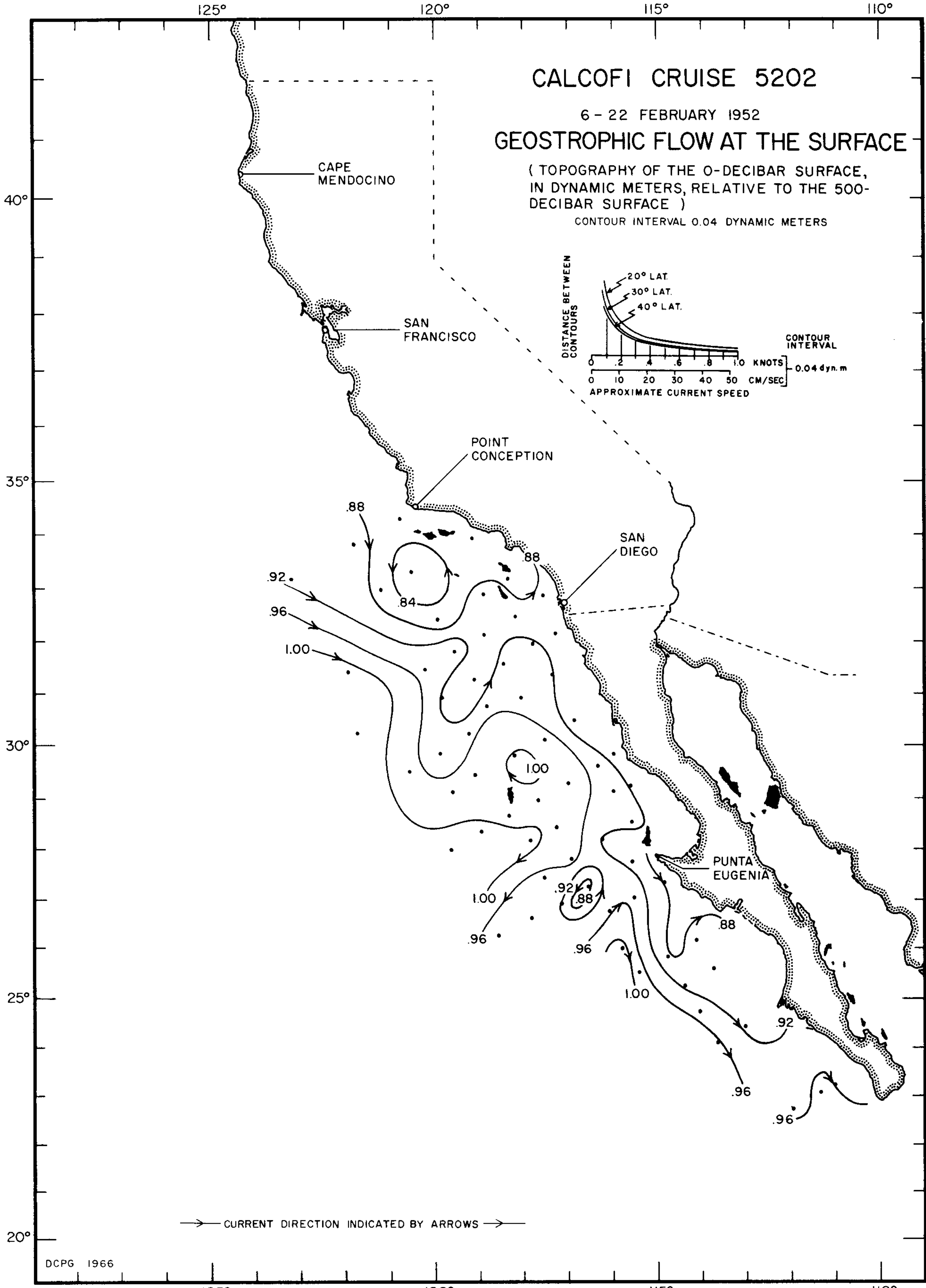
0/500 db

5110



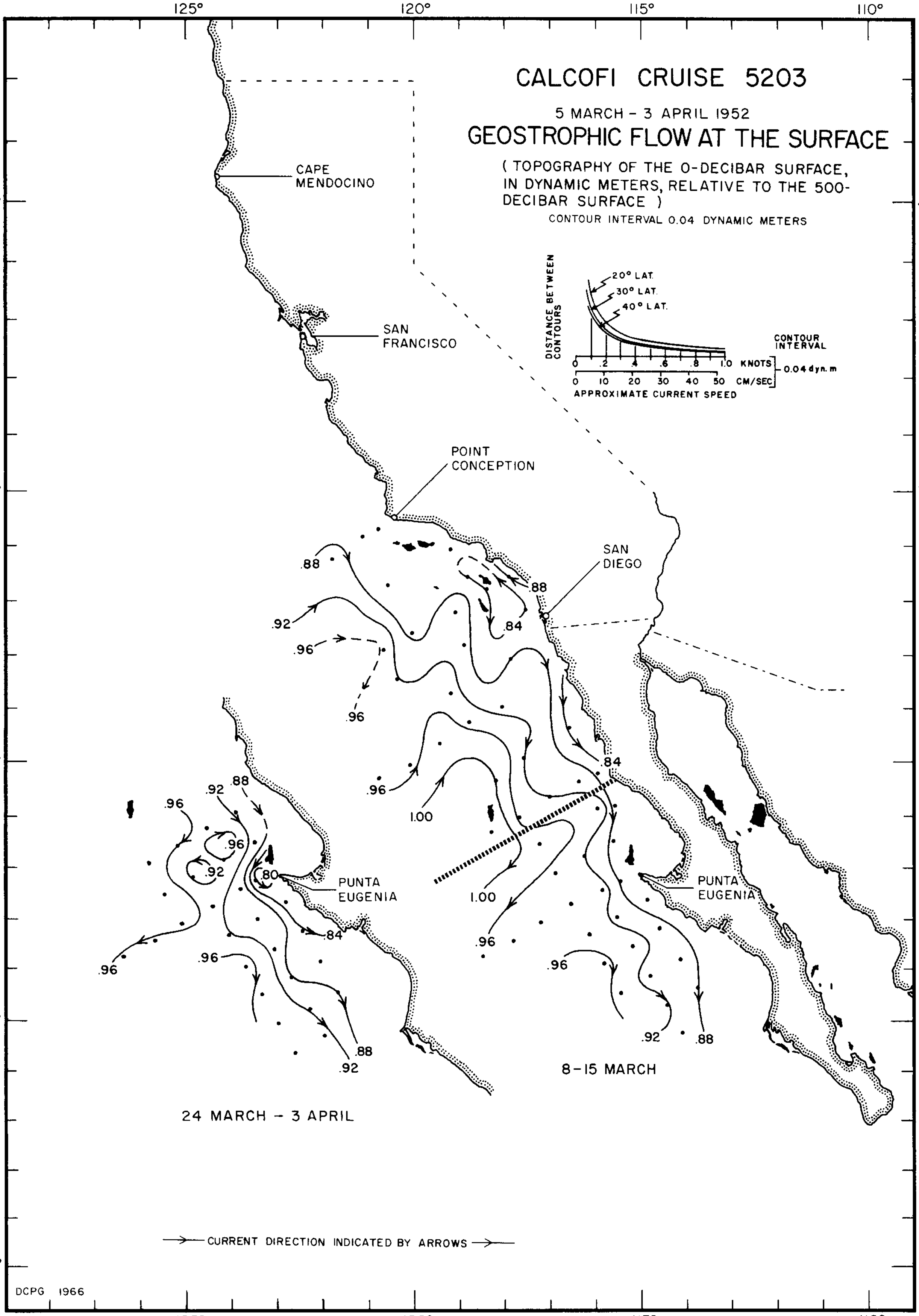
Lines 100 and 105. Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.043‰, with a standard deviation of 0.079‰ (see OOP 1952).
Lines 110 to 137. Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.060‰, with a standard deviation of 0.014‰ (see OOP 1952).

0/500 db
5201


CALCOFI CRUISE 5202
6 - 22 FEBRUARY 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
125° 120° 115° 110°
40° 35° 30° 25° 20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.88
.84
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

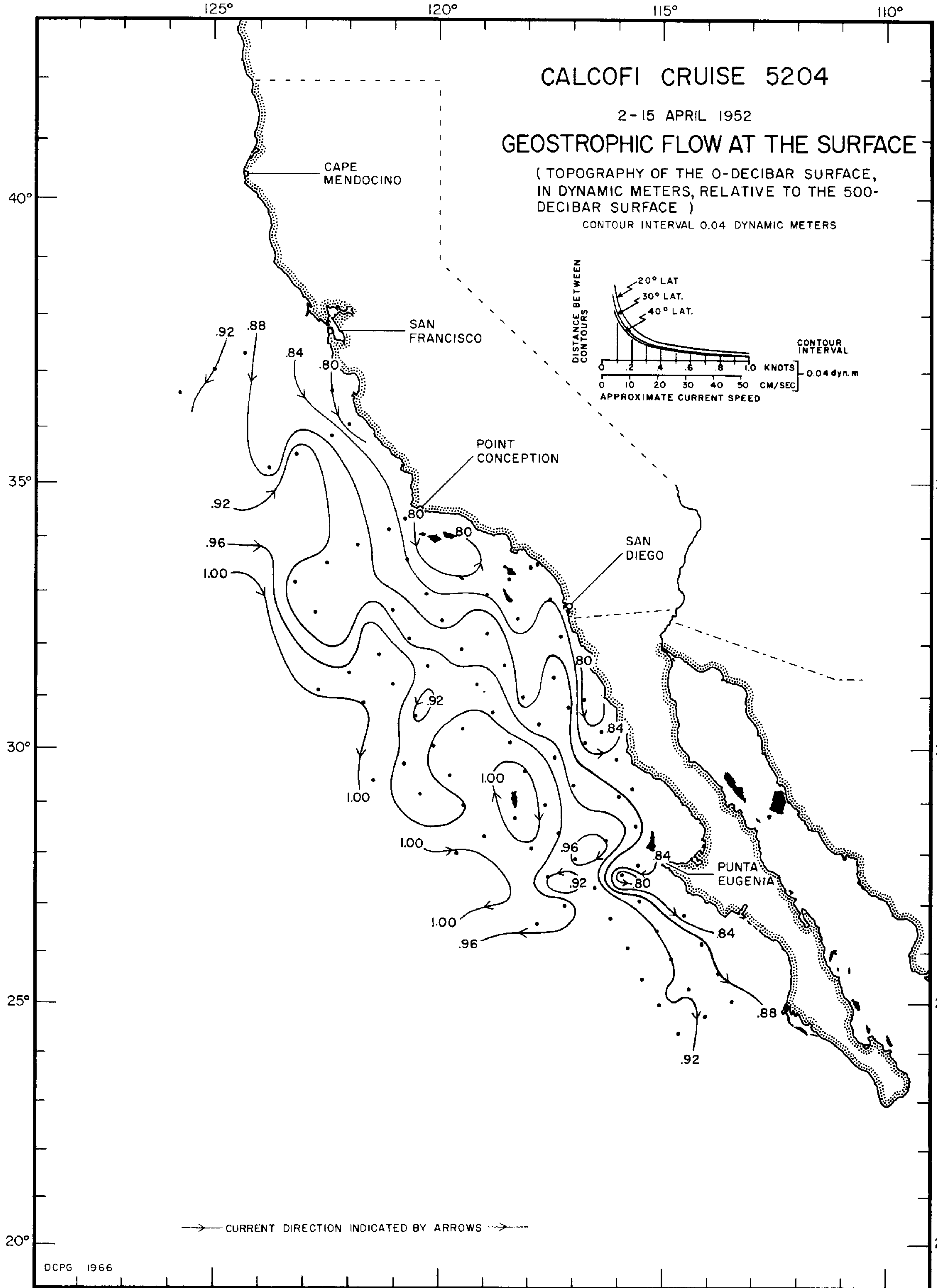
5202



CALCOFI CRUISE 5203
5 MARCH - 3 APRIL 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
PUNTA EUGENIA
24 MARCH - 3 APRIL
8-15 MARCH
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db

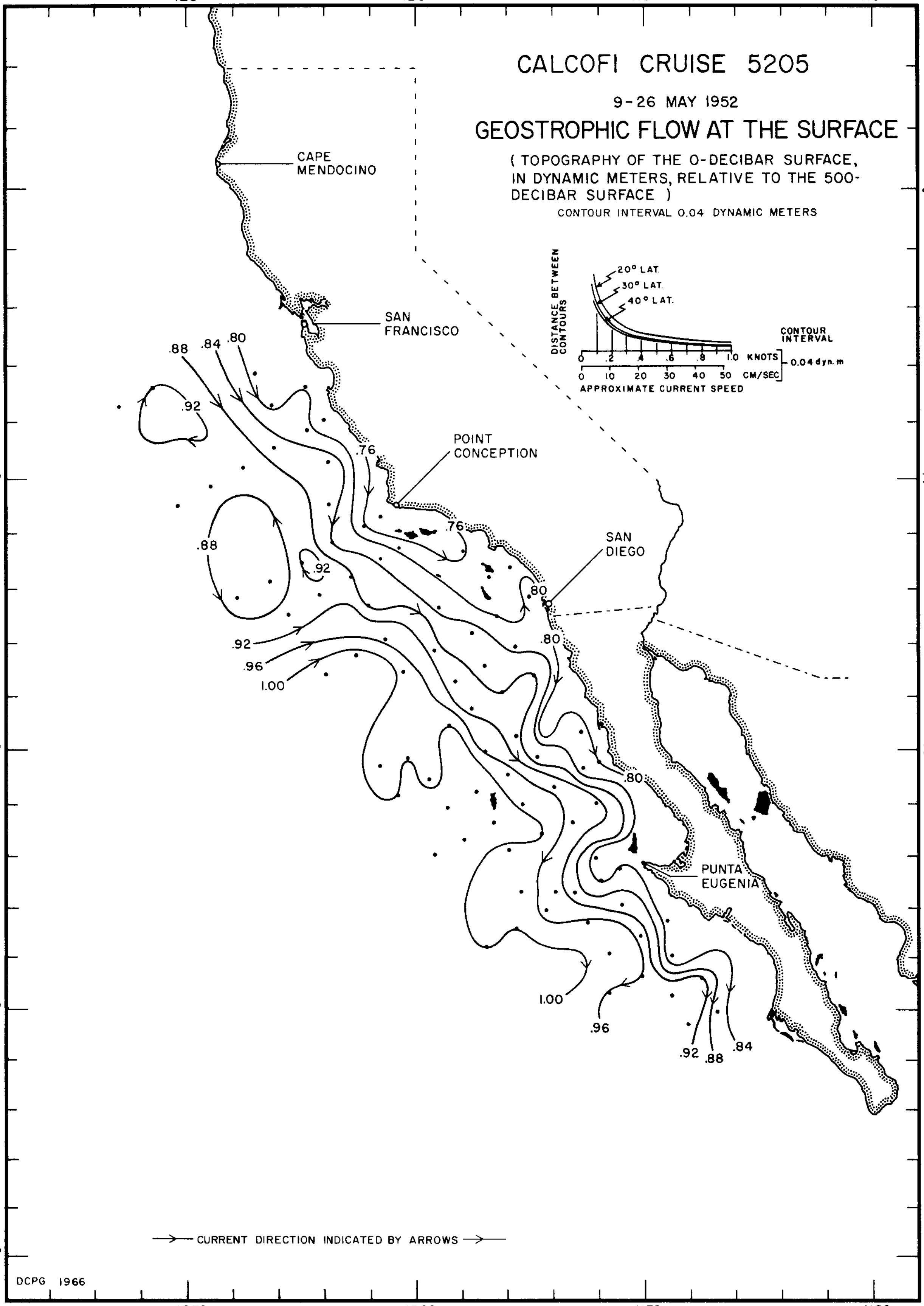
5203



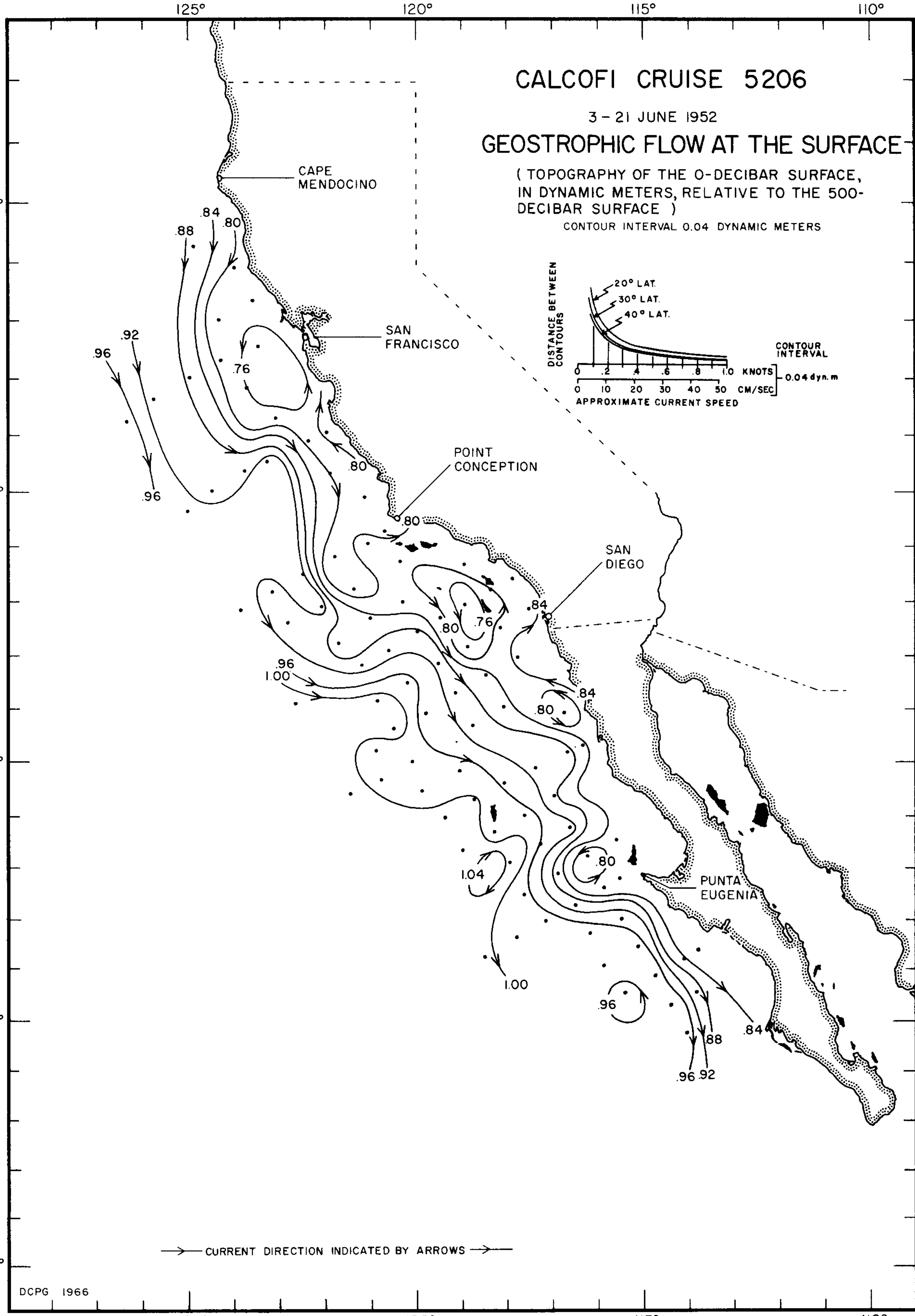
CALCOFI CRUISE 5204
2-15 APRIL 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db

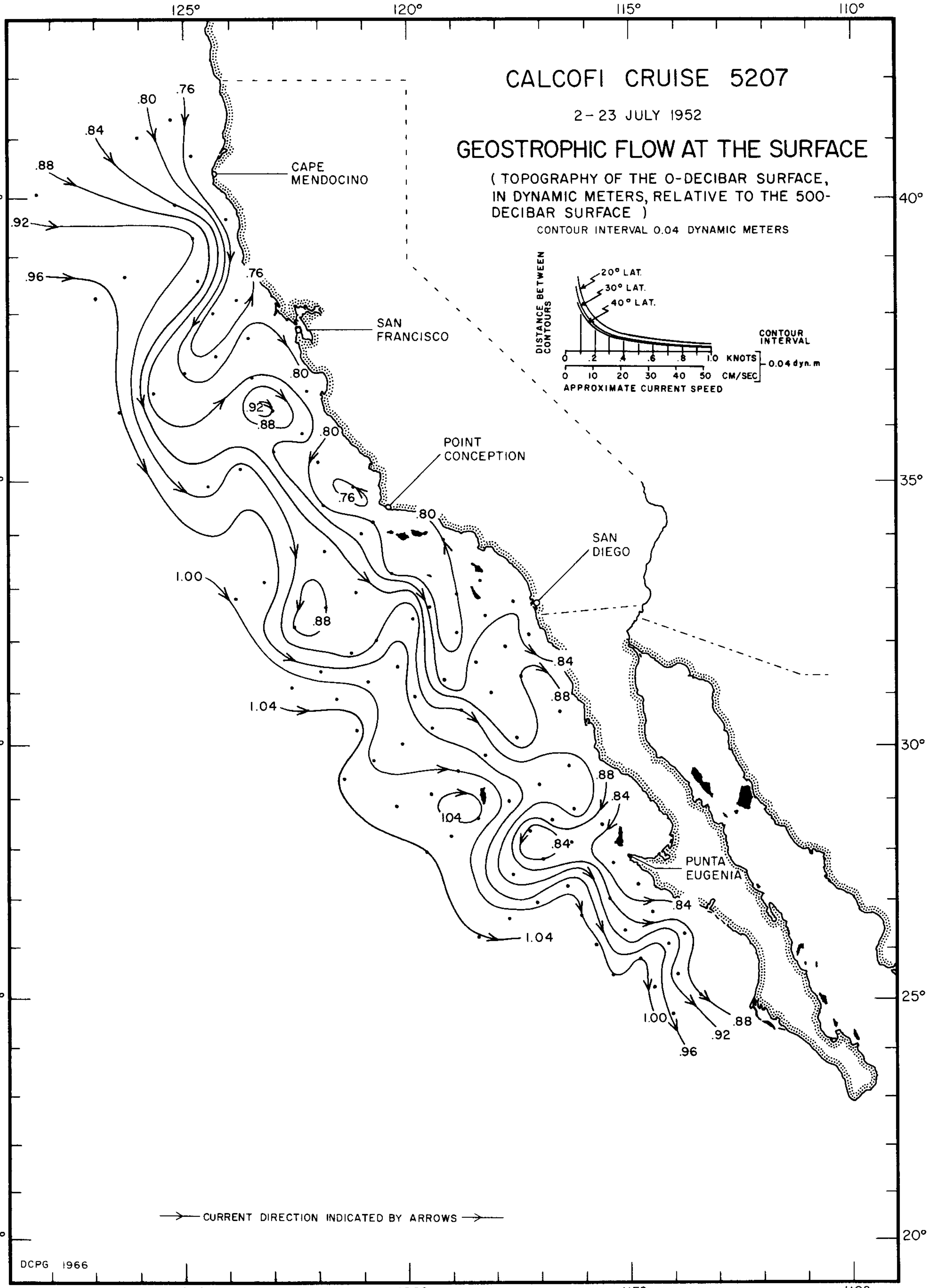
5204


CALCOFI CRUISE 5205
9-26 MAY 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5205

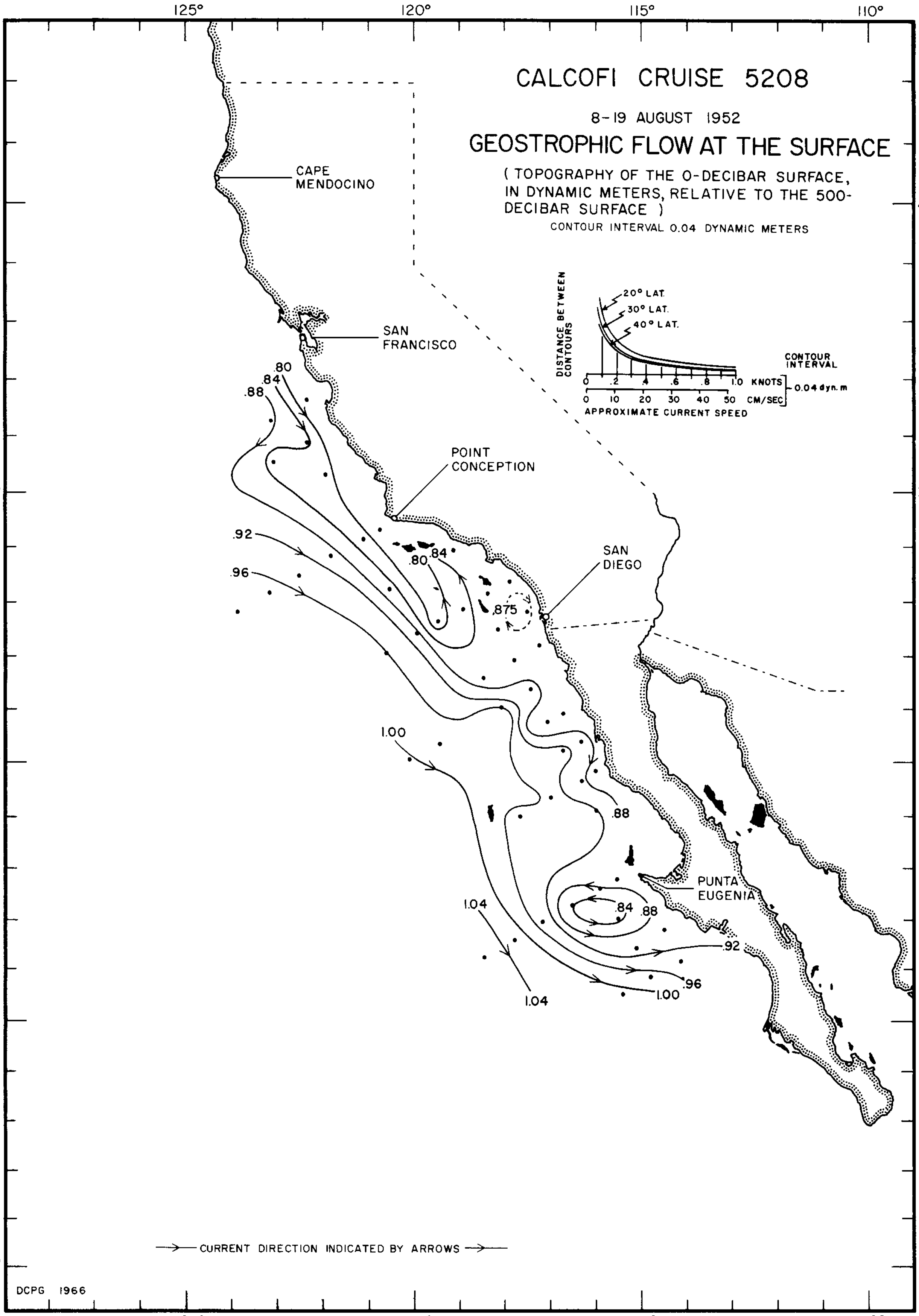

CALCOFI CRUISE 5206
3 - 21 JUNE 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125° 120° 115° 110°
40° 35° 30° 25° 20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5206

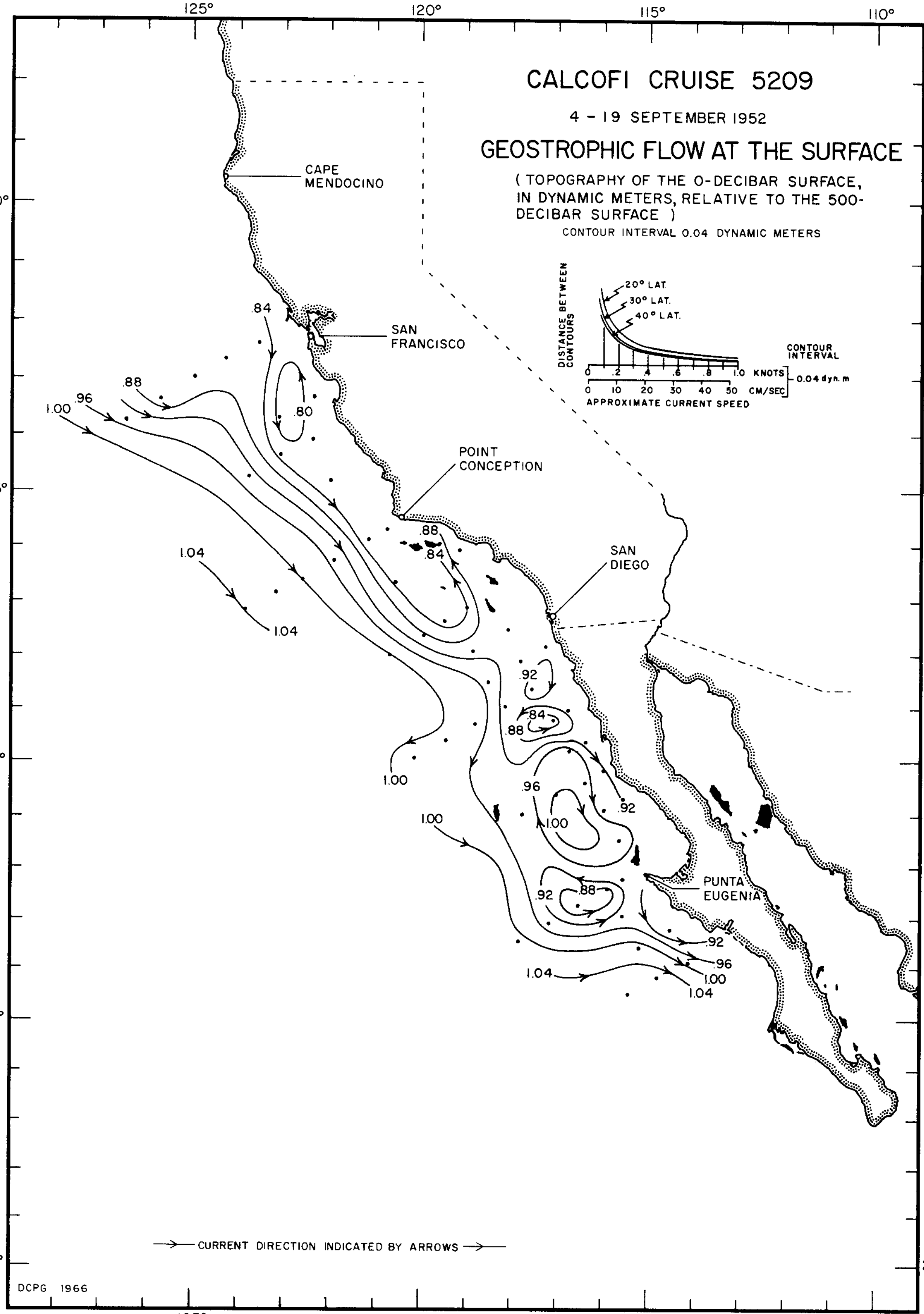

CALCOFI CRUISE 5207
2 - 23 JULY 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db

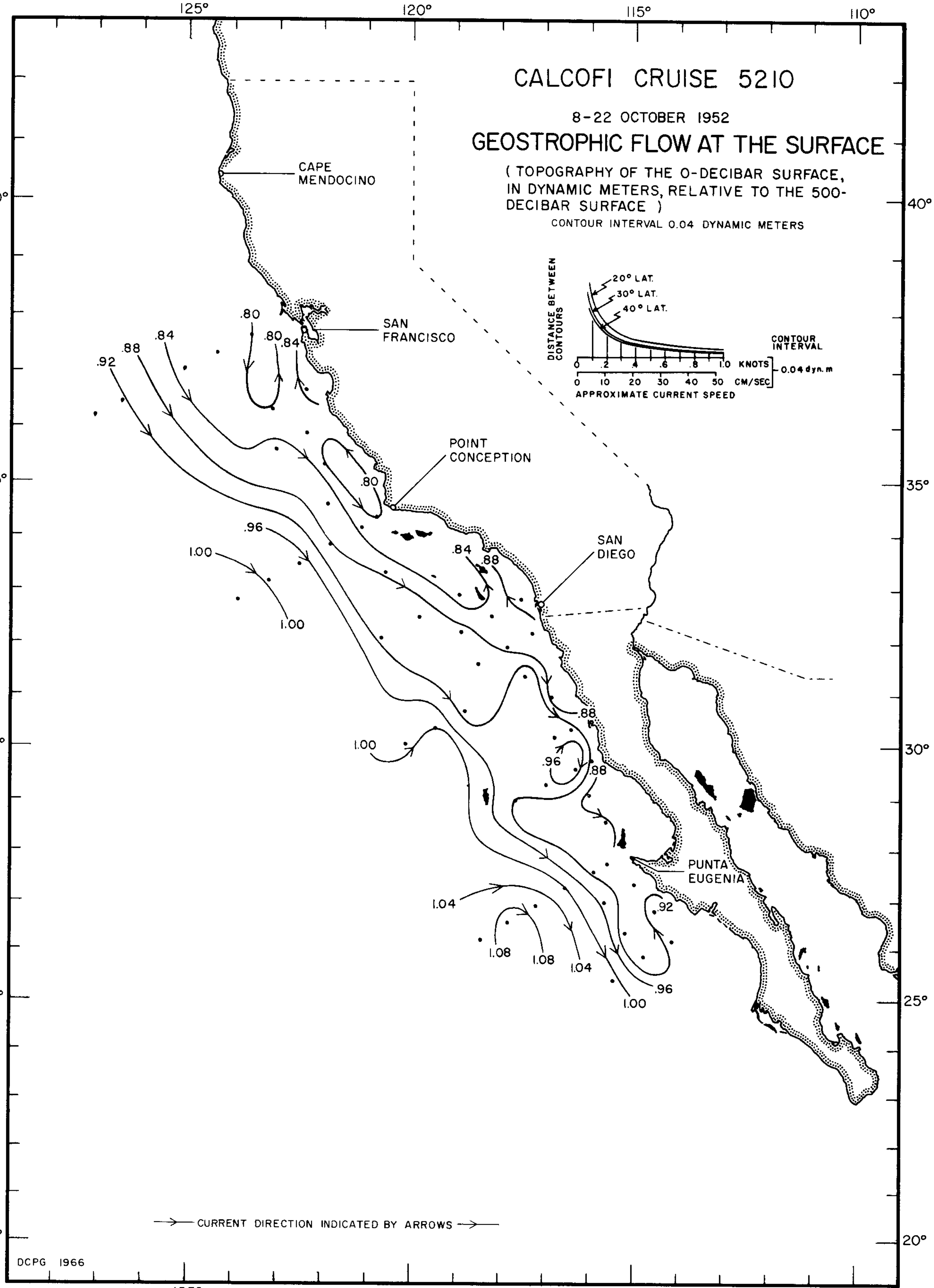
5207


CALCOFI CRUISE 5208
8-19 AUGUST 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.80
.84
.88
.92
.96
.875
1.00
1.04
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

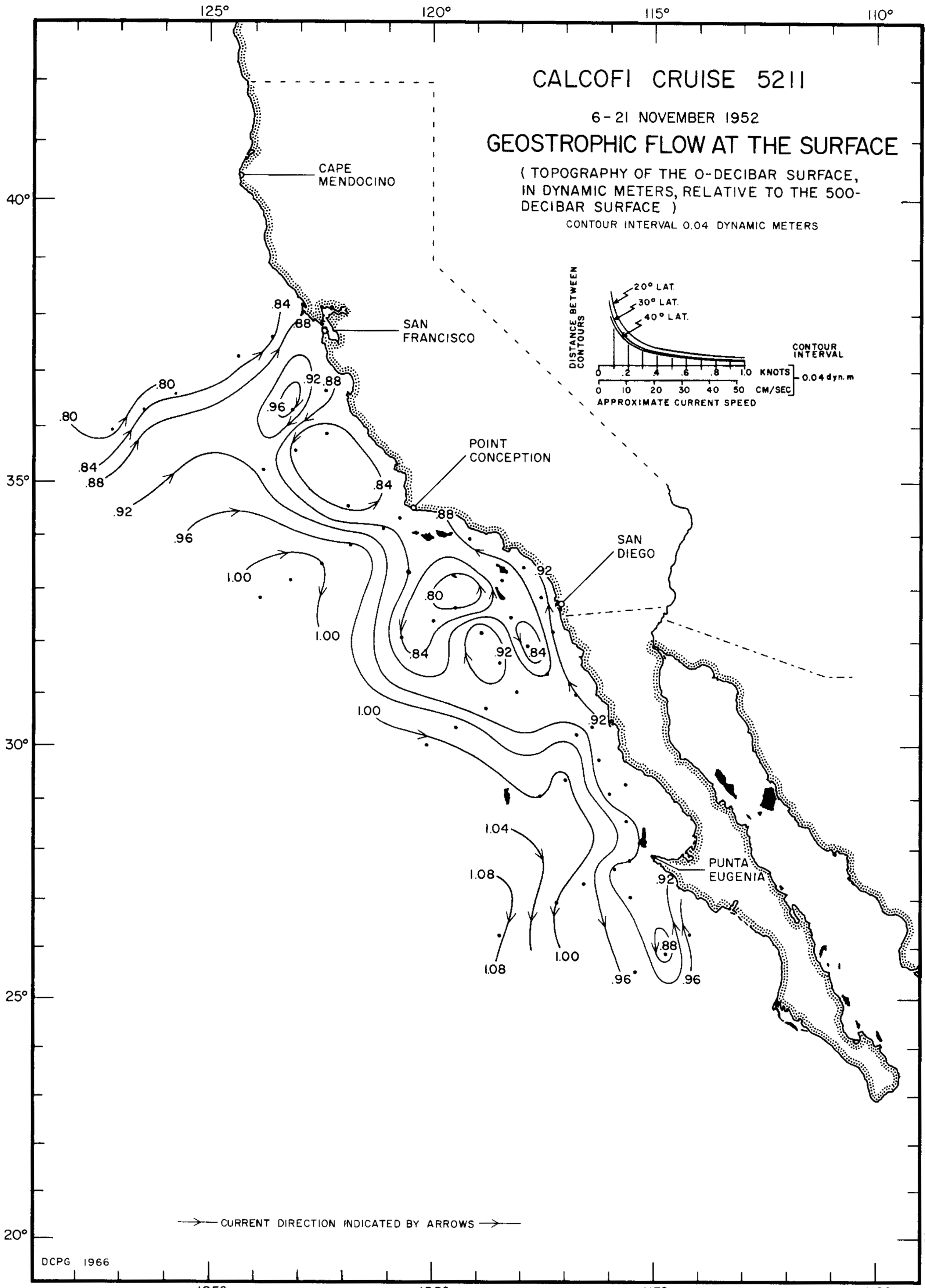
0/500 db
5208


CALCOFI CRUISE 5209
4 - 19 SEPTEMBER 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125° 120° 115° 110°
40° 35° 30° 25° 20°
.84 .88 .96 1.00 .80 .88 .84 1.04 1.04 .92 .84 .88 1.00 .96 .92 1.00 1.00 .92 .88 .92 .96 1.00 1.04 1.04
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

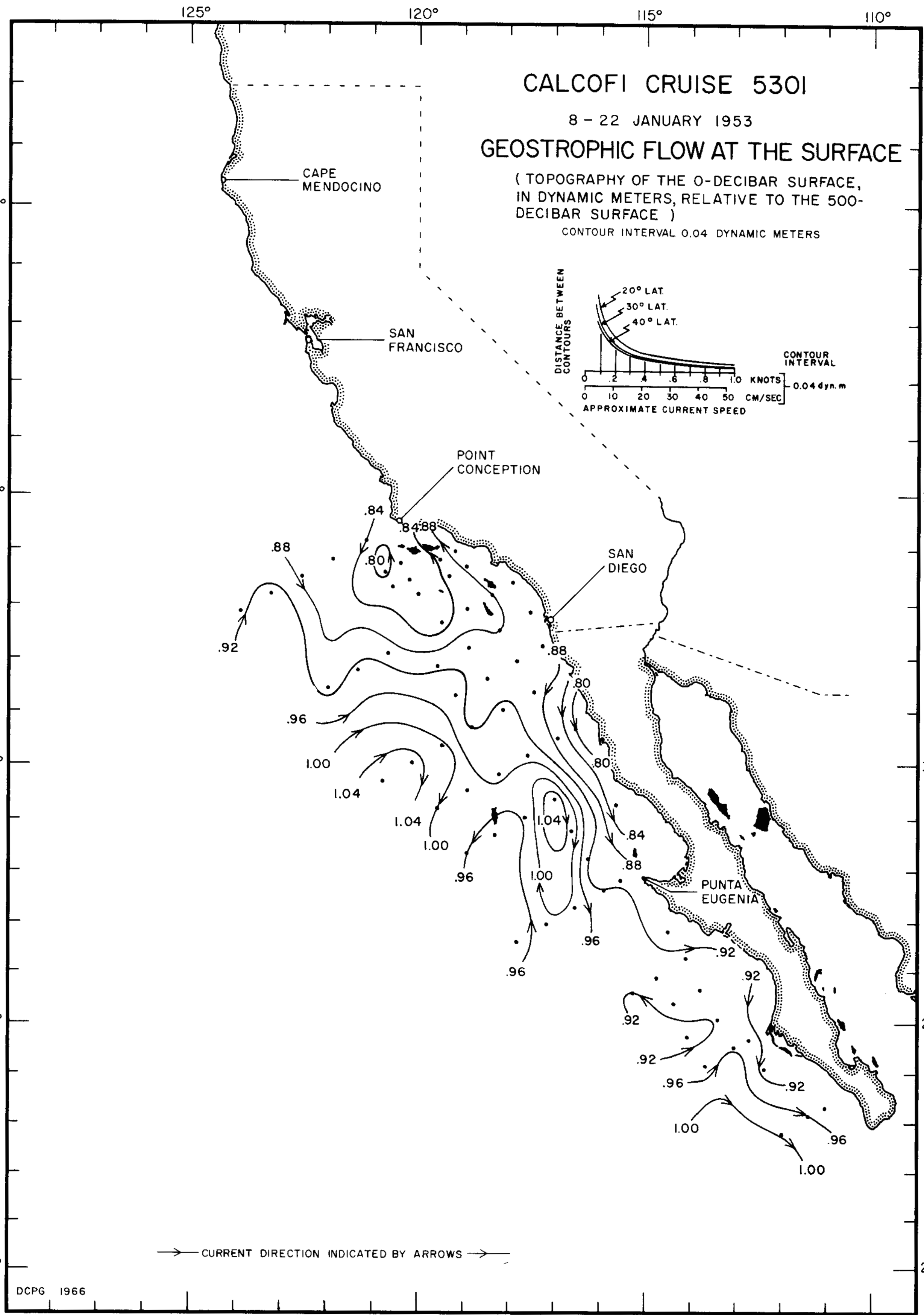
0/500 db
5209


CALCOFI CRUISE 5210
8-22 OCTOBER 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.80
.84
.88
.92
.96
1.00
1.04
1.08
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5210

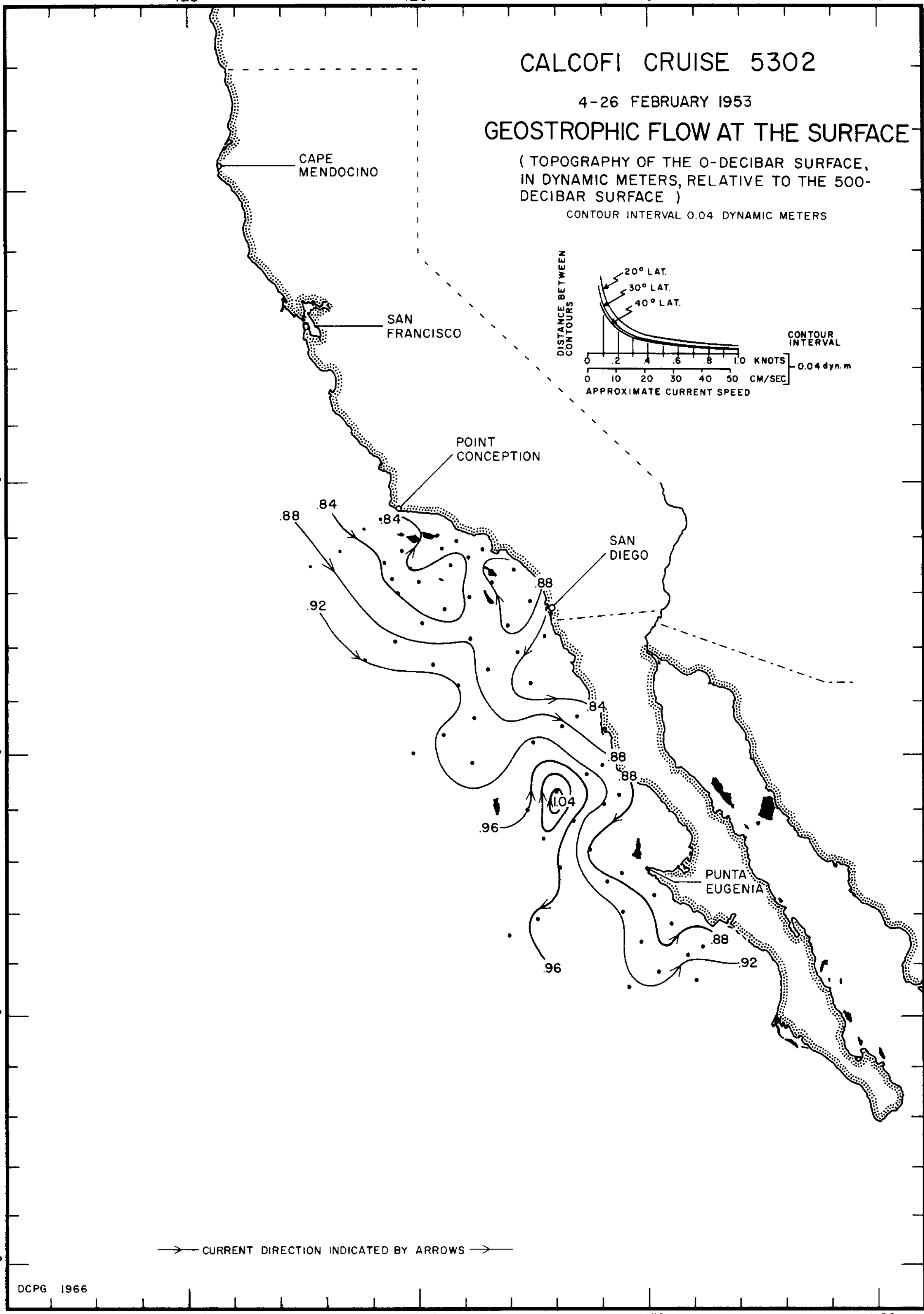

CALCOFI CRUISE 5211
6-21 NOVEMBER 1952
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.80
.84
.88
.92
.96
1.00
1.04
1.08
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

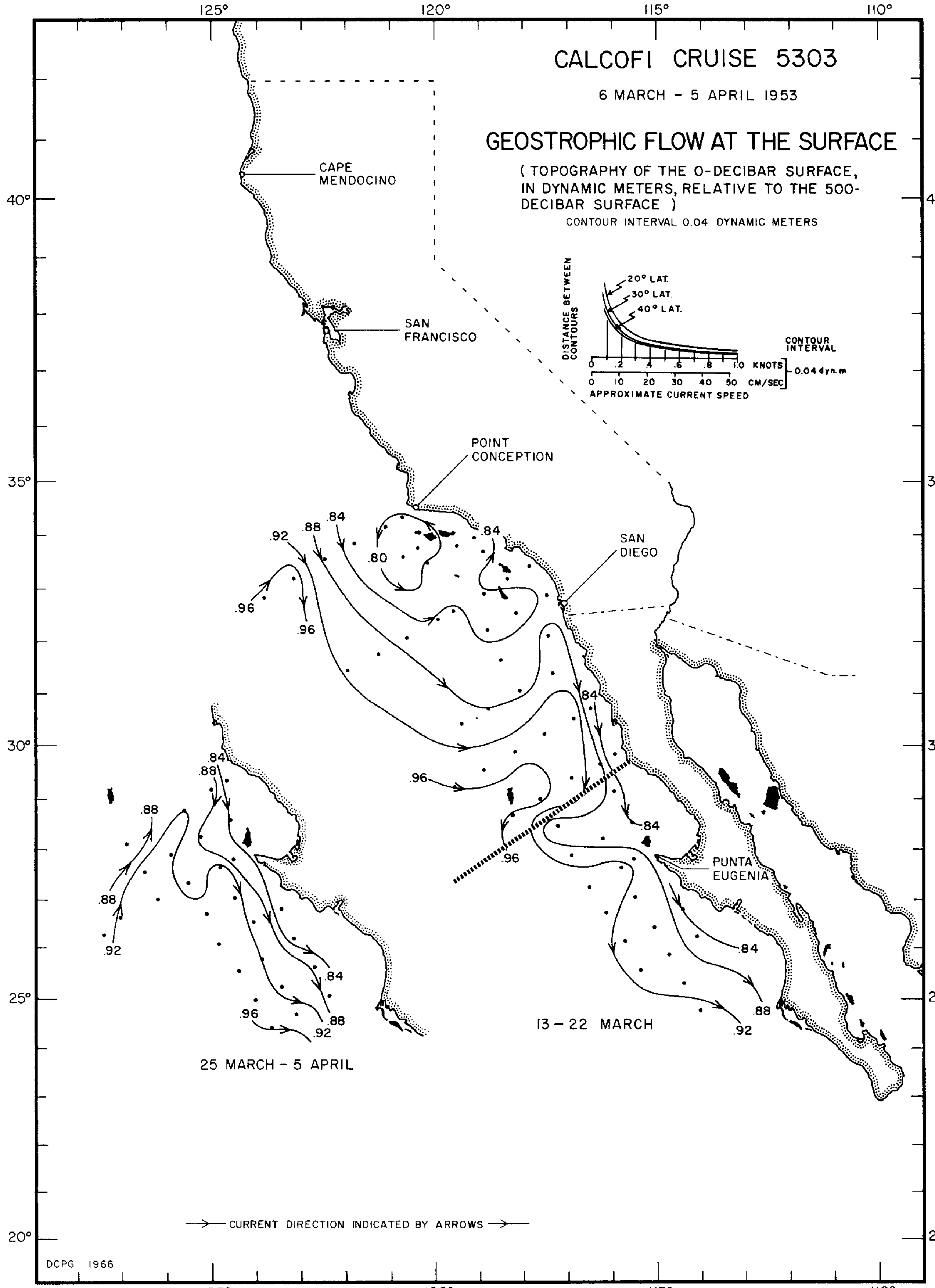
0/500 db
5211


CALCOFI CRUISE 5301
8 – 22 JANUARY 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

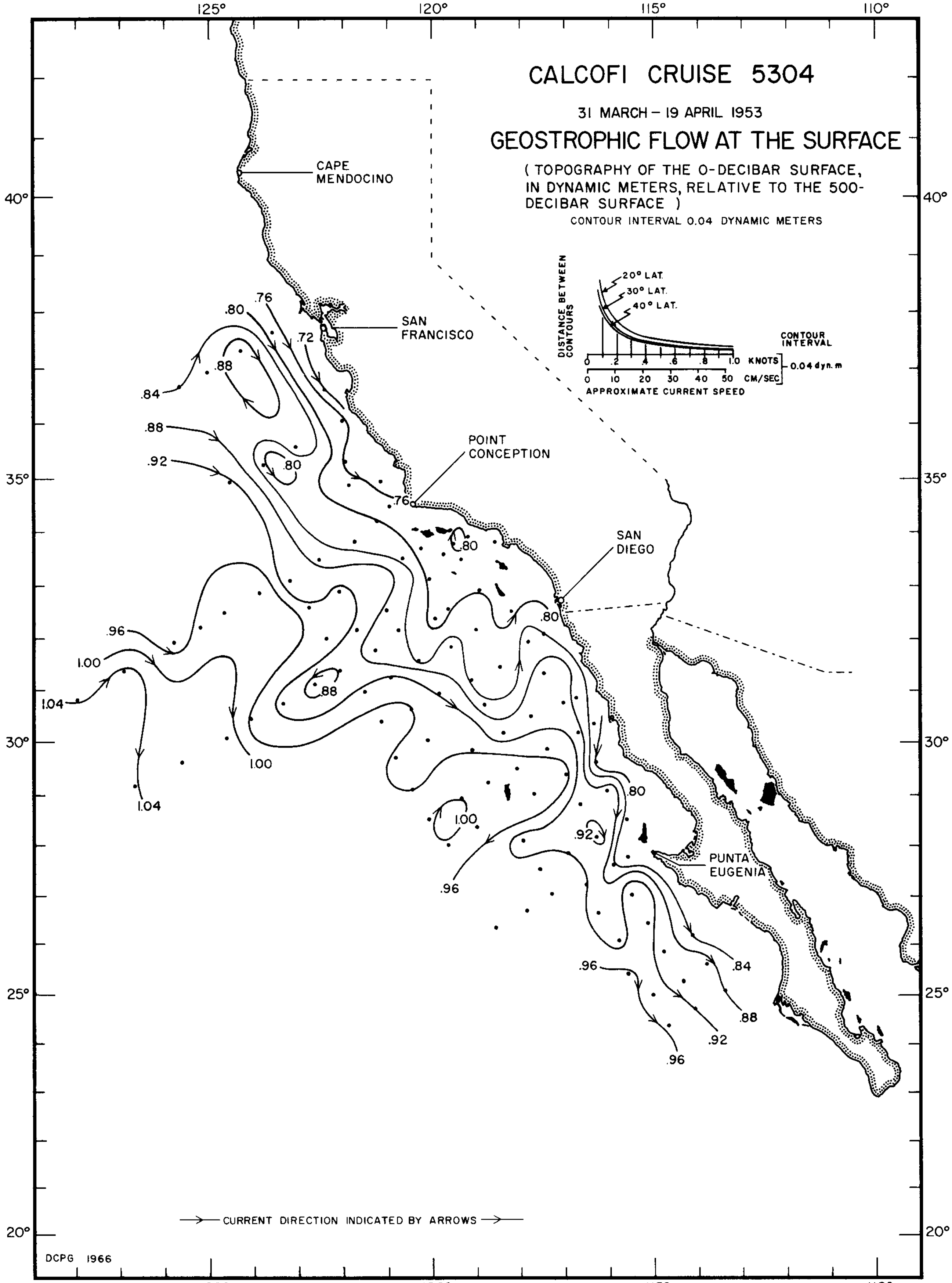
0/500 db

5301

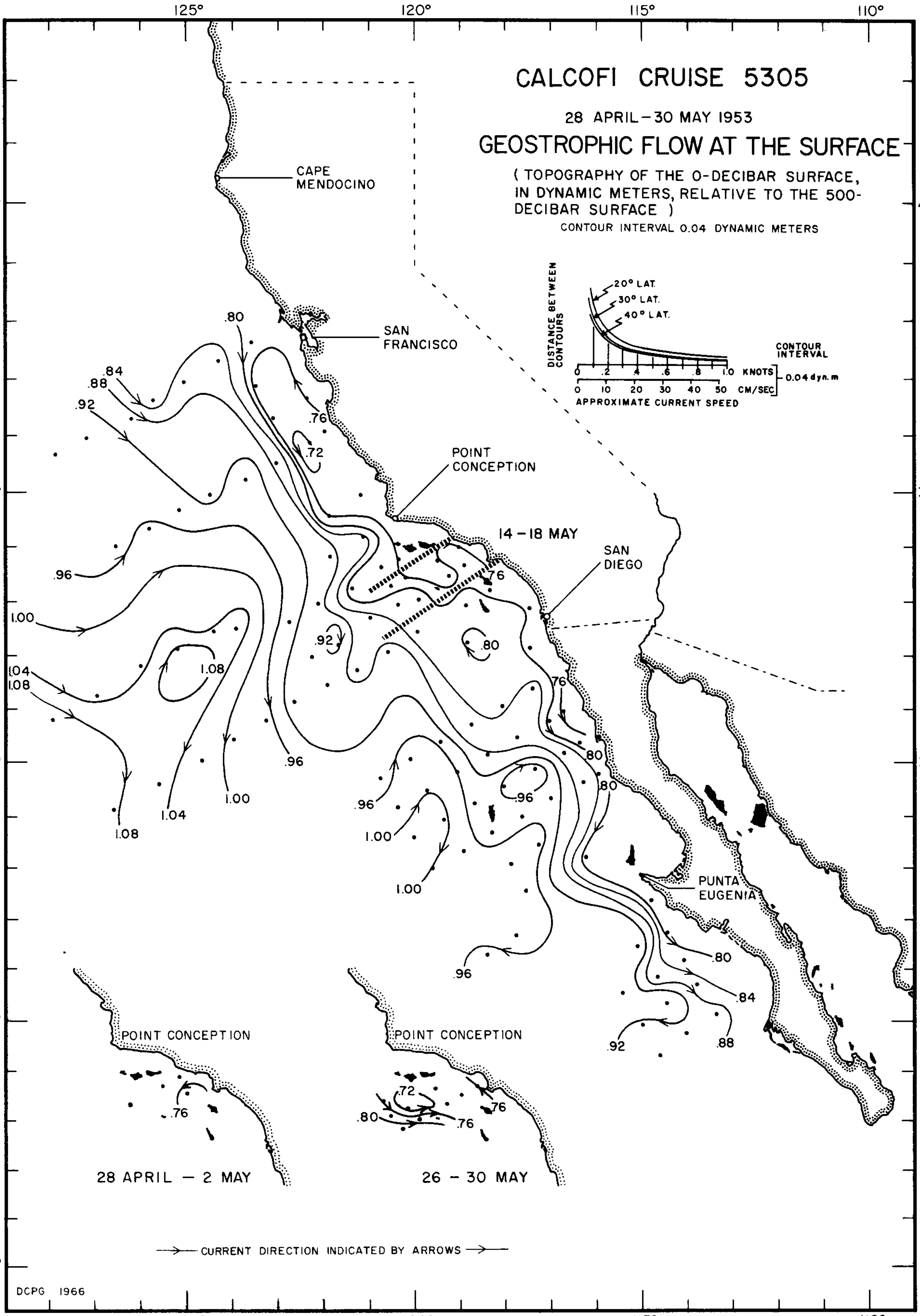

CALCOFI CRUISE 5302
4-26 FEBRUARY 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.88
.84
.84
.92
.88
.84
.88
.88
1.04
.96
.88
.92
.96
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

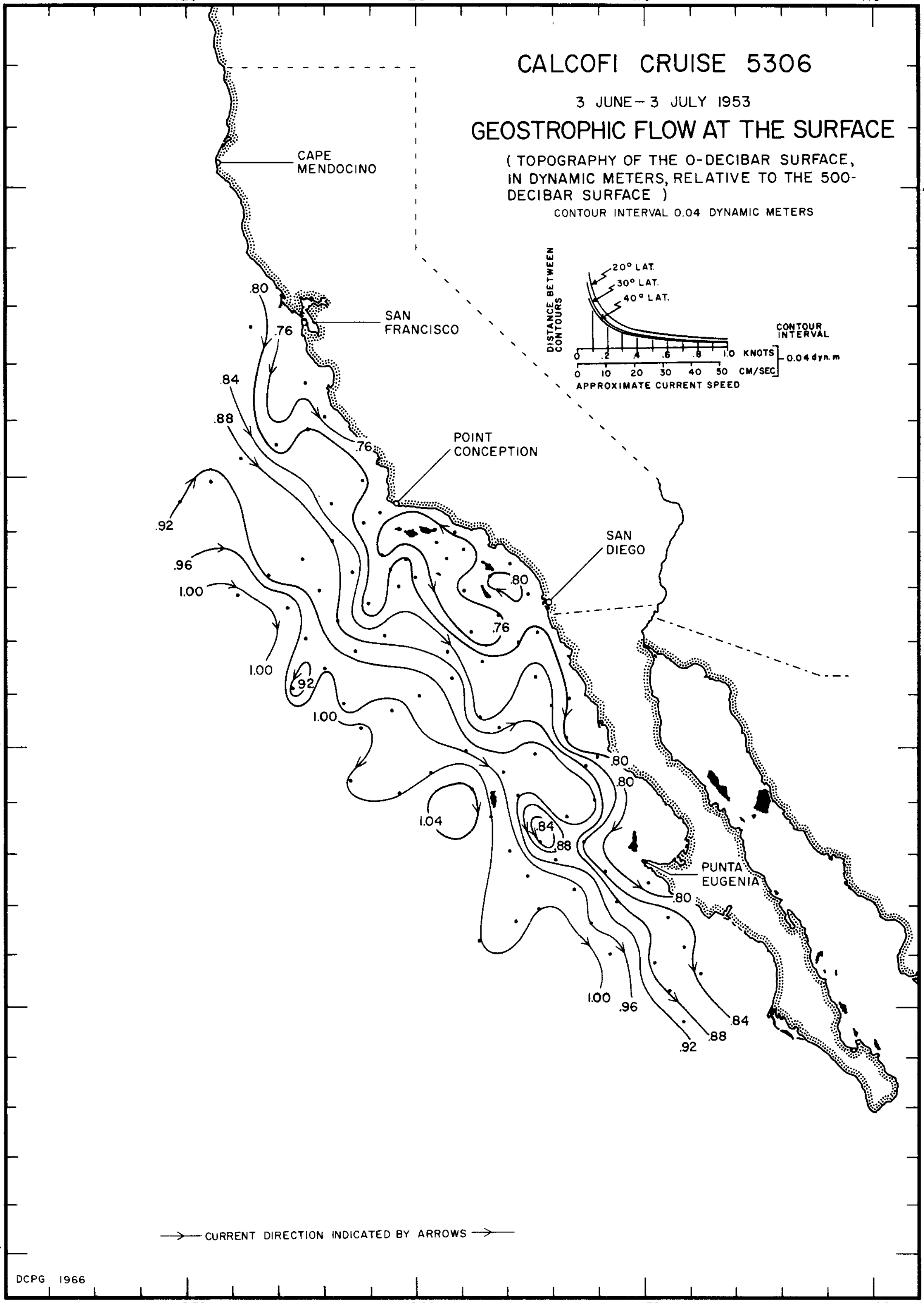

CALCOFI CRUISE 5303
6 MARCH - 5 APRIL 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
13 - 22 MARCH
25 MARCH - 5 APRIL
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5303


CALCOFI CRUISE 5304
31 MARCH – 19 APRIL 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125° 120° 115° 110°
40° 35° 30° 25° 20°
.76 .80 .72 .88 .84 .92 1.00 1.04 .96
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

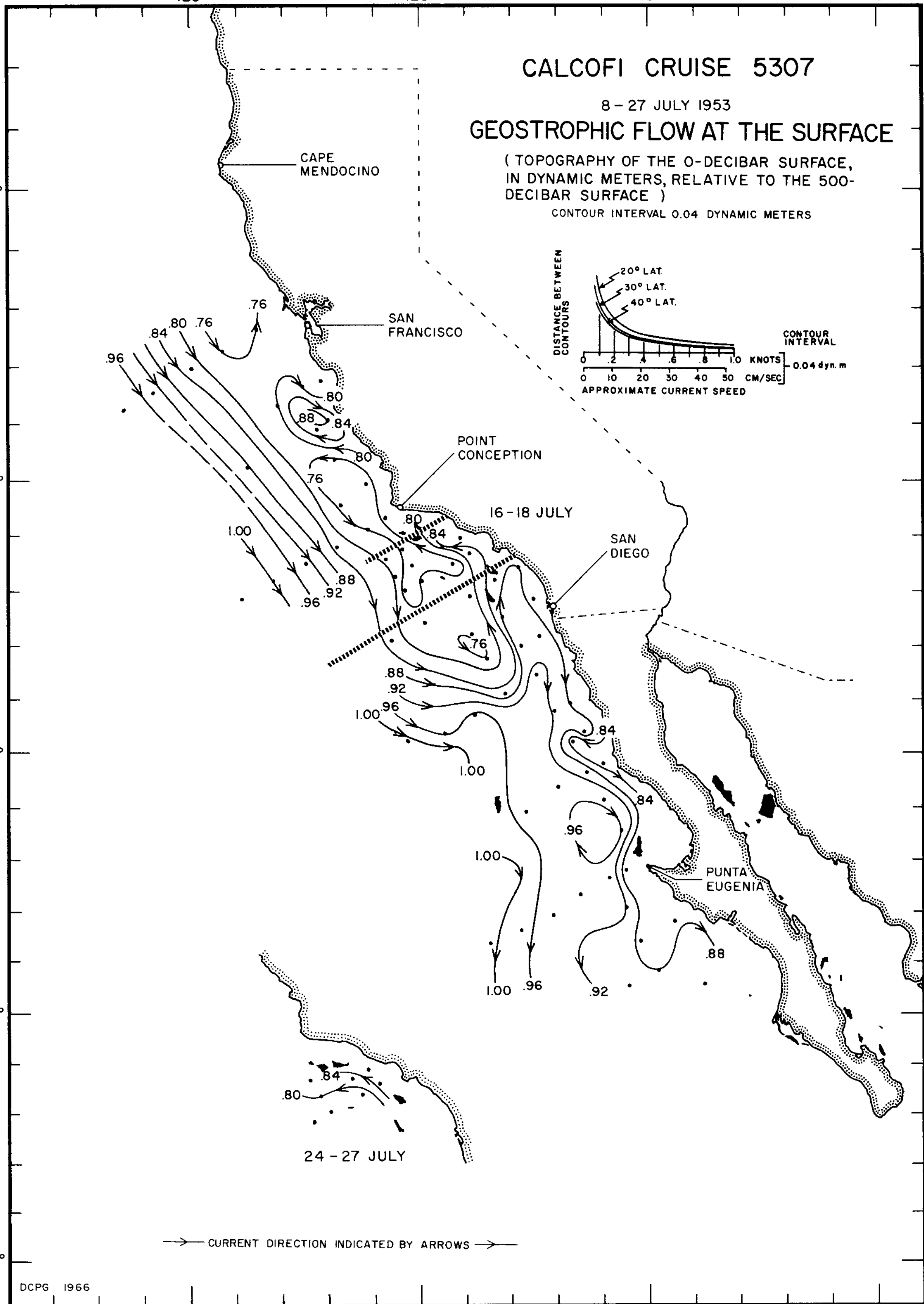
0/500 db
5304


CALCOFI CRUISE 5305
28 APRIL–30 MAY 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
14 – 18 MAY
28 APRIL – 2 MAY
26 – 30 MAY
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966


CALCOFI CRUISE 5306
3 JUNE – 3 JULY 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

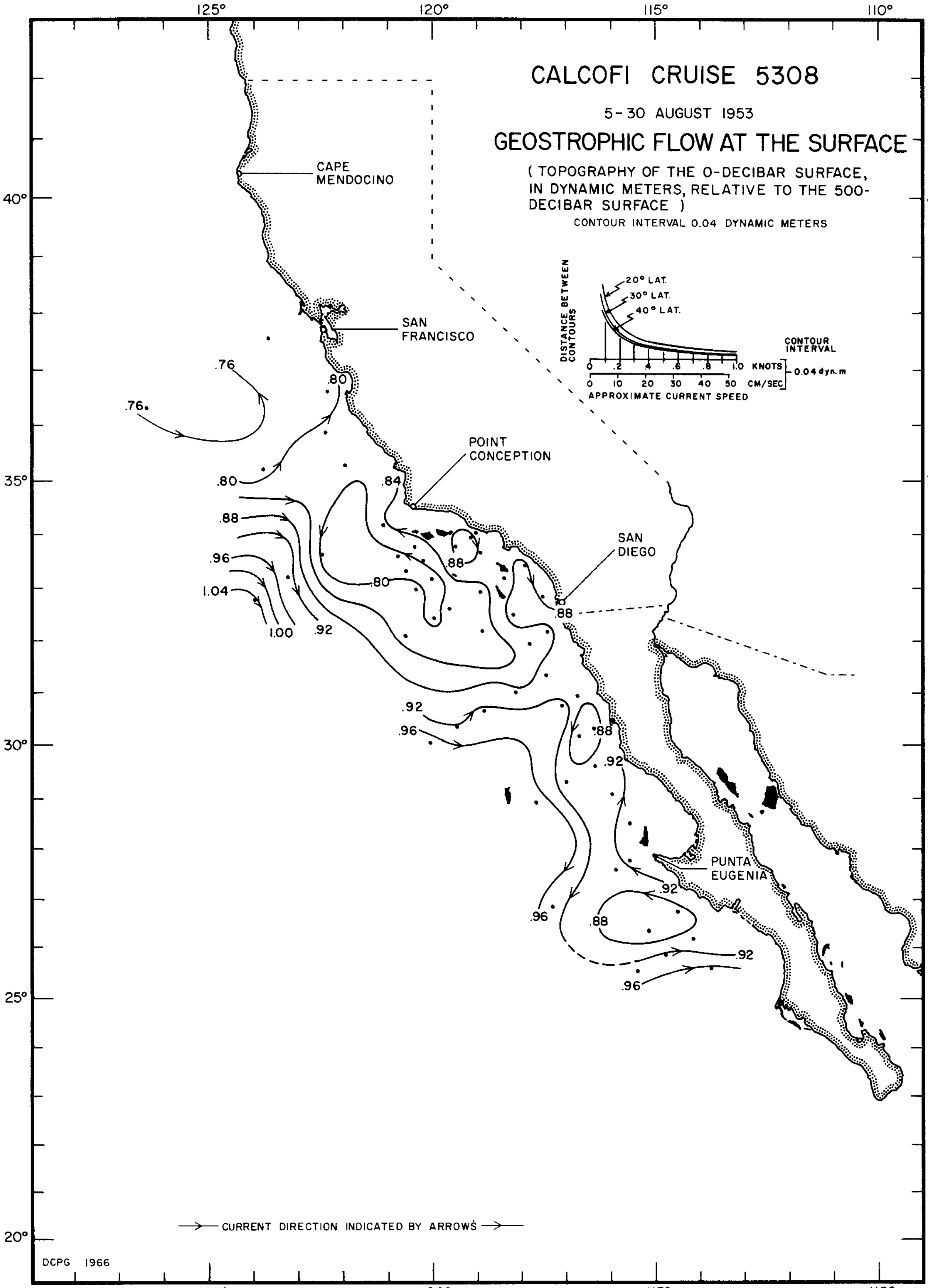
0/500 db

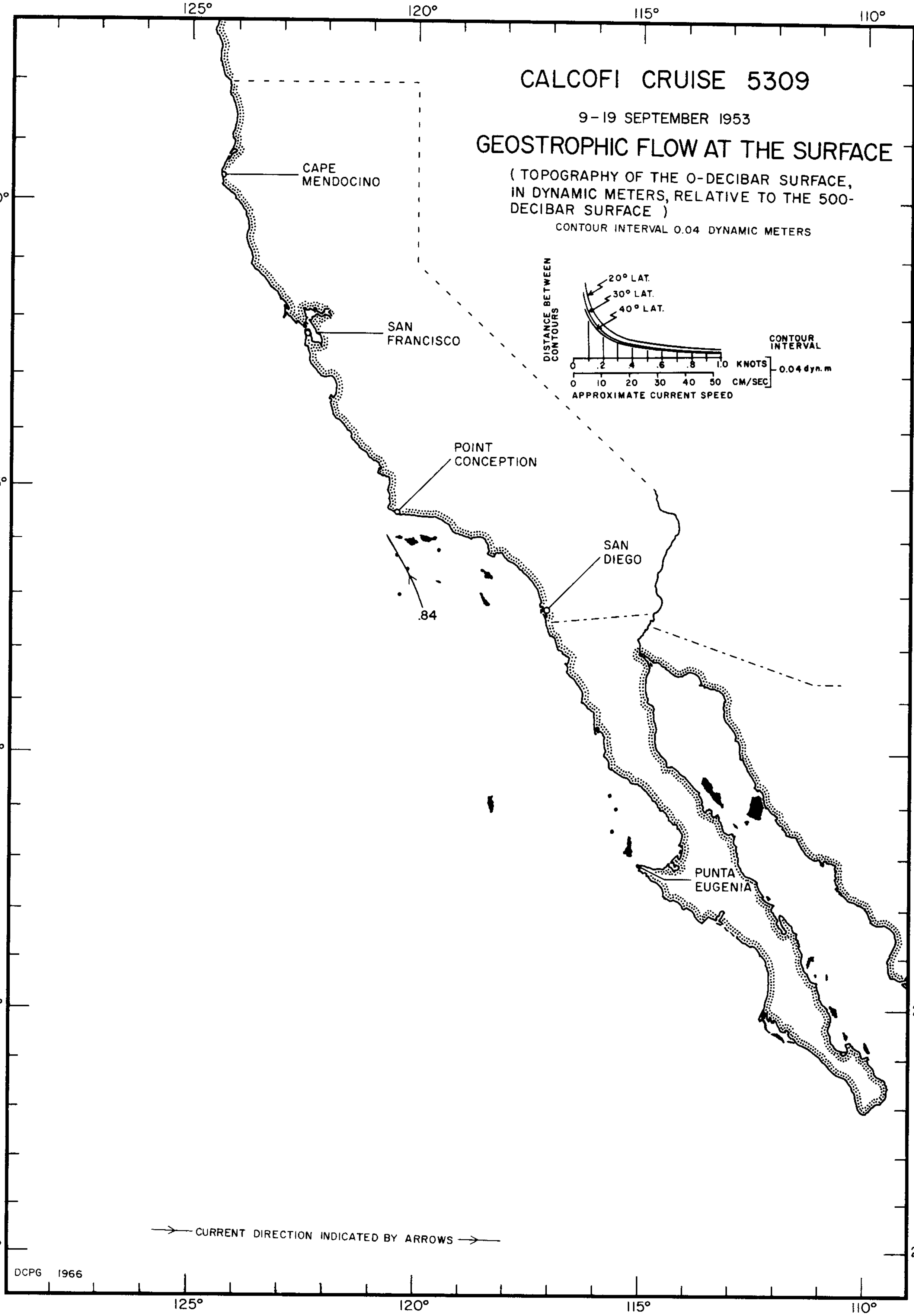
5306


CALCOFI CRUISE 5307
8 – 27 JULY 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
16 - 18 JULY
24 - 27 JULY
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

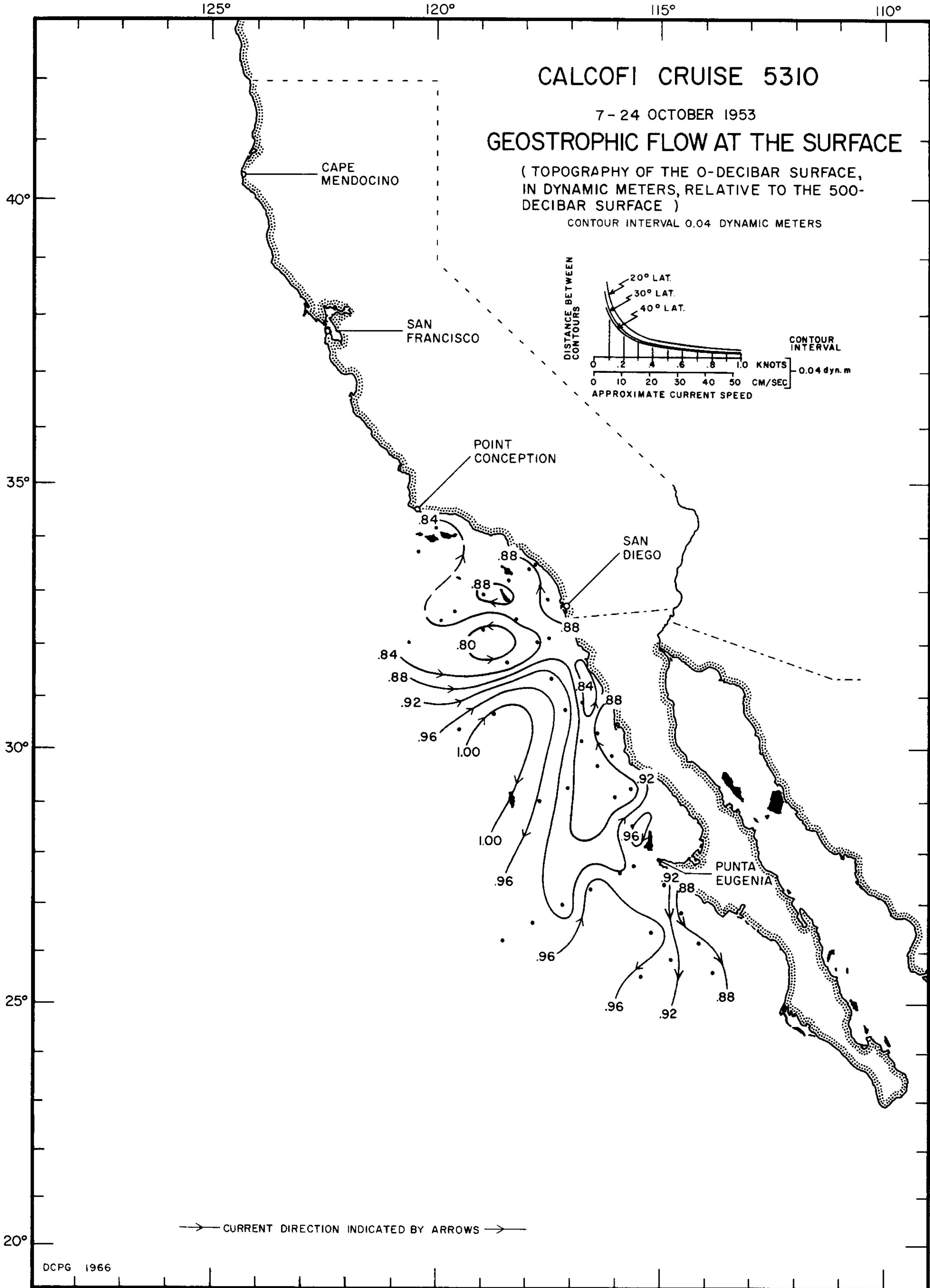
0/500 db

5307

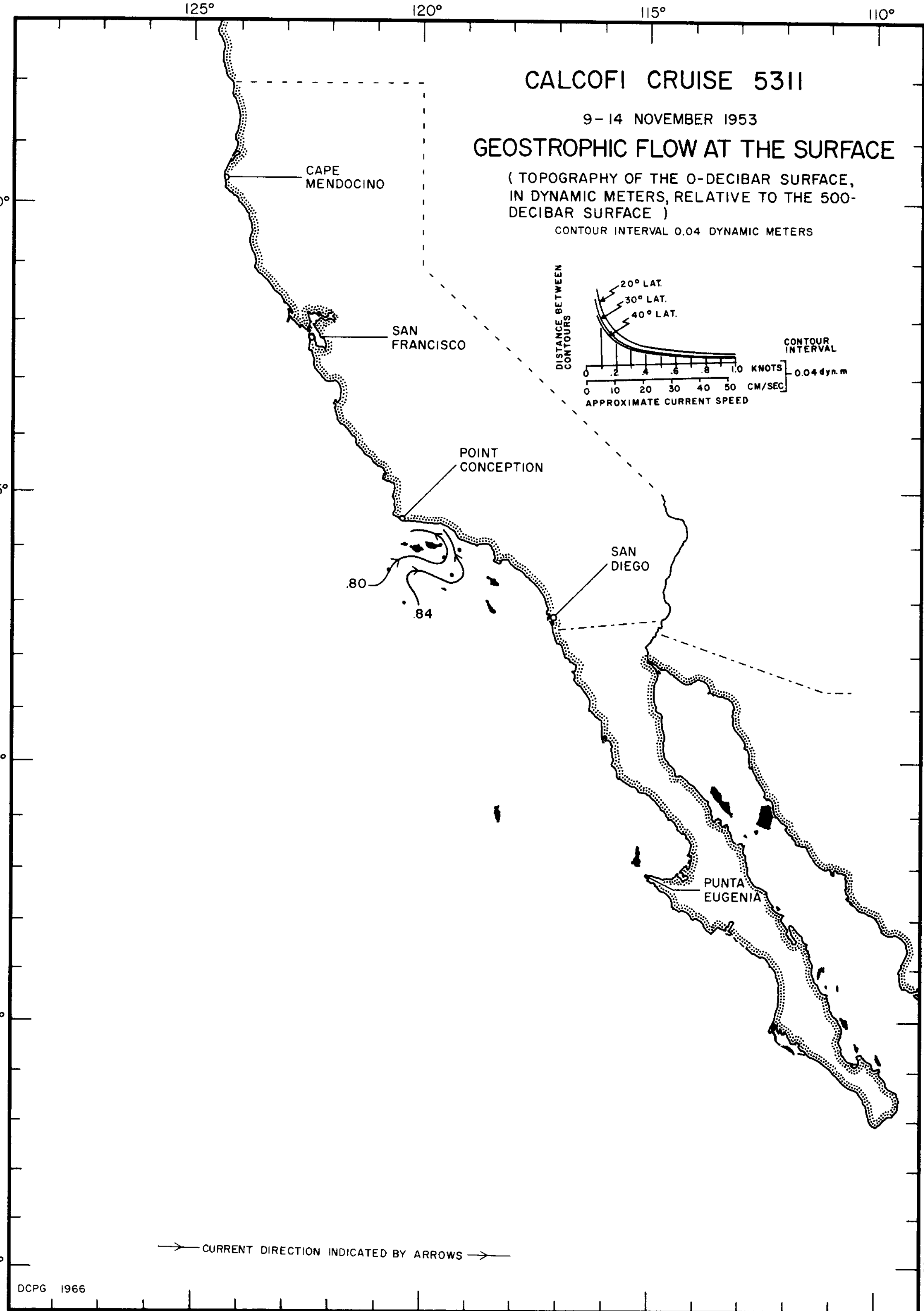

CALCOFI CRUISE 5308
5-30 AUGUST 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

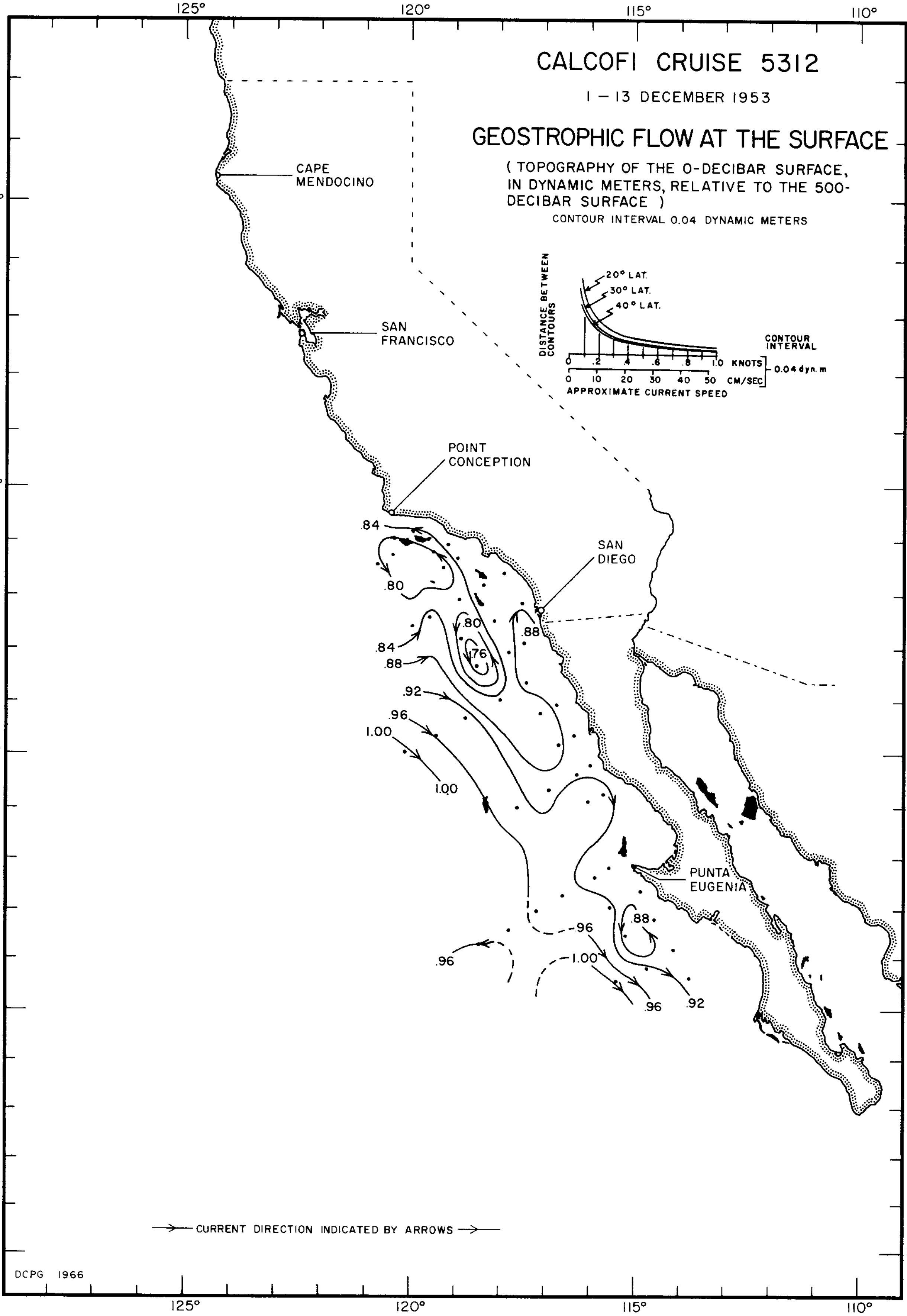

CALCOFI CRUISE 5309
9-19 SEPTEMBER 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5309

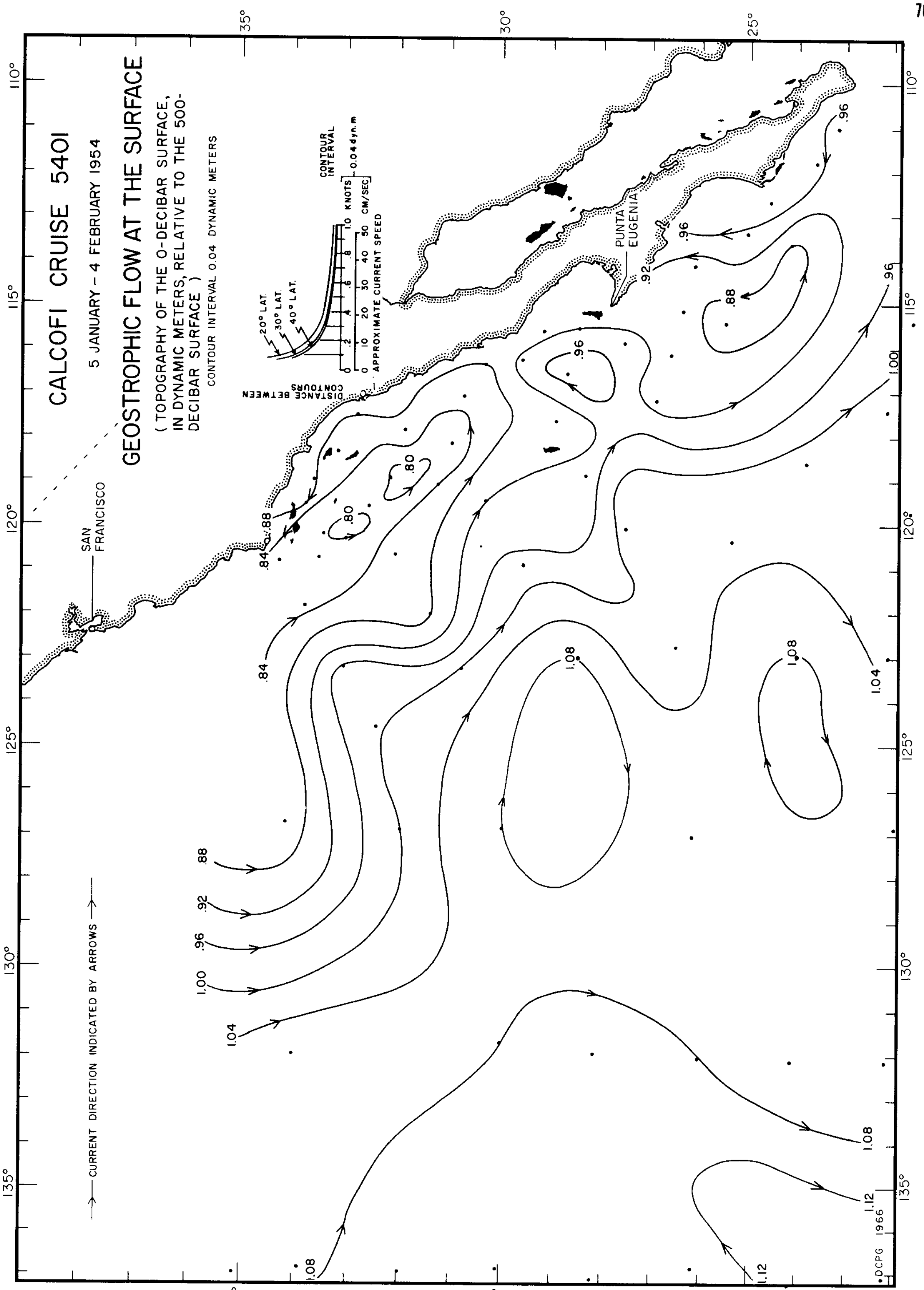

CALCOFI CRUISE 5310
7-24 OCTOBER 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5310


CALCOFI CRUISE 5311
9-14 NOVEMBER 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.80
.84
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

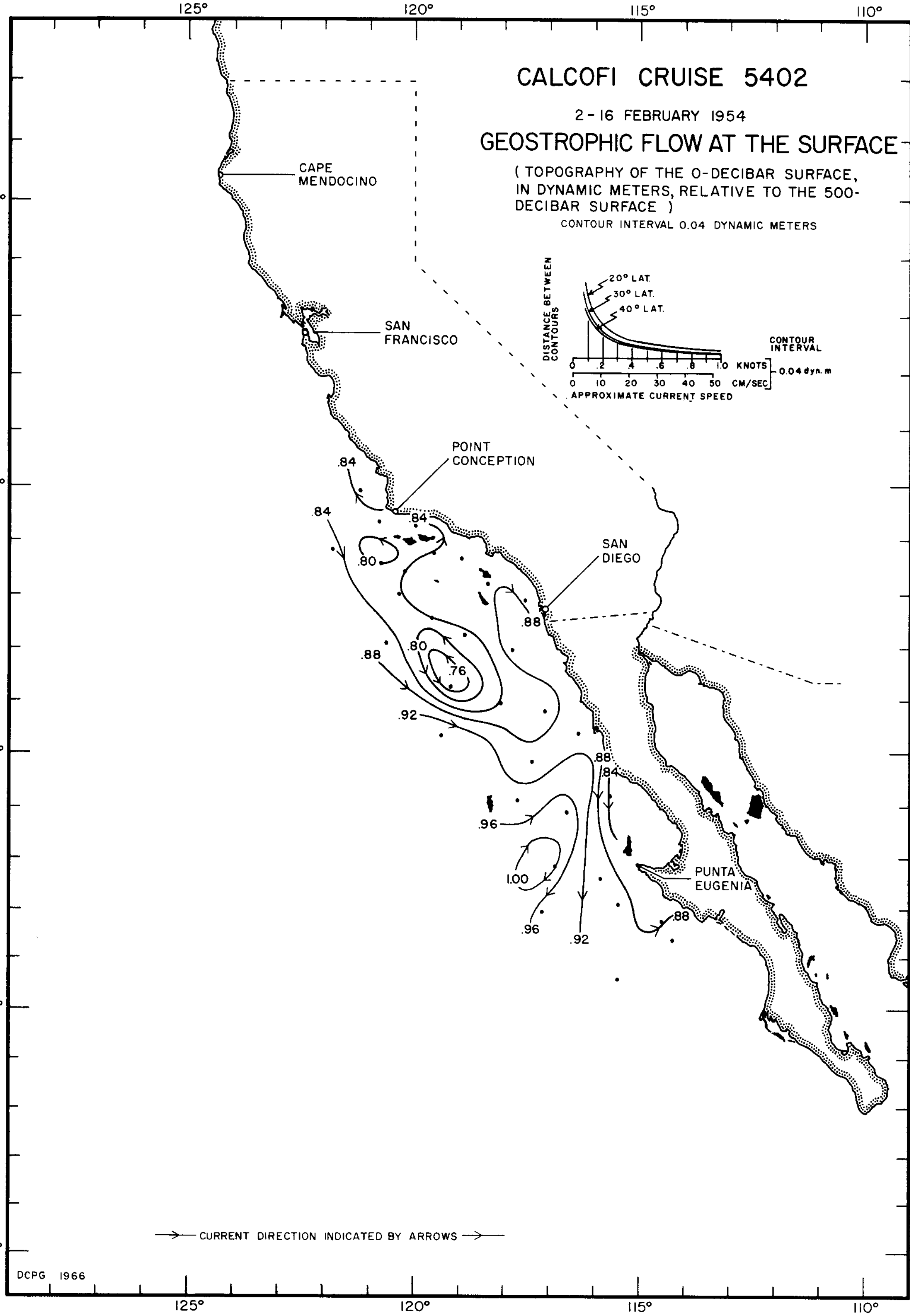

CALCOFI CRUISE 5312
1 – 13 DECEMBER 1953
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°
.84
.80
.76
.88
.92
.96
1.00

0/500 db
5312


CALCOFI CRUISE 5401
5 JANUARY – 4 FEBRUARY 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
SAN FRANCISCO
PUNTA EUGENIA
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn. m
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

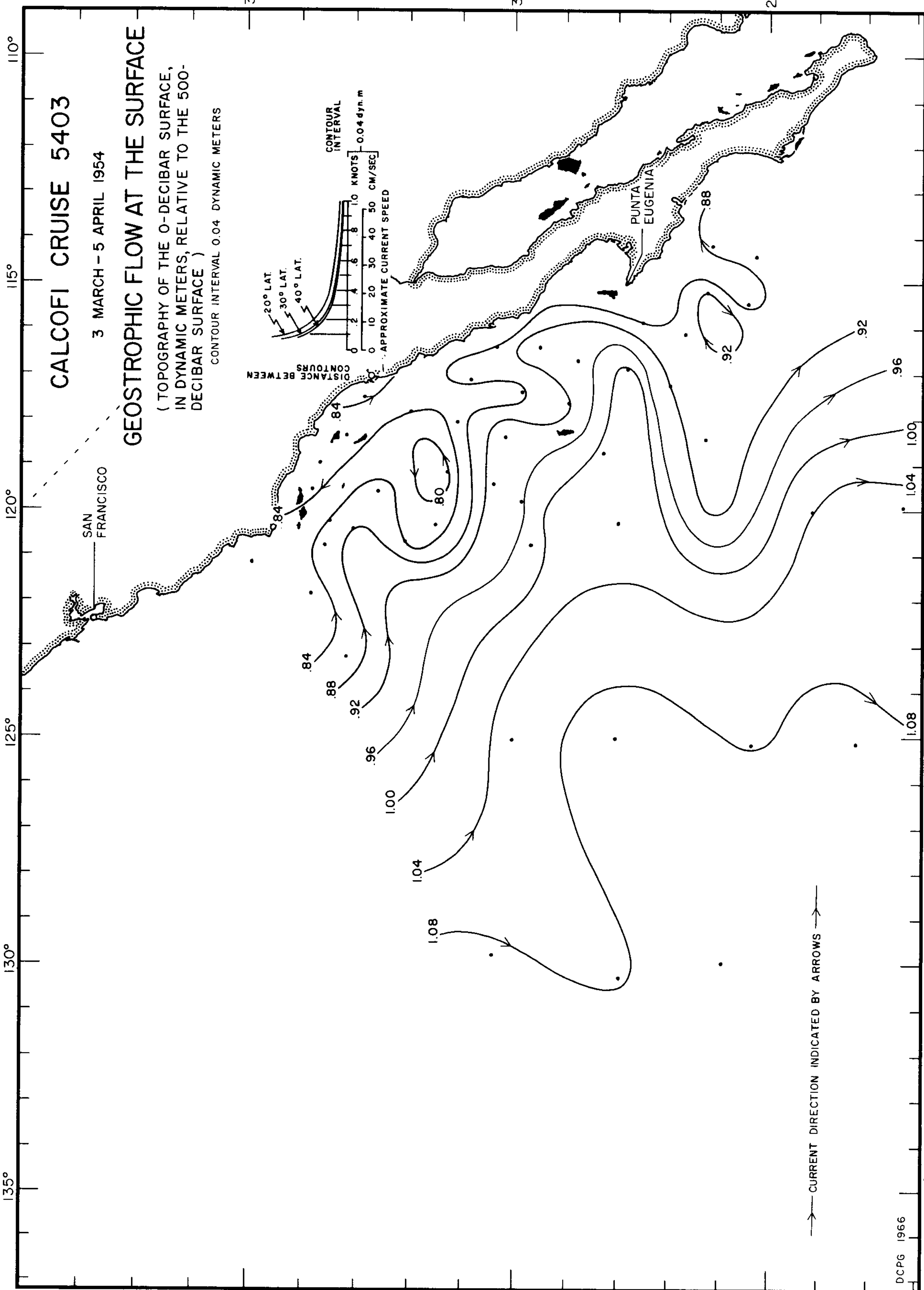
5401



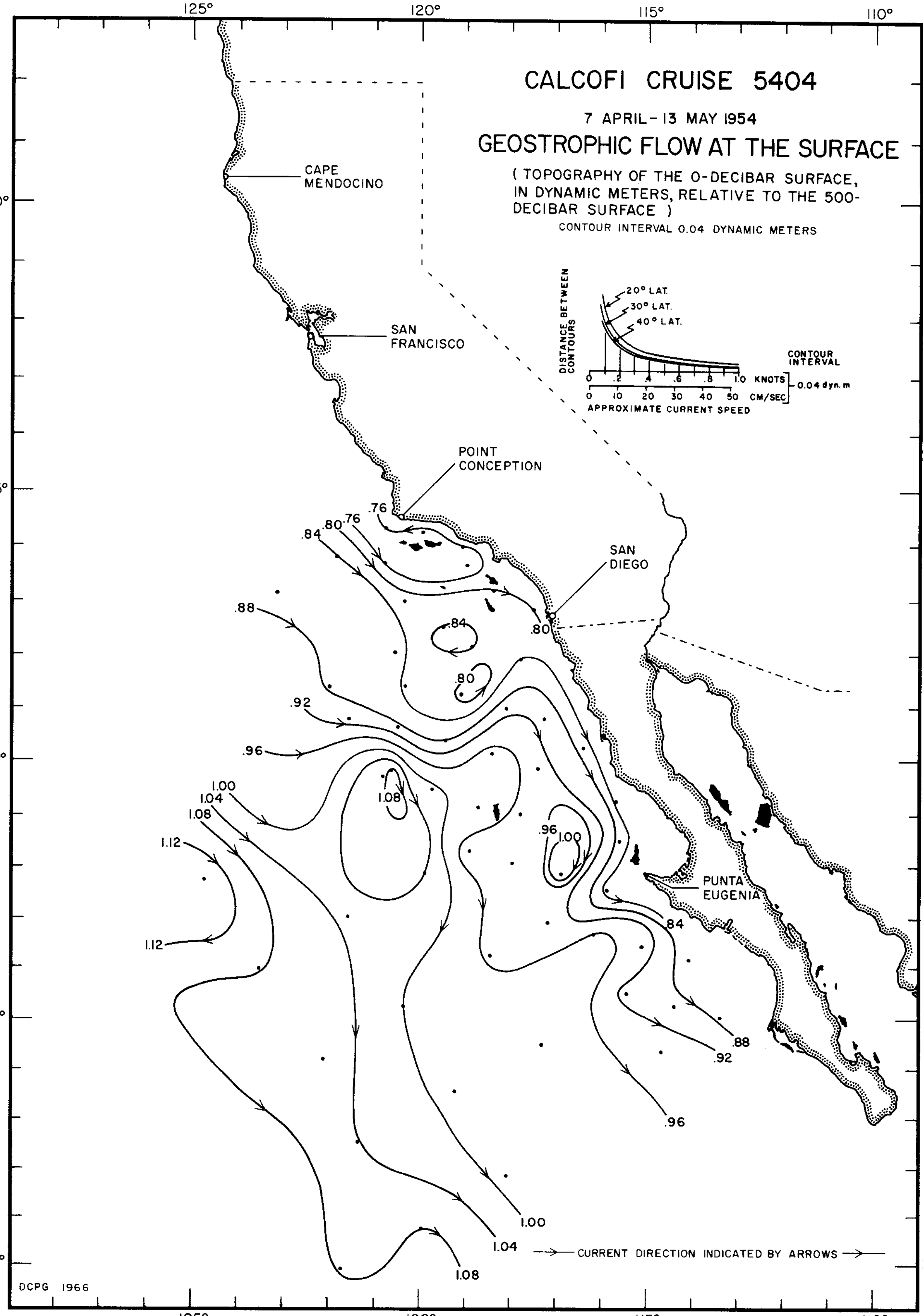
CALCOFI CRUISE 5402
2-16 FEBRUARY 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

5402

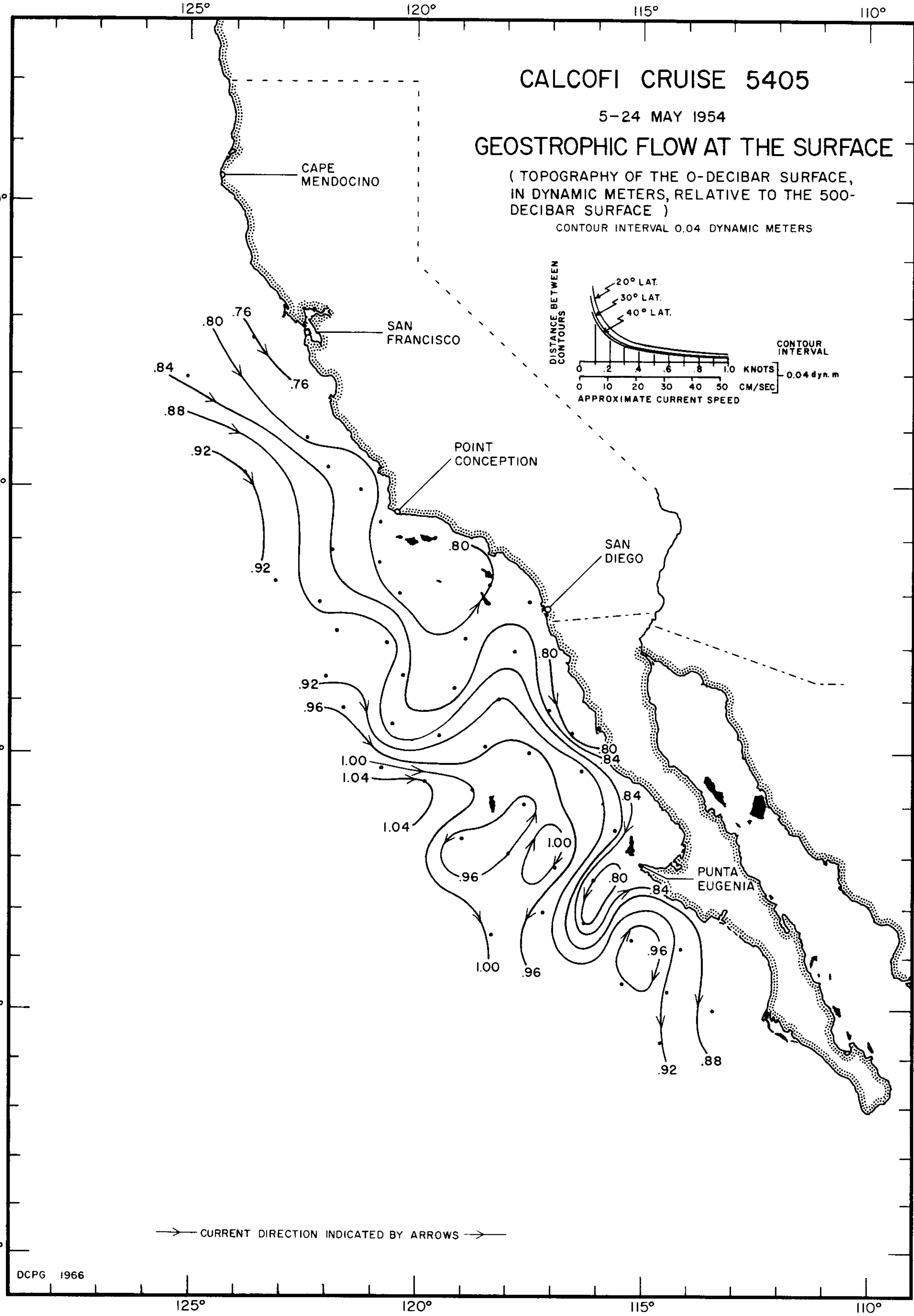

CALCOFI CRUISE 5403
3 MARCH - 5 APRIL 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
20° LAT.
30° LAT.
40° LAT.
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
35°
30°
25°
110°
115°
120°
125°
130°
135°
.80
.84
.88
.92
.96
1.00
1.04
1.08

0/500 db
5403

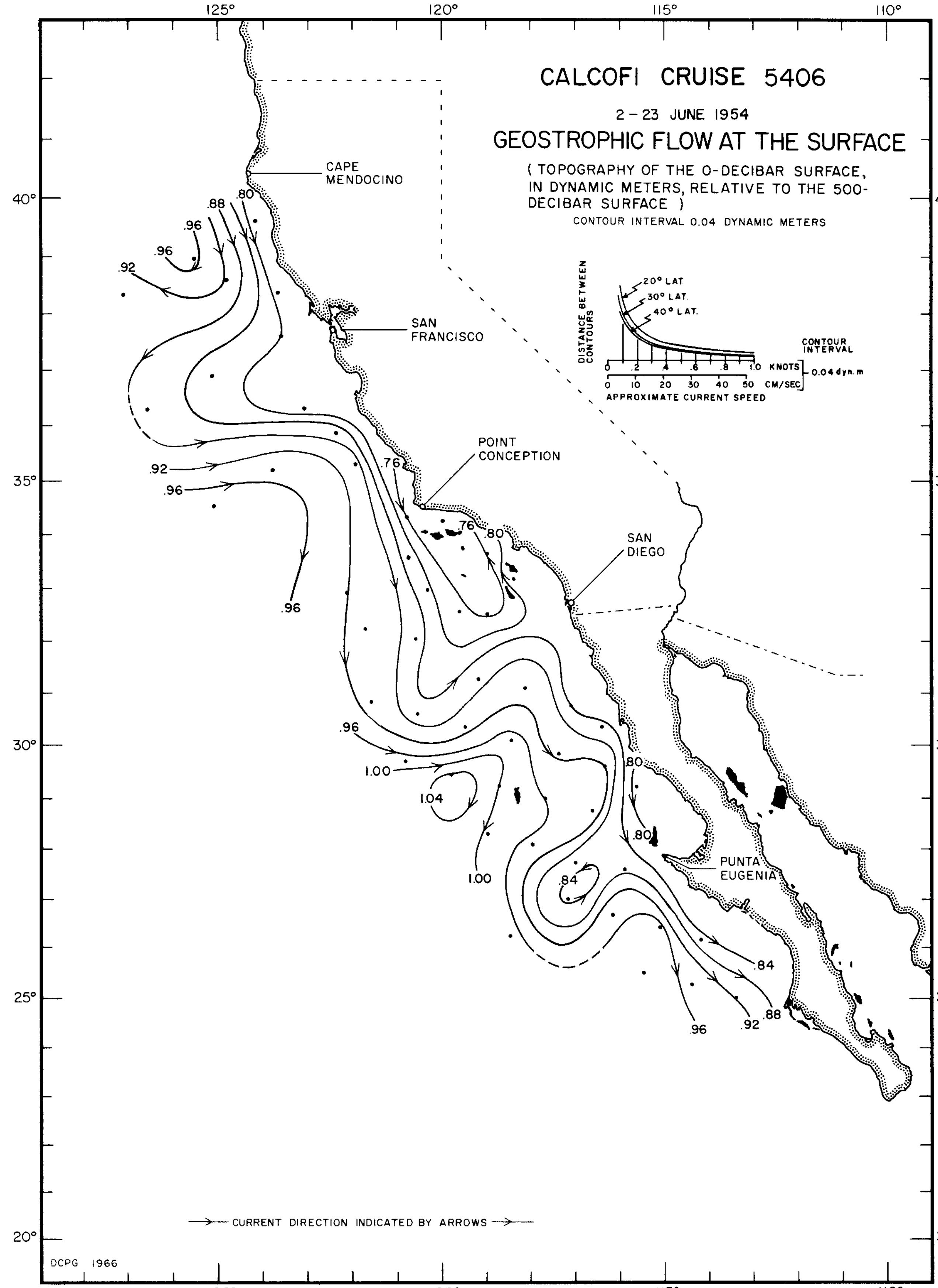


CALCOFI CRUISE 5404
7 APRIL - 13 MAY 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
125° 120° 115° 110°
40° 35° 30° 25° 20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.76 .80 .84 .88 .92 .96 1.00 1.04 1.08 1.12
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5404


CALCOFI CRUISE 5405
5–24 MAY 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125° 120° 115° 110°
40° 35° 30° 25° 20°
.76 .80 .84 .88 .92 .96 1.00 1.04
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

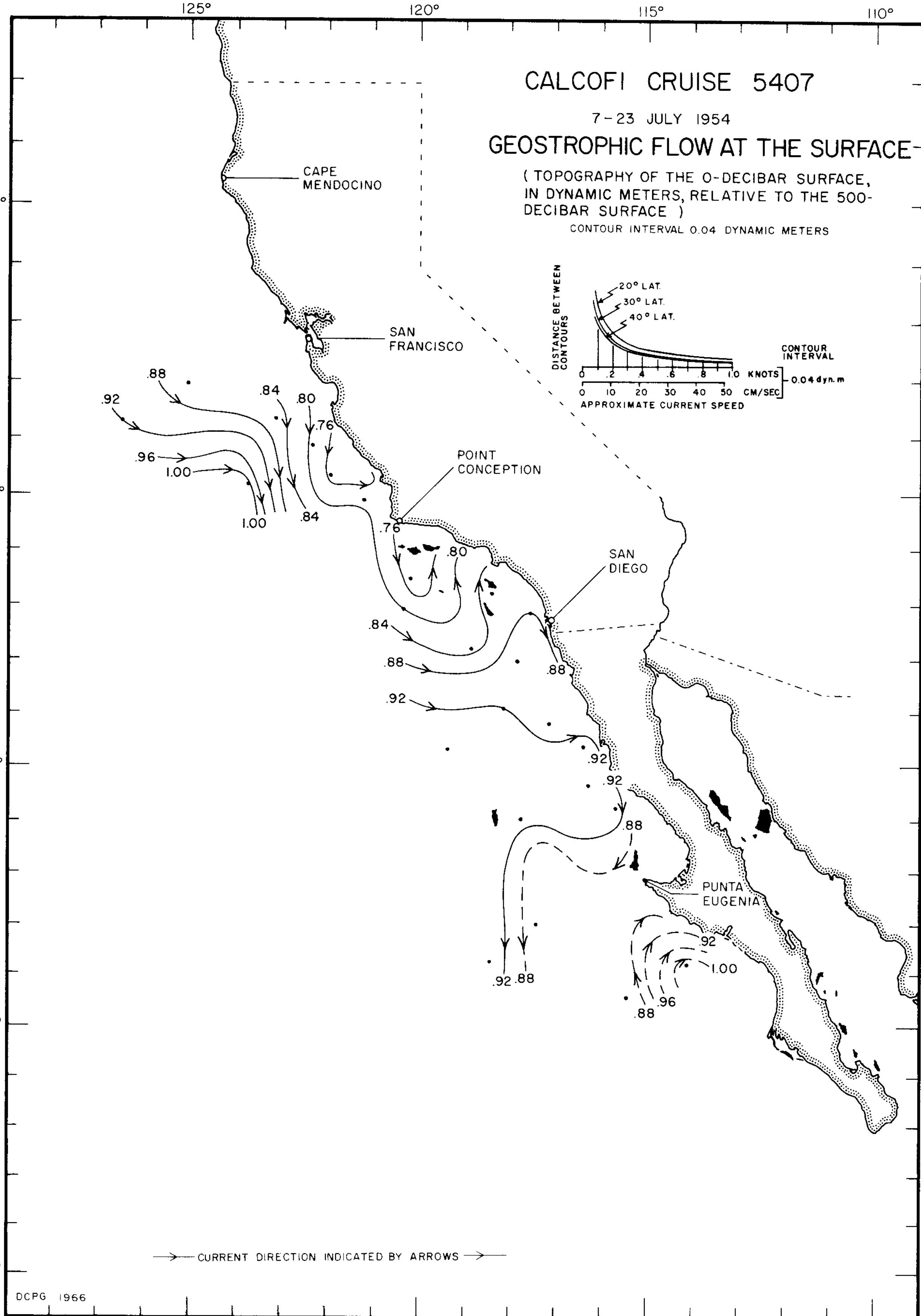
0/500 db
5405



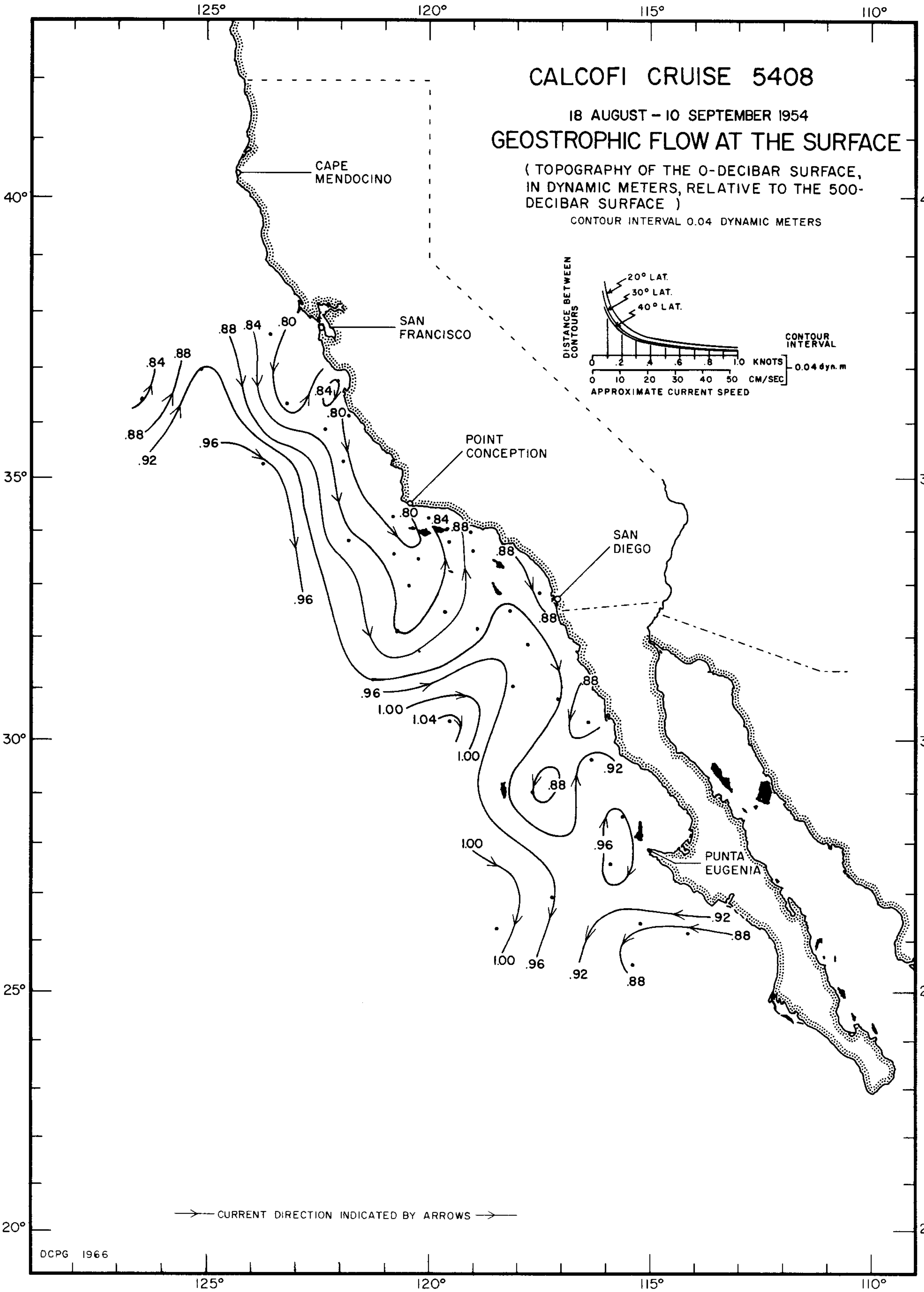
CALCOFI CRUISE 5406
2 – 23 JUNE 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.80
.88
.96
.96
.92
.92
.96
.76
.76
.80
.96
.96
1.00
1.04
1.00
.80
.80
.84
.84
.88
.92
.96
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

5406


CALCOFI CRUISE 5407
7-23 JULY 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

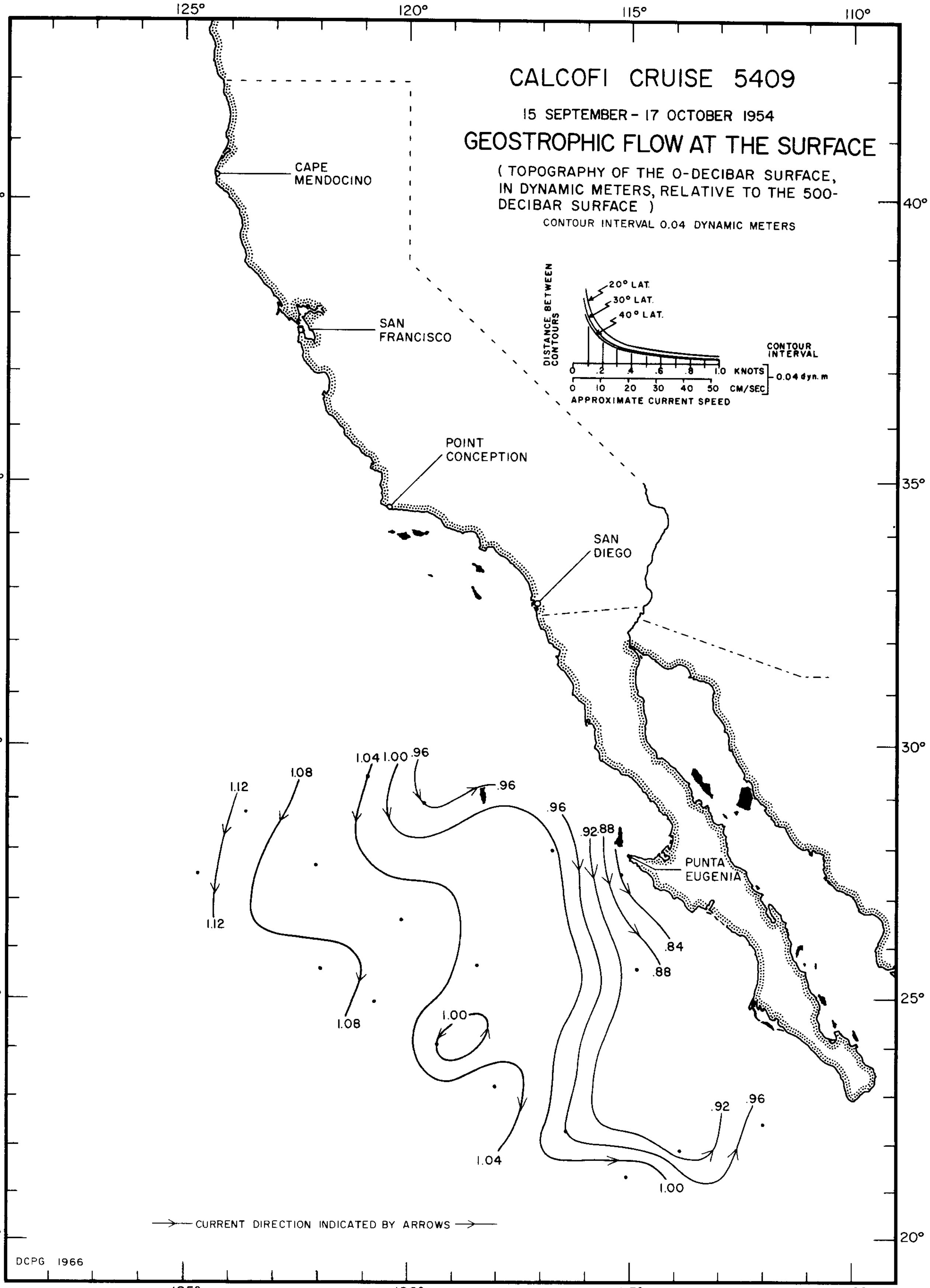
0/500 db
5407



CALCOFI CRUISE 5408
18 AUGUST – 10 SEPTEMBER 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db

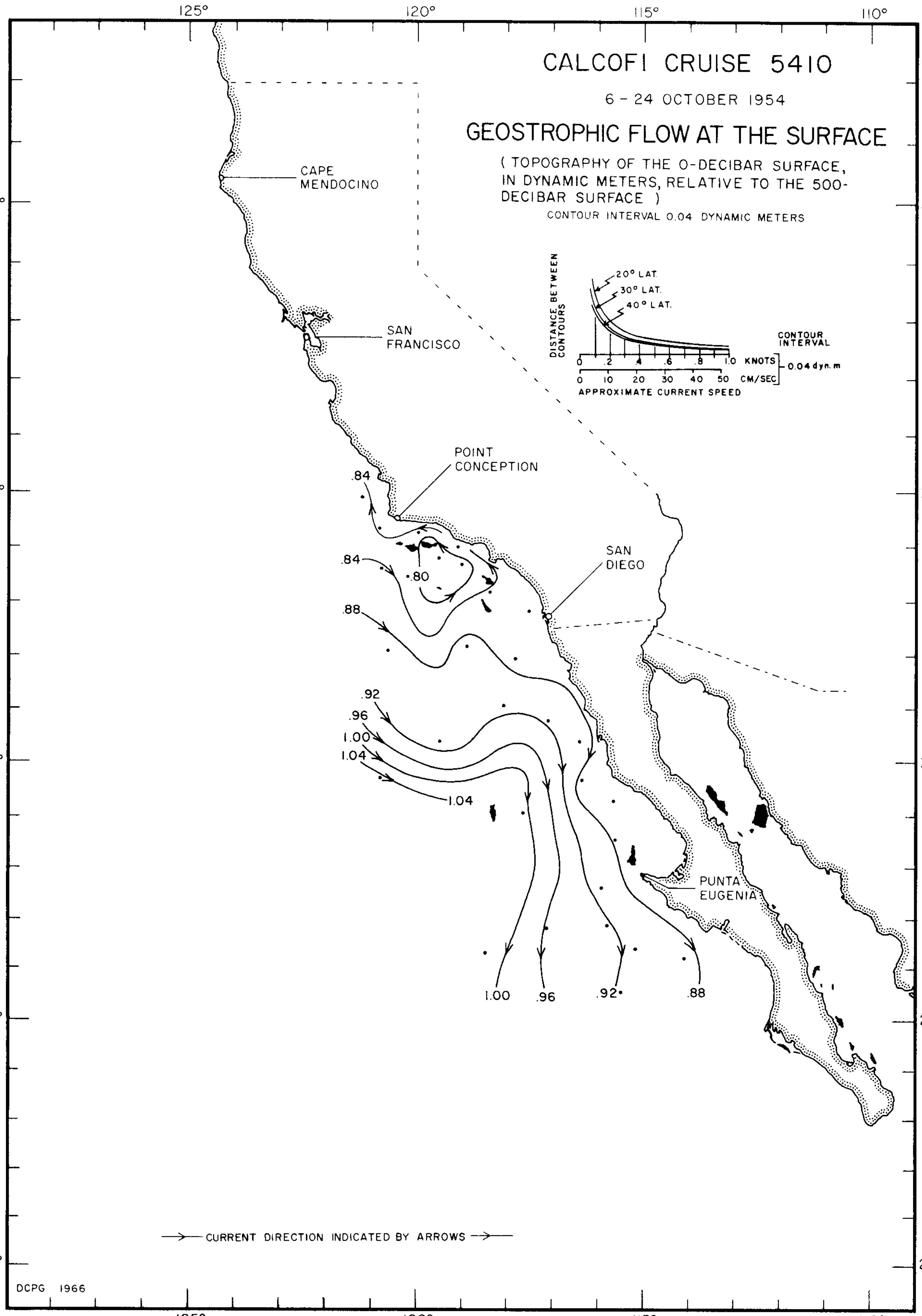
5408



CALCOFI CRUISE 5409
15 SEPTEMBER - 17 OCTOBER 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

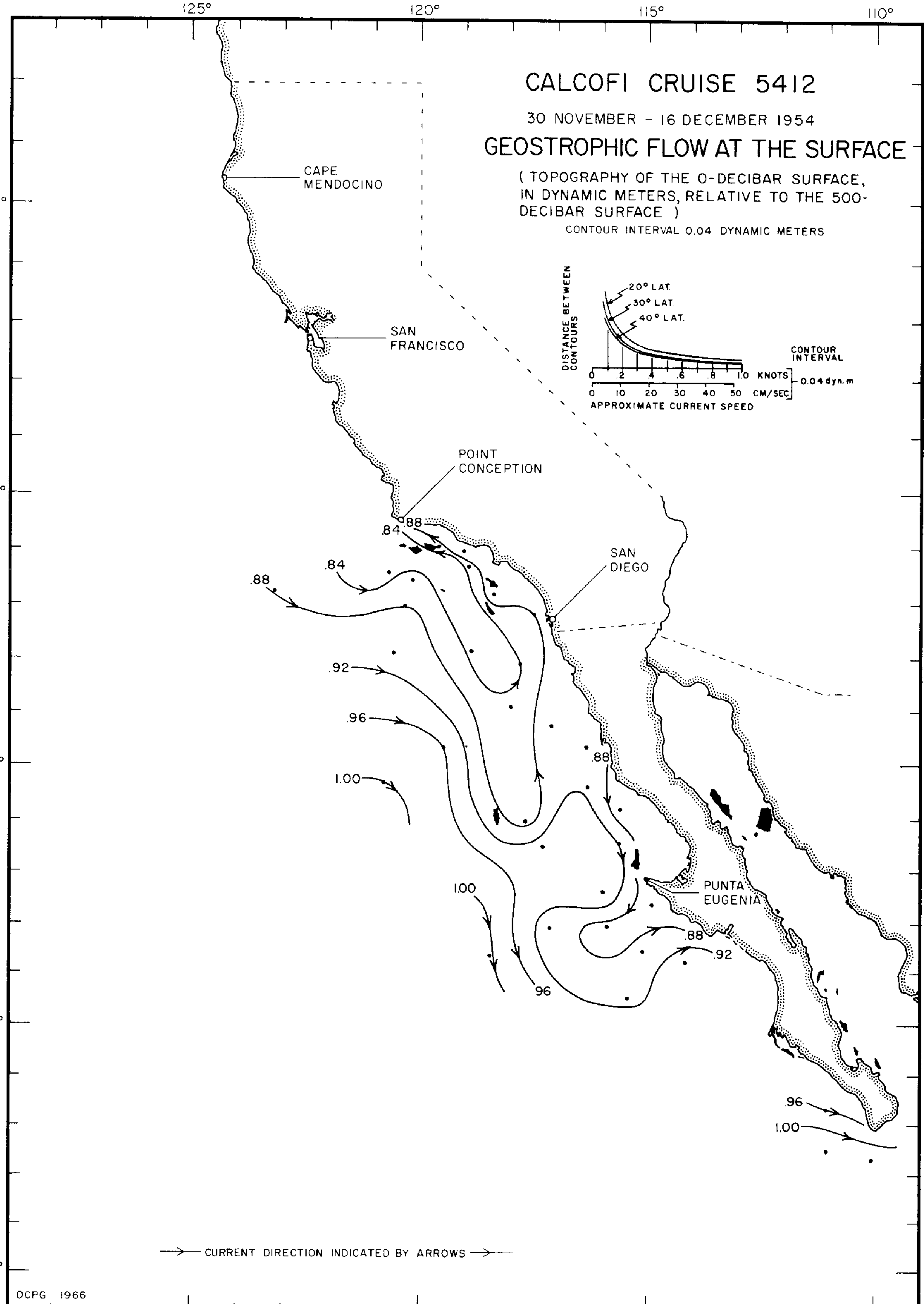
0/500 db

5409


CALCOFI CRUISE 5410
6 - 24 OCTOBER 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.84
.80
.88
.92
.96
1.00
1.04
1.04
1.00
.96
.92
.88
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

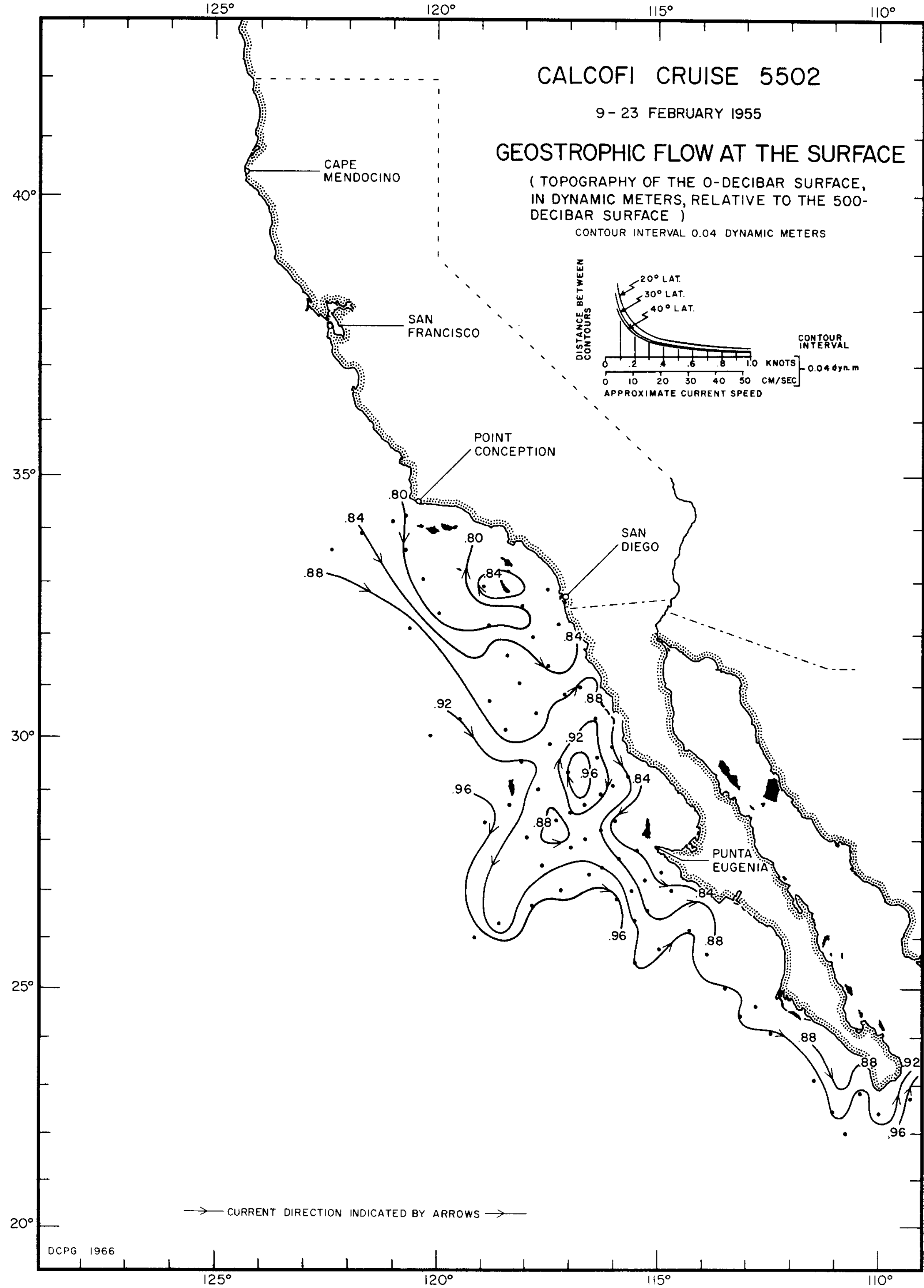
5410



CALCOFI CRUISE 5412
30 NOVEMBER - 16 DECEMBER 1954
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.84
.88
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

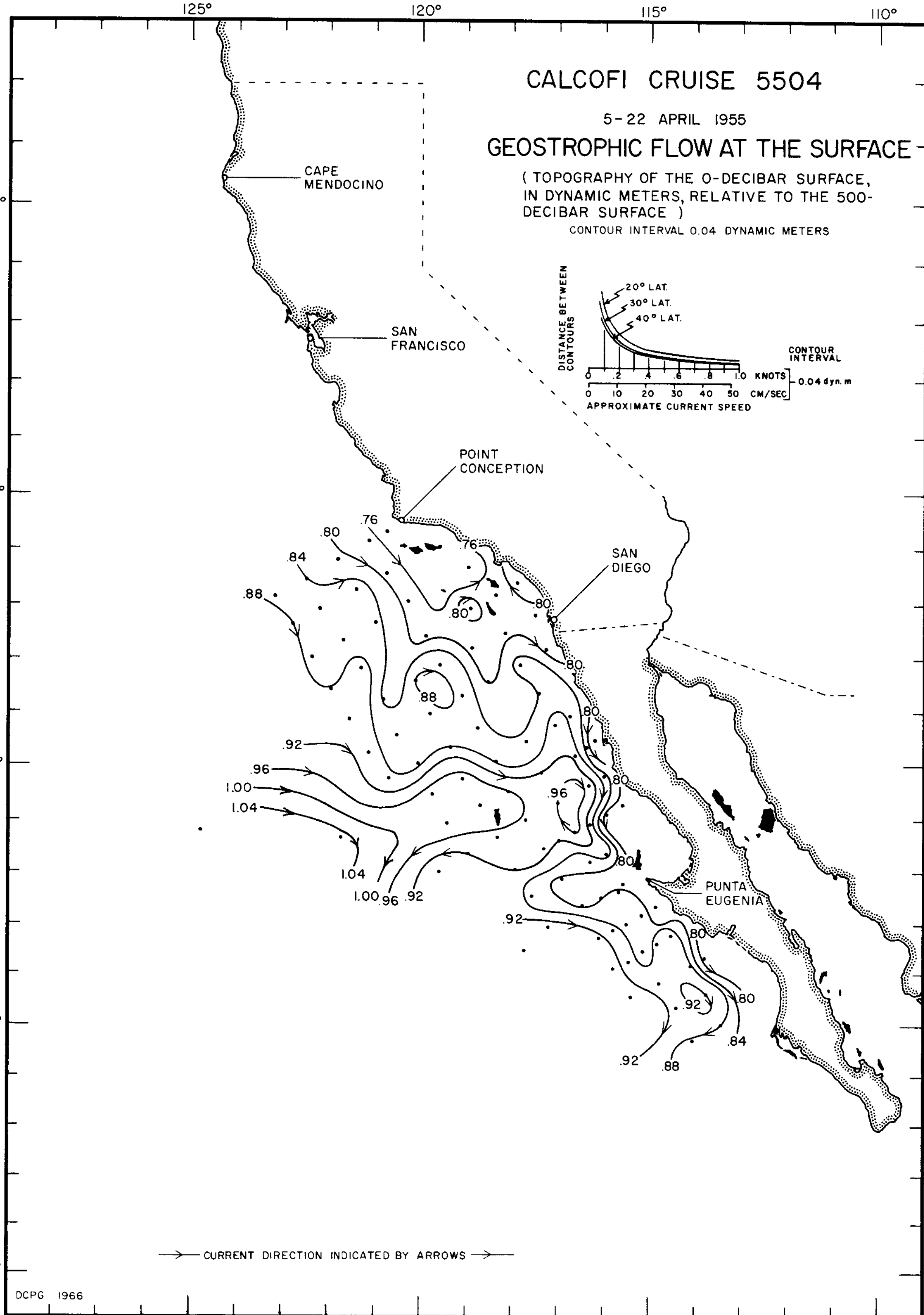
5412



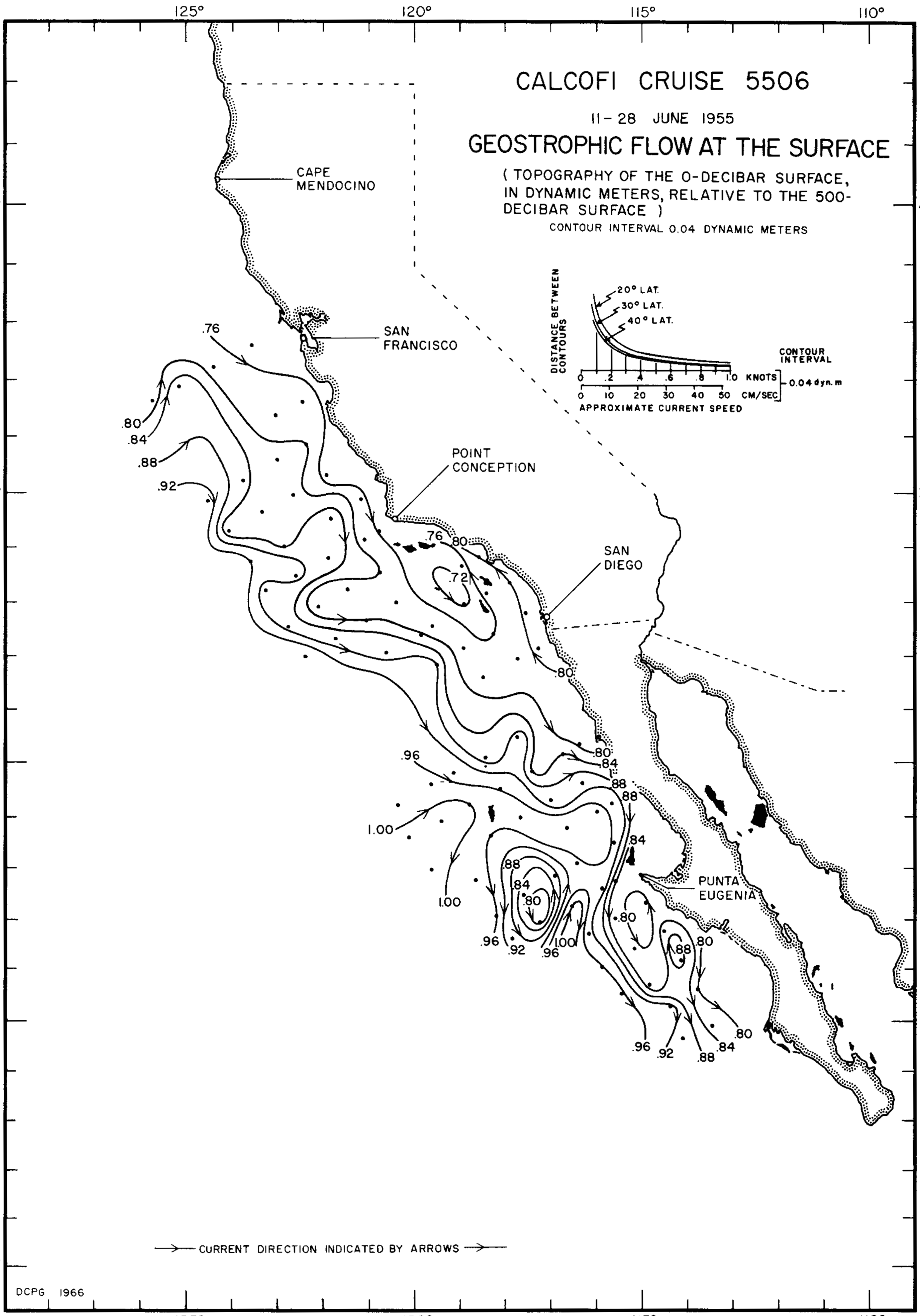
CALCOFI CRUISE 5502
9 - 23 FEBRUARY 1955
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.80
.84
.88
.92
.96
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

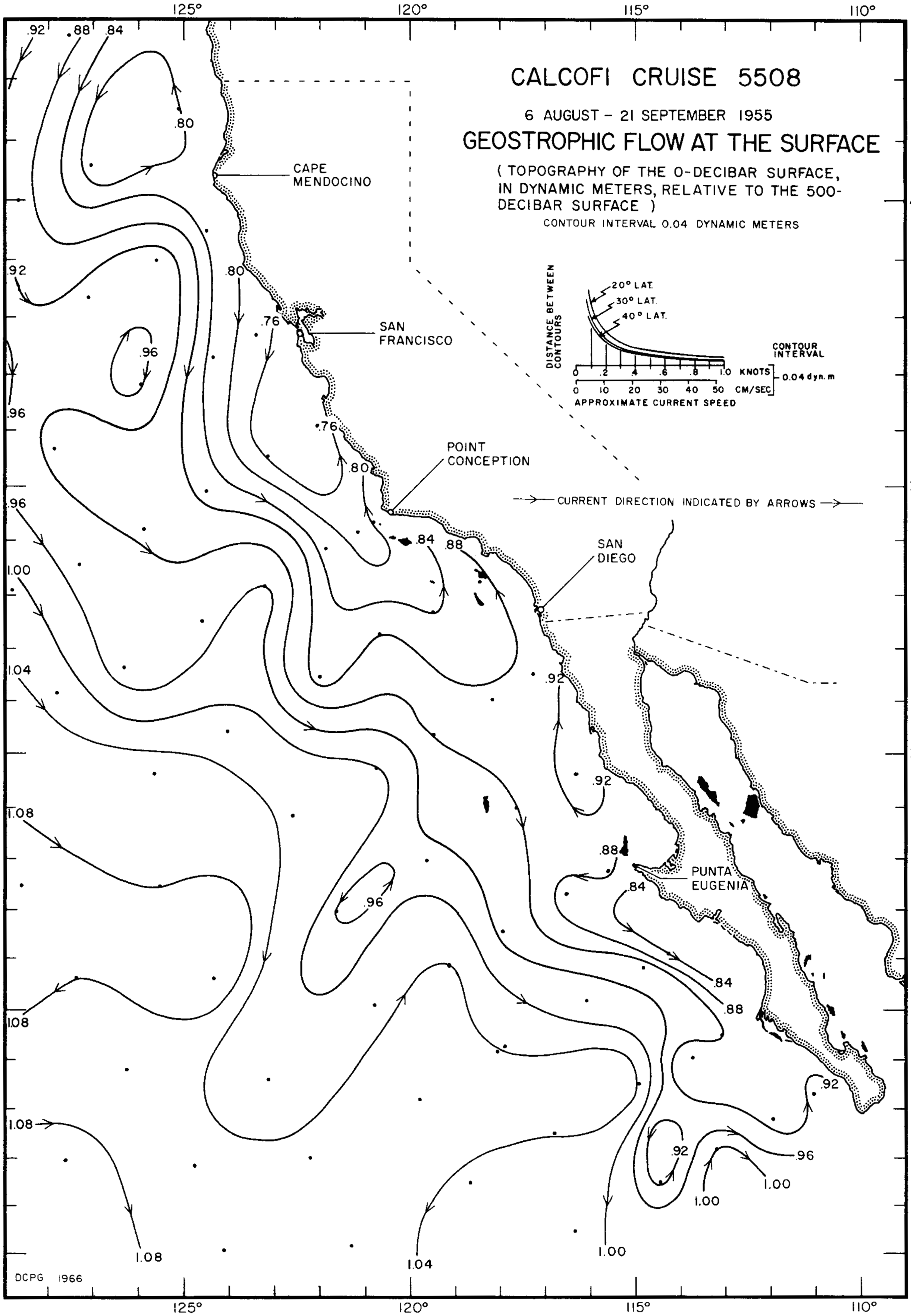
5502


CALCOFI CRUISE 5504
5-22 APRIL 1955
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125° 120° 115° 110°
40° 35° 30° 25° 20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5504

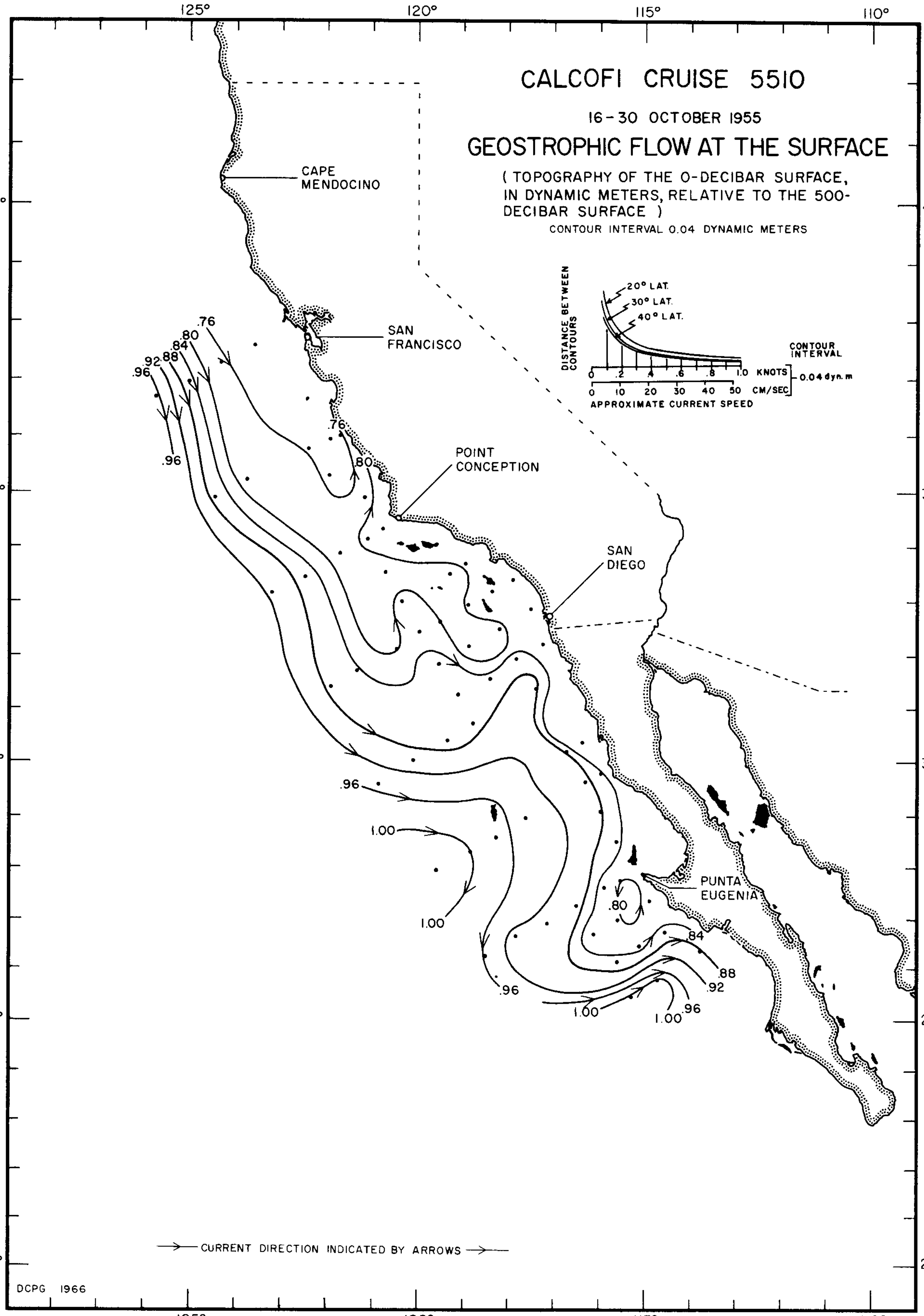

CALCOFI CRUISE 5506
11-28 JUNE 1955
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5506



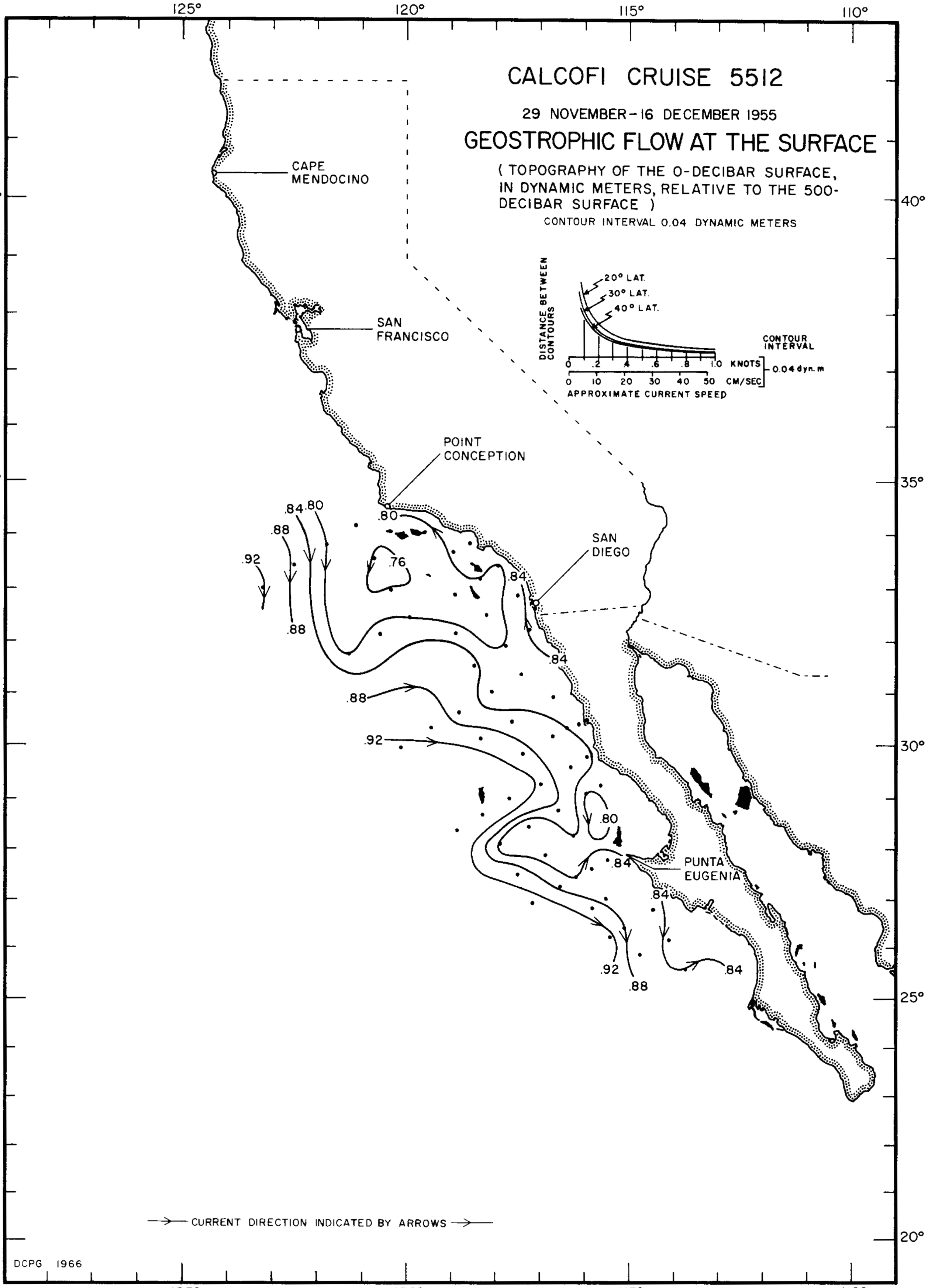
CALCOFI CRUISE 5508
6 AUGUST - 21 SEPTEMBER 1955
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CURRENT DIRECTION INDICATED BY ARROWS
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
DCPG 1966

0/500 db
5508


CALCOFI CRUISE 5510
16-30 OCTOBER 1955
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

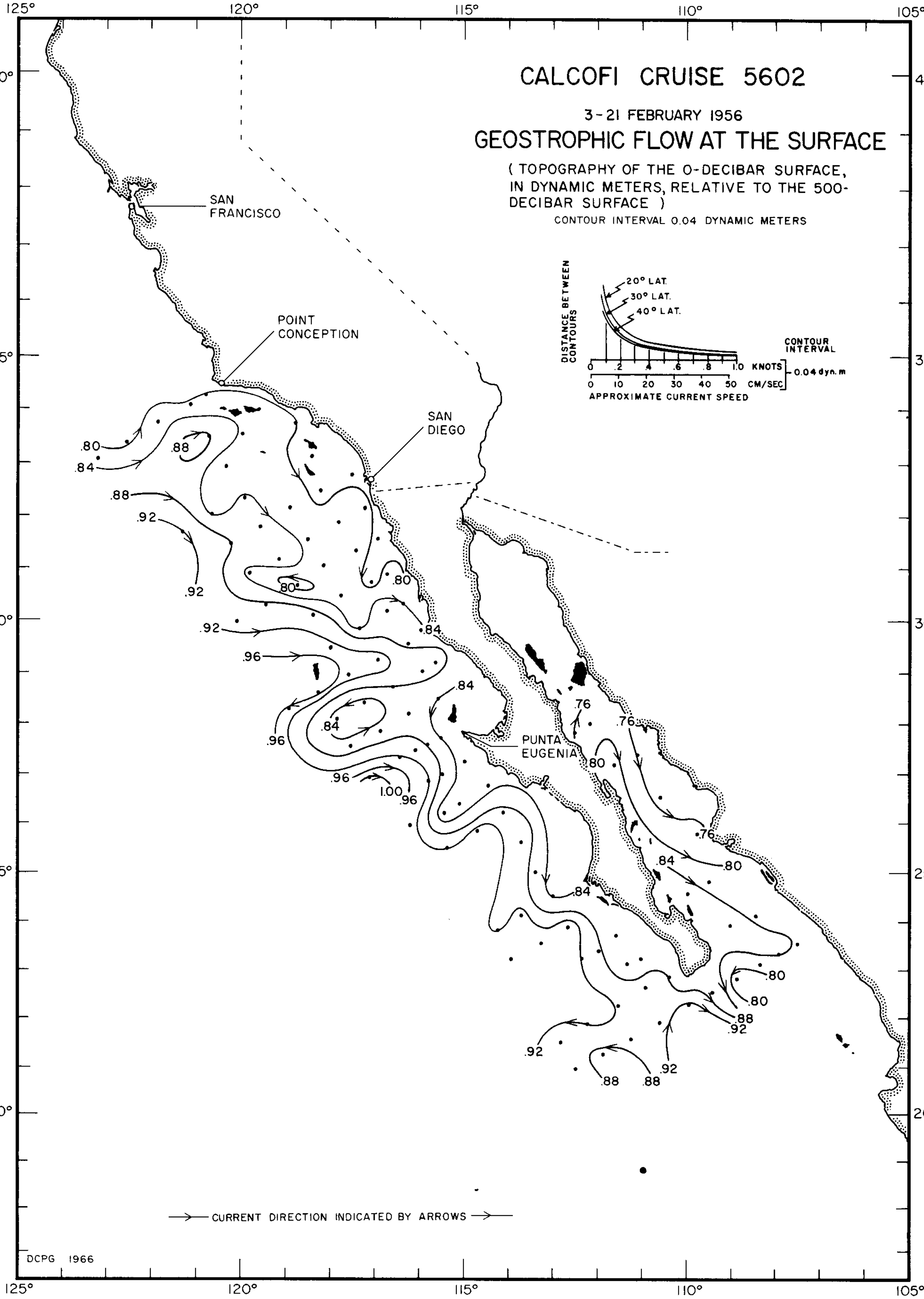
5510



CALCOFI CRUISE 5512
29 NOVEMBER-16 DECEMBER 1955
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

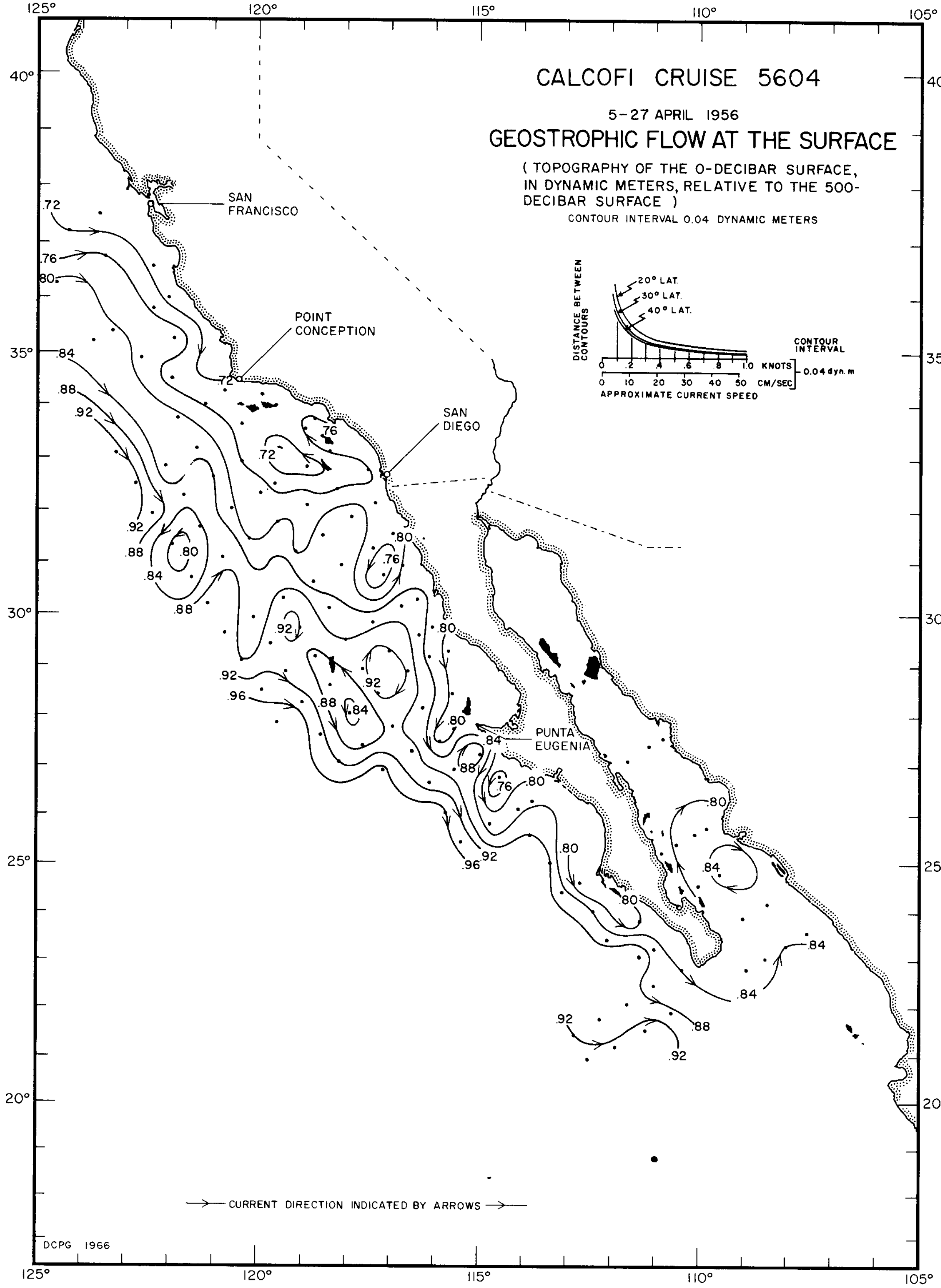
0/500 db

5512


CALCOFI CRUISE 5602
3-21 FEBRUARY 1956
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
105°
40°
35°
30°
25°
20°

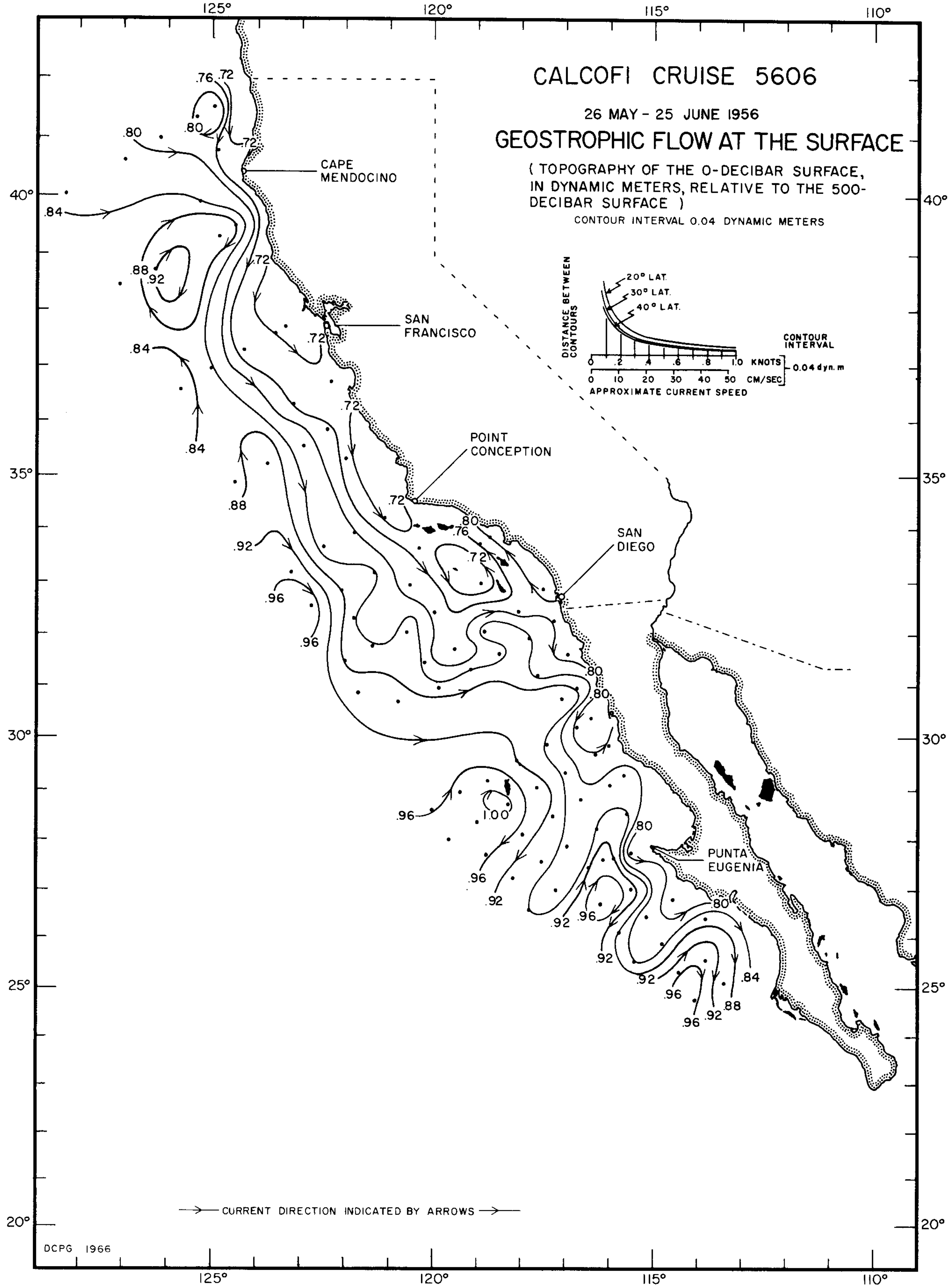
0/500 db

5602

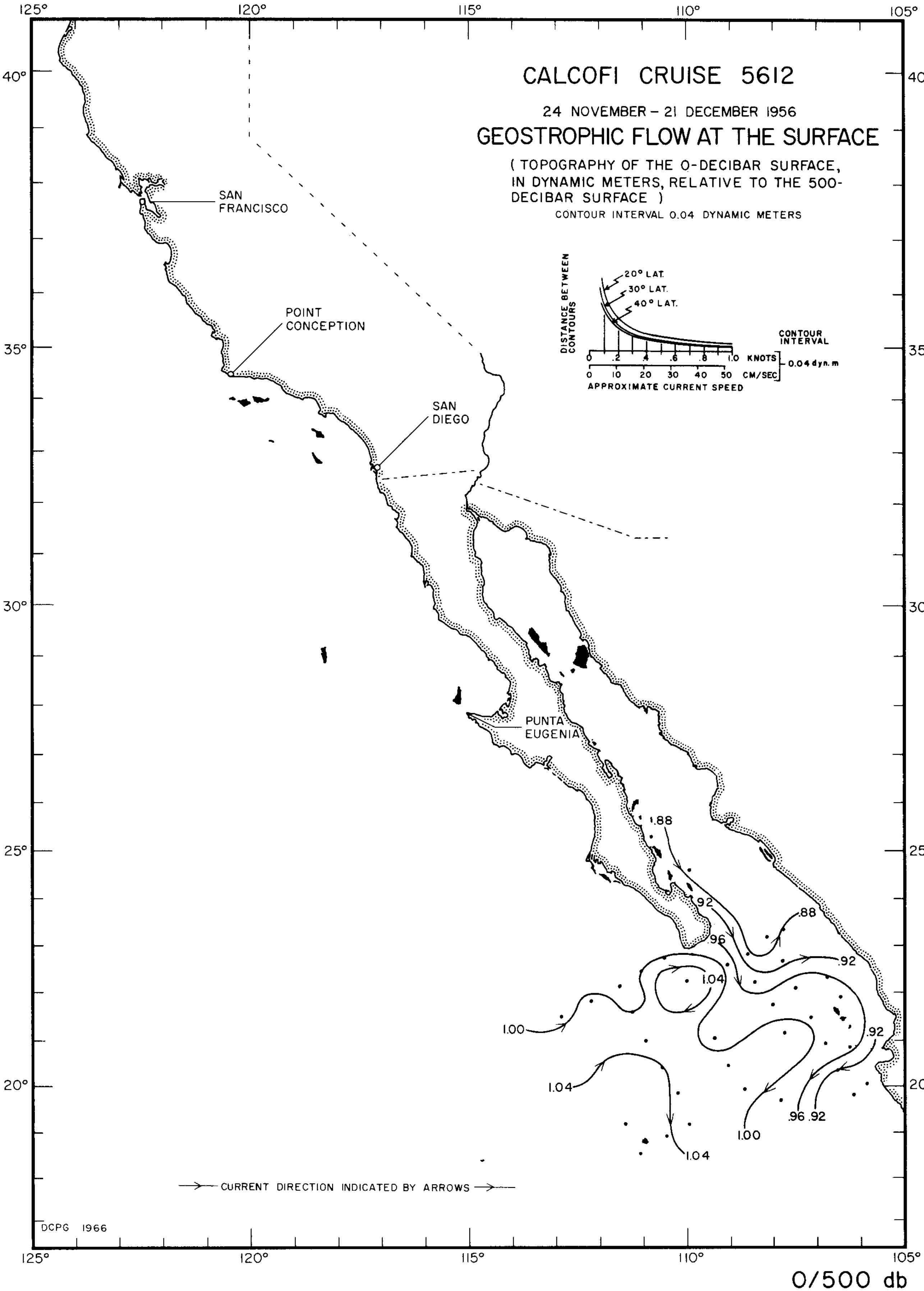

CALCOFI CRUISE 5604
5-27 APRIL 1956
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
105°
40°
35°
30°
25°
20°

0/500 db

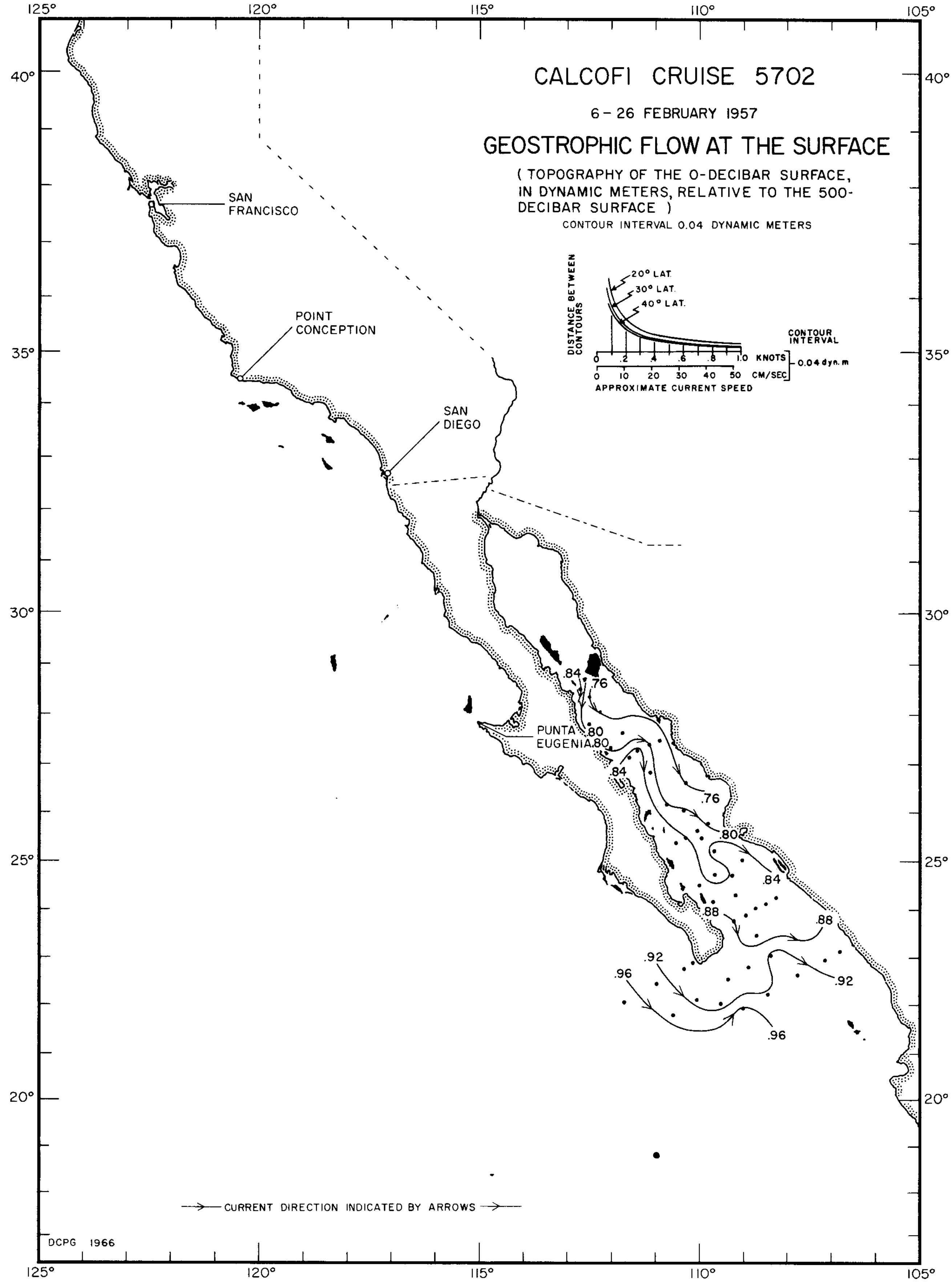
5604


CALCOFI CRUISE 5606
26 MAY - 25 JUNE 1956
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5606


125°
120°
115°
110°
105°
40°
35°
30°
25°
20°
CALCOFI CRUISE 5612
24 NOVEMBER – 21 DECEMBER 1956
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
1.88
.92
.88
.96
.92
1.04
1.00
.92
1.04
.96 .92
1.00
1.04
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

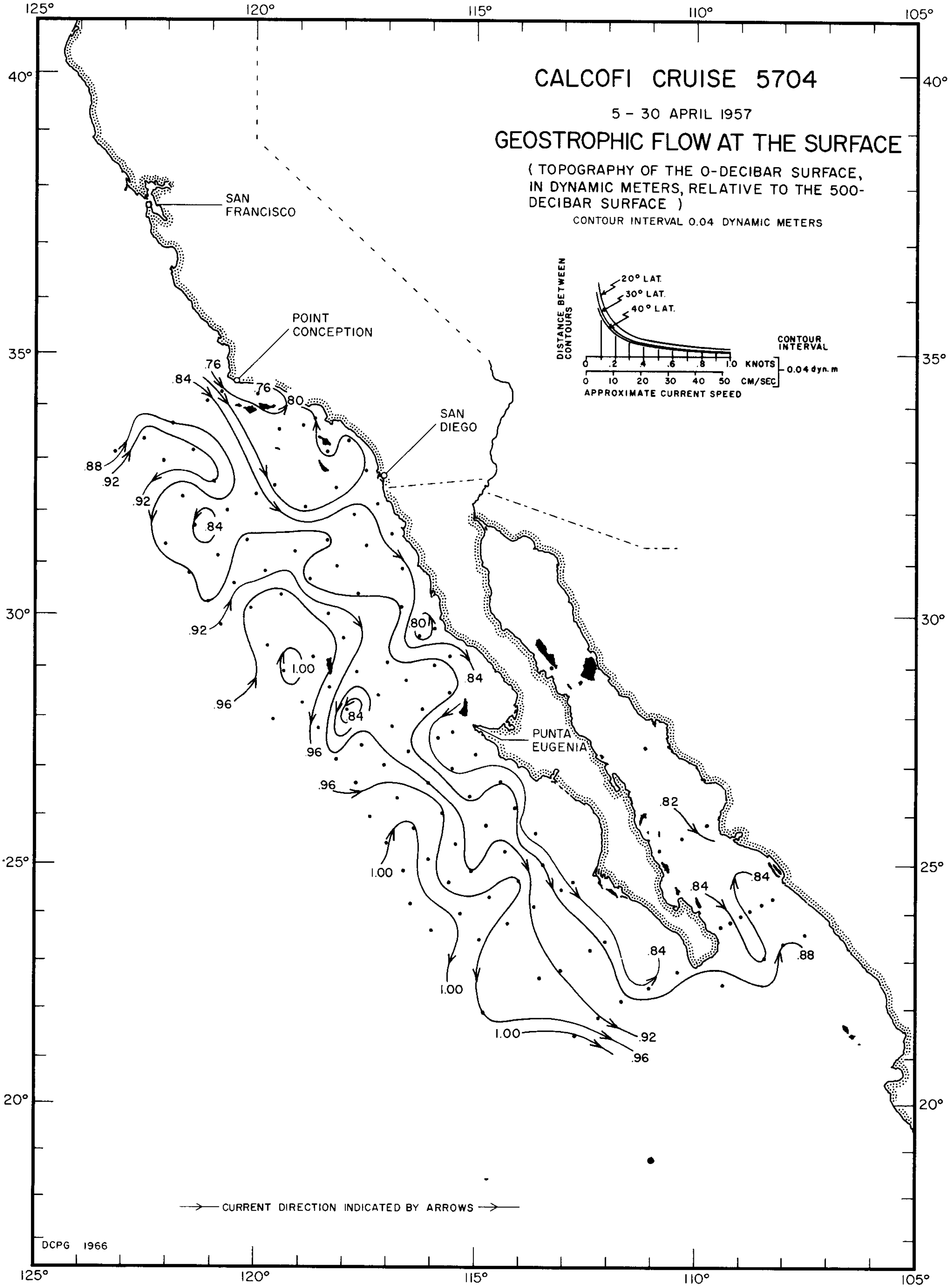
0/500 db
5612



CALCOFI CRUISE 5702
6-26 FEBRUARY 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125° 120° 115° 110° 105°
40° 35° 30° 25° 20°

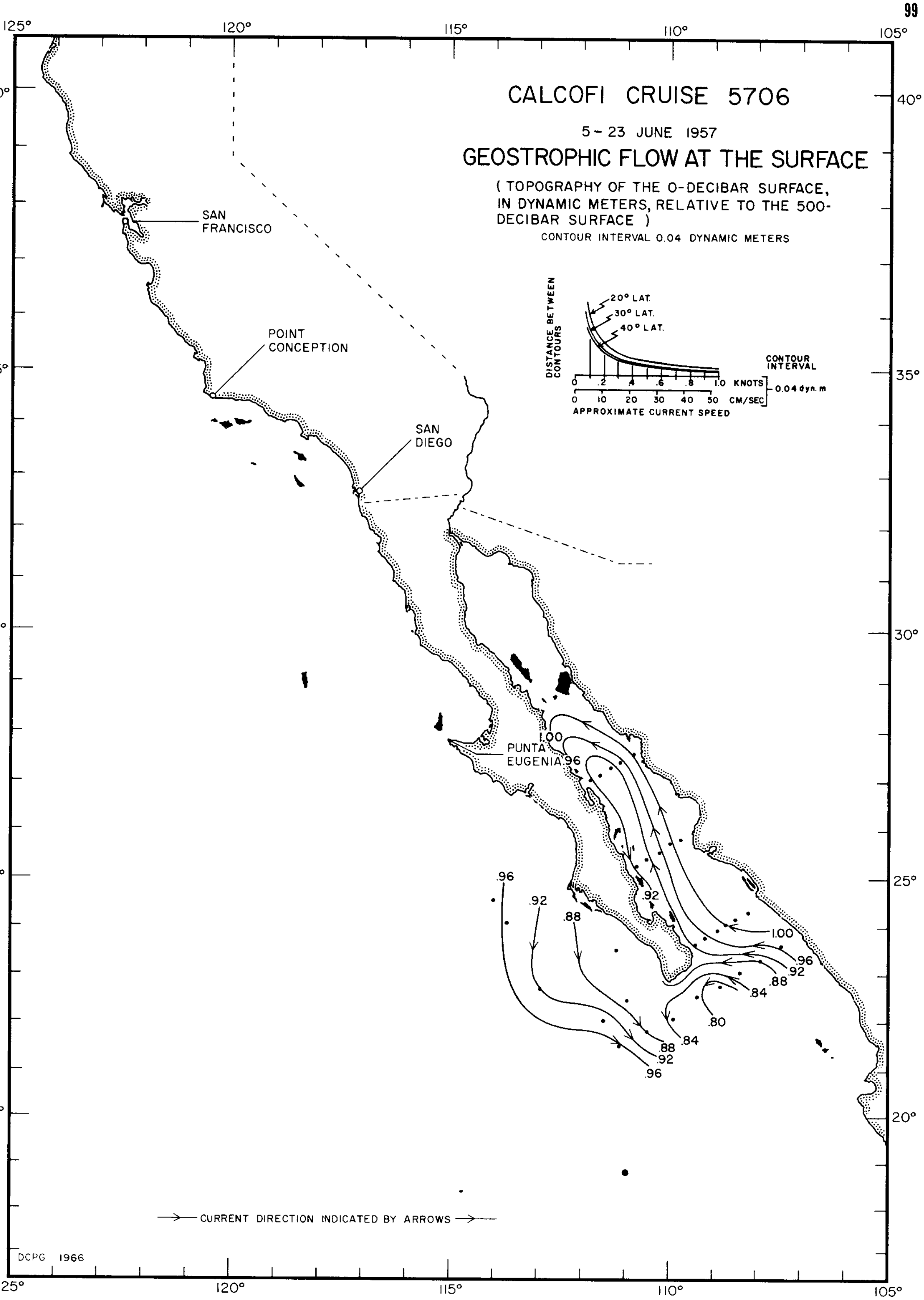
0/500 db

5702


CALCOFI CRUISE 5704
5 - 30 APRIL 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
105°
40°
35°
30°
25°
20°

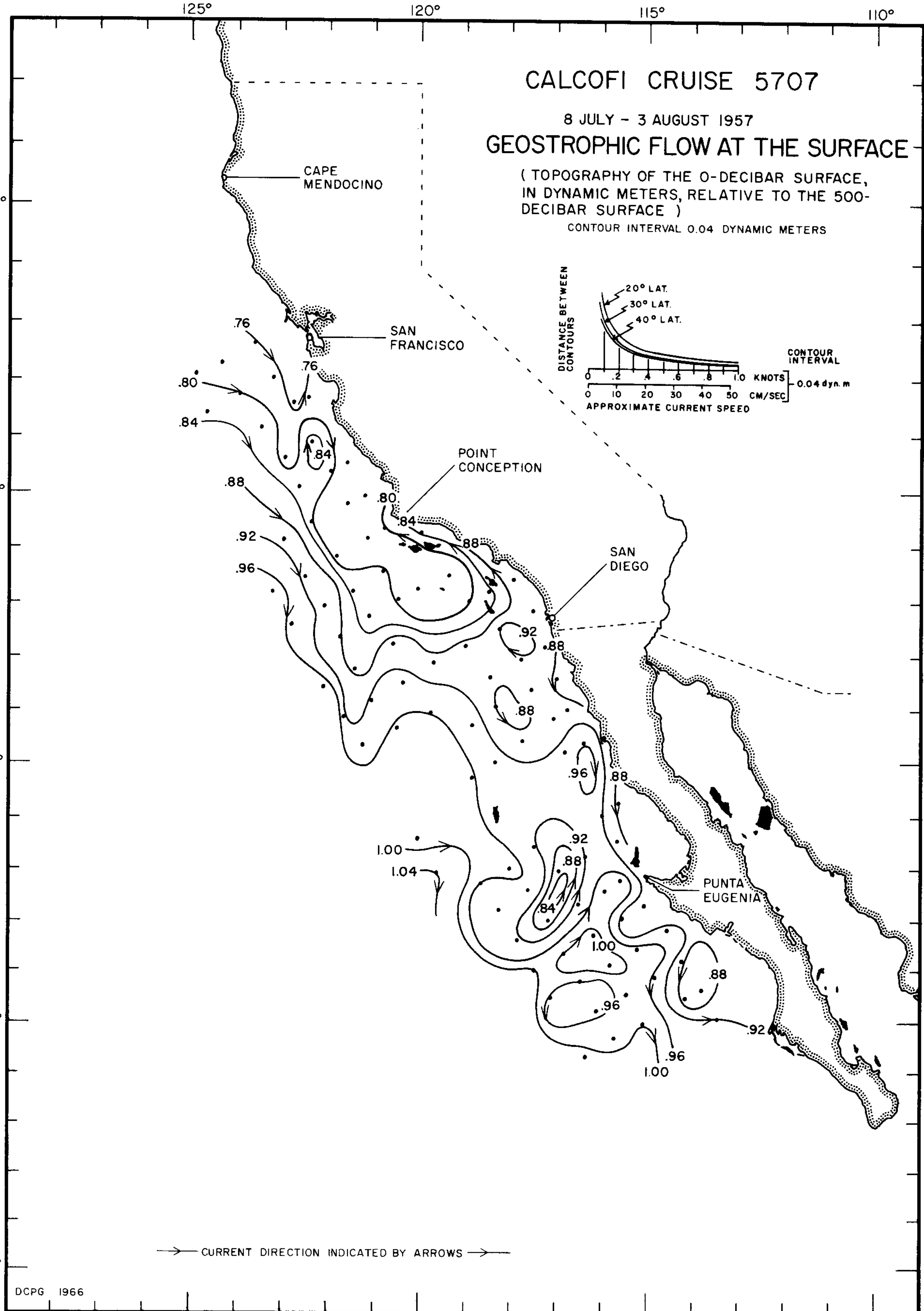
0/500 db

5704

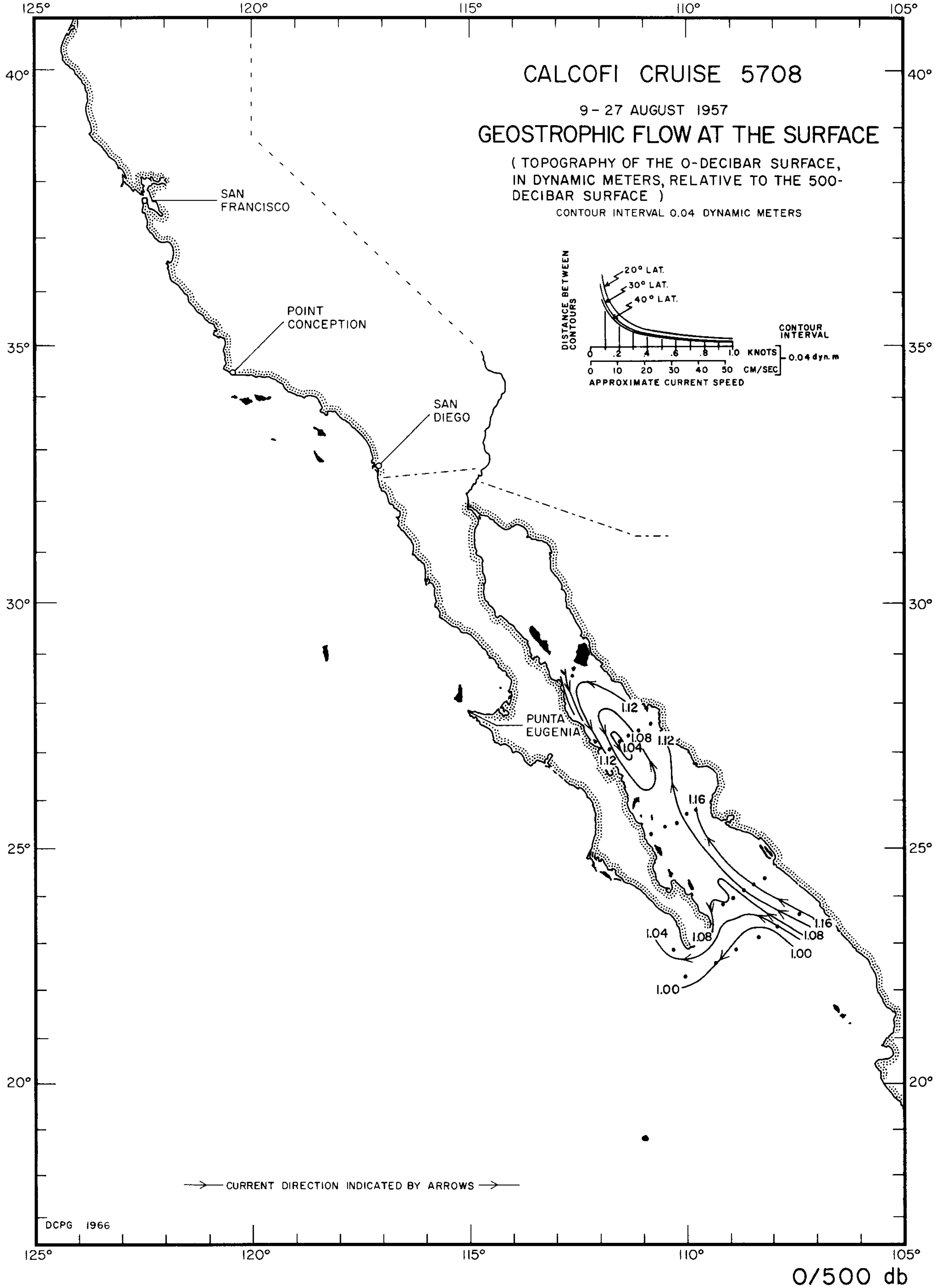


CALCOFI CRUISE 5706
5 – 23 JUNE 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
125°
120°
115°
110°
105°
40°
35°
30°
25°
20°
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
1.00
.96
.92
.88
.84
.80
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5706

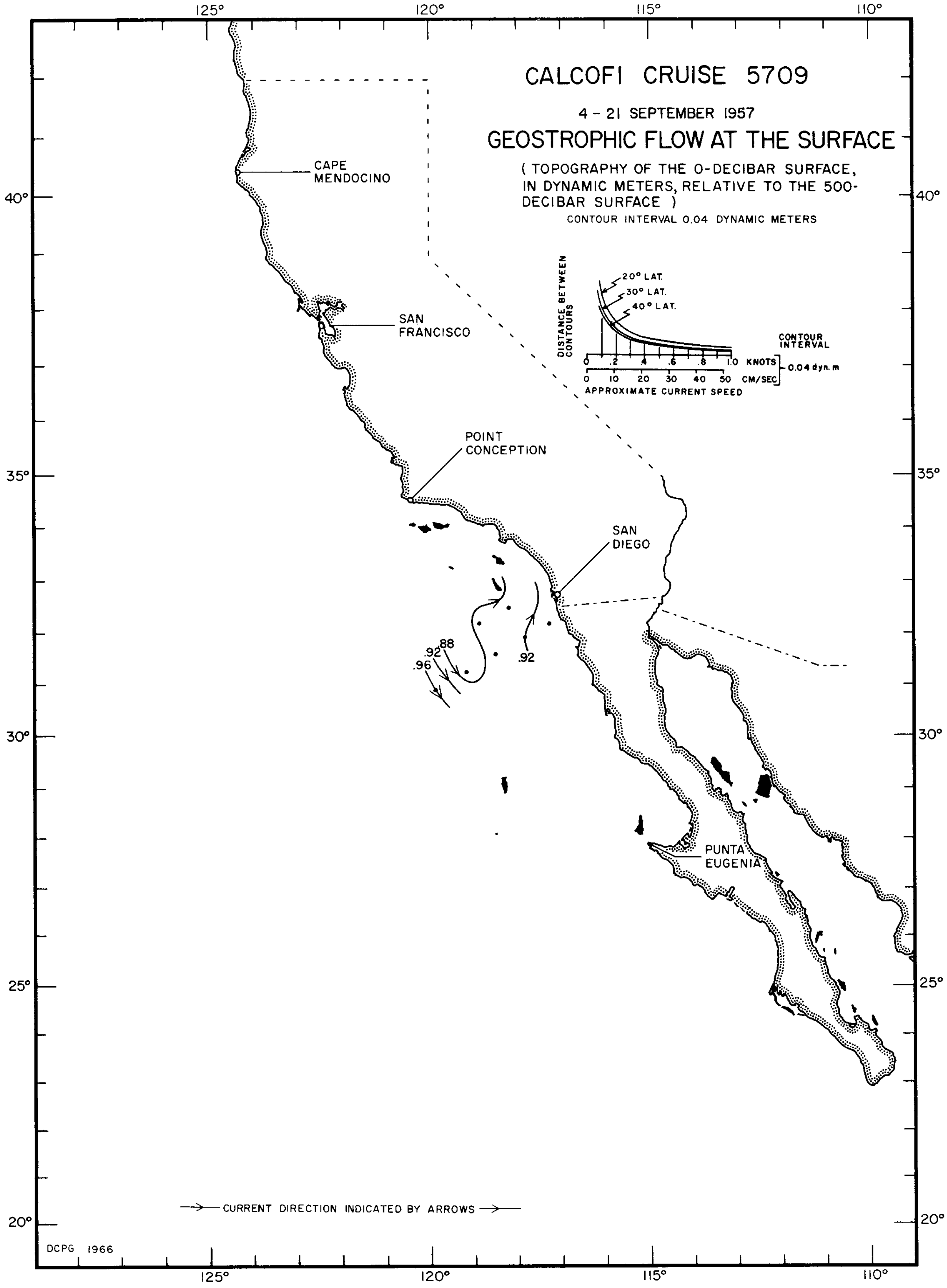

CALCOFI CRUISE 5707
8 JULY - 3 AUGUST 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5707

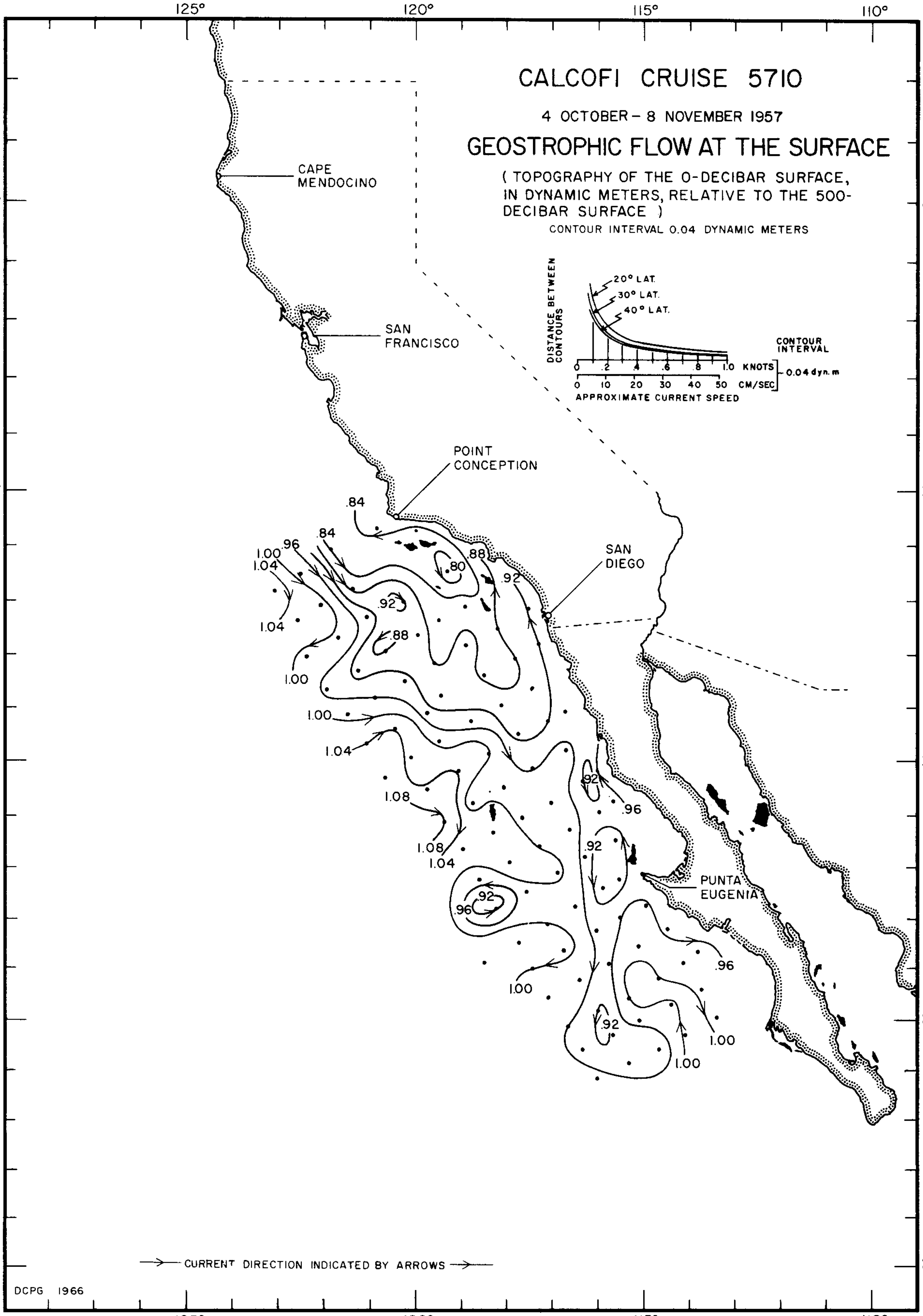

125°
120°
115°
110°
105°
40°
35°
30°
25°
20°
CALCOFI CRUISE 5708
9 - 27 AUGUST 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
1.12
1.08
1.04
1.12
1.12
1.16
1.16
1.08
1.00
1.04
1.08
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

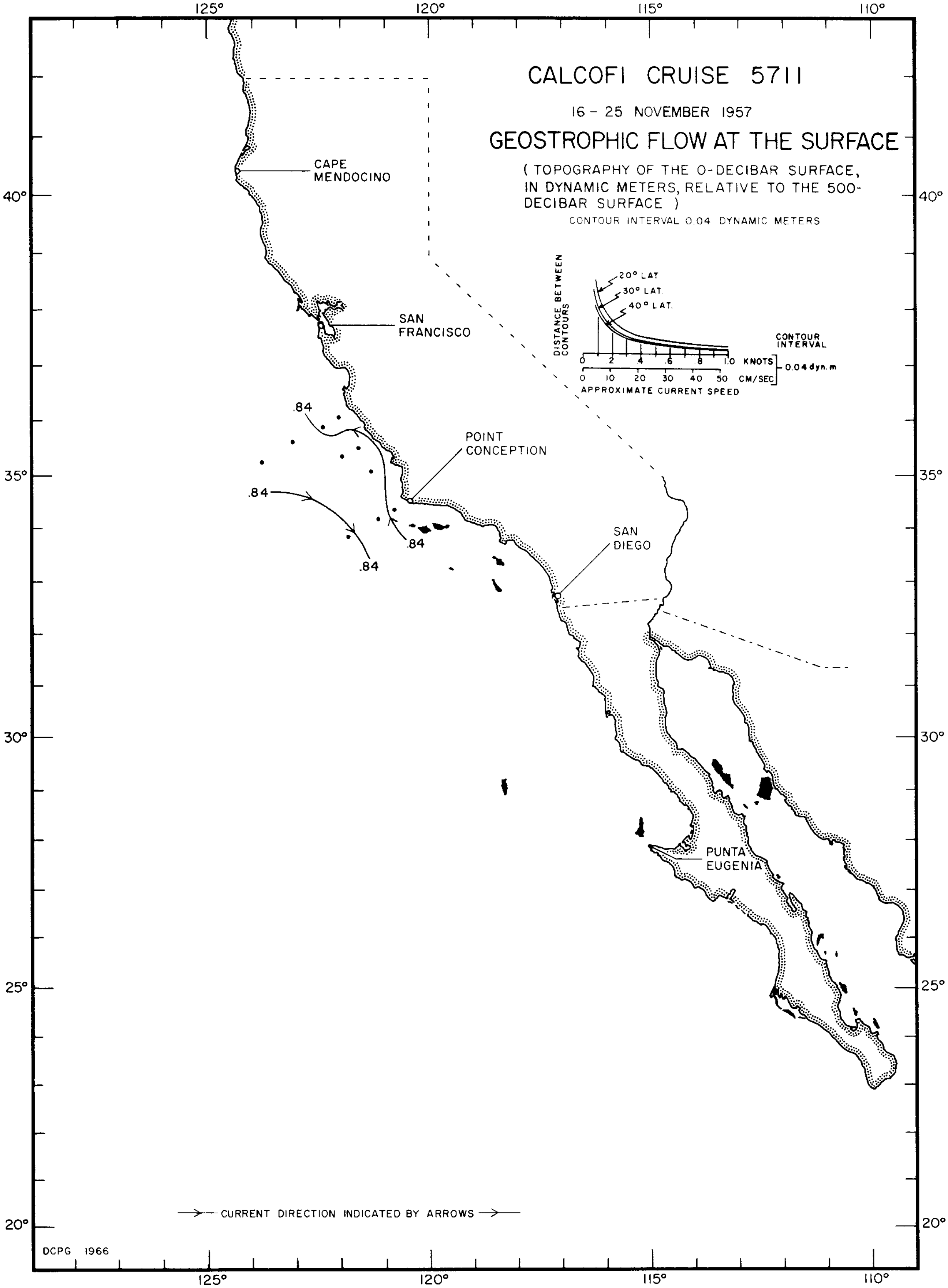
5708


CALCOFI CRUISE 5709
4 - 21 SEPTEMBER 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
125° 120° 115° 110°
40° 35° 30° 25° 20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.96
.92
.88
.92
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5709

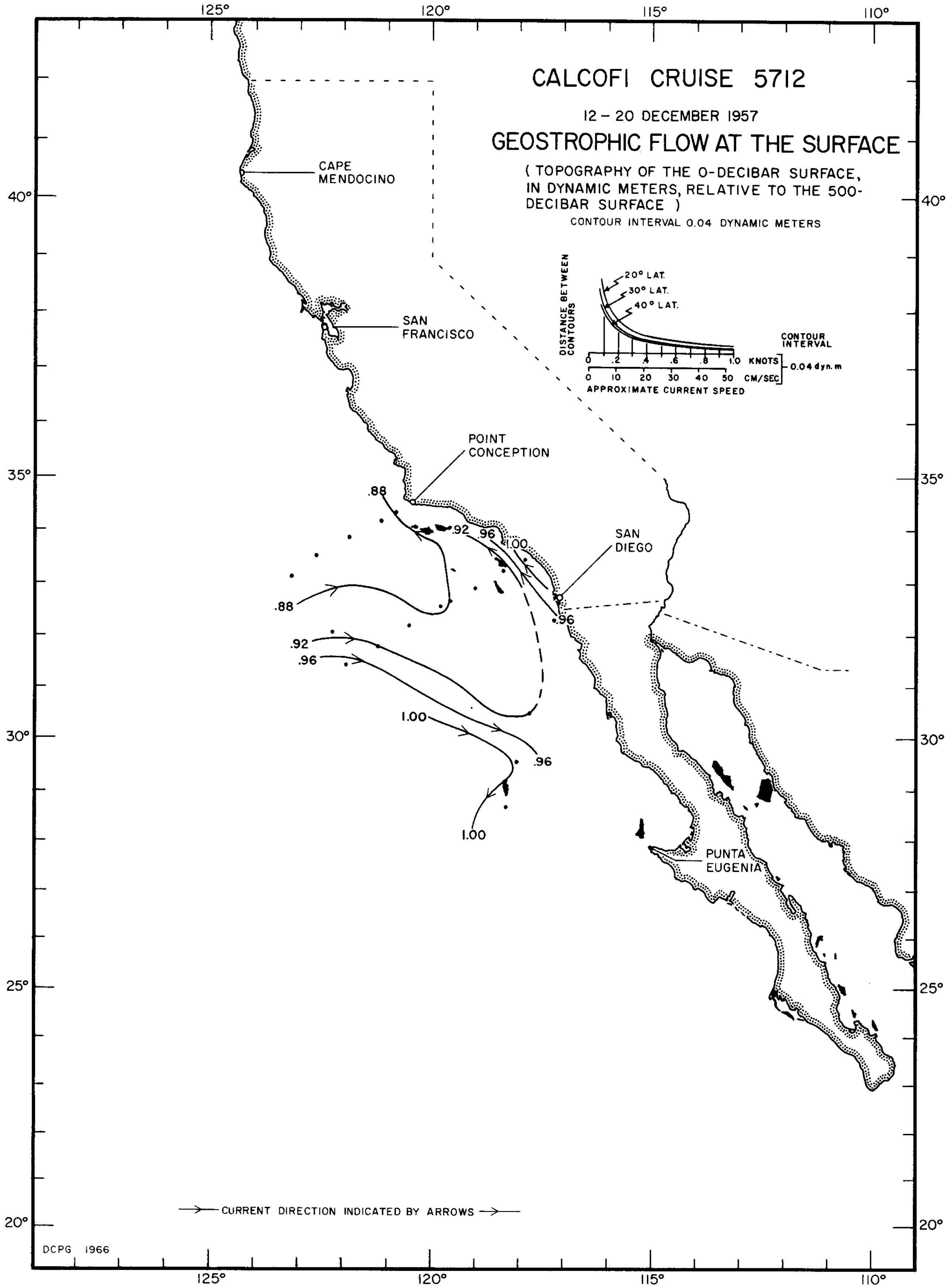

CALCOFI CRUISE 5710
4 OCTOBER – 8 NOVEMBER 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5710

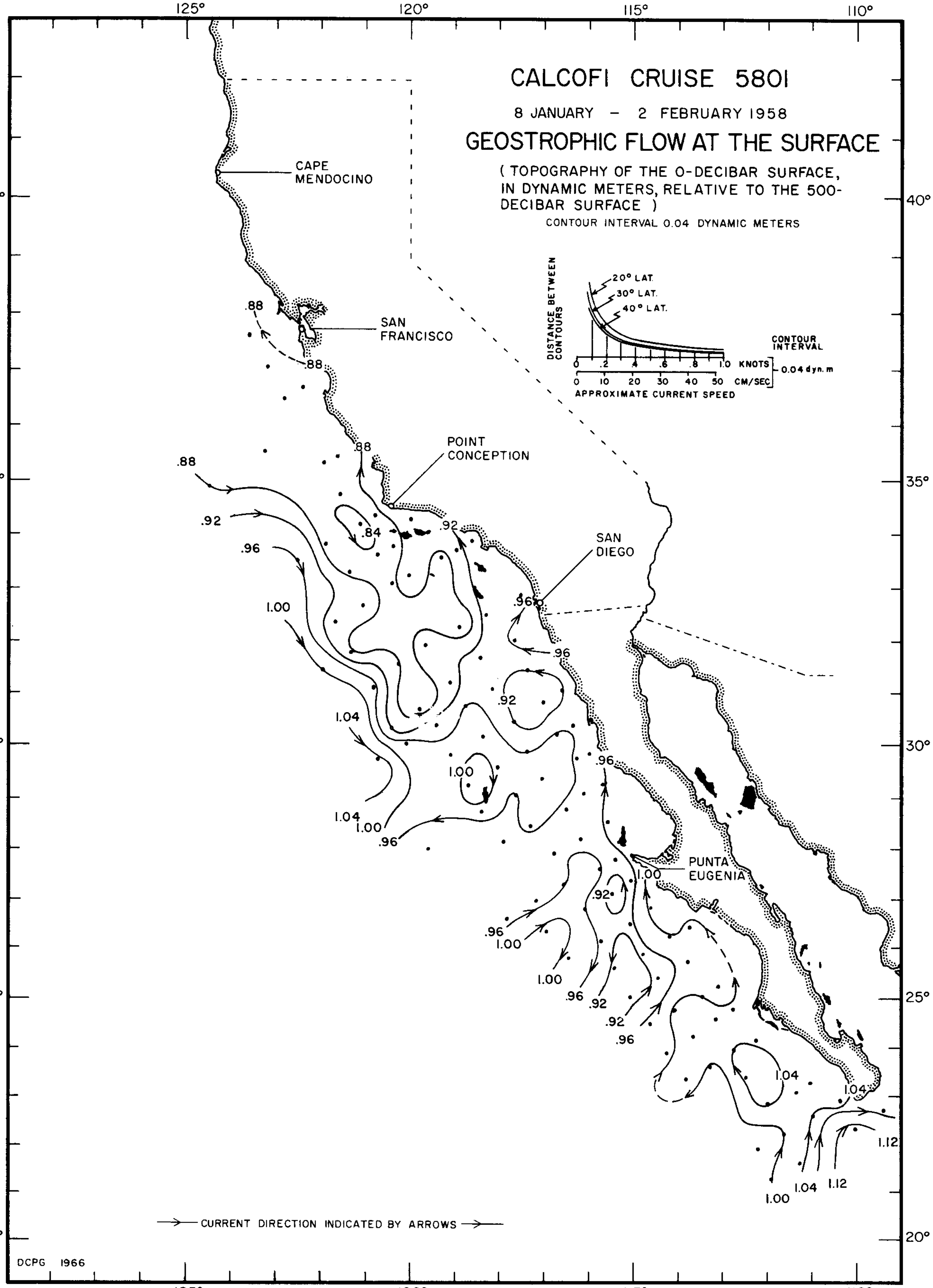

CALCOFI CRUISE 5711
16 - 25 NOVEMBER 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db

5711


CALCOFI CRUISE 5712
12 – 20 DECEMBER 1957
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.88
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

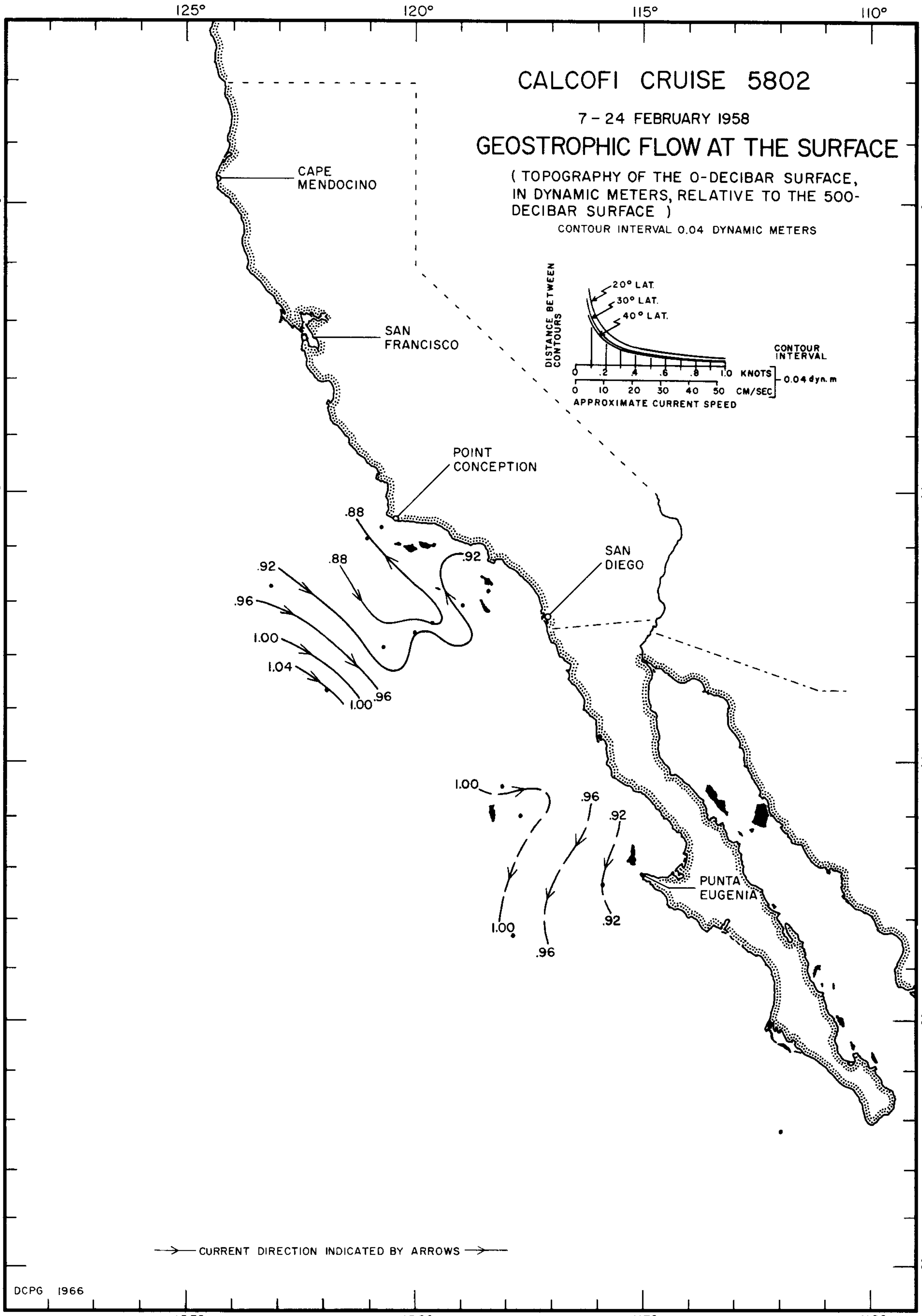
0/500 db
5712



CALCOFI CRUISE 5801
8 JANUARY – 2 FEBRUARY 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

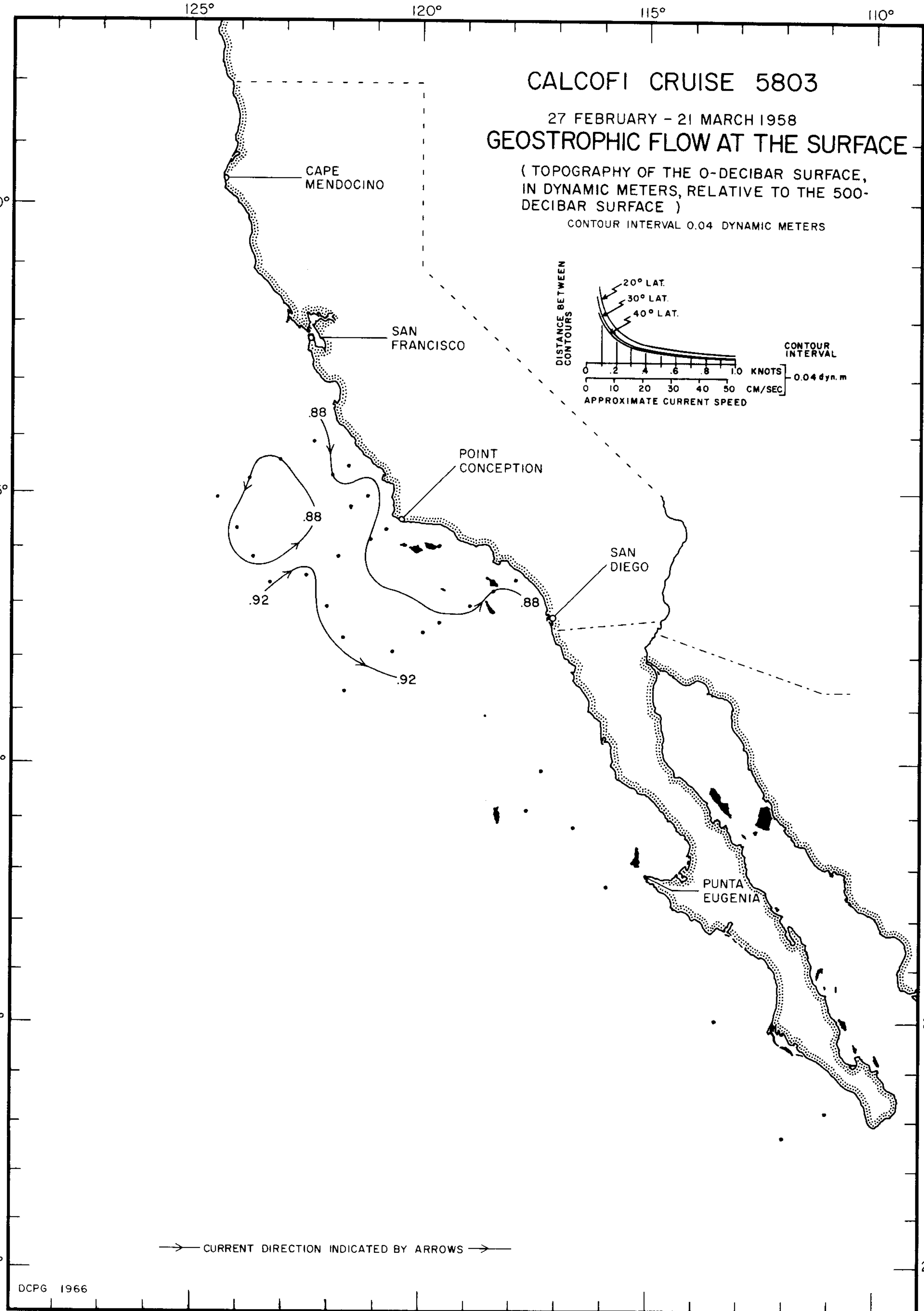
0/500 db

5801

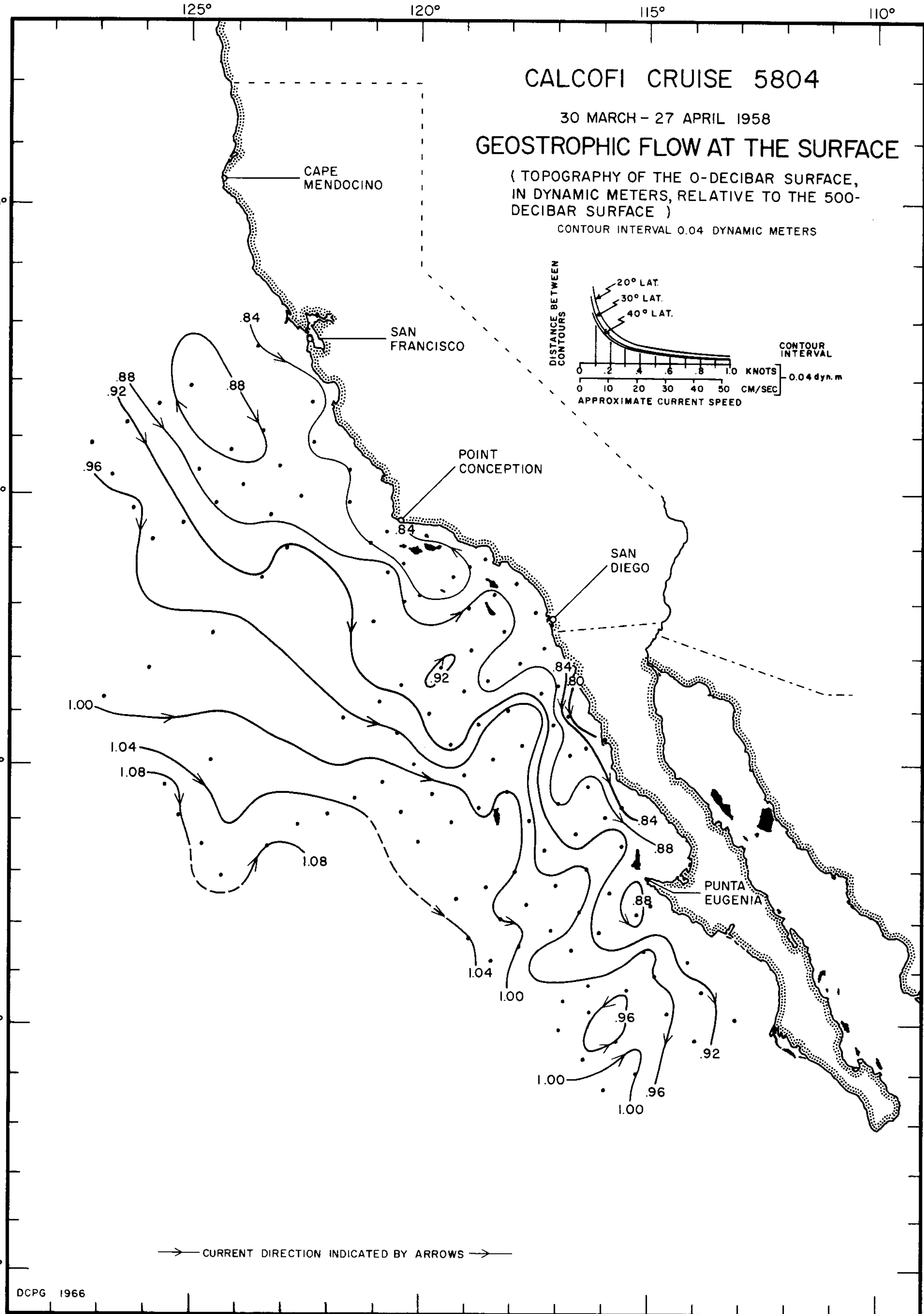

CALCOFI CRUISE 5802
7 - 24 FEBRUARY 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.88
.92
.96
1.00
1.04
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

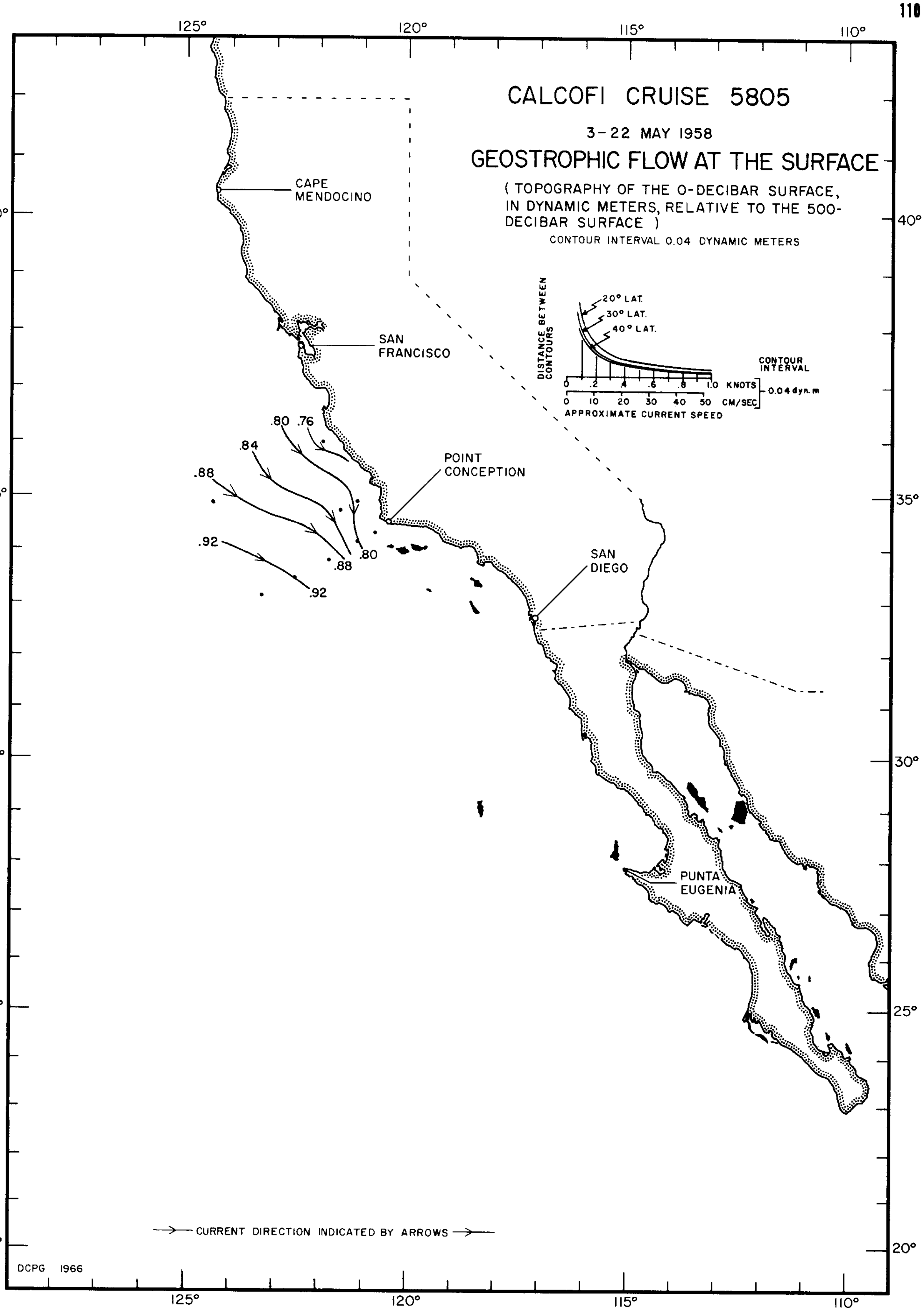
5802


CALCOFI CRUISE 5803
27 FEBRUARY - 21 MARCH 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
125° 120° 115° 110°
40° 35° 30° 25° 20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.88
.88
.88
.92
.92
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5803


CALCOFI CRUISE 5804
30 MARCH - 27 APRIL 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

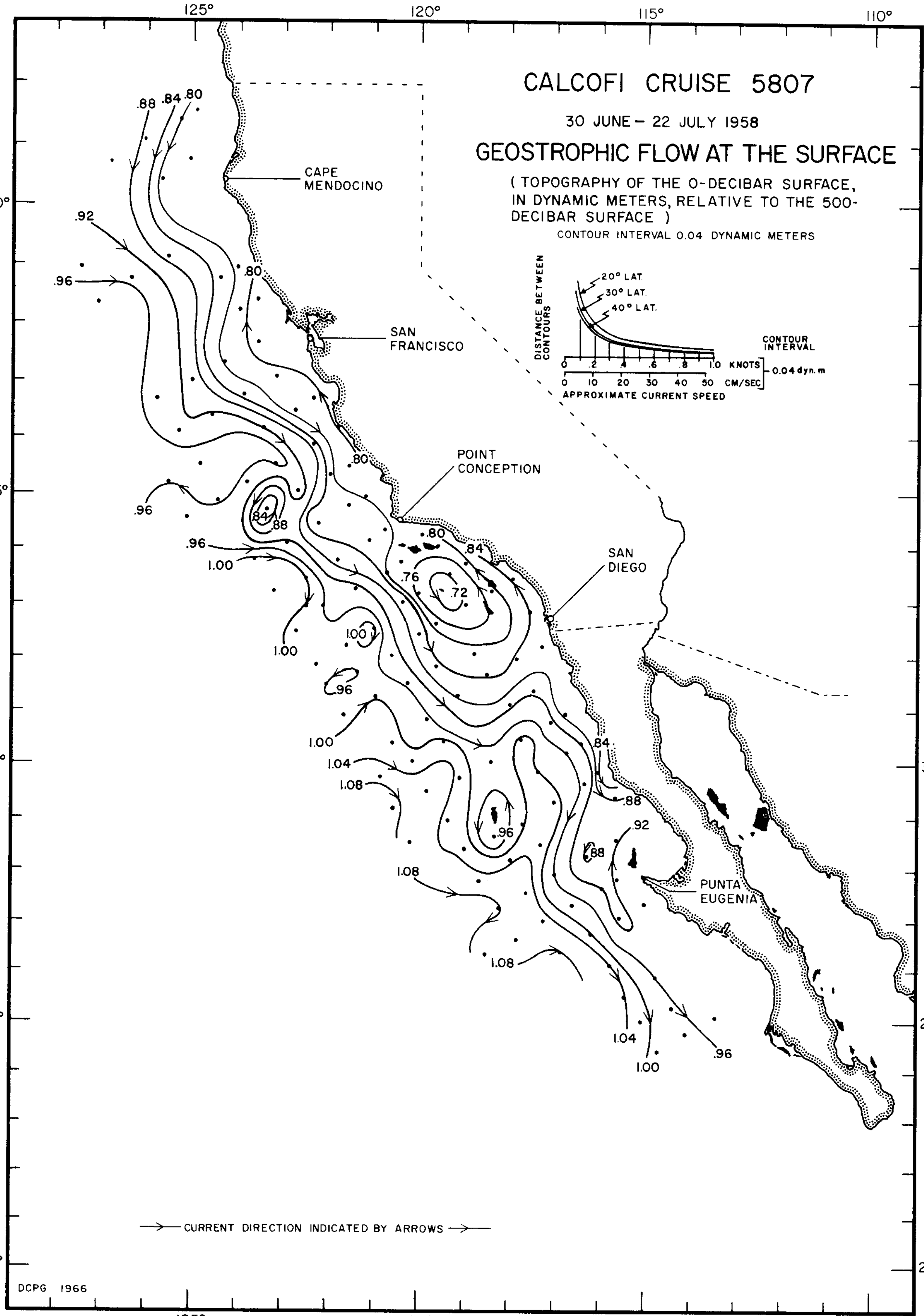
0/500 db
5804



CALCOFI CRUISE 5805
3-22 MAY 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.76
.80
.84
.88
.92
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

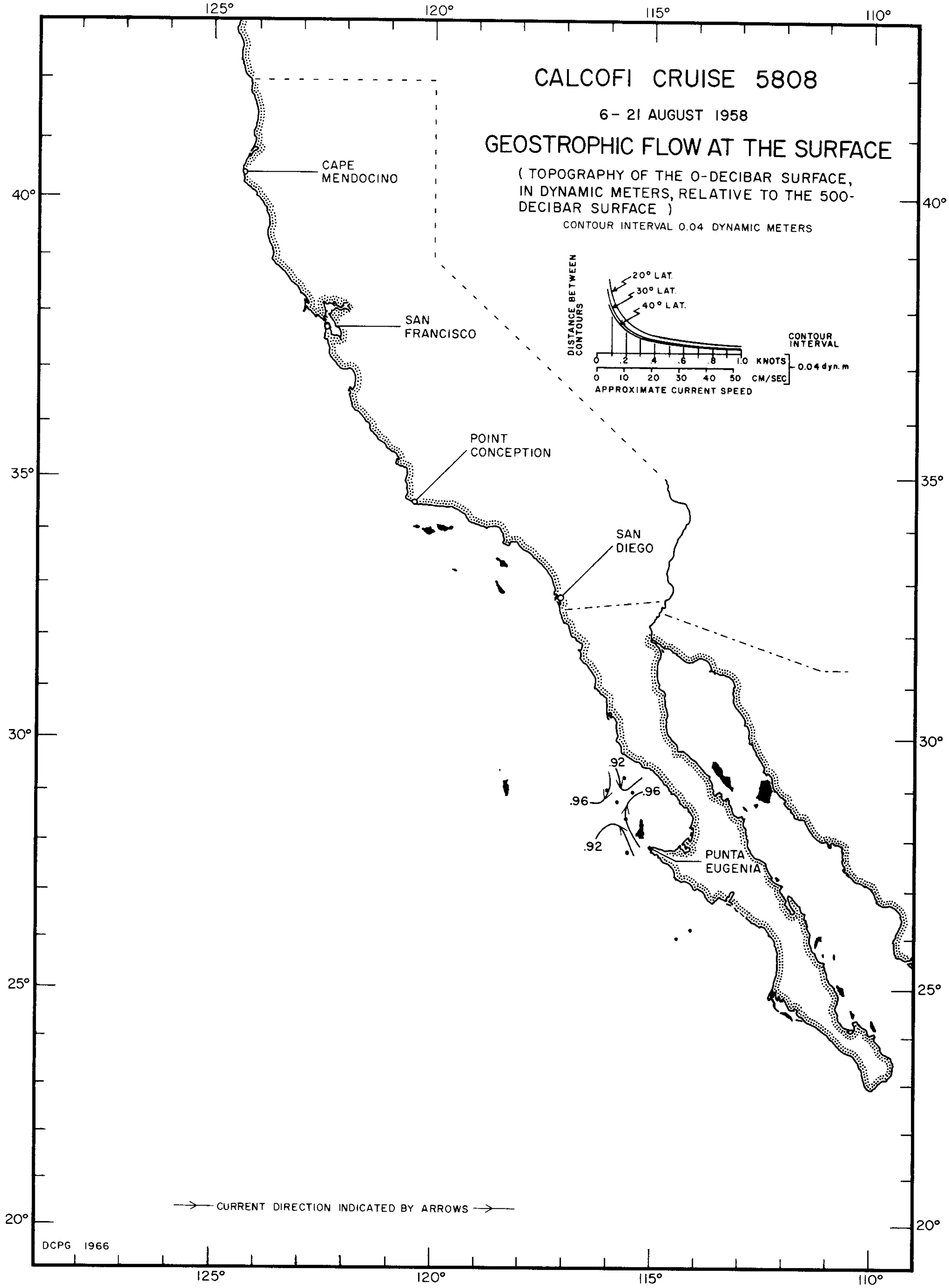
0/500 db

5805



CALCOFI CRUISE 5807
30 JUNE – 22 JULY 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

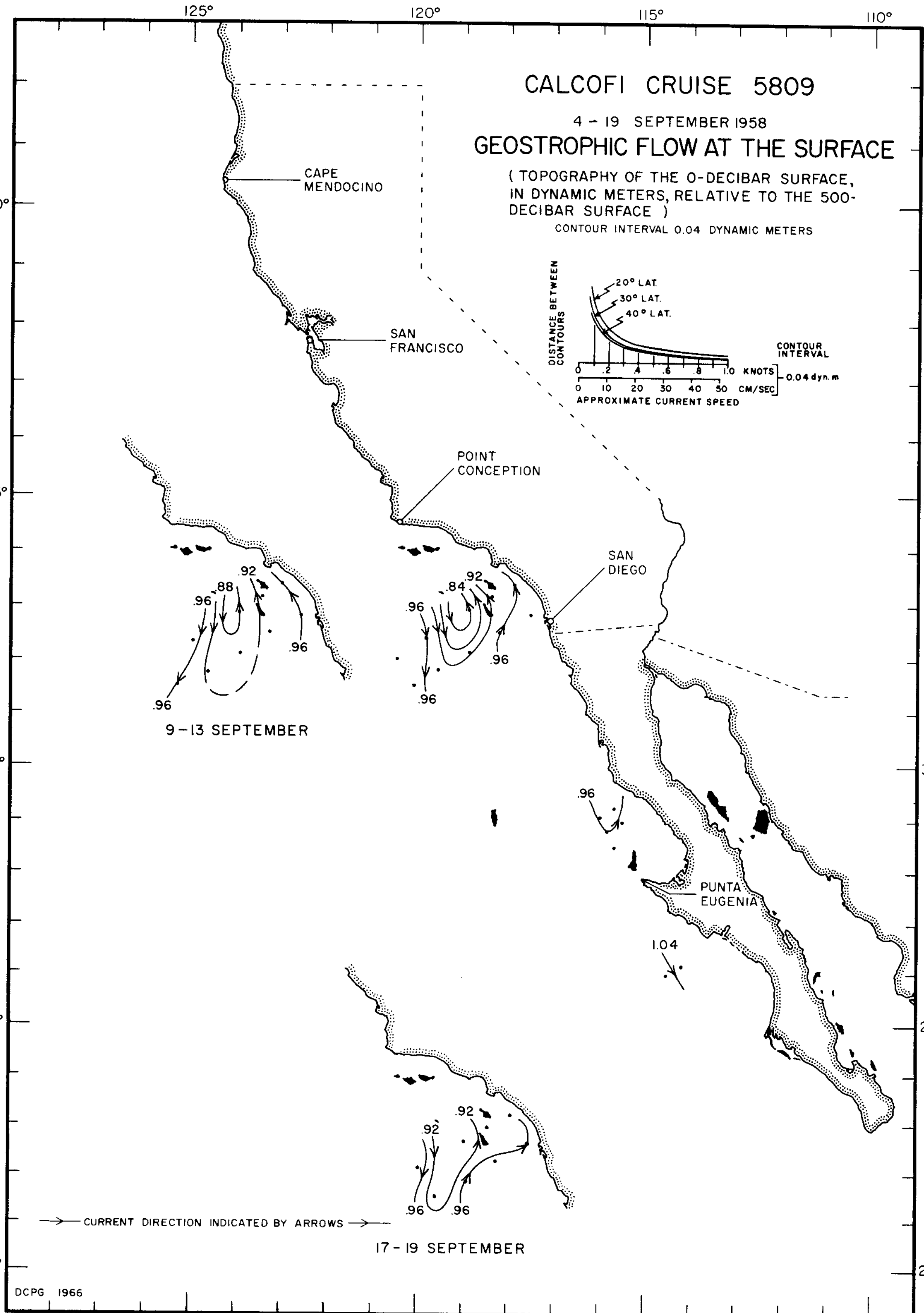
0/500 db
5807



CALCOFI CRUISE 5808
6 - 21 AUGUST 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.92
.96
.96
.92
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

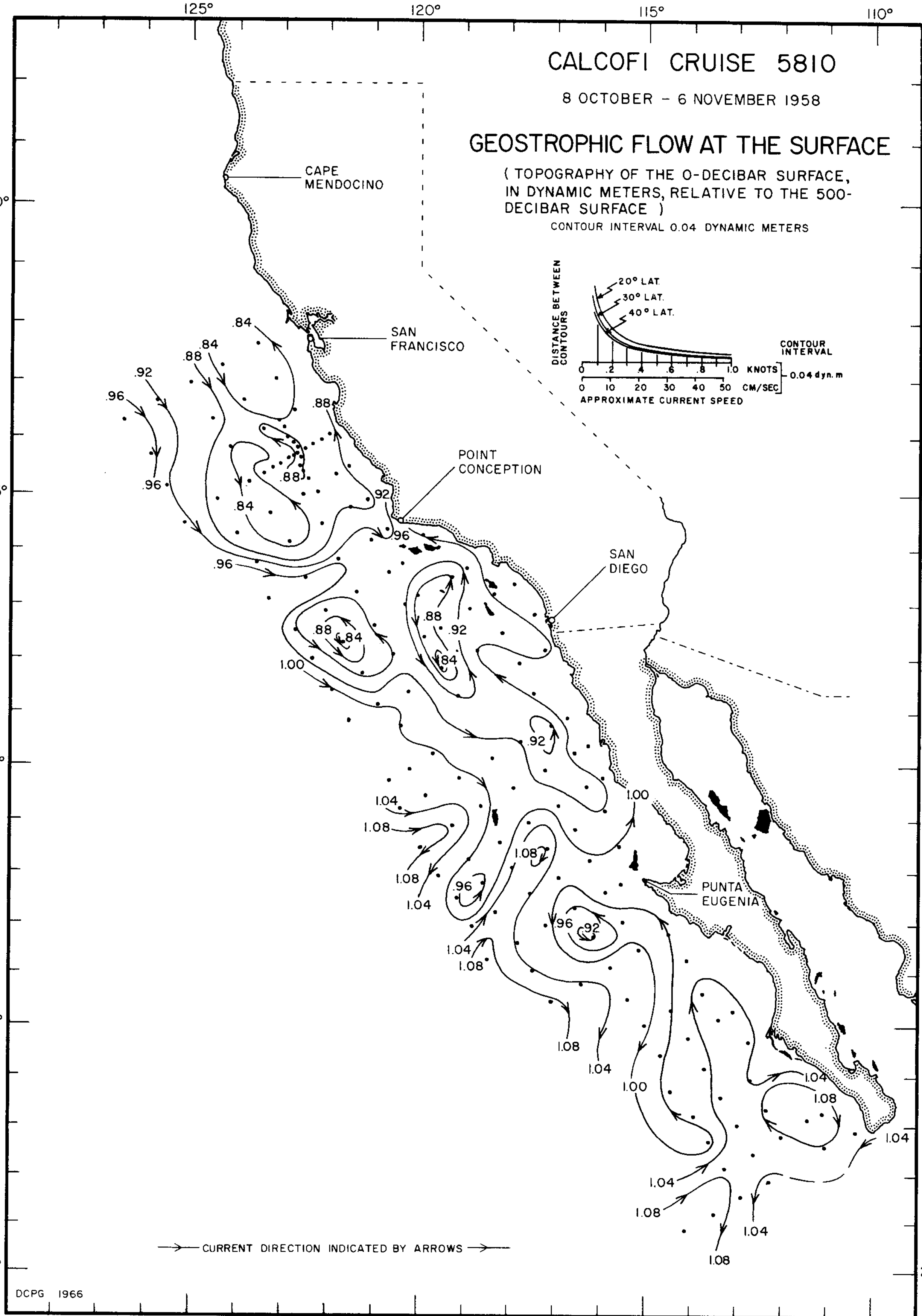
0/500 db

5808


CALCOFI CRUISE 5809
4 - 19 SEPTEMBER 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
125°
120°
115°
110°
40°
35°
30°
25°
20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
9-13 SEPTEMBER
17-19 SEPTEMBER
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

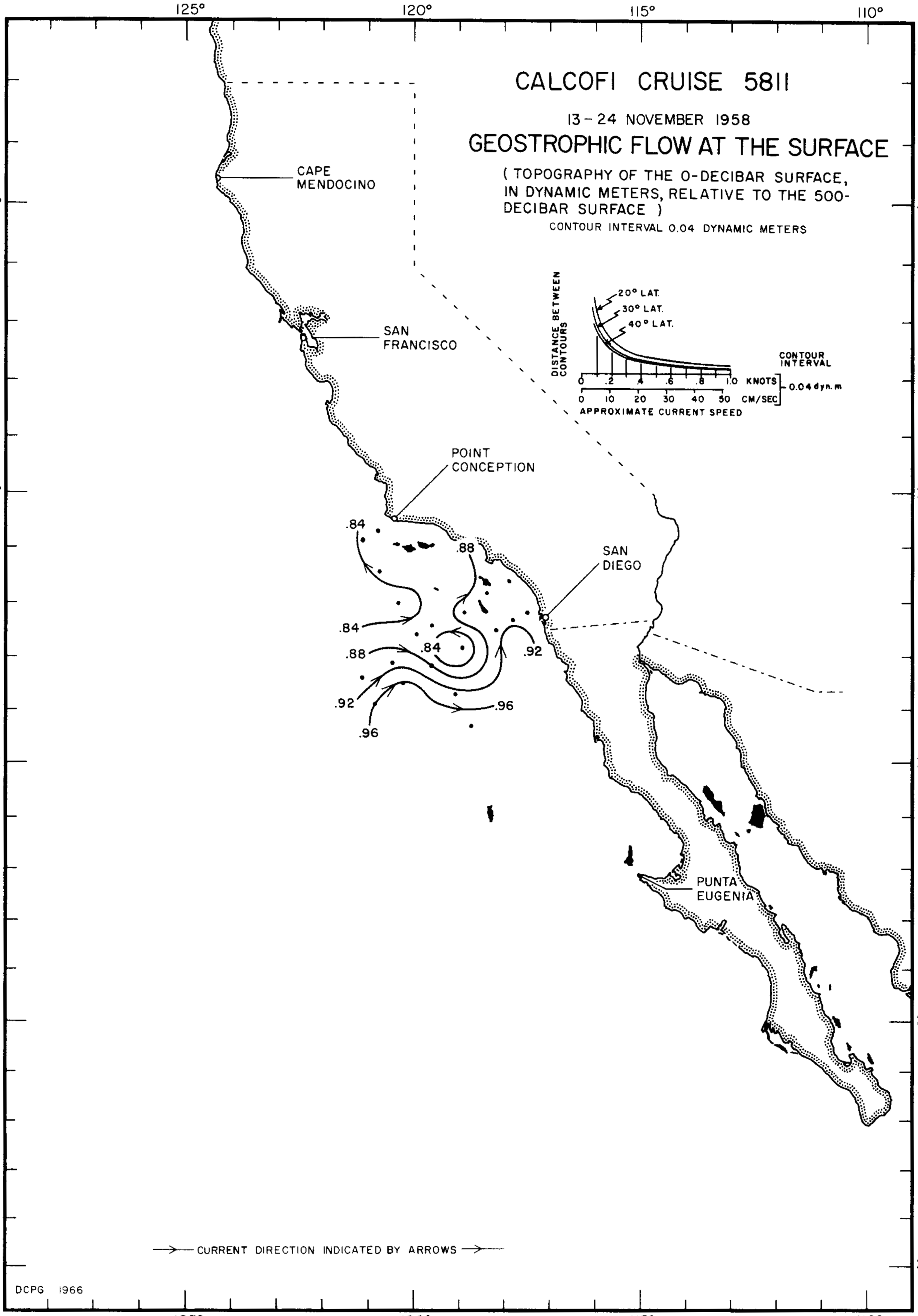
5809



CALCOFI CRUISE 5810
8 OCTOBER – 6 NOVEMBER 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
125° 120° 115° 110°
40° 35° 30° 25° 20°
DCPG 1966

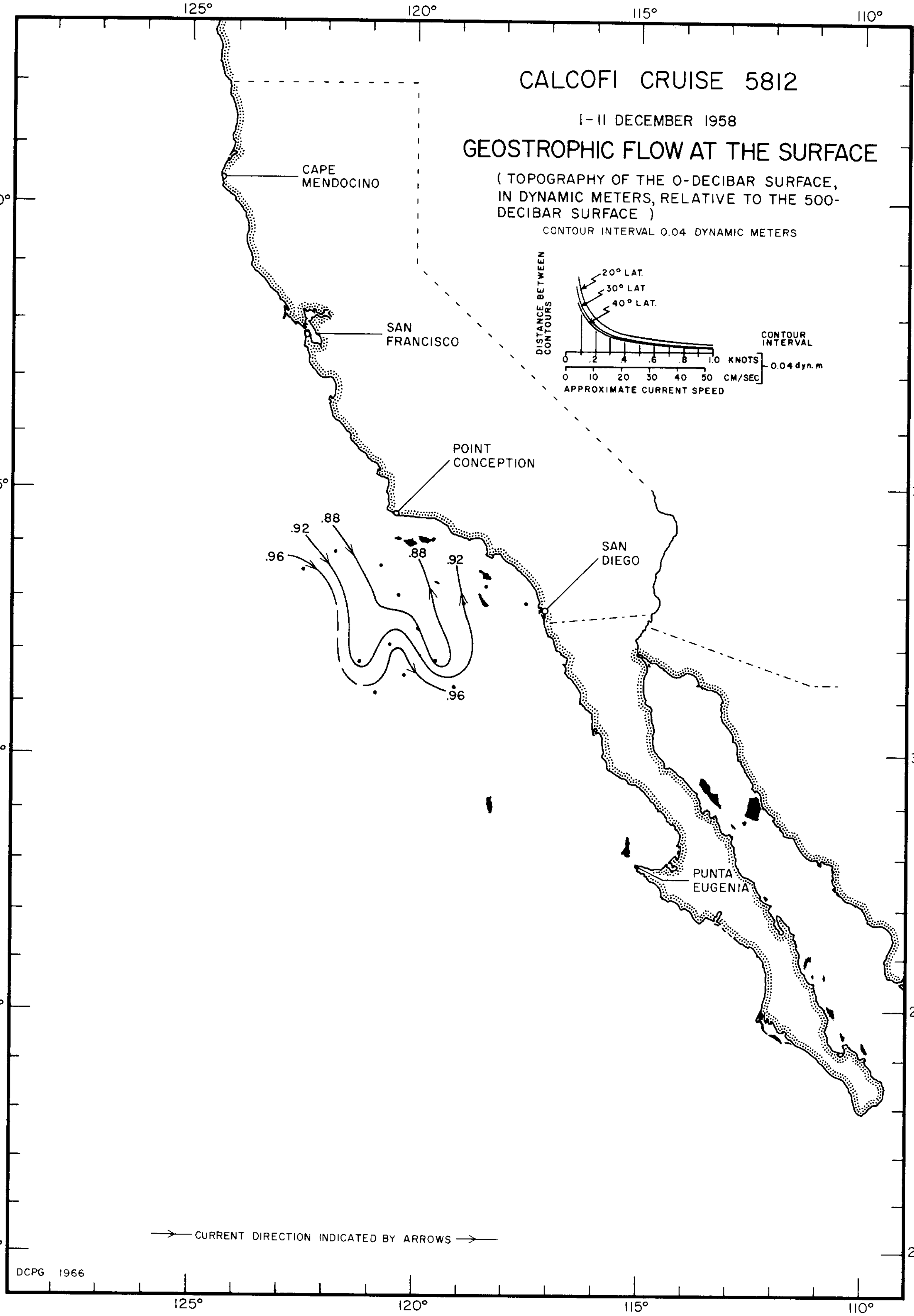
0/500 db

5810

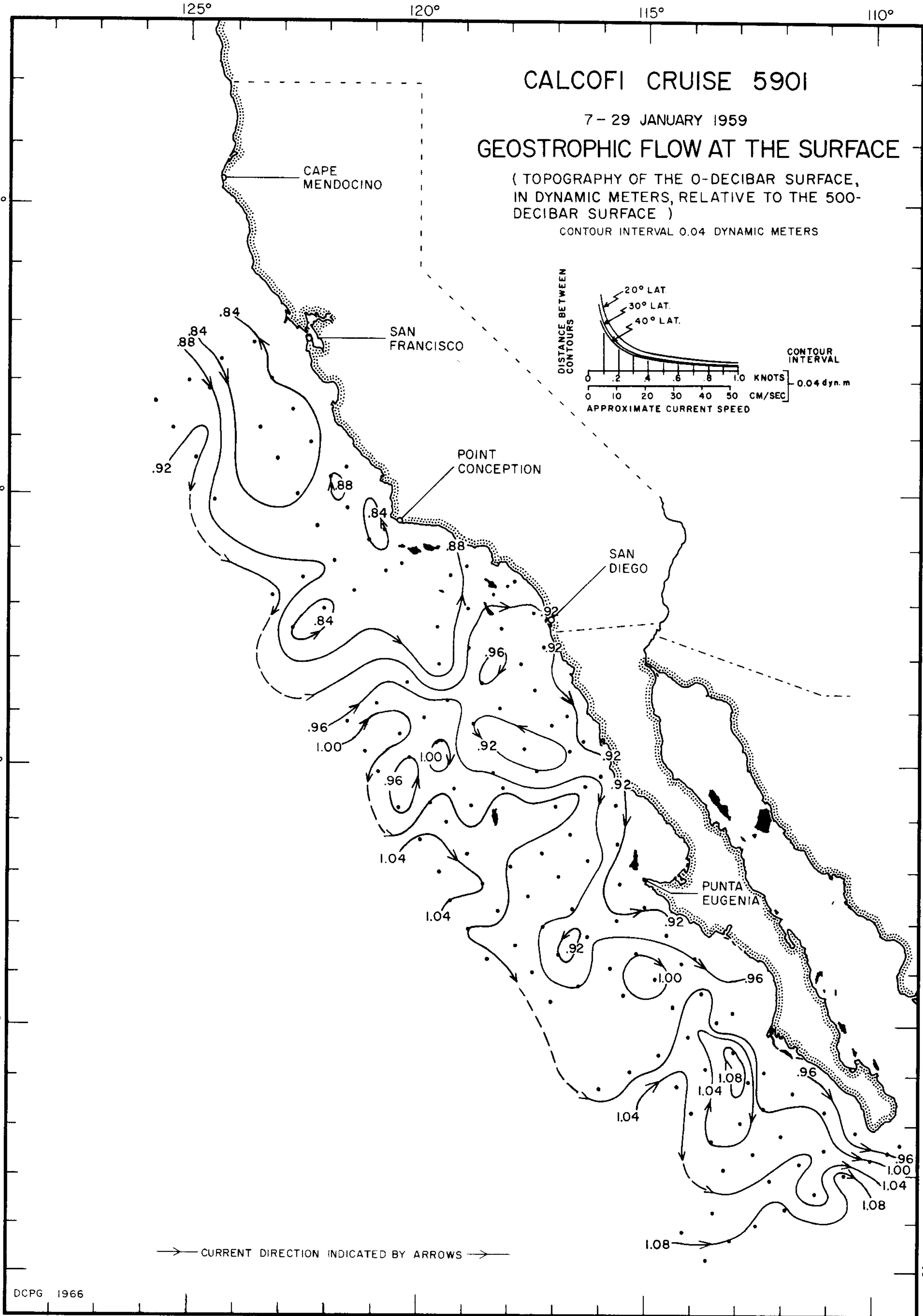

CALCOFI CRUISE 5811
13 - 24 NOVEMBER 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.88
.84
.88
.84
.92
.92
.96
.96
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

5811

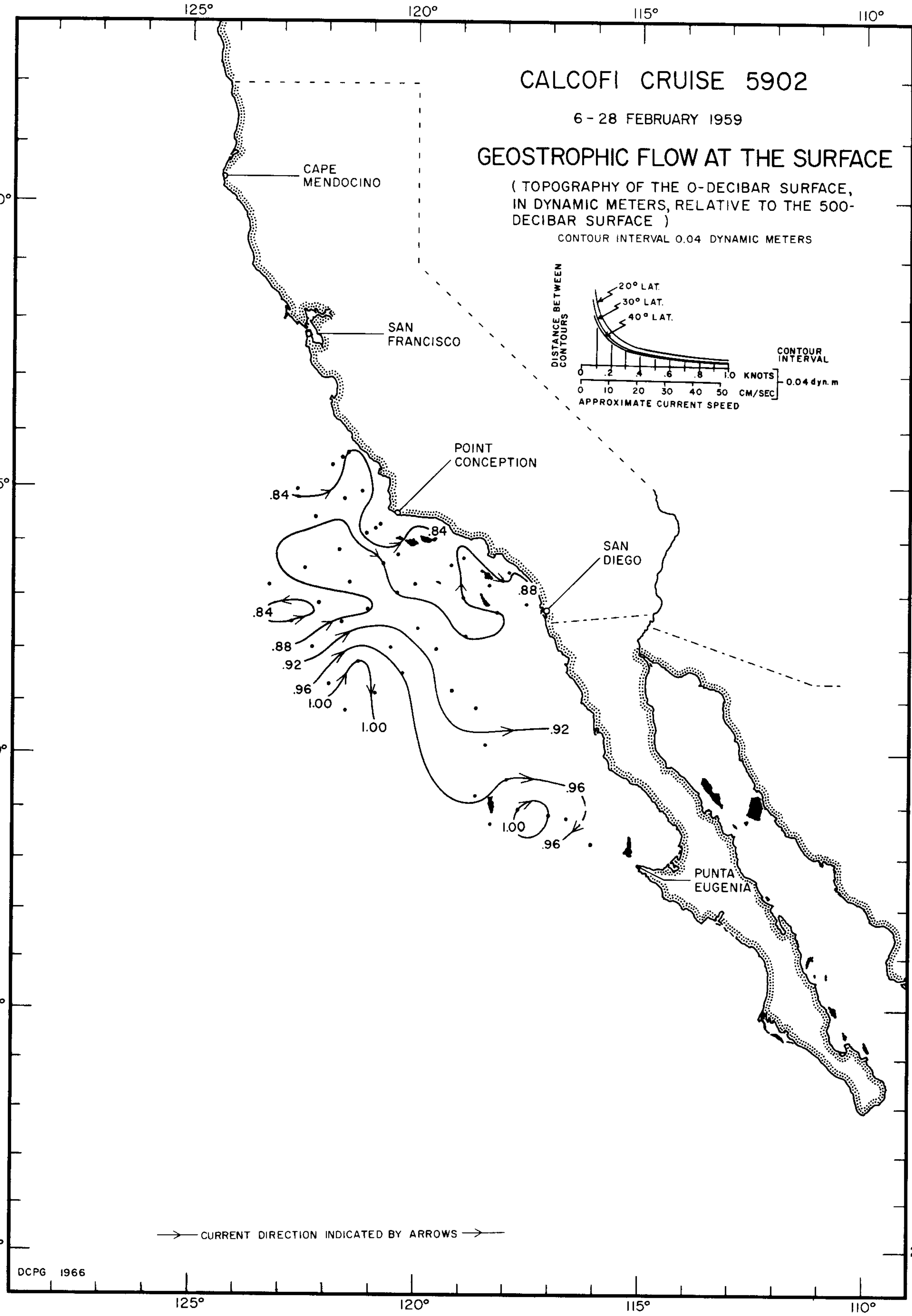

CALCOFI CRUISE 5812
1-11 DECEMBER 1958
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.88
.92
.96
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5812


CALCOFI CRUISE 5901
7 - 29 JANUARY 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

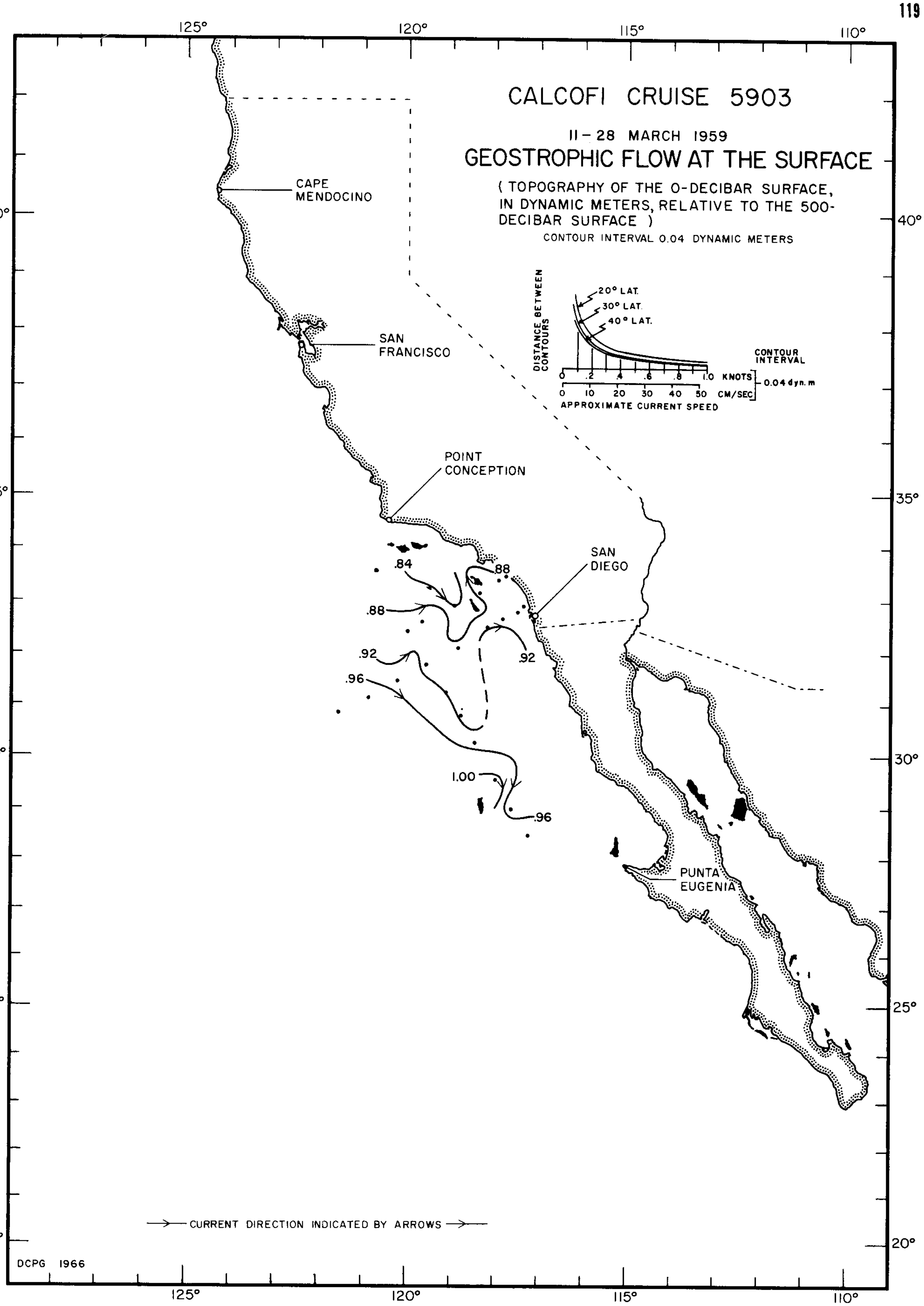
0/500 db

5901

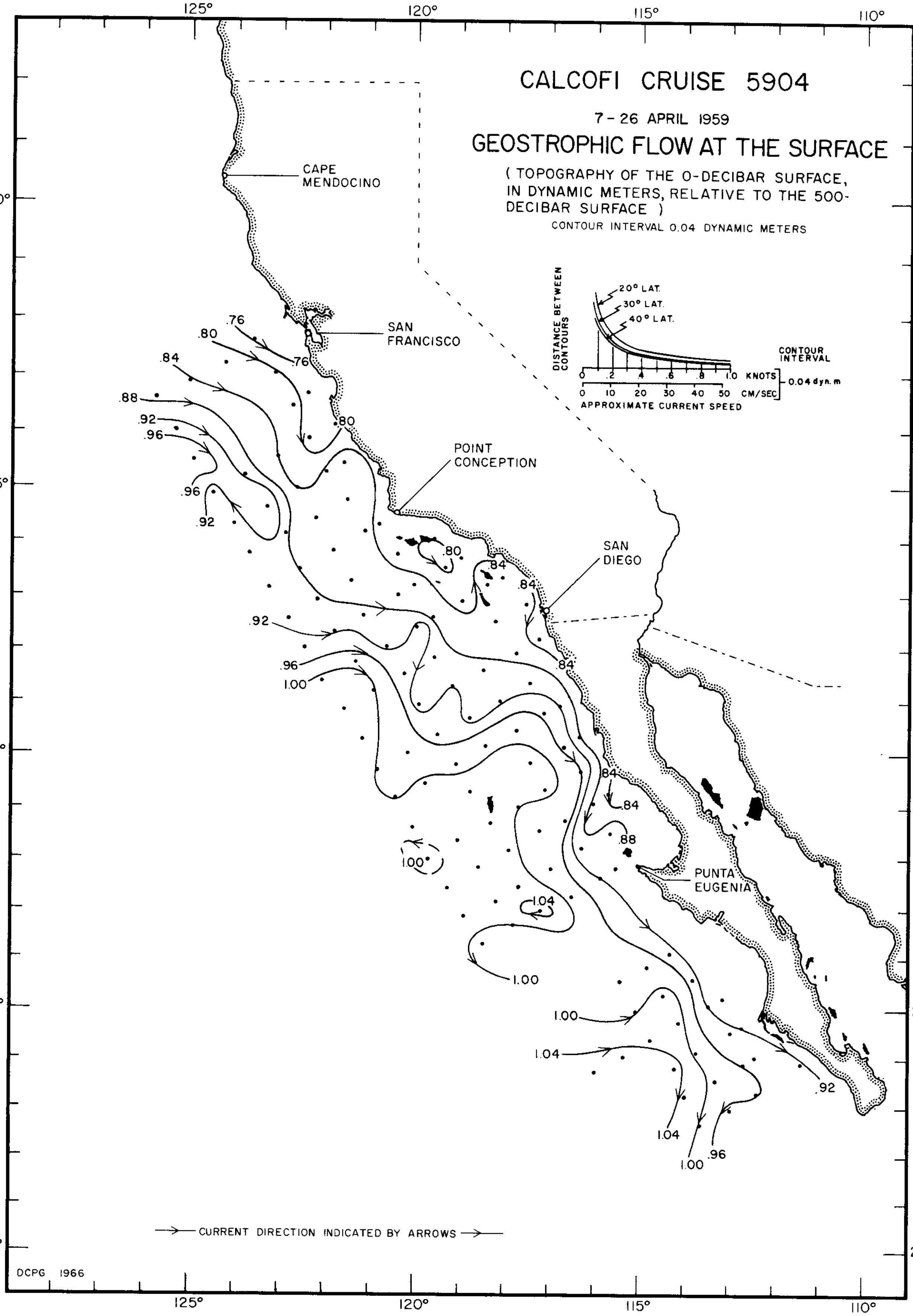


CALCOFI CRUISE 5902
6 - 28 FEBRUARY 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.84
.88
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

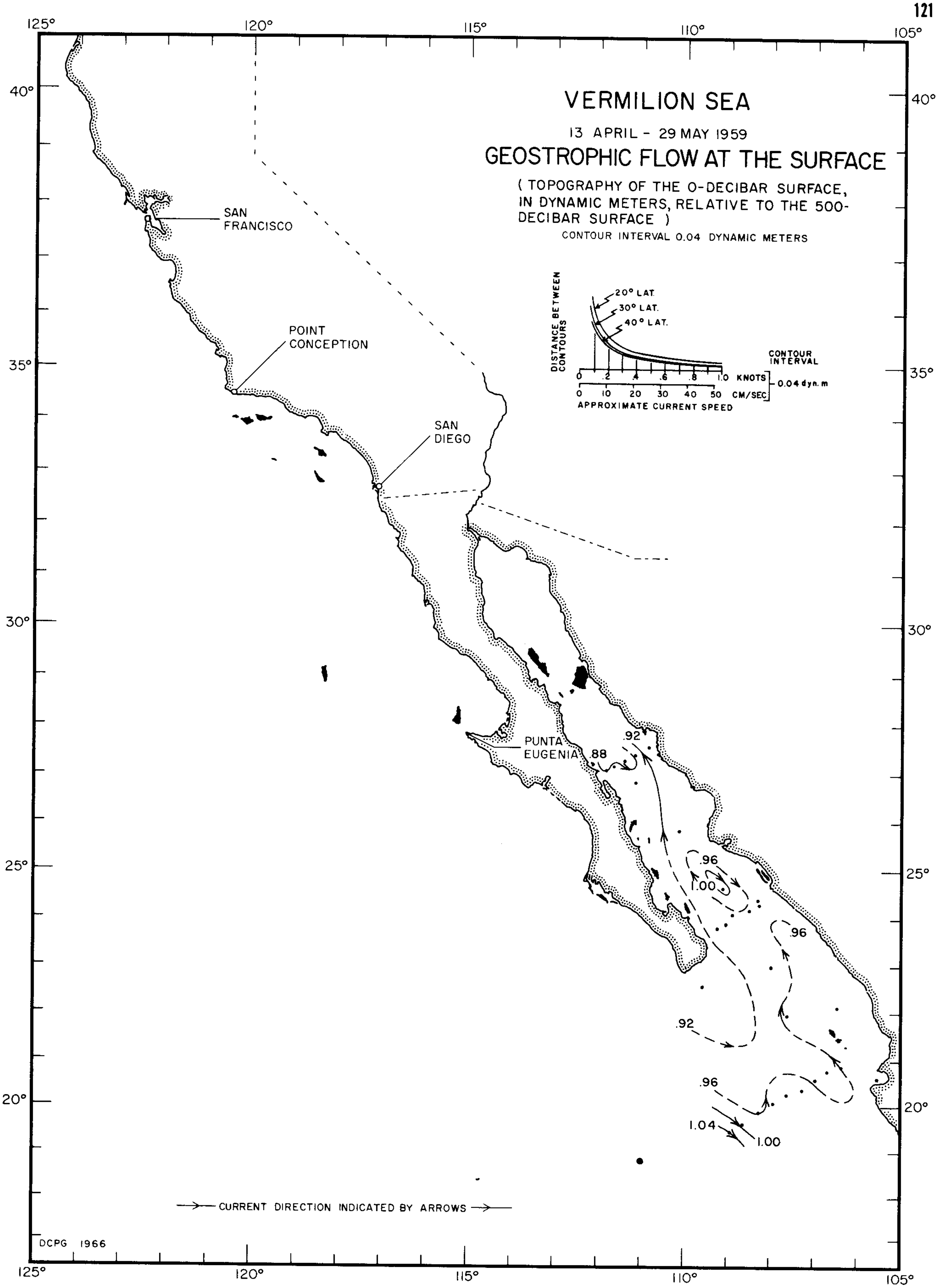
0/500 db
5902


CALCOFI CRUISE 5903
11 – 28 MARCH 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.88
.88
.92
.92
.96
1.00
.96
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5903

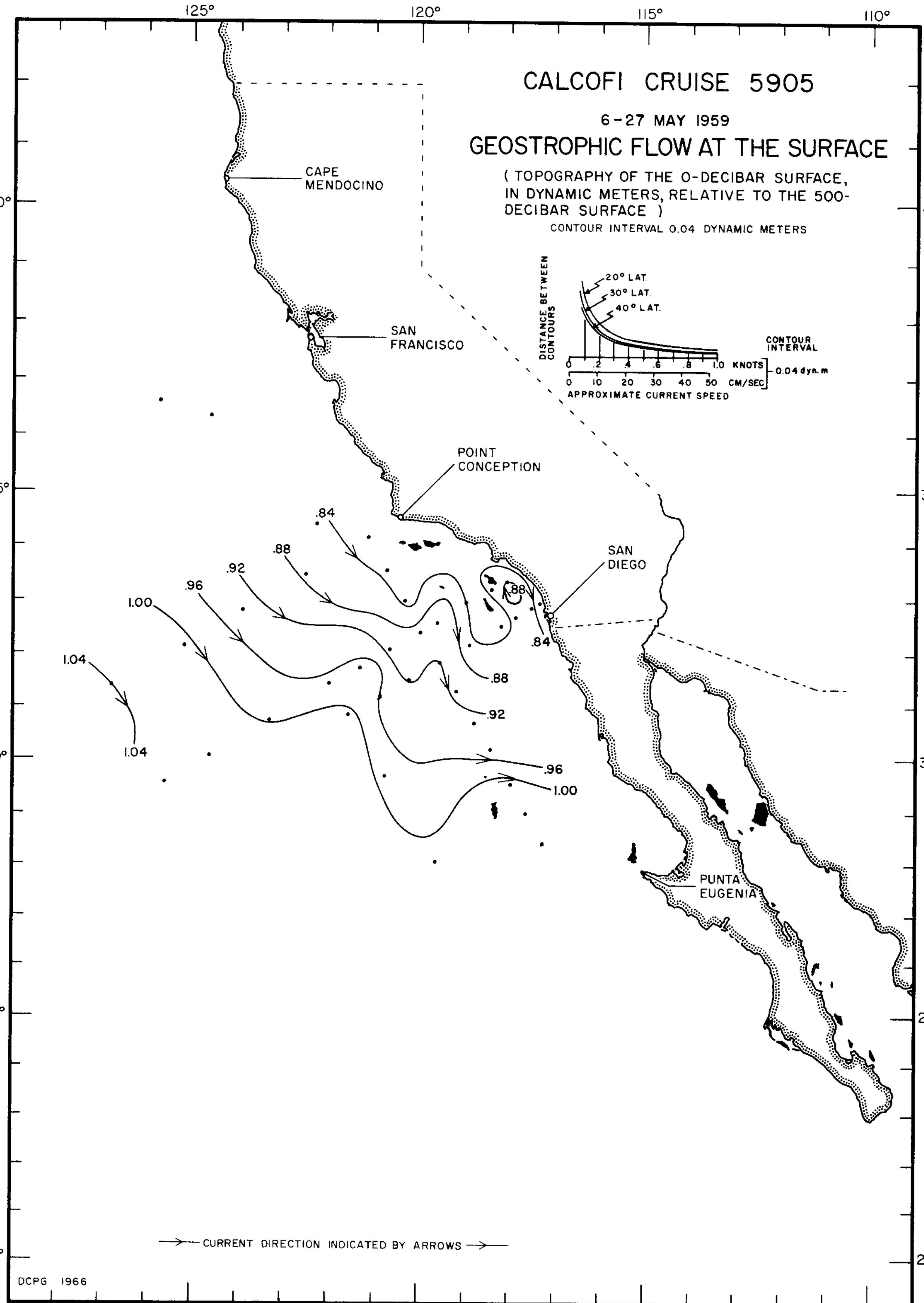

CALCOFI CRUISE 5904
7 - 26 APRIL 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5904

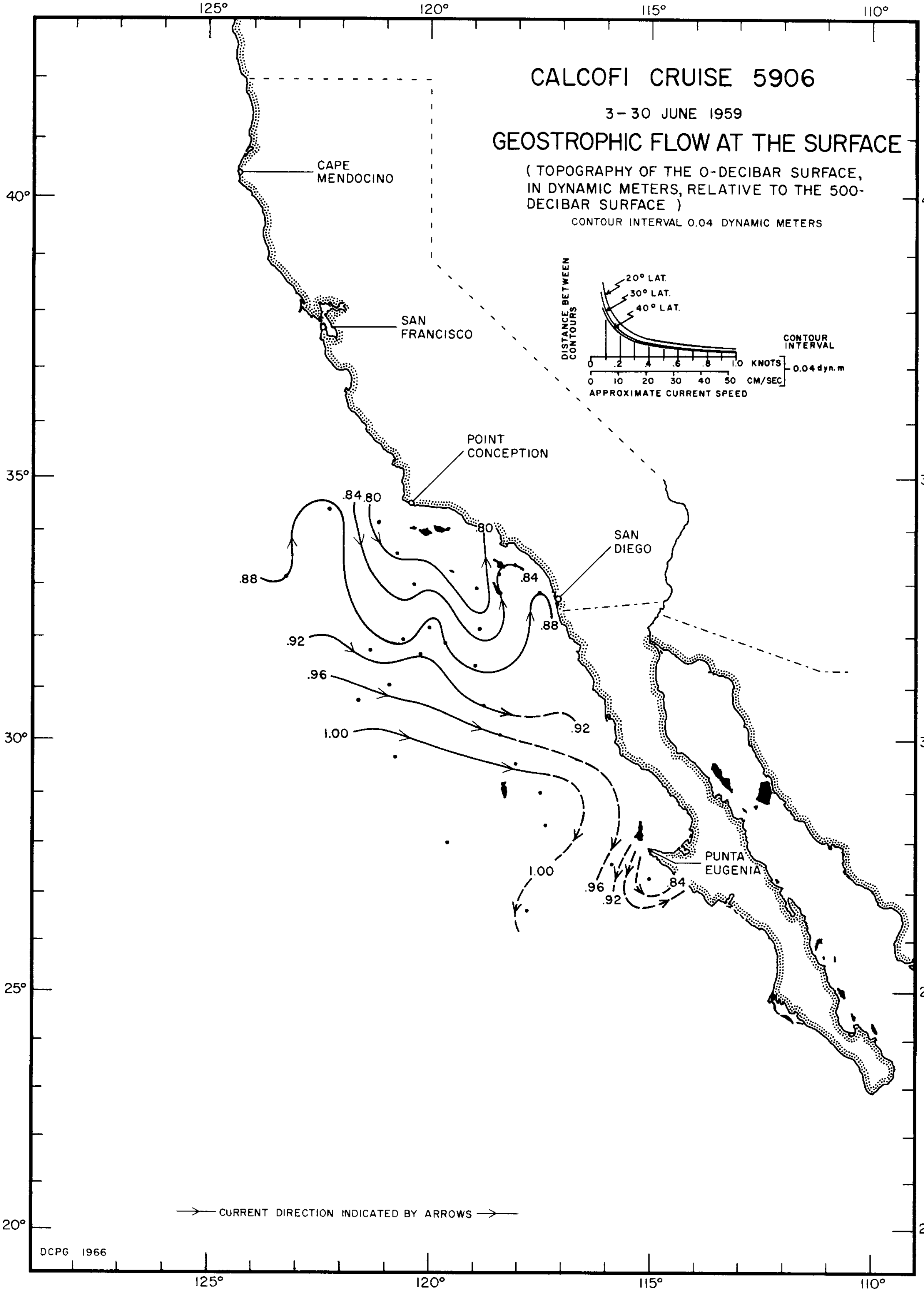


0/500 db

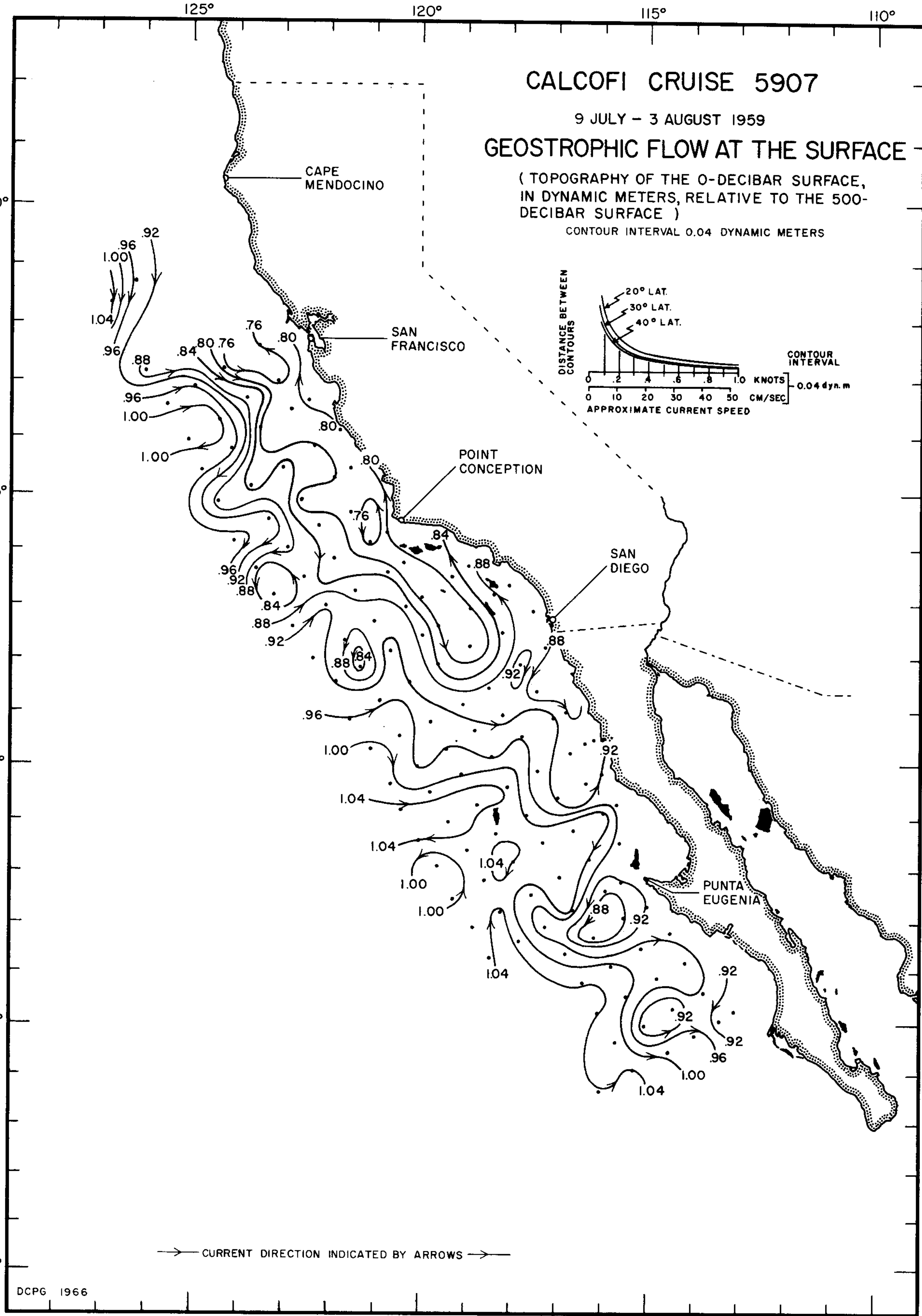
VERMILION SEA


CALCOFI CRUISE 5905
6-27 MAY 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

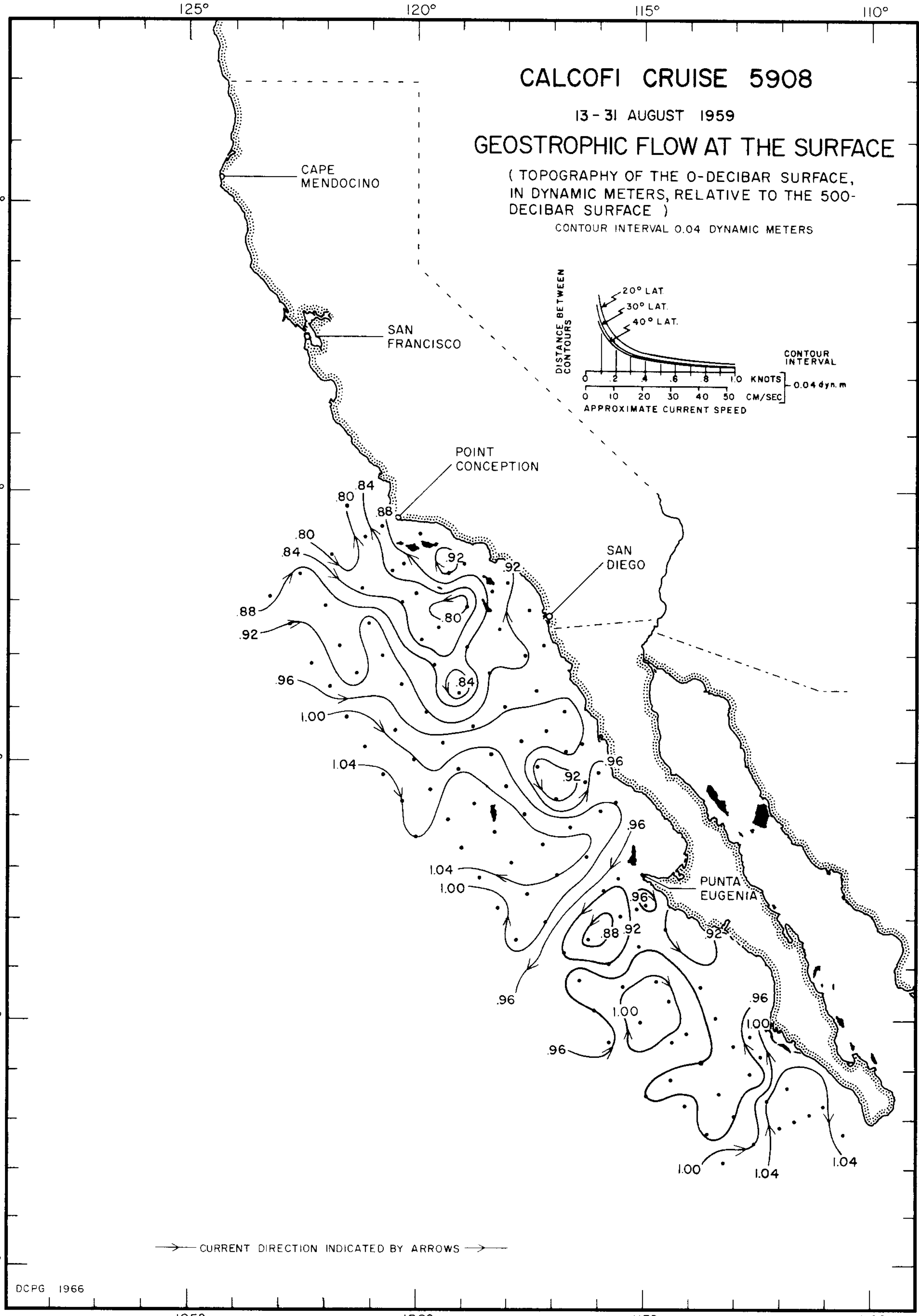
0/500 db
5905


CALCOFI CRUISE 5906
3-30 JUNE 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.80
.88
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
5906

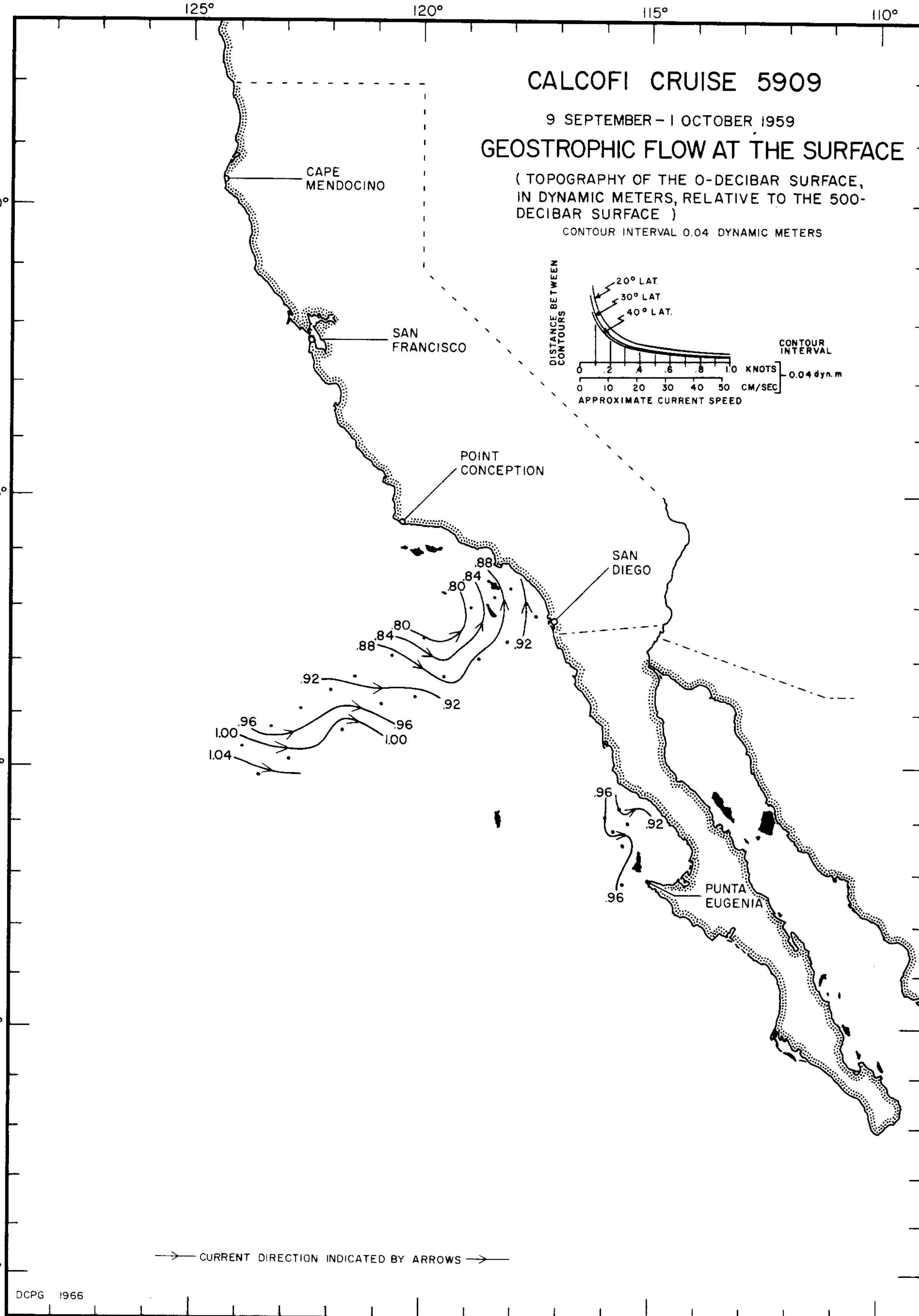

CALCOFI CRUISE 5907
9 JULY – 3 AUGUST 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
5907


CALCOFI CRUISE 5908
13-31 AUGUST 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

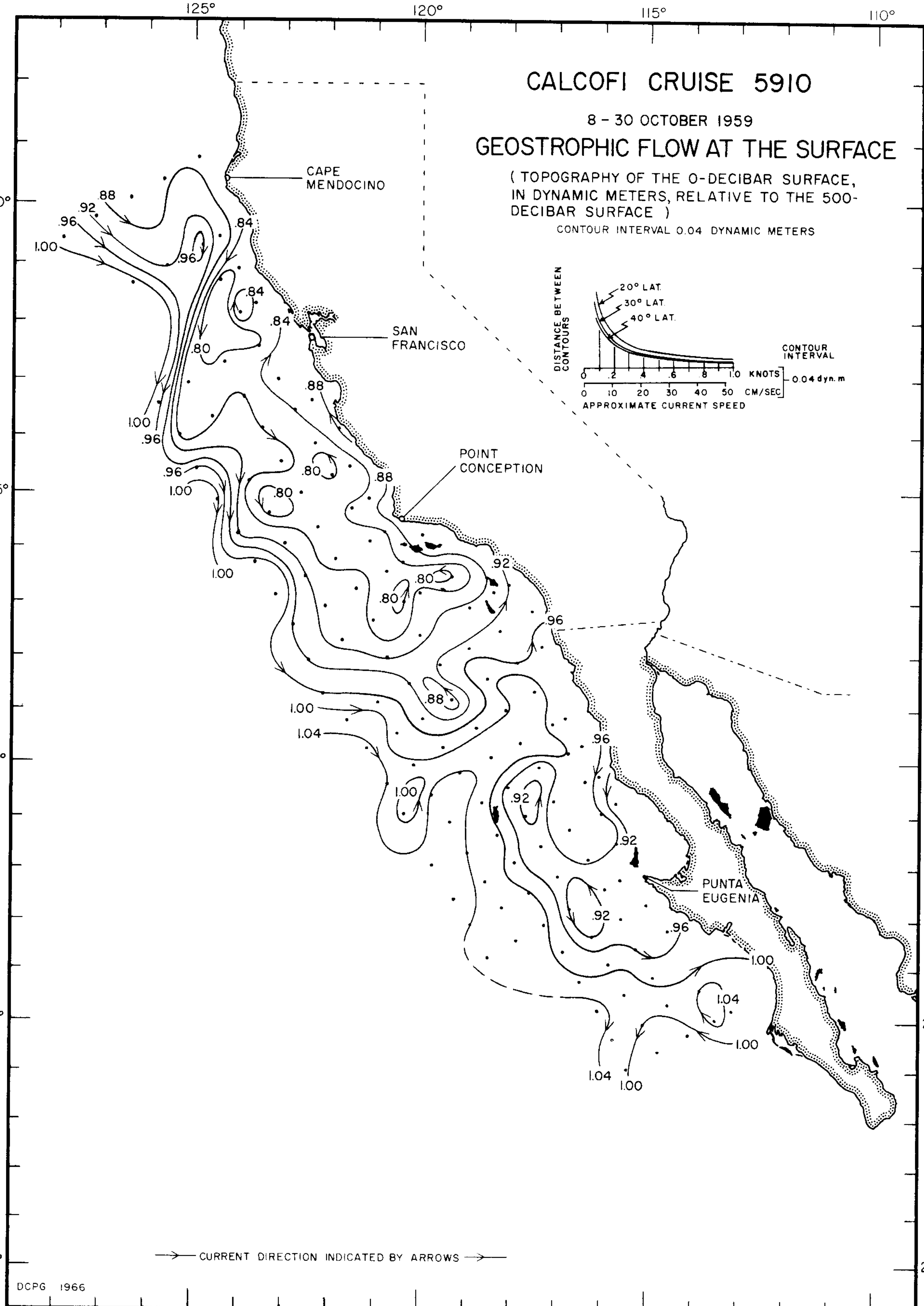
0/500 db

5908


CALCOFI CRUISE 5909
9 SEPTEMBER – 1 OCTOBER 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.80
.84
.88
.92
.96
1.00
1.04
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

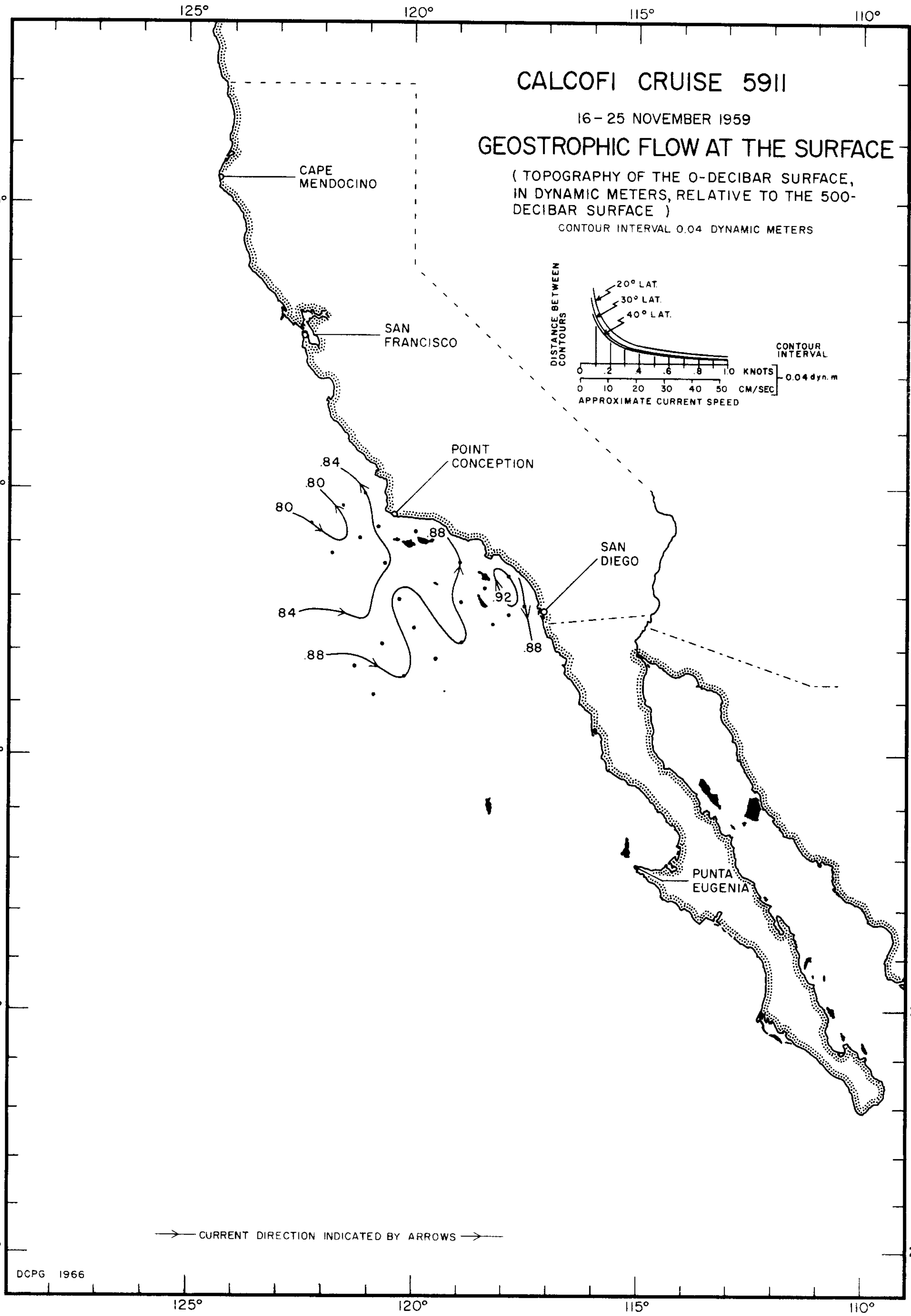
5909



CALCOFI CRUISE 5910
8 – 30 OCTOBER 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

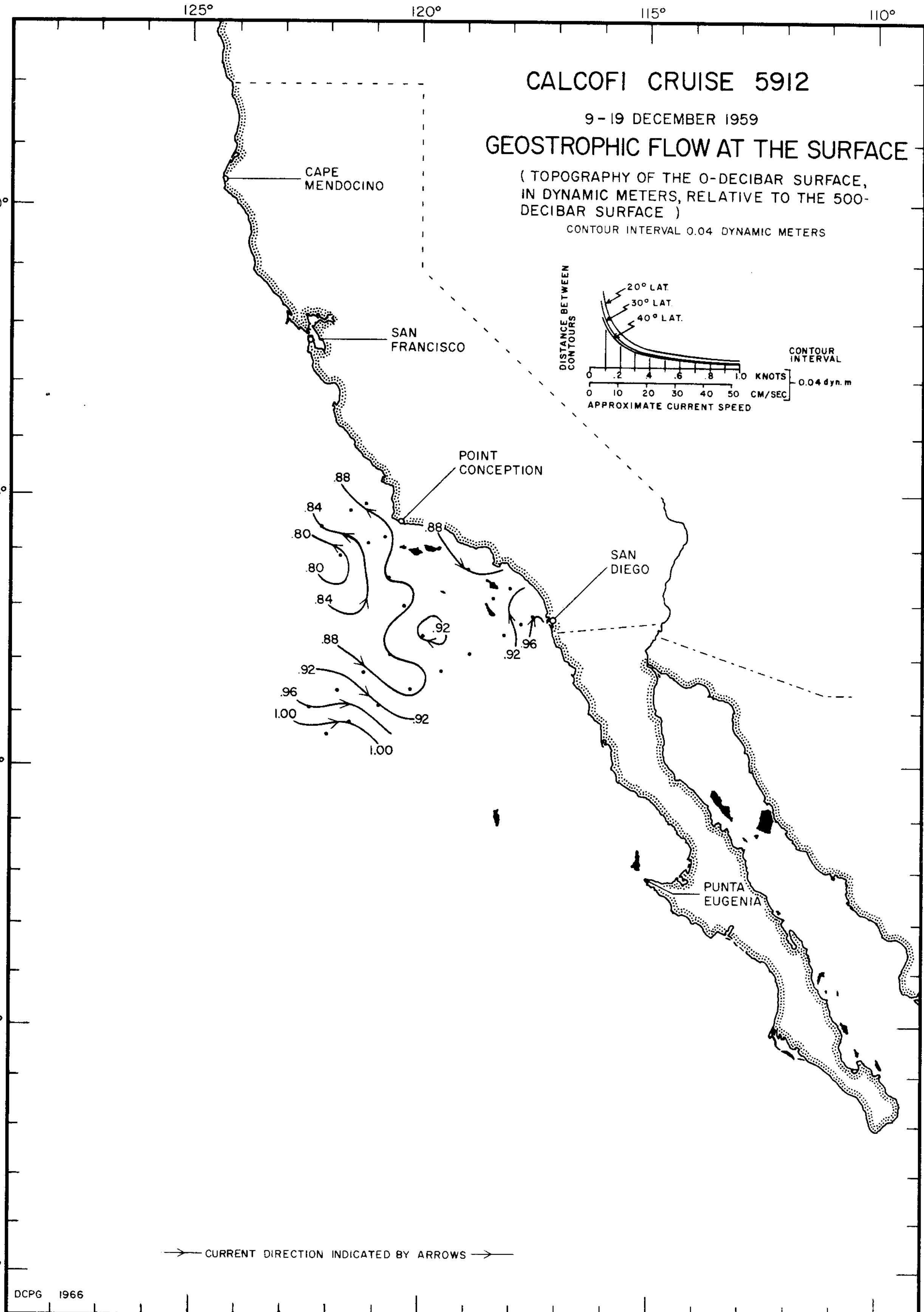
0/500 db

5910



CALCOFI CRUISE 5911
16 - 25 NOVEMBER 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.80
80
.88
.92
84
.88
.88
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

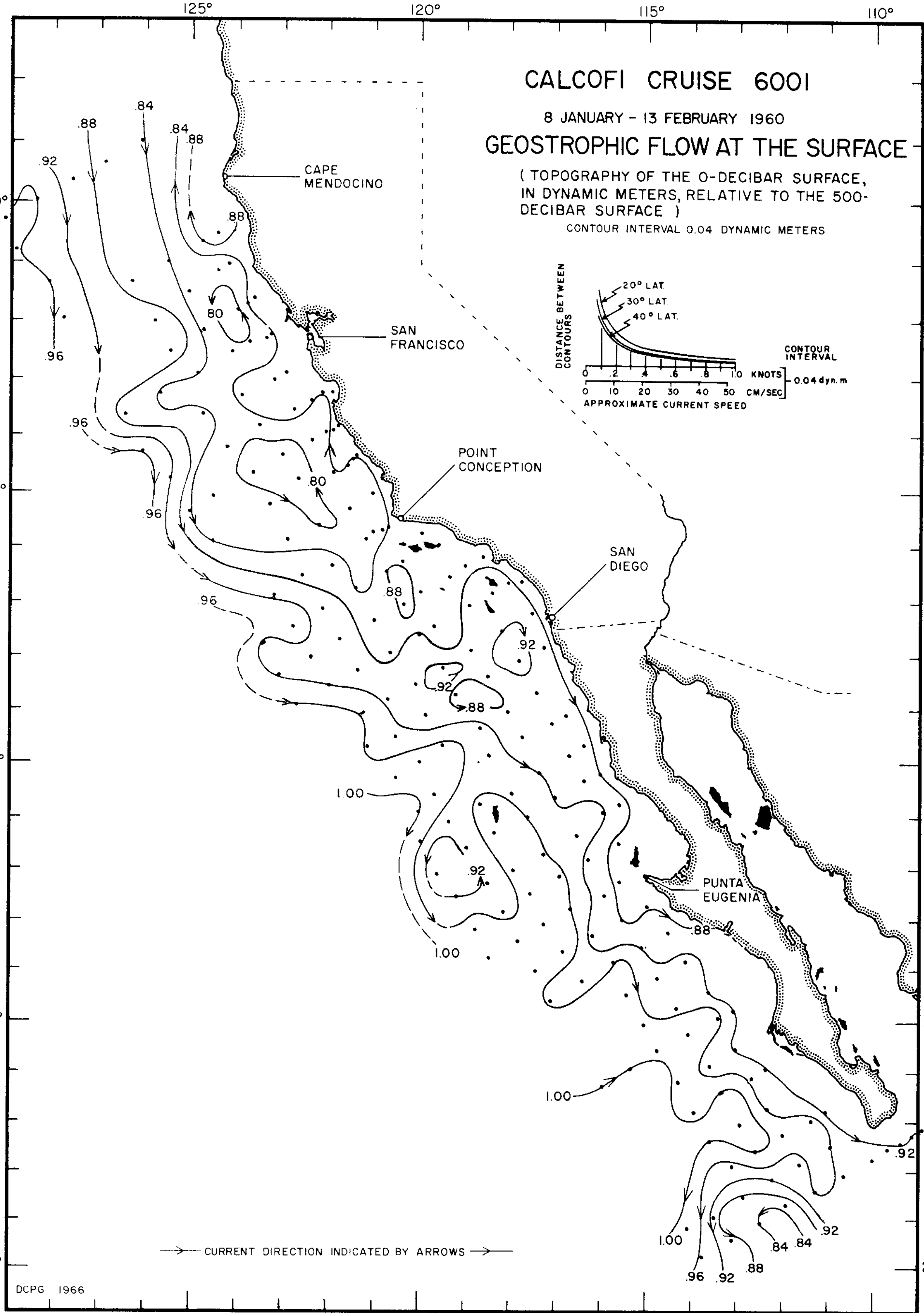
0/500 db
5911



CALCOFI CRUISE 5912
9-19 DECEMBER 1959
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.80
.84
.88
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

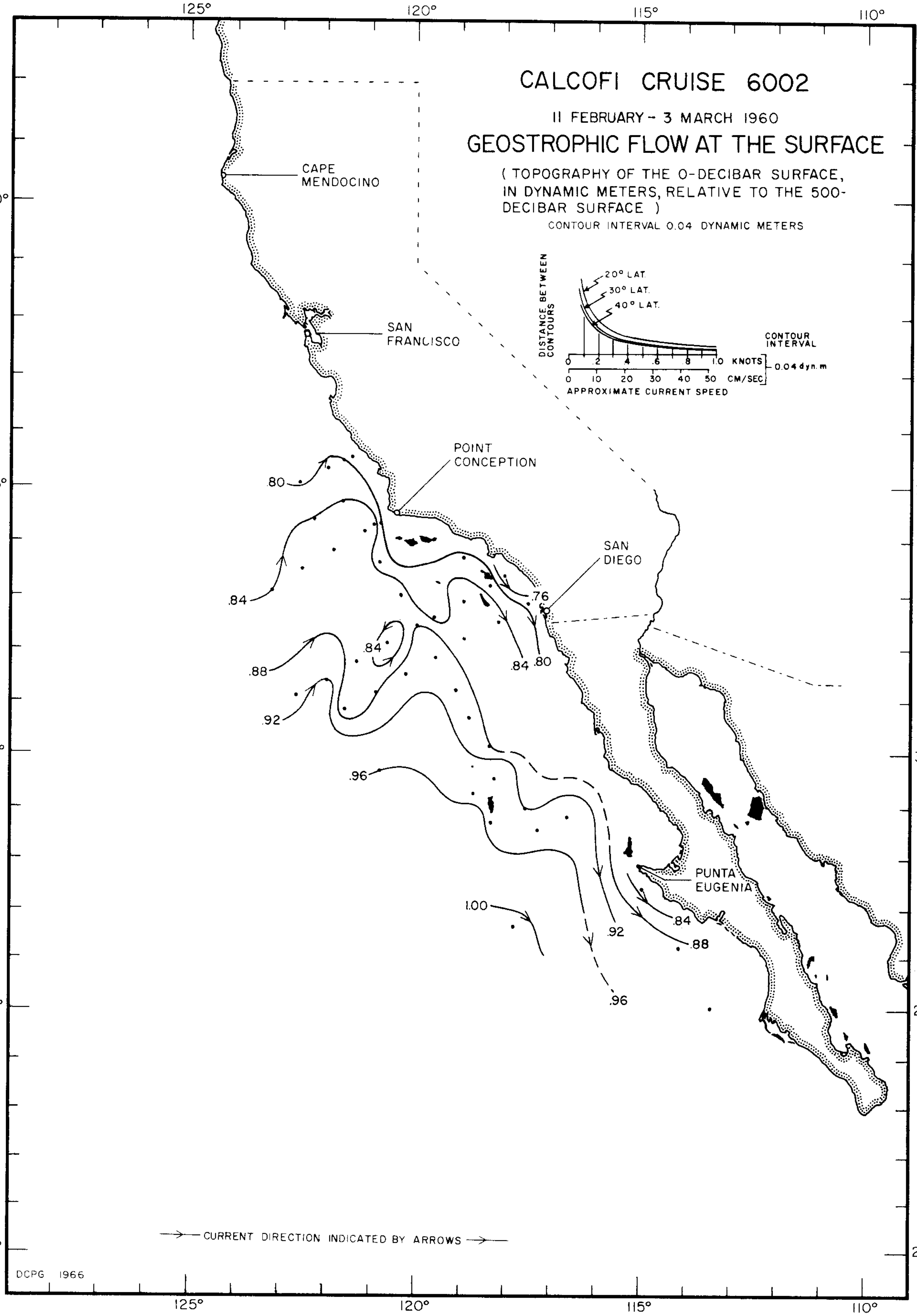
0/500 db

5912


CALCOFI CRUISE 6001
8 JANUARY - 13 FEBRUARY 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT
30° LAT
40° LAT
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
125°
120°
115°
110°
40°
35°
30°
25°
20°
.84
.88
.92
.96
.80
1.00
DCPG 1966

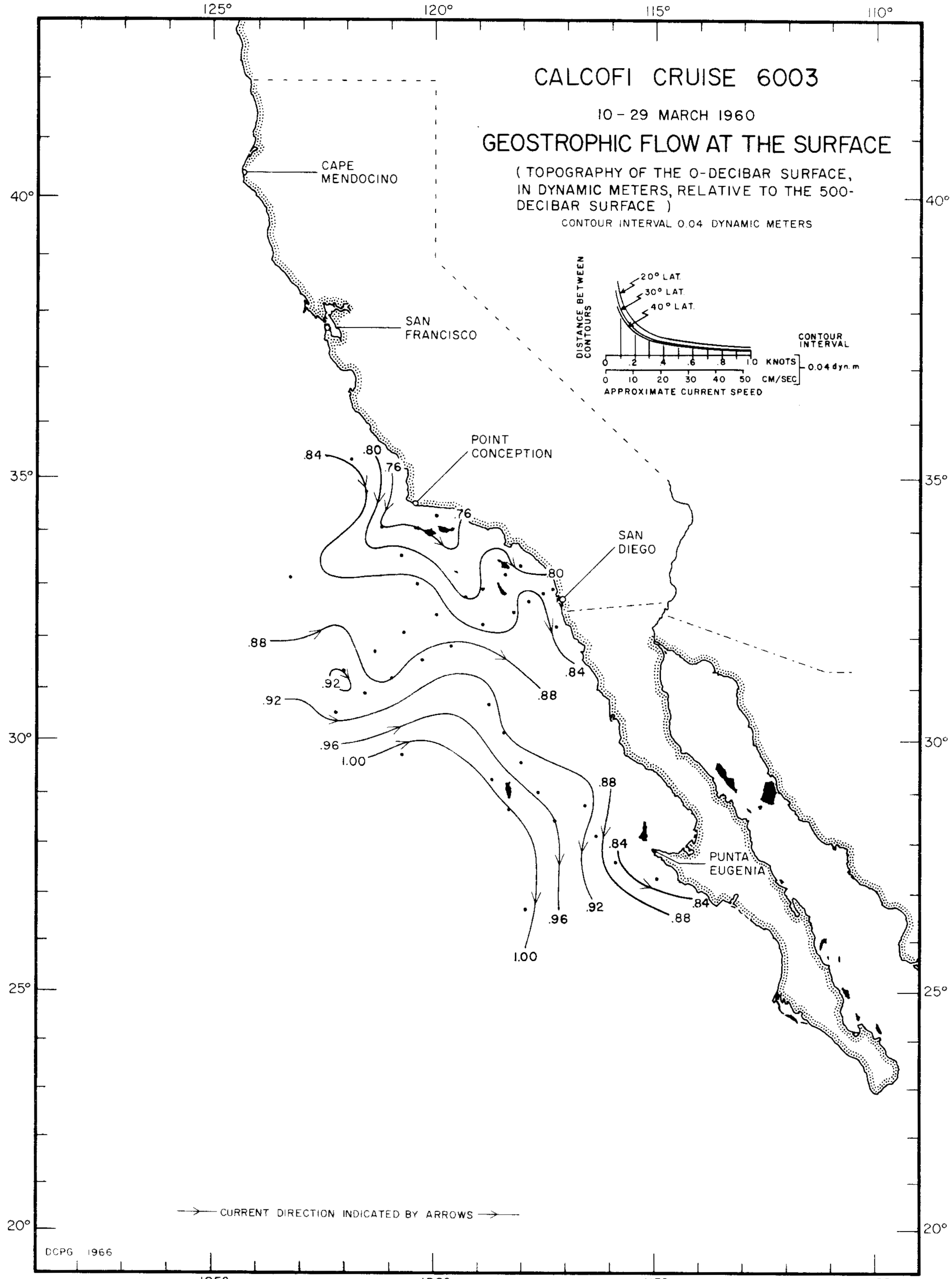
0/500 db

6001

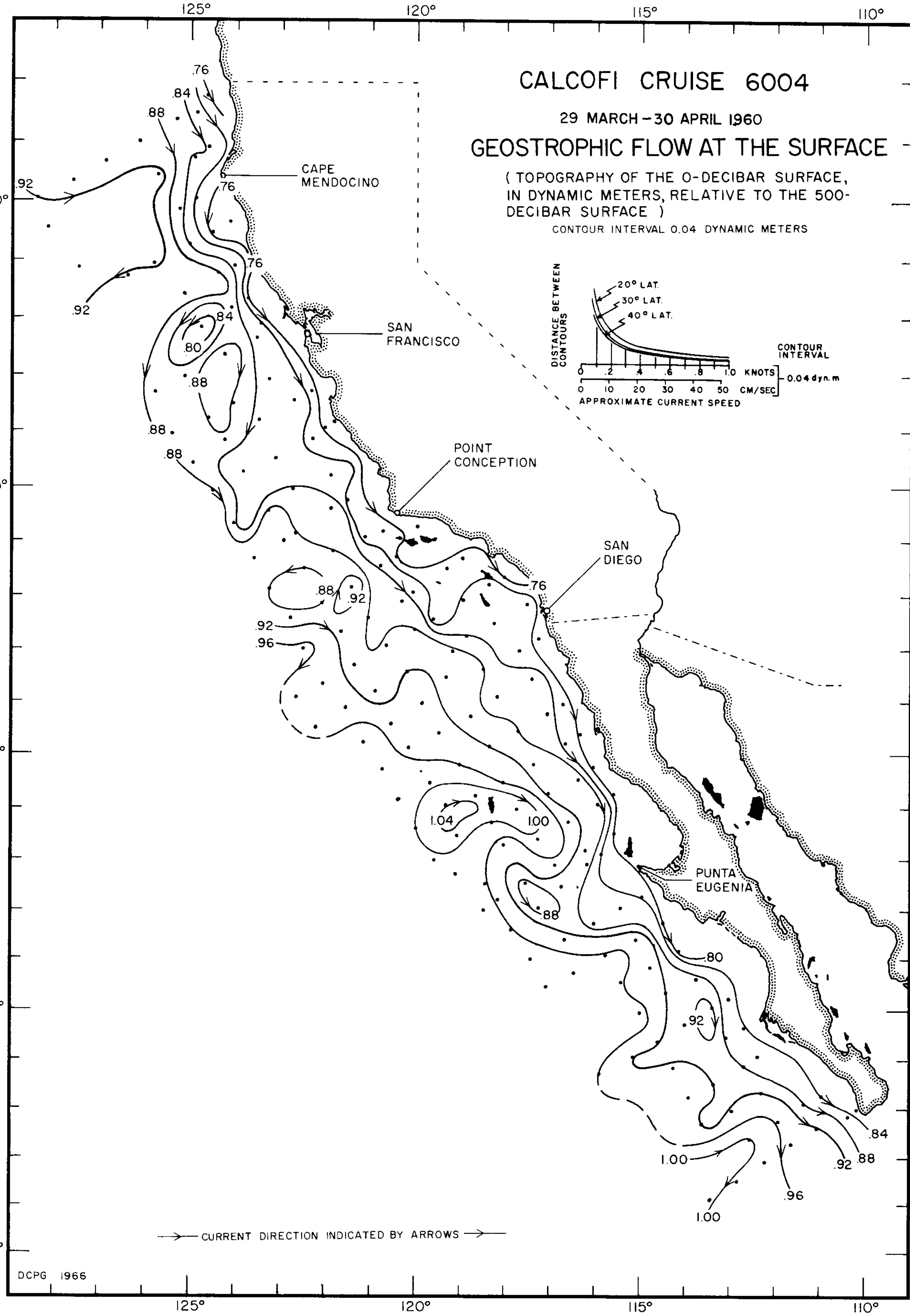


CALCOFI CRUISE 6002
11 FEBRUARY - 3 MARCH 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.80
.84
.76
.88
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

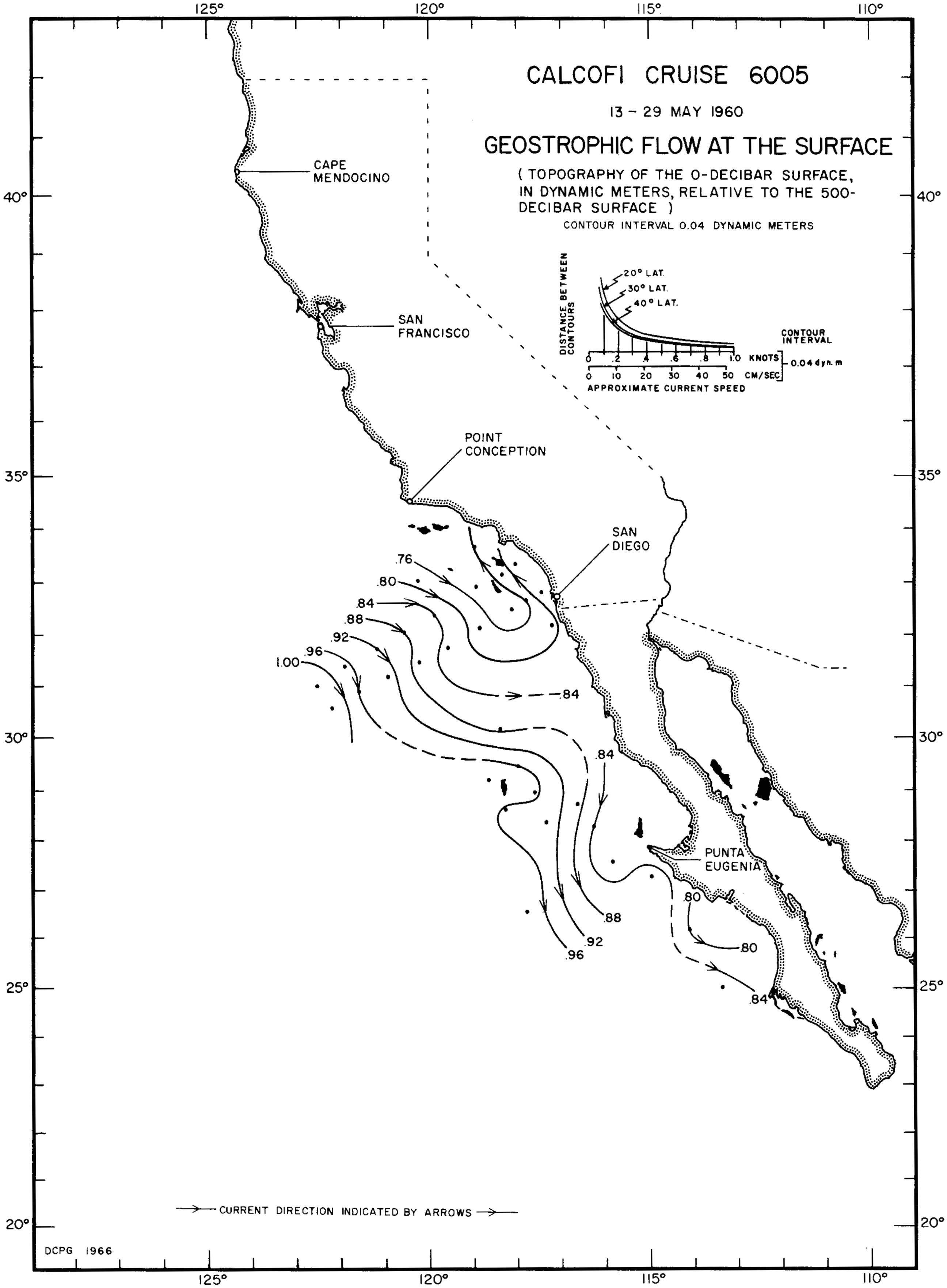
0/500 db
6002


CALCOFI CRUISE 6003
10 – 29 MARCH 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.80
.76
.76
.80
.84
.88
.88
.92
.92
.96
1.00
.88
.84
.84
.88
.92
.96
1.00
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

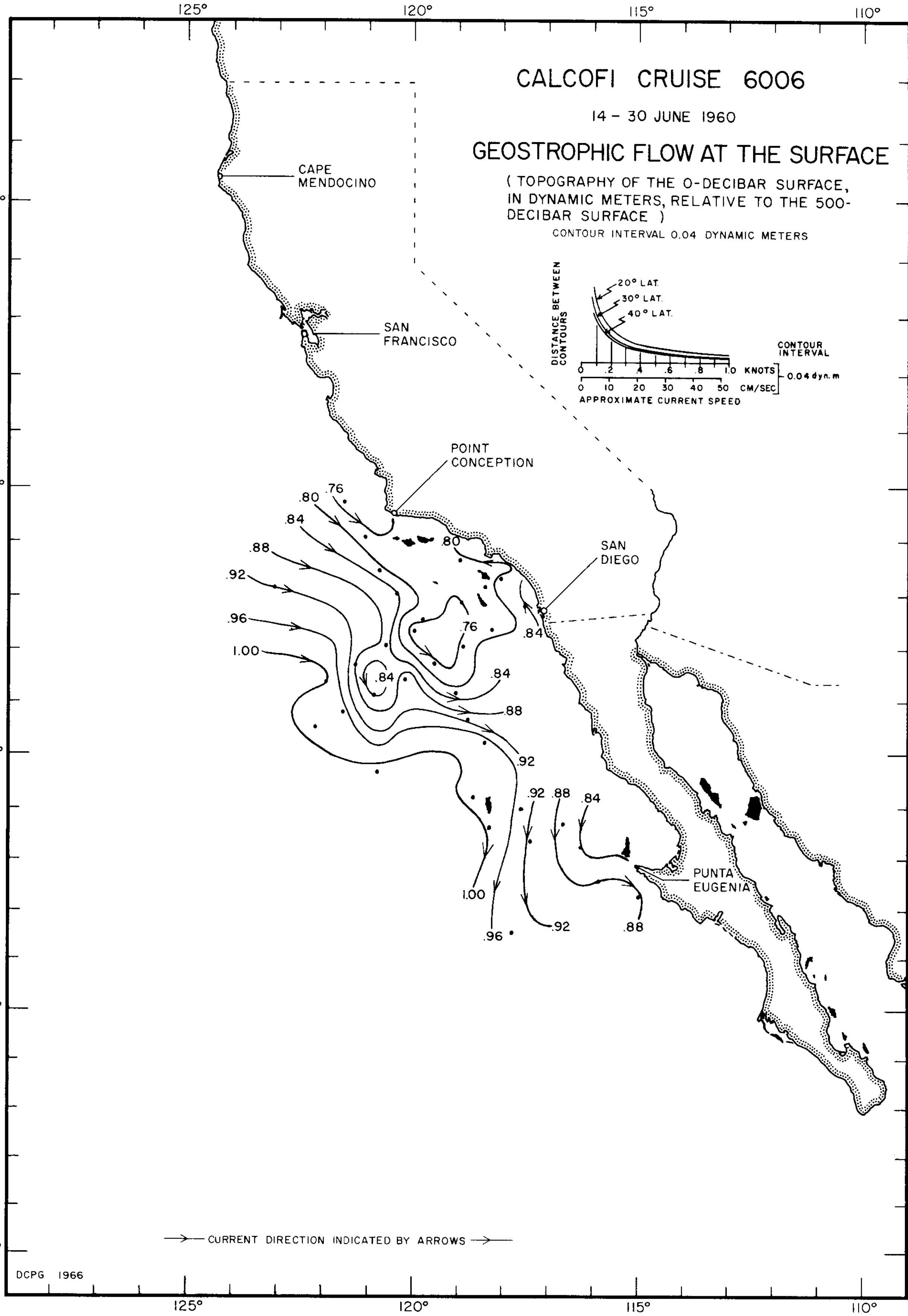
0/500 db
6003


CALCOFI CRUISE 6004
29 MARCH – 30 APRIL 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

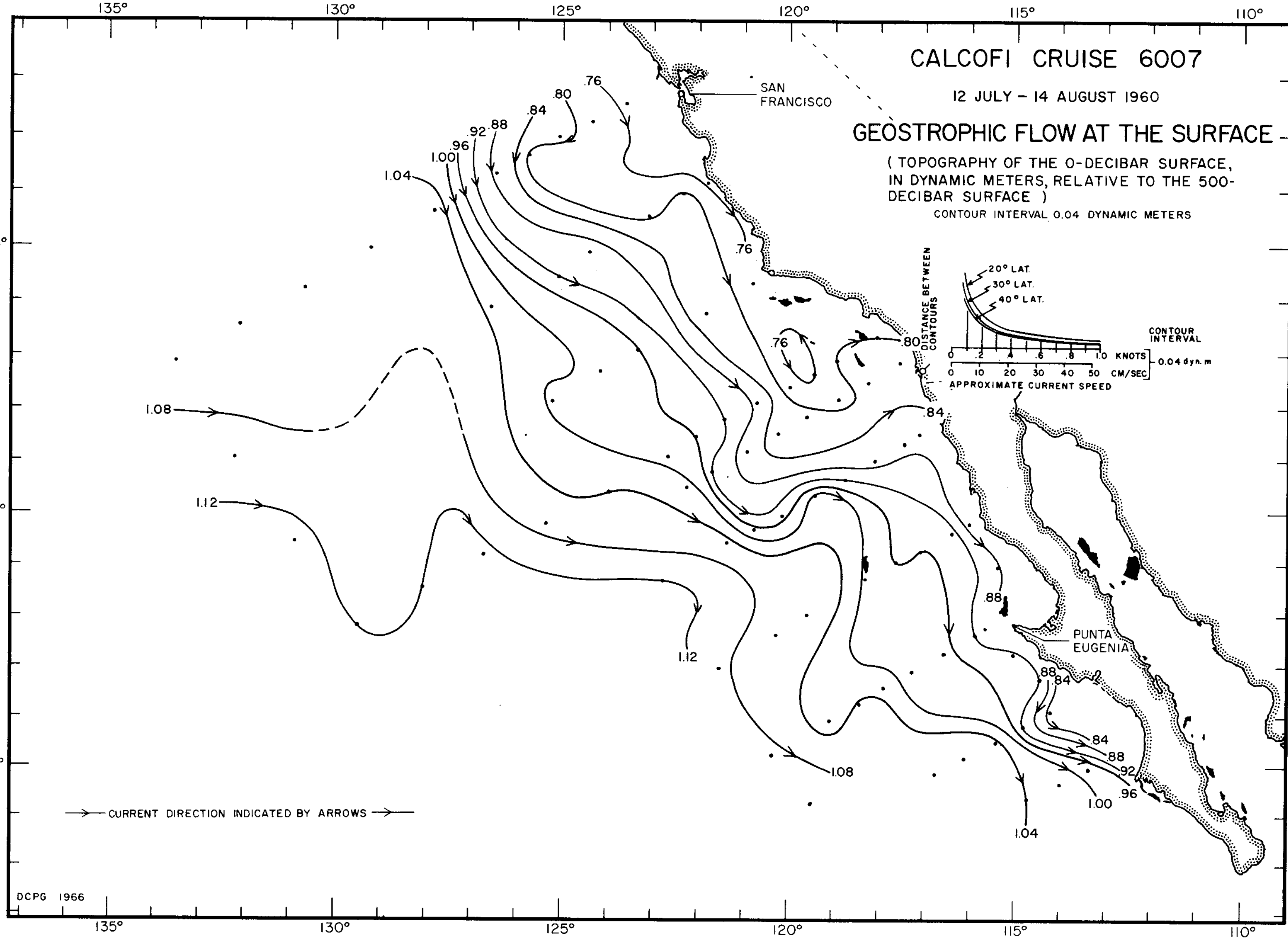
0/500 db
6004


CALCOFI CRUISE 6005
13 – 29 MAY 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.76
.80
.84
.88
.92
.96
1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

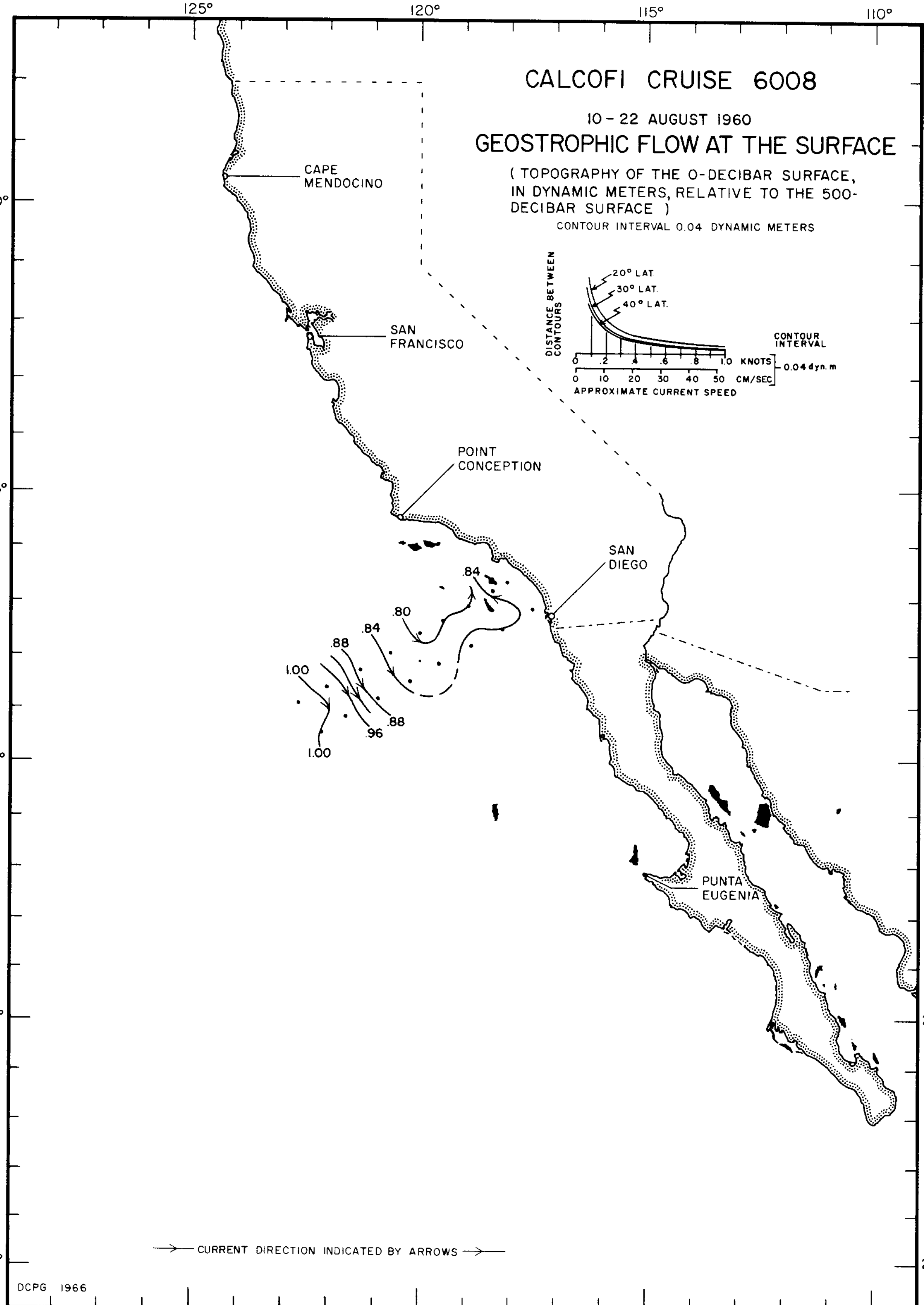
0/500 db
6005


CALCOFI CRUISE 6006
14 – 30 JUNE 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125° 120° 115° 110°
40° 35° 30° 25° 20°
.76 .80 .84 .88 .92 .96 1.00
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6006

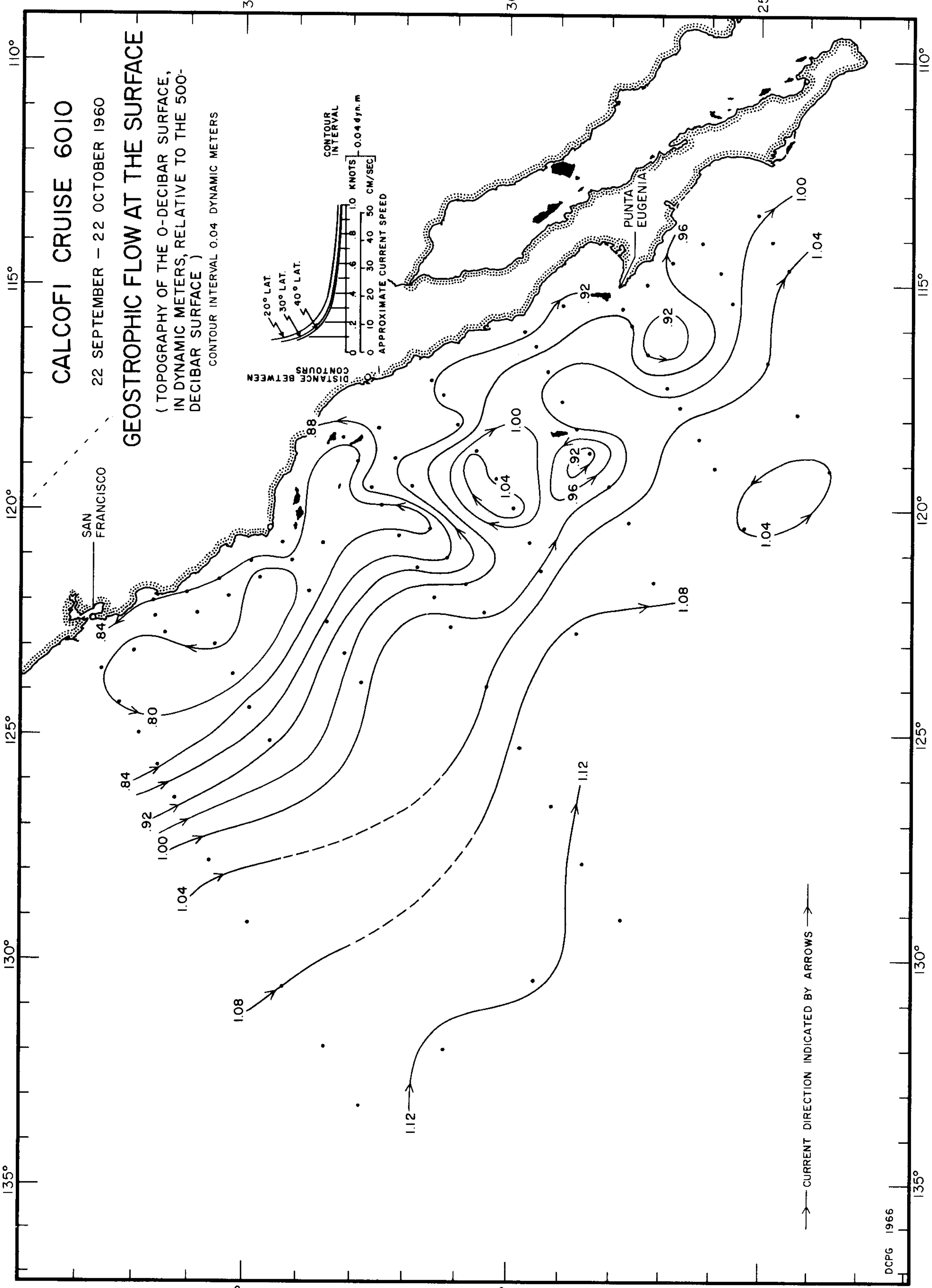

CALCOFI CRUISE 6007
12 JULY – 14 AUGUST 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn. m
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
135° 130° 125° 120° 115° 110°
35° 30° 25°
.76
.80
.84
.88
.92
.96
1.00
1.04
1.08
1.12

0/500 db
6007



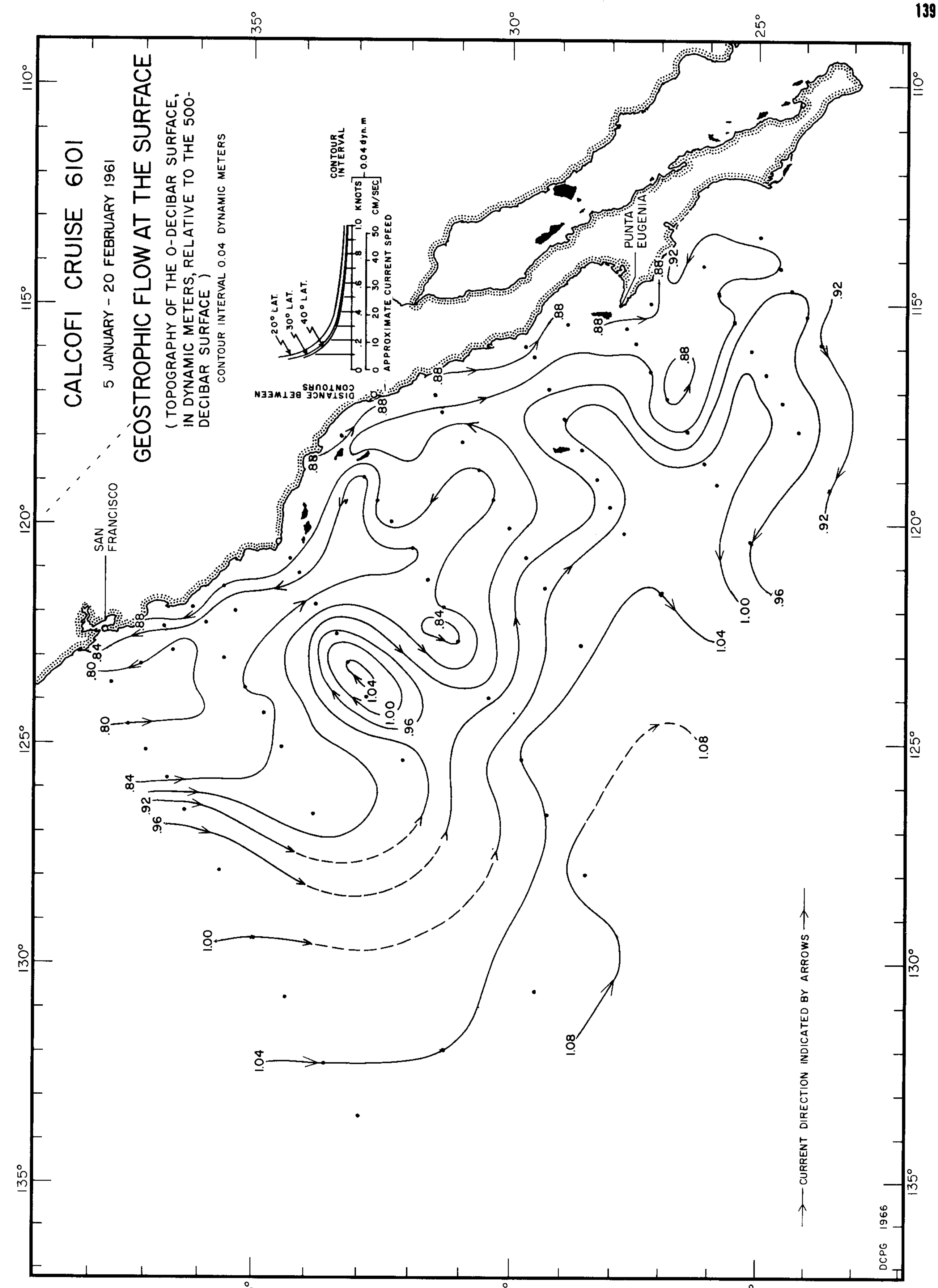
CALCOFI CRUISE 6008
10 - 22 AUGUST 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.80
.84
.88
1.00
.88
.96
1.00
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6008


CALCOFI CRUISE 6010
22 SEPTEMBER – 22 OCTOBER 1960
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn. m
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
35°
30°
25°
110°
115°
120°
125°
130°
135°
.80
.84
.88
.92
.96
1.00
1.04
1.08
1.12

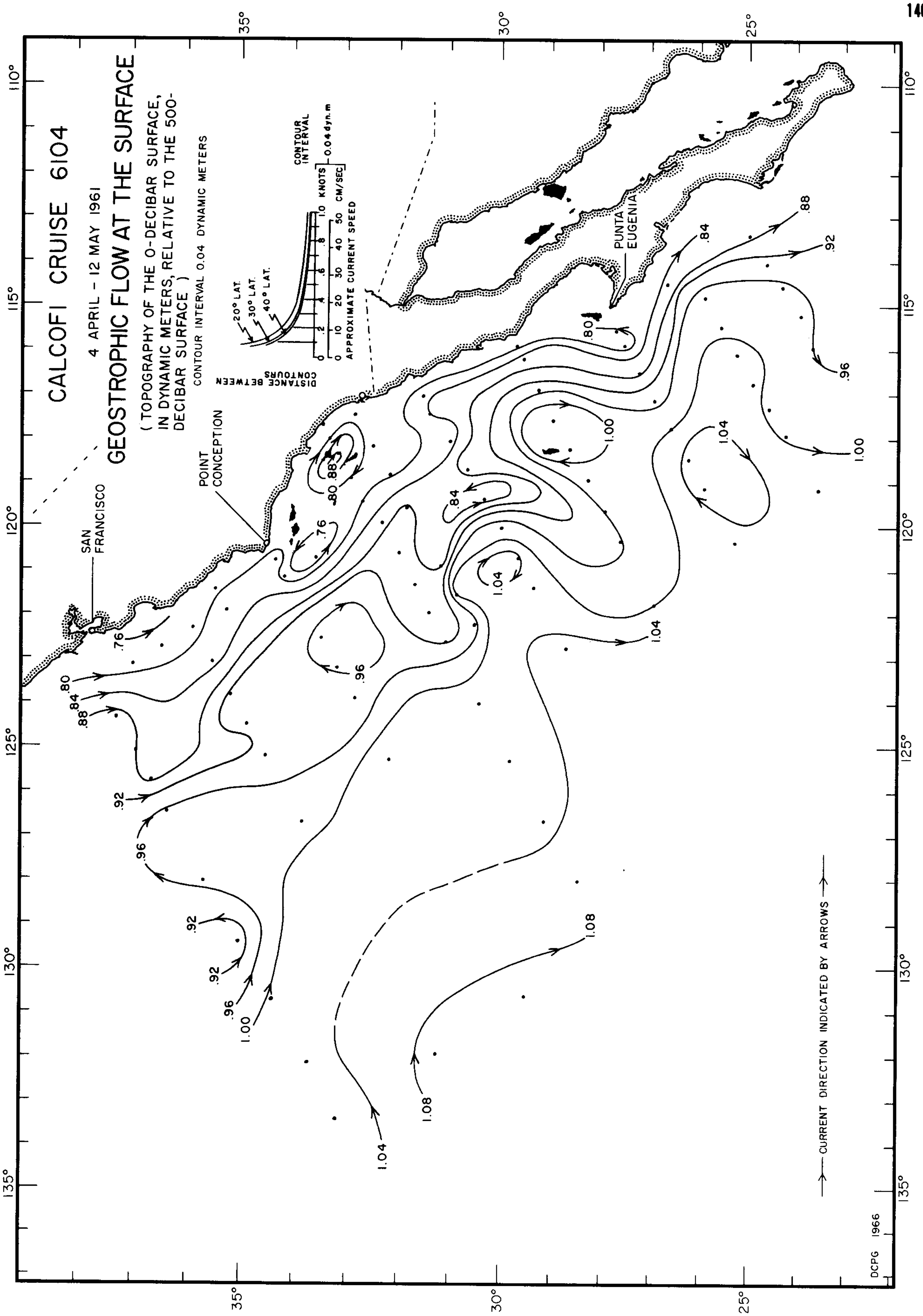
0/500 db

6010

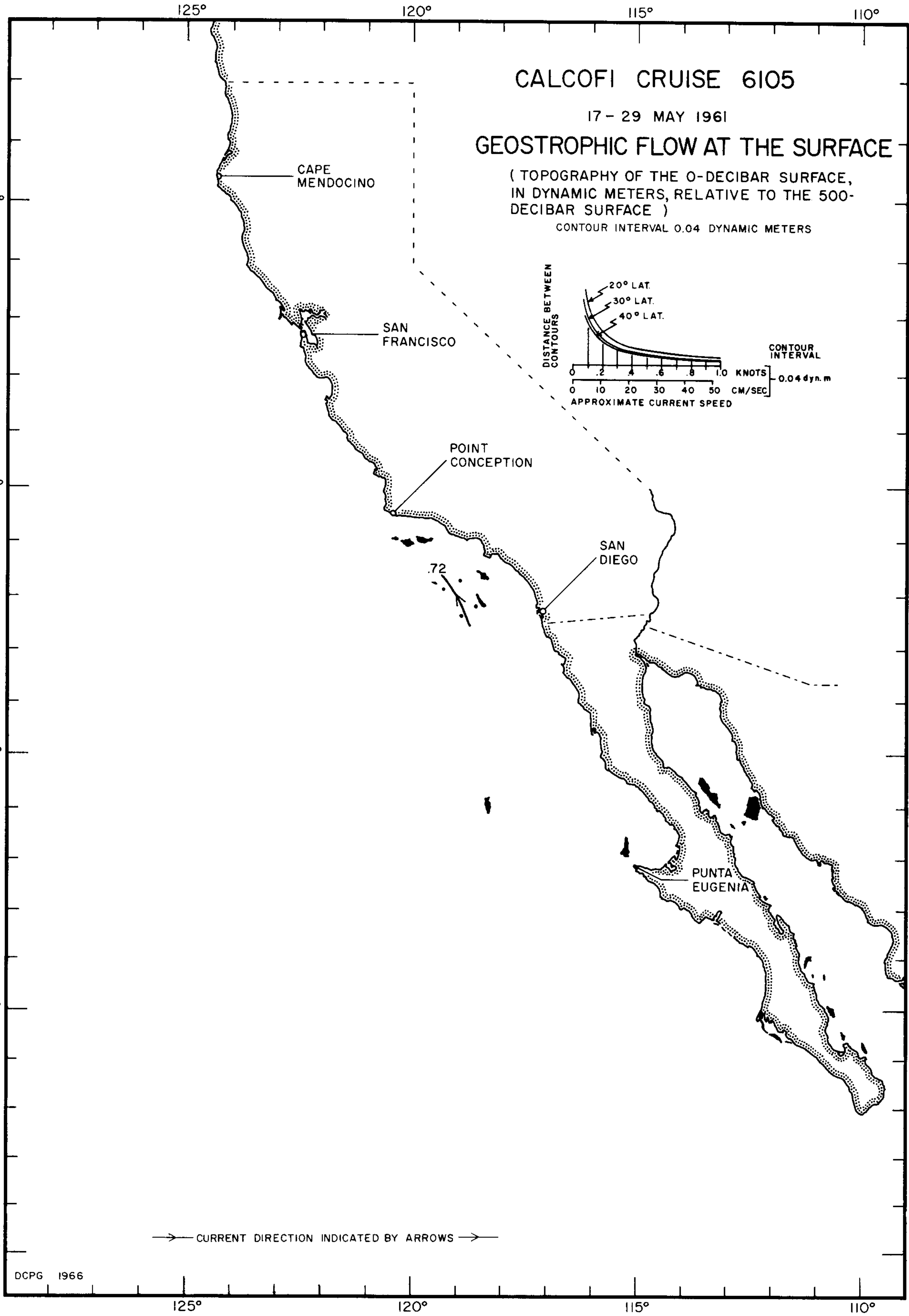

CALCOFI CRUISE 6101
5 JANUARY - 20 FEBRUARY 1961
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

6101

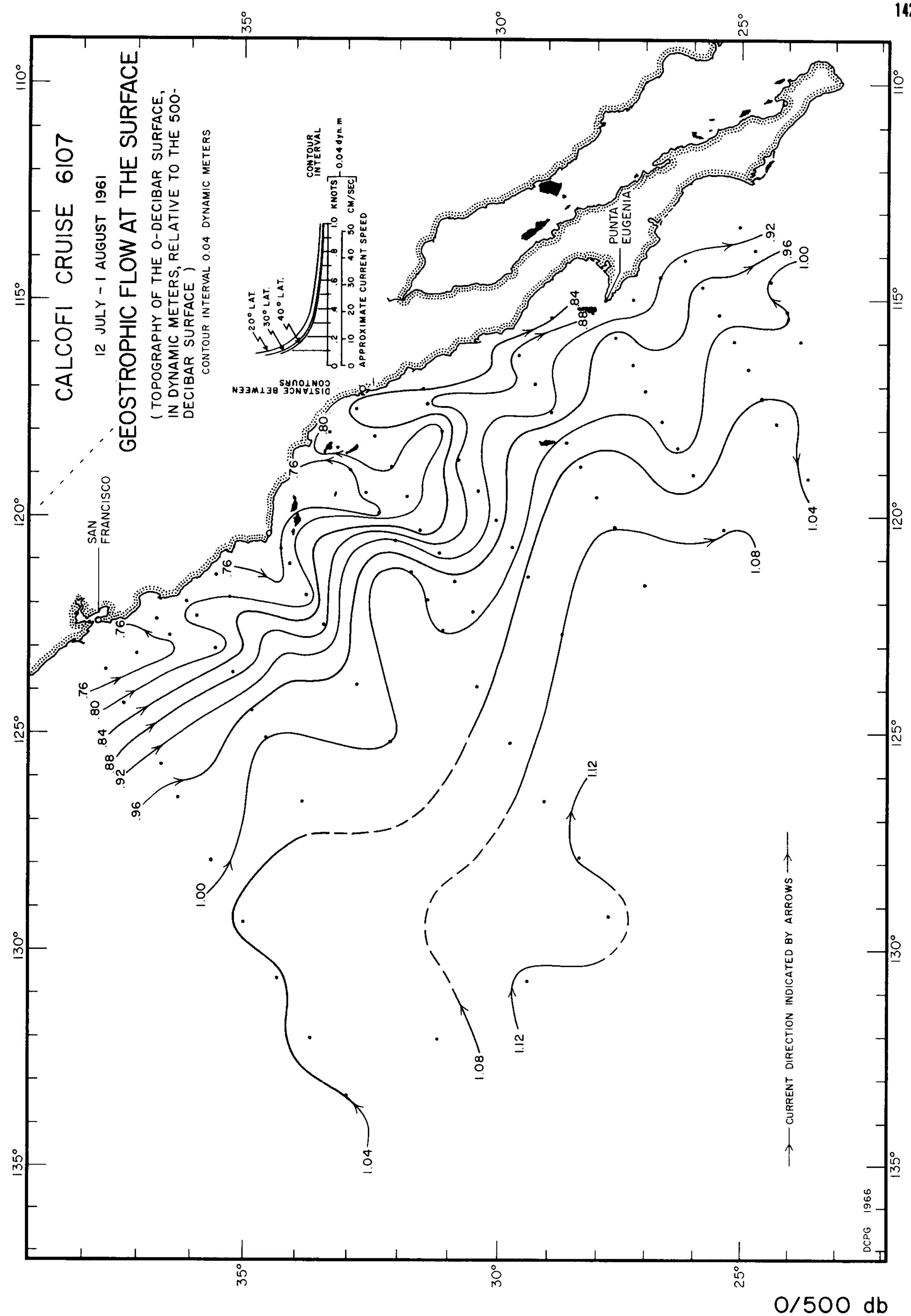

CALCOFI CRUISE 6104
4 APRIL - 12 MAY 1961
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
CONTOUR INTERVAL
0.04 dyn.m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
20° LAT.
30° LAT.
40° LAT.
SAN FRANCISCO
POINT CONCEPTION
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6104



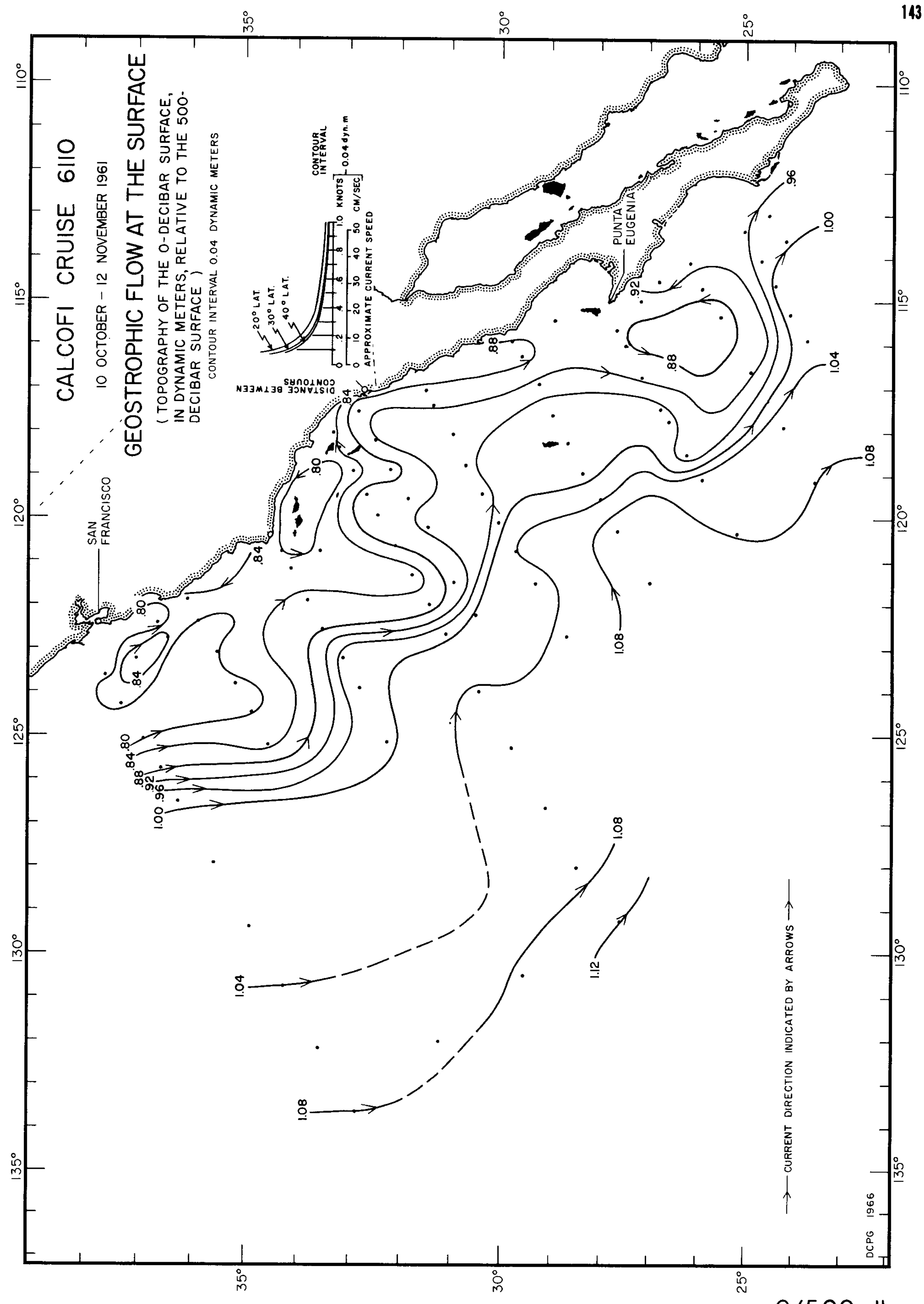
CALCOFI CRUISE 6105
17-29 MAY 1961
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn. m
125° 120° 115° 110°
40° 35° 30° 25° 20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.72
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6105



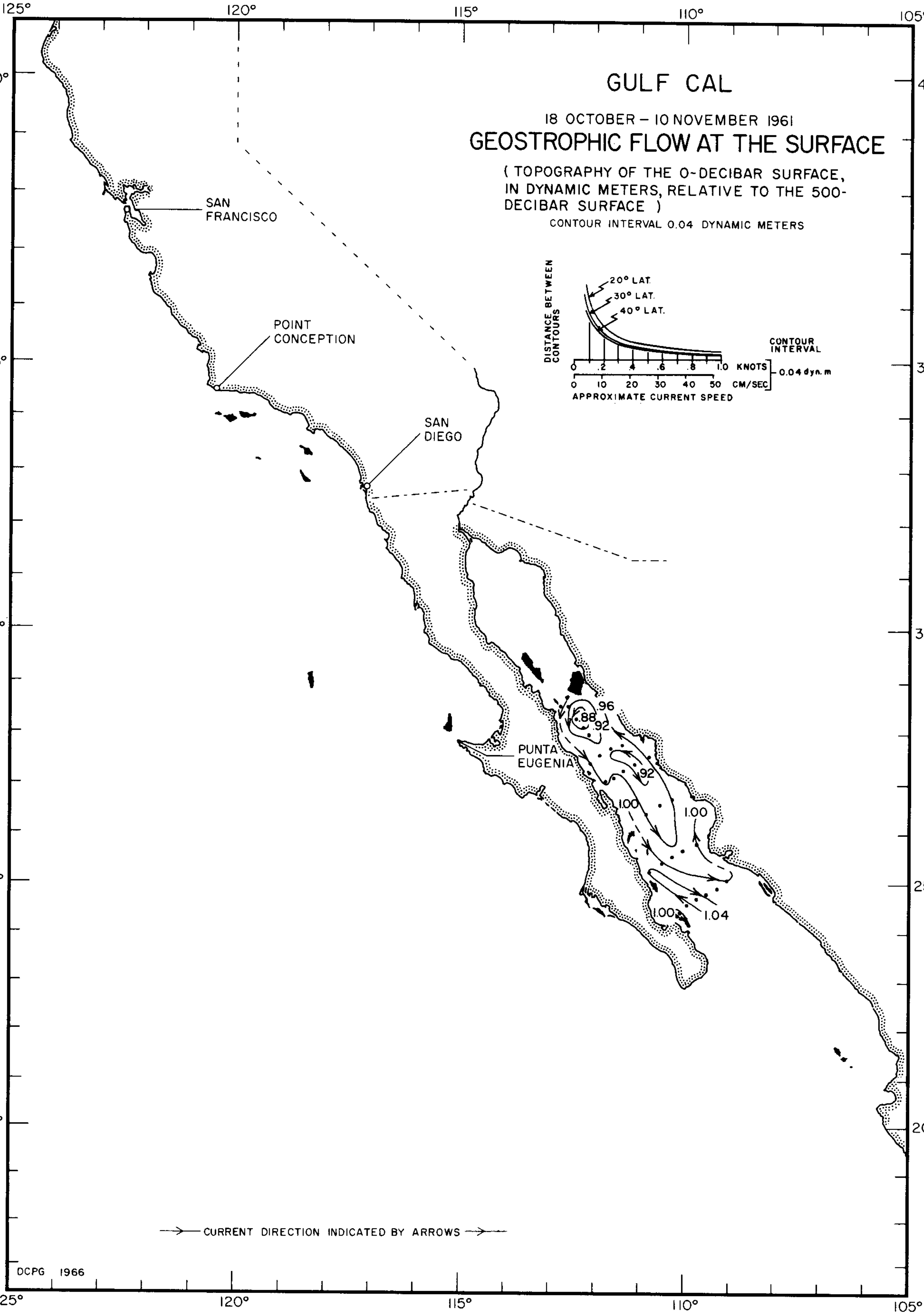
CALCOFI CRUISE 6107
12 JULY - 1 AUGUST 1961
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
CONTOUR INTERVAL
0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6107

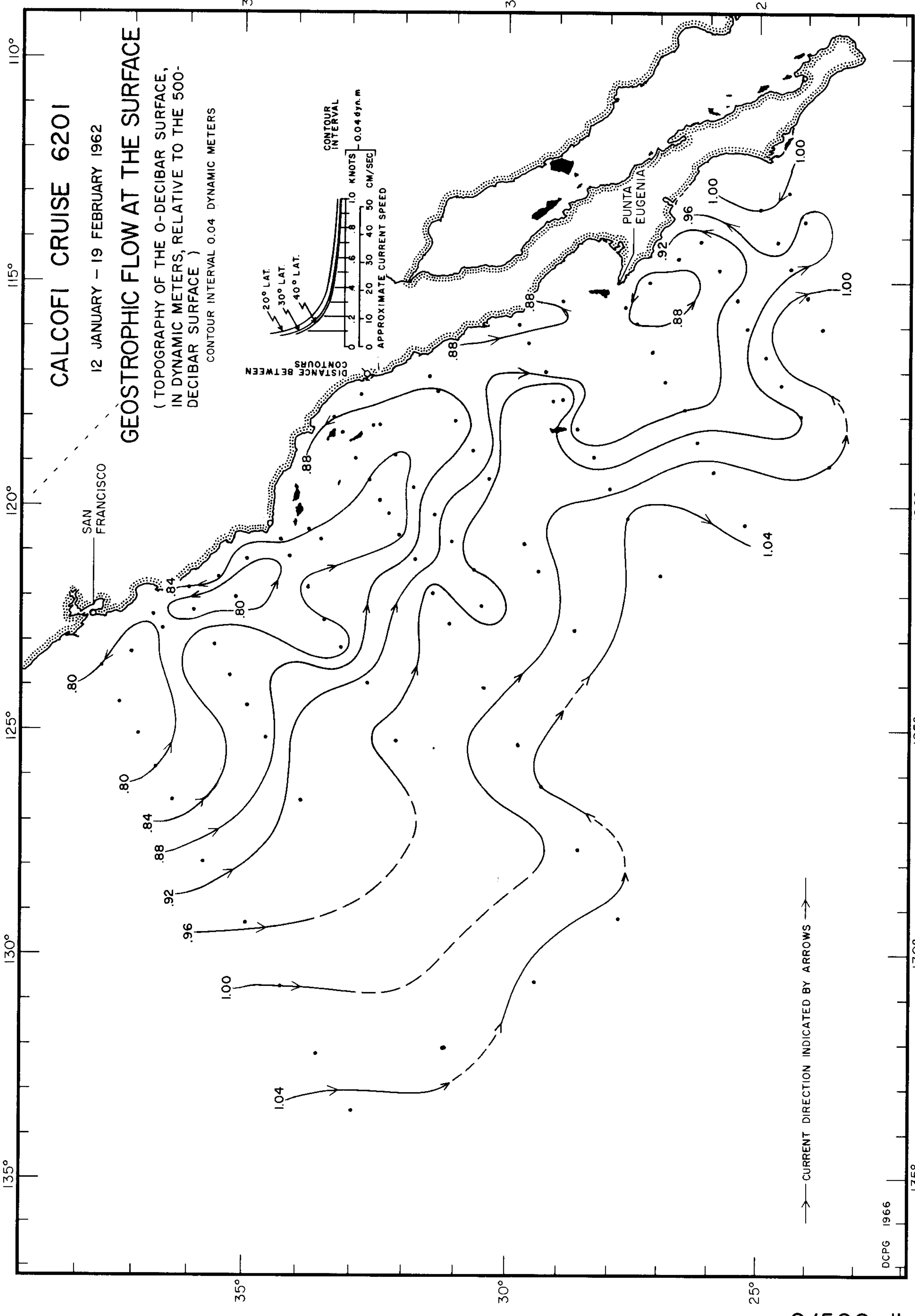

CALCOFI CRUISE 6110
10 OCTOBER - 12 NOVEMBER 1961
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
CONTOUR INTERVAL
0.04 dyn.m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
35°
30°
25°
110°
115°
120°
125°
130°
135°
.80
.84
.88
.92
.96
1.00
1.04
1.08
1.12

0/500 db

6110



0/500 db
GULF CAL


CALCOFI CRUISE 6201
12 JANUARY – 19 FEBRUARY 1962
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
CONTOUR INTERVAL
0.04 dyn.m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
35°
30°
25°
110°
115°
120°
125°
130°
135°

0/500 db

6201

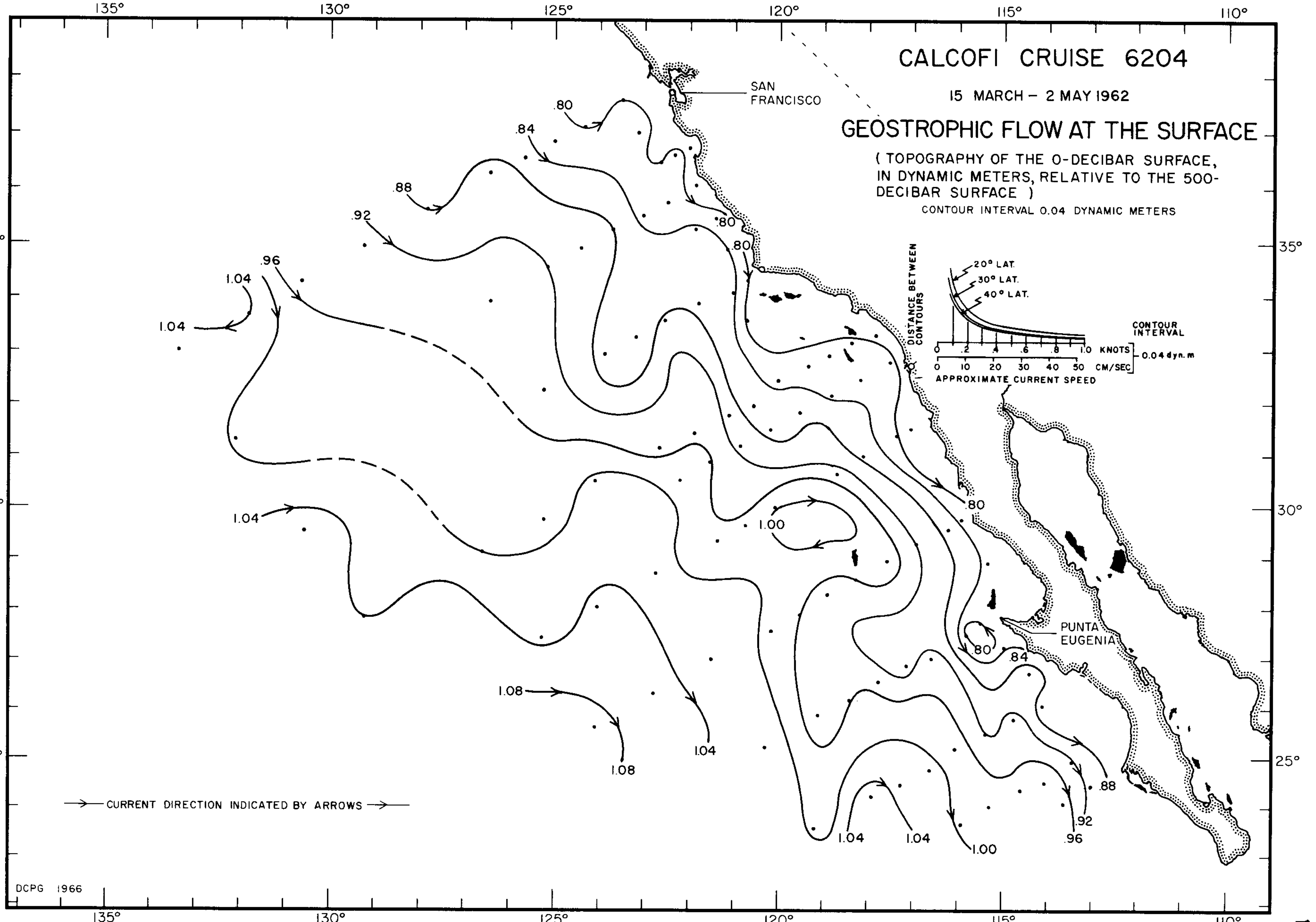
CALCOFI CRUISE 6204

15 MARCH – 2 MAY 1962

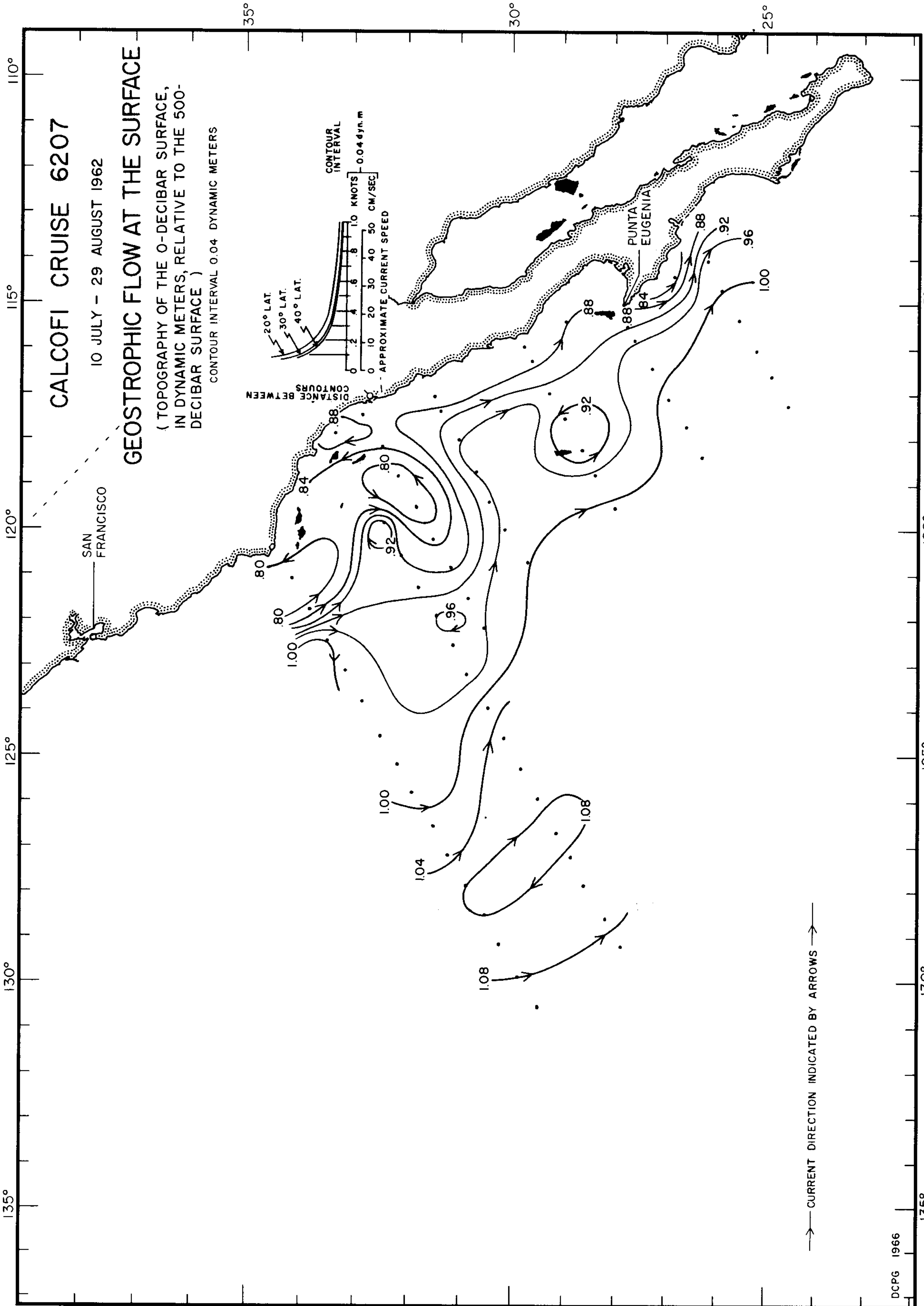
GEOSTROPHIC FLOW AT THE SURFACE

(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)

CONTOUR INTERVAL 0.04 DYNAMIC METERS

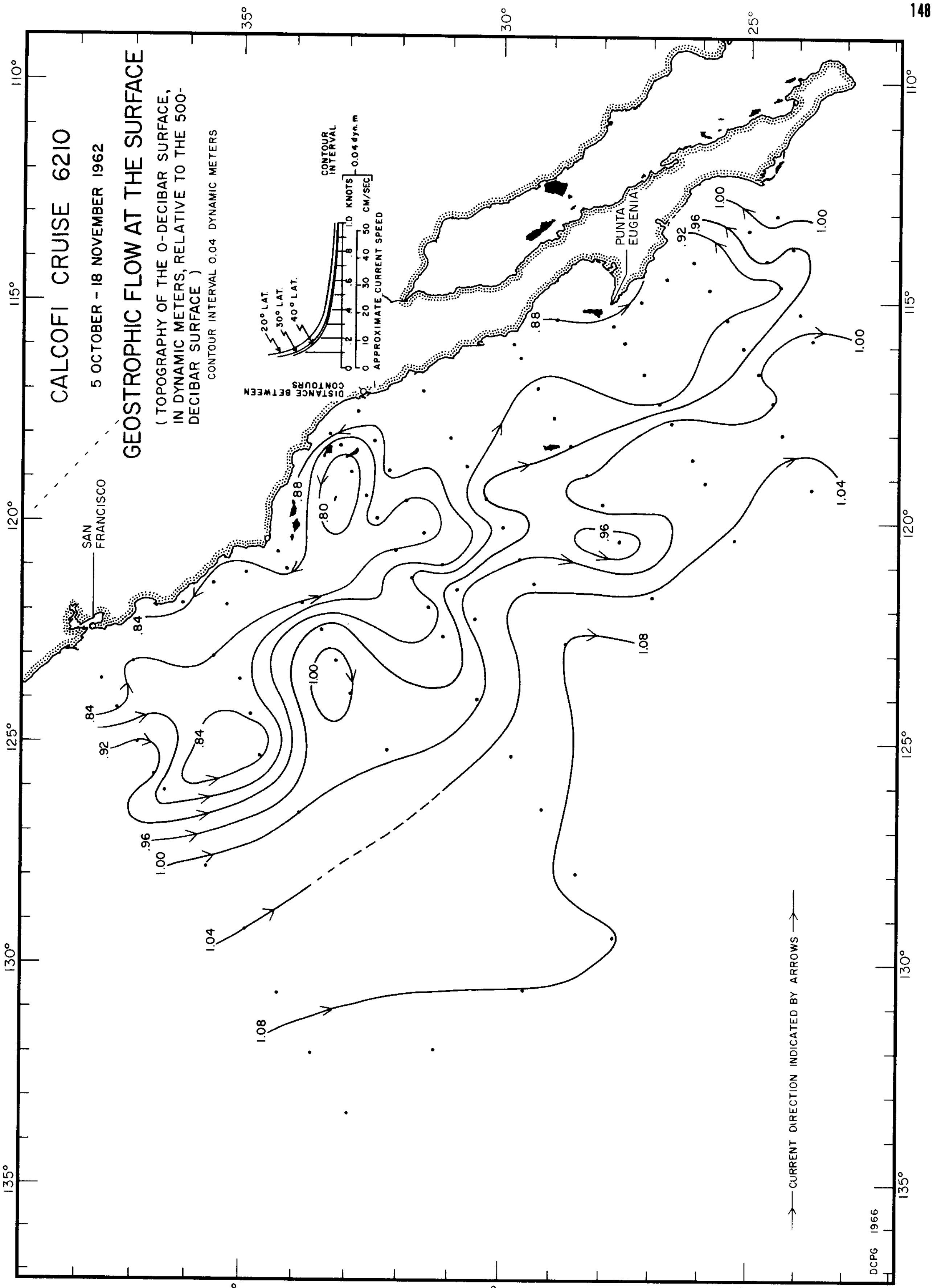


0/500 db
6204

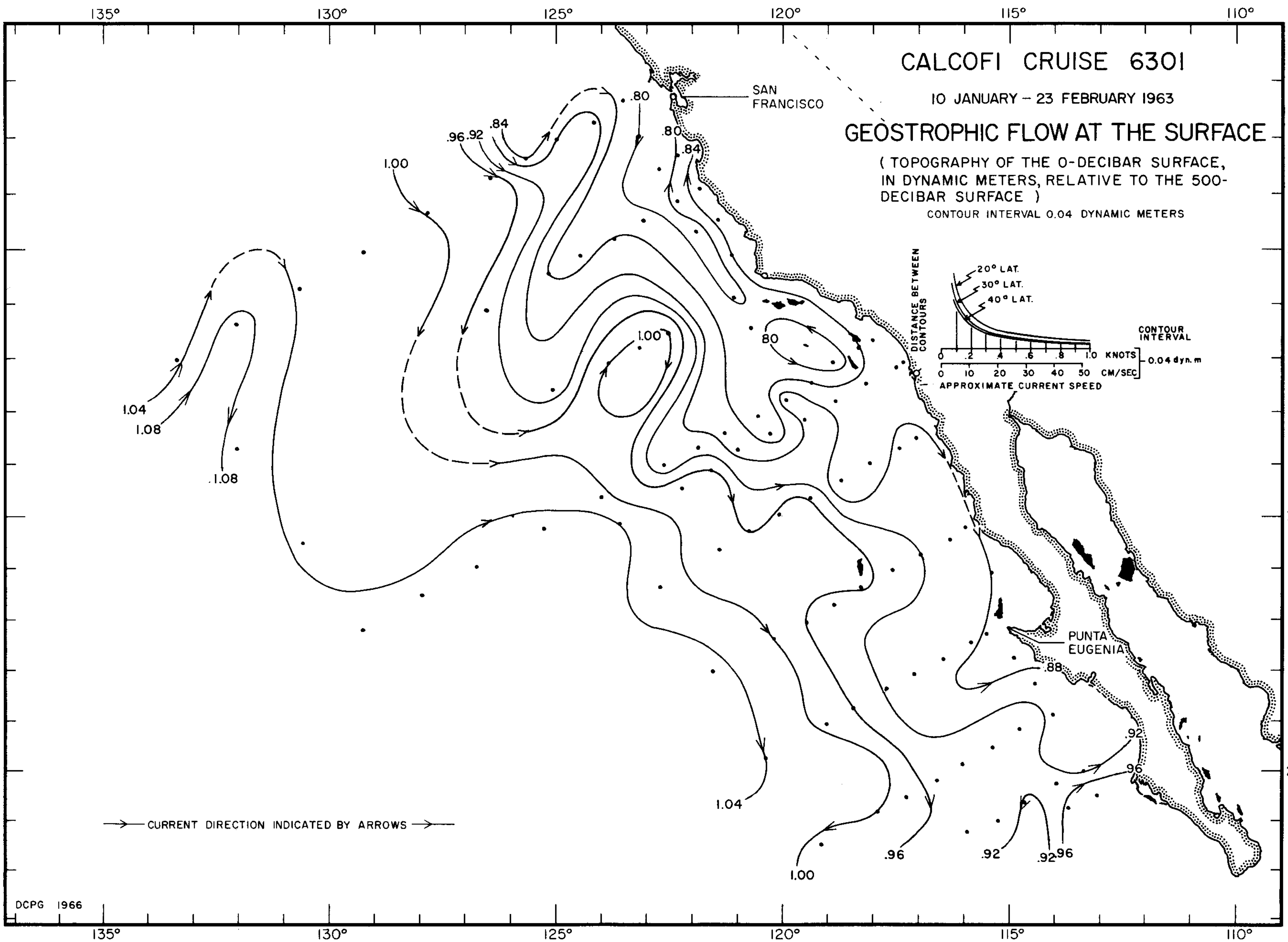

CALCOFI CRUISE 6207
10 JULY - 29 AUGUST 1962
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn. m
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

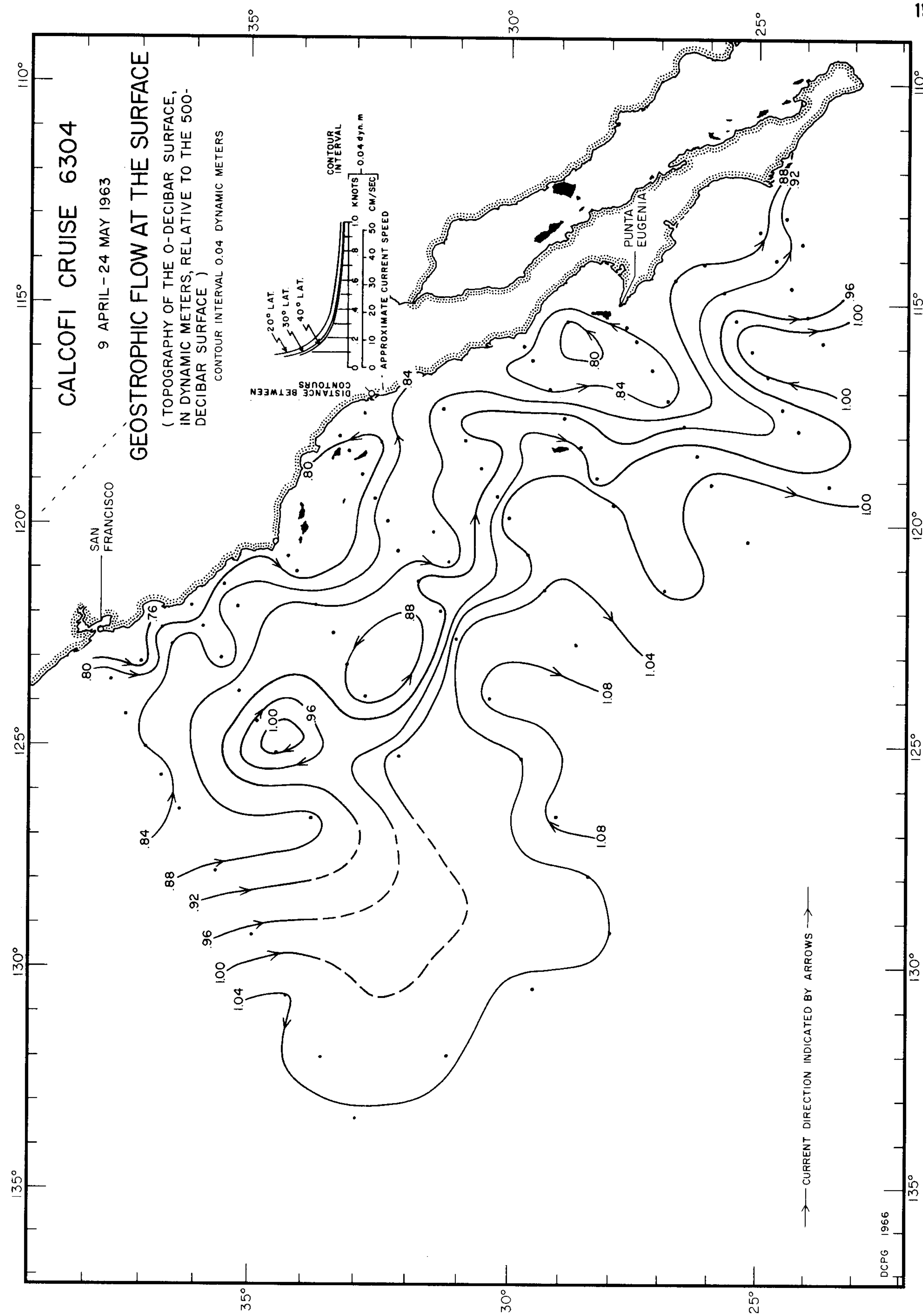
6207


CALCOFI CRUISE 6210
5 OCTOBER - 18 NOVEMBER 1962
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
35°
30°
25°
110°
115°
120°
125°
130°
135°
.80
.84
.88
.92
.96
1.00
1.04
1.08

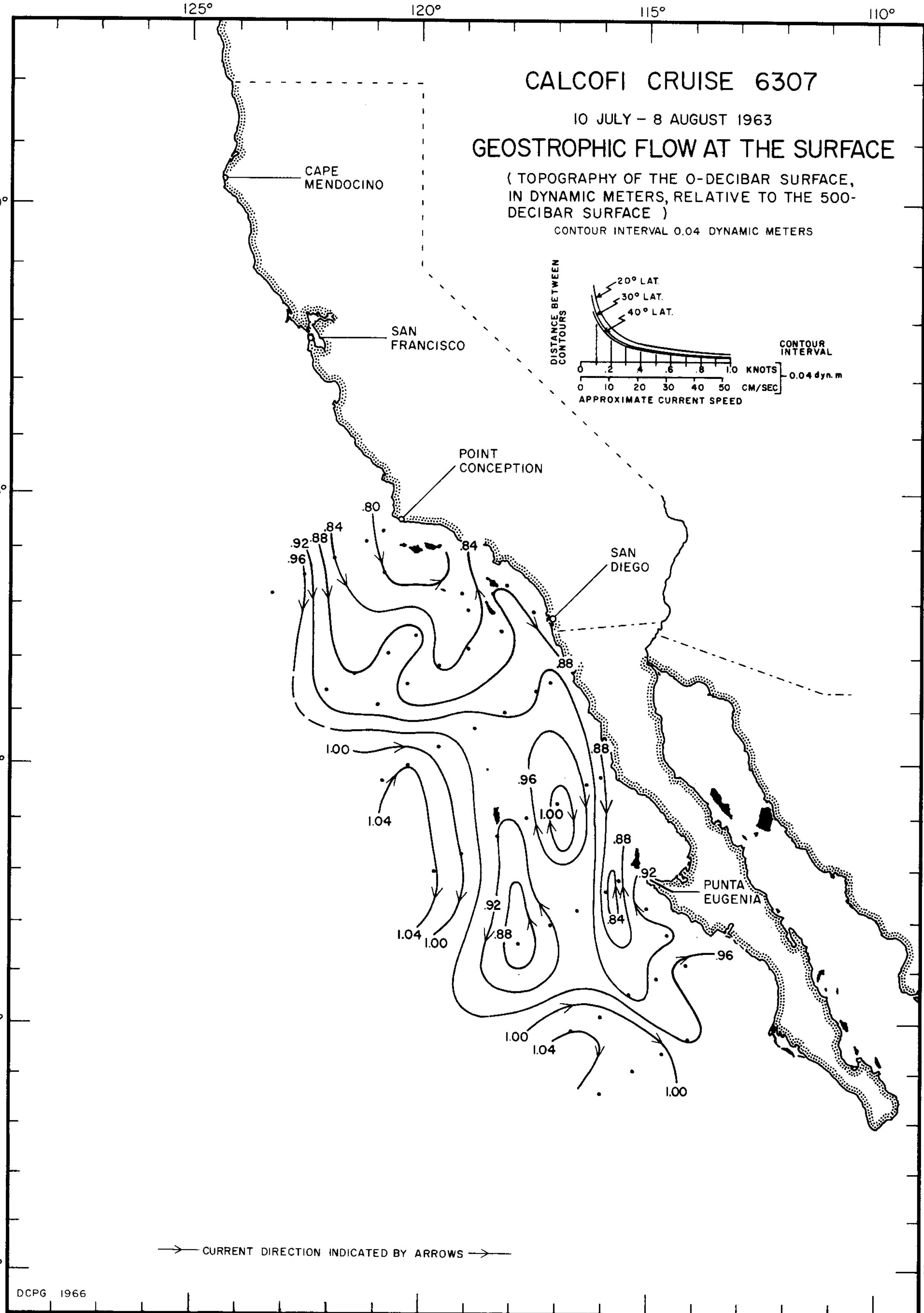
0/500 db
6210


CALCOFI CRUISE 6301
10 JANUARY – 23 FEBRUARY 1963
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
SAN FRANCISCO
PUNTA EUGENIA
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
135° 130° 125° 120° 115° 110°
35° 30° 25°
.80
.84
.88
.92
.96
1.00
1.04
1.08

0/500 db
6301

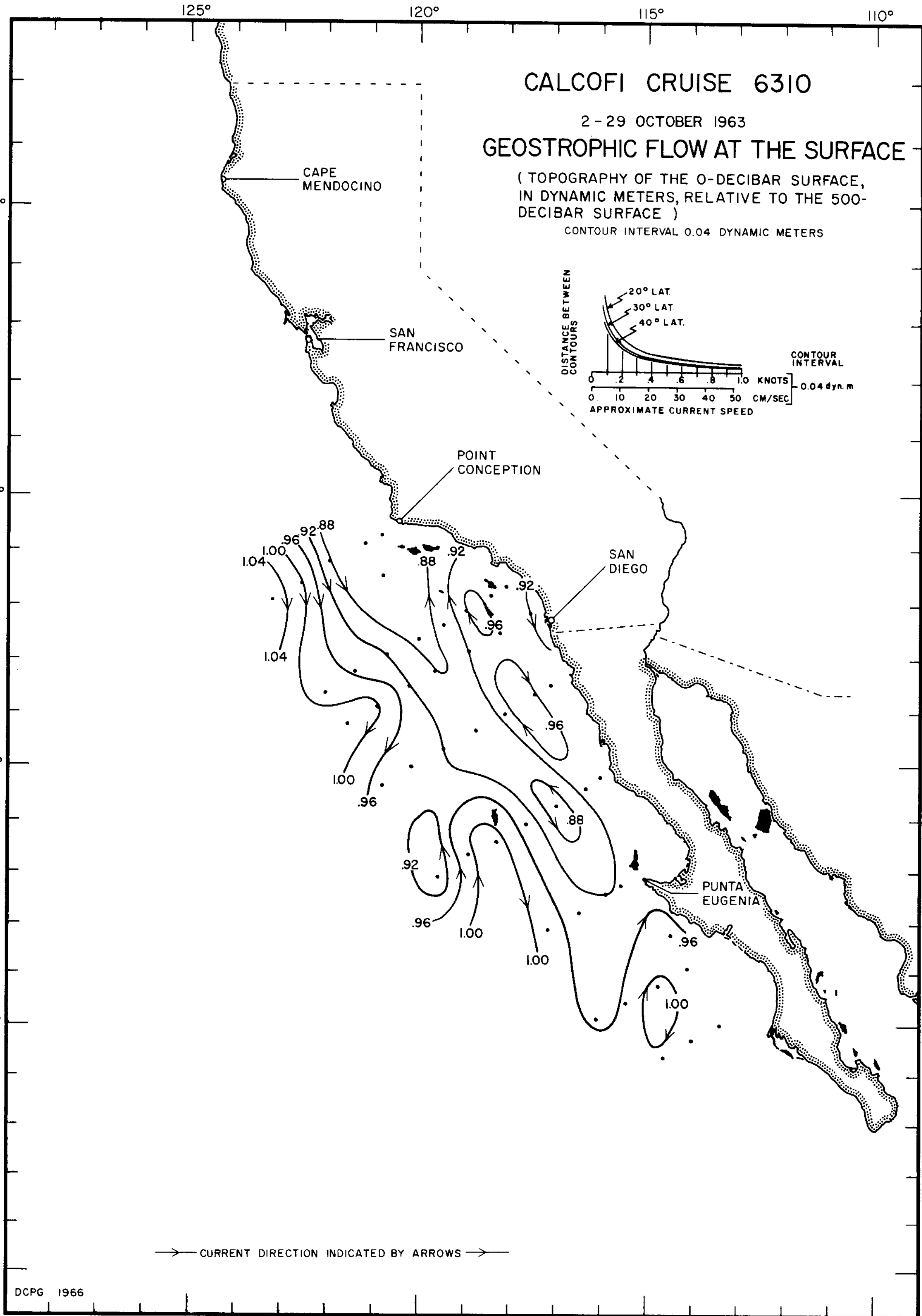

CALCOFI CRUISE 6304
9 APRIL - 24 MAY 1963
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
CONTOUR INTERVAL 0.04 dyn. m
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
20° LAT.
30° LAT.
40° LAT.
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6304



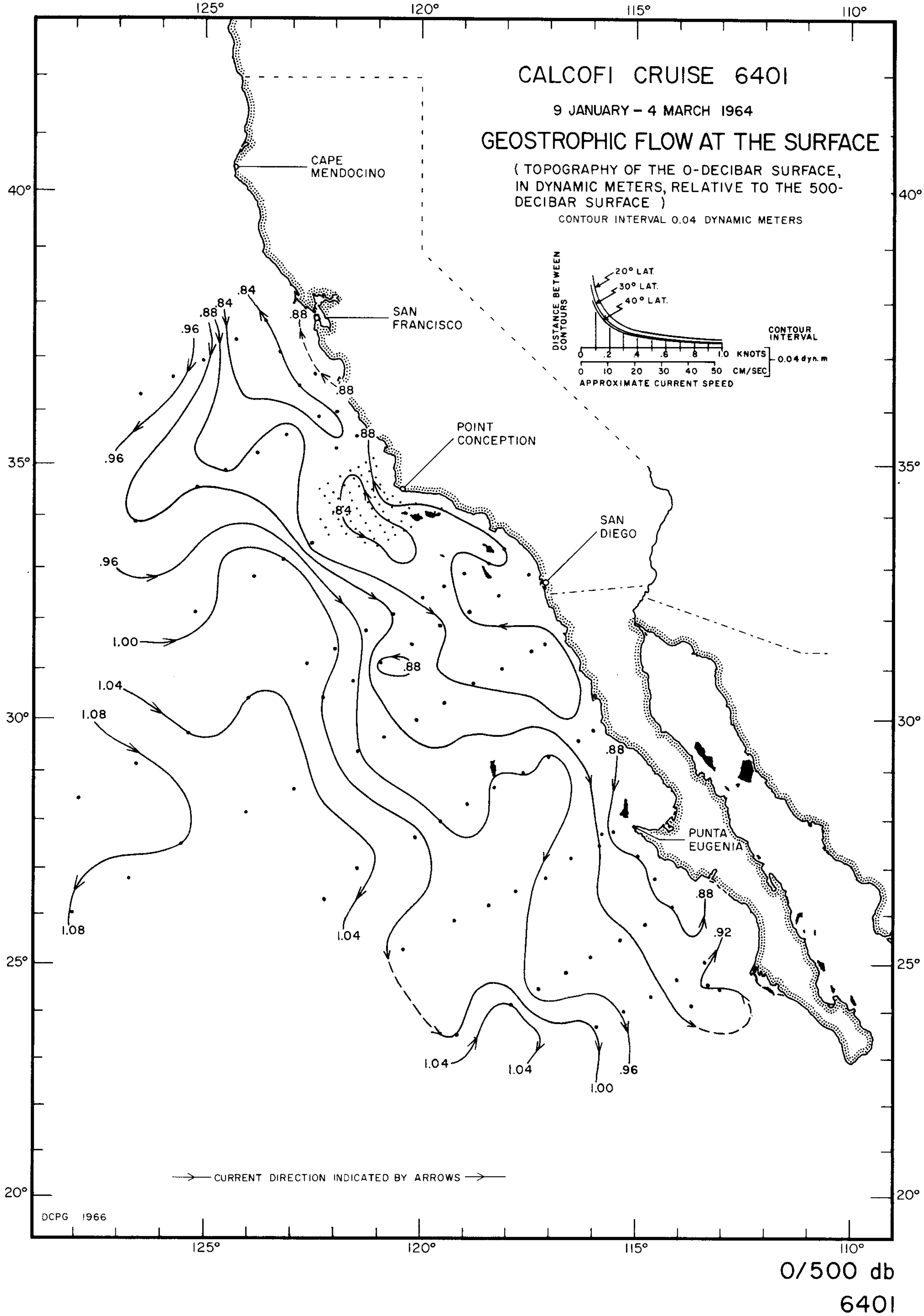
125°
120°
115°
110°
CALCOFI CRUISE 6307
10 JULY – 8 AUGUST 1963
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6307

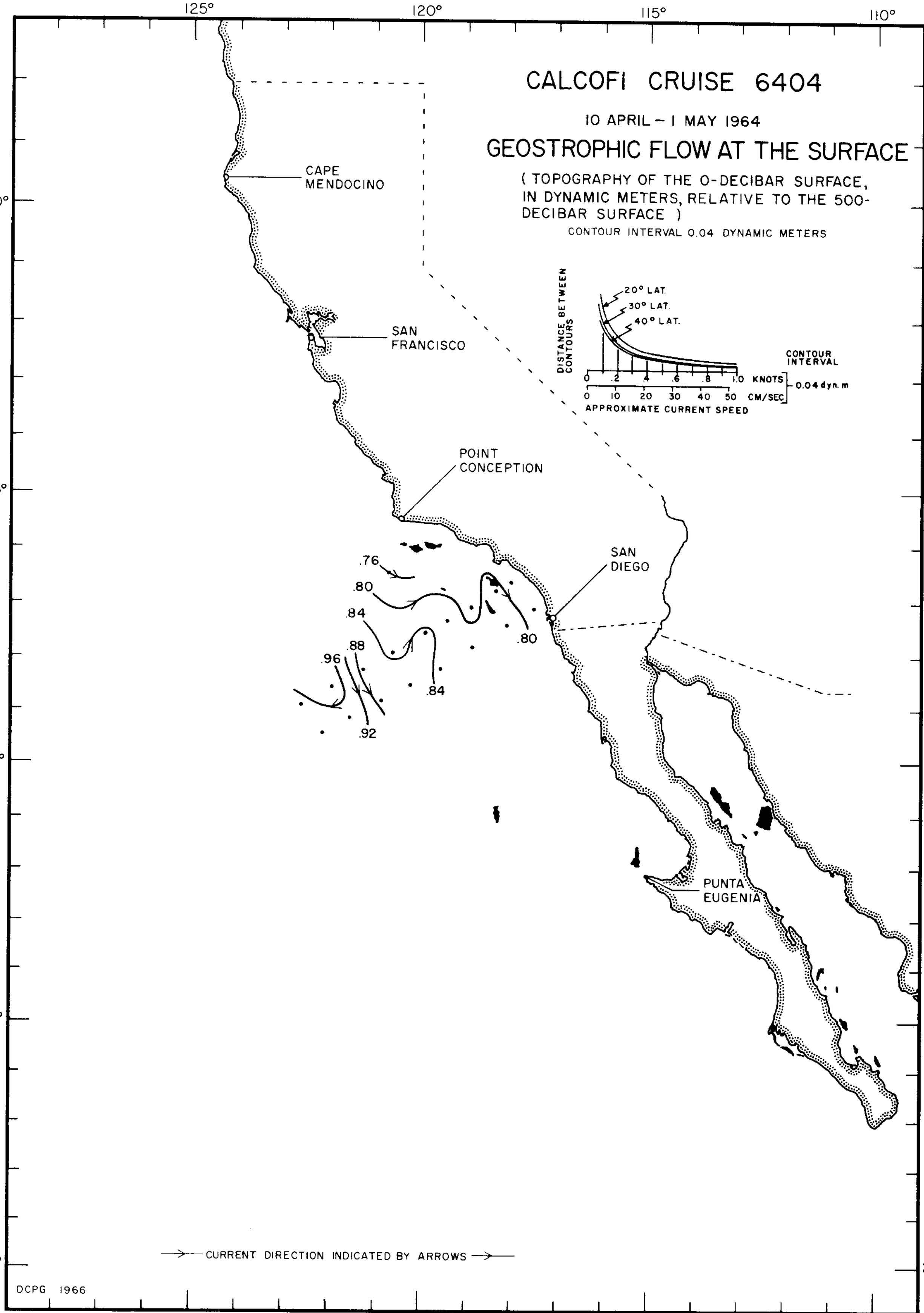

CALCOFI CRUISE 6310
2-29 OCTOBER 1963
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
KNOTS
0.04 dyn. m
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db

6310

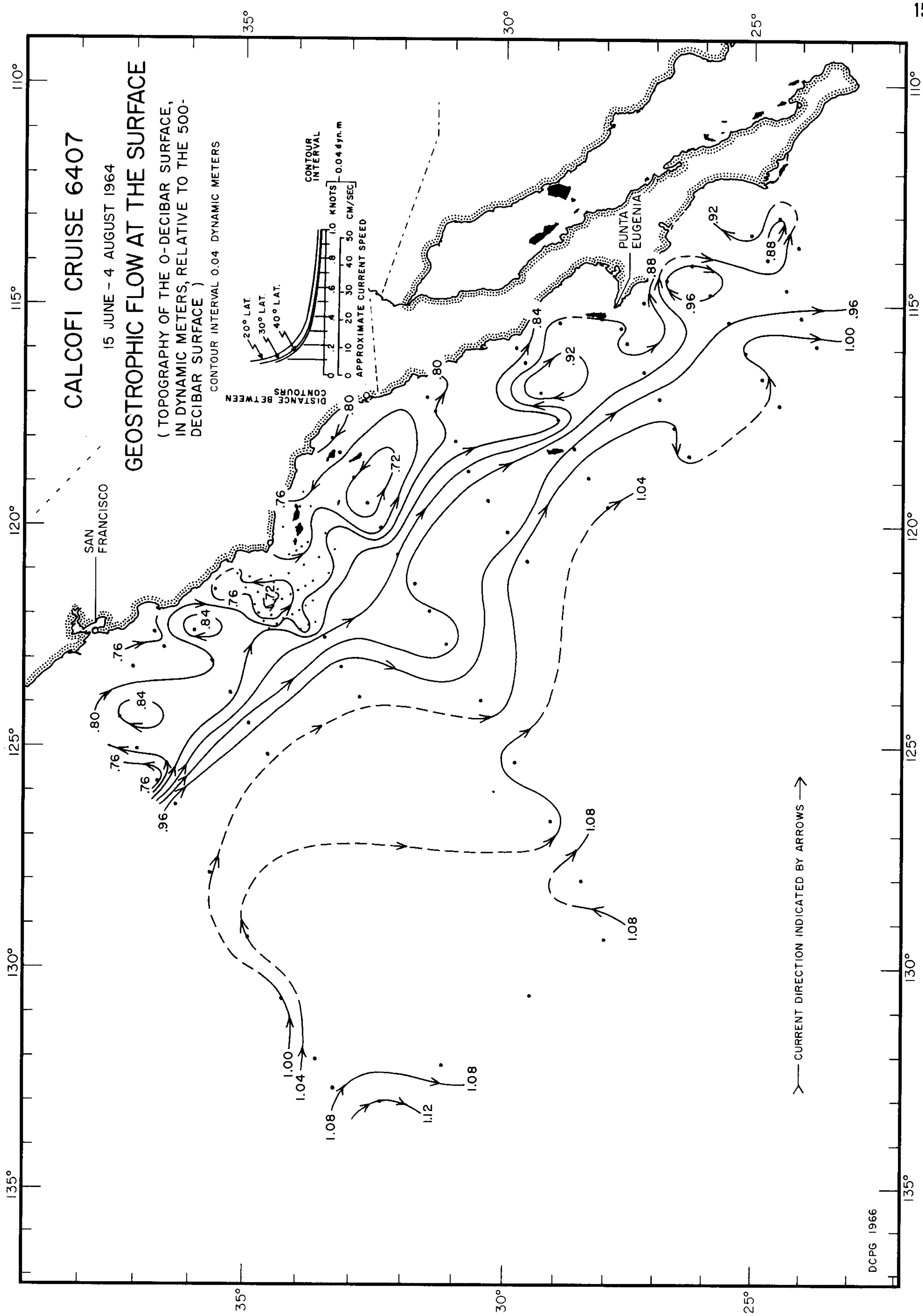

CALCOFI CRUISE 6401
9 JANUARY – 4 MARCH 1964
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
125°
120°
115°
110°
40°
35°
30°
25°
20°

0/500 db
6401

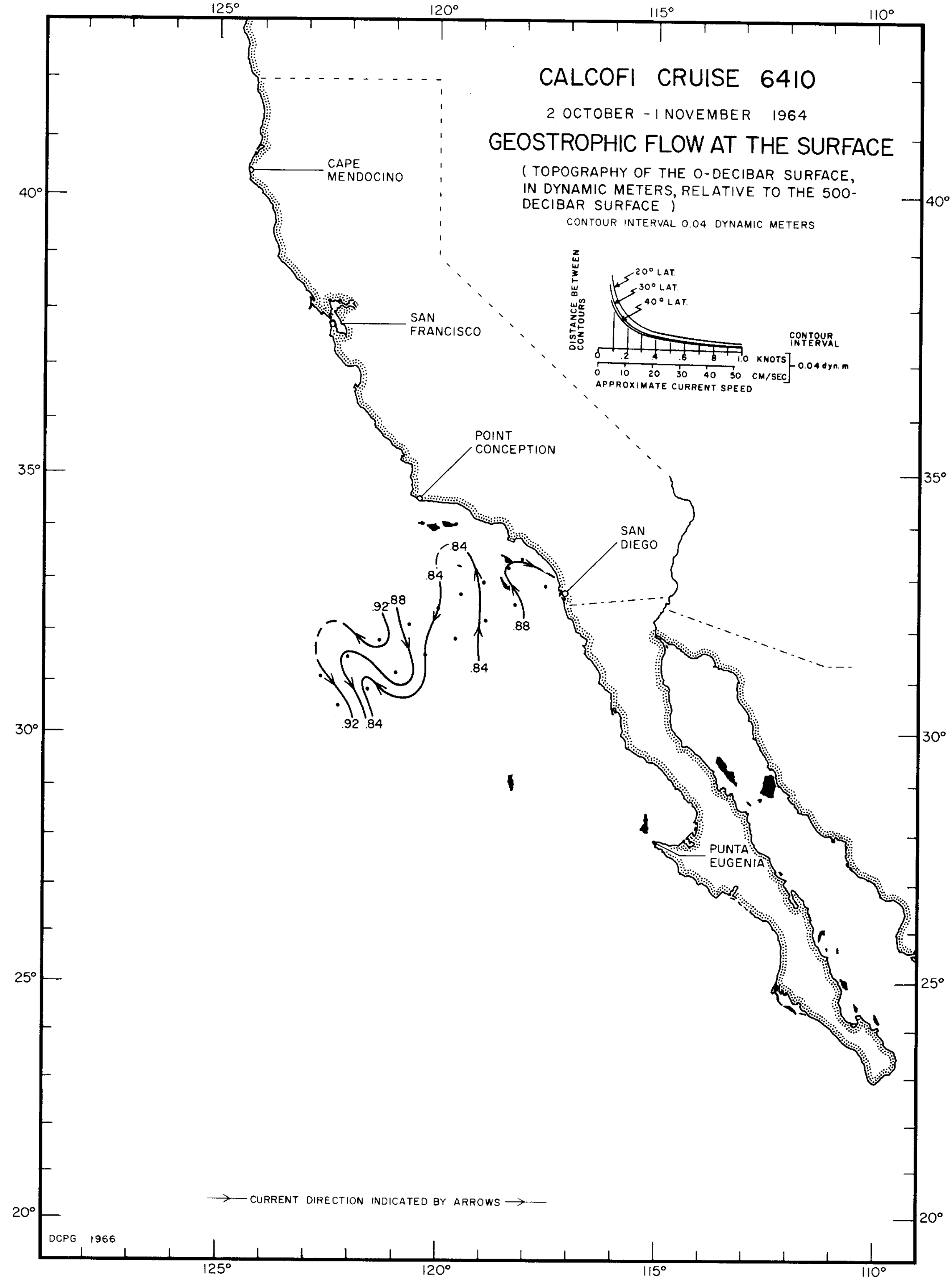


CALCOFI CRUISE 6404
10 APRIL – 1 MAY 1964
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn. m
125°
120°
115°
110°
40°
35°
30°
25°
20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.76
.80
.84
.88
.96
.92
.80
.84
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

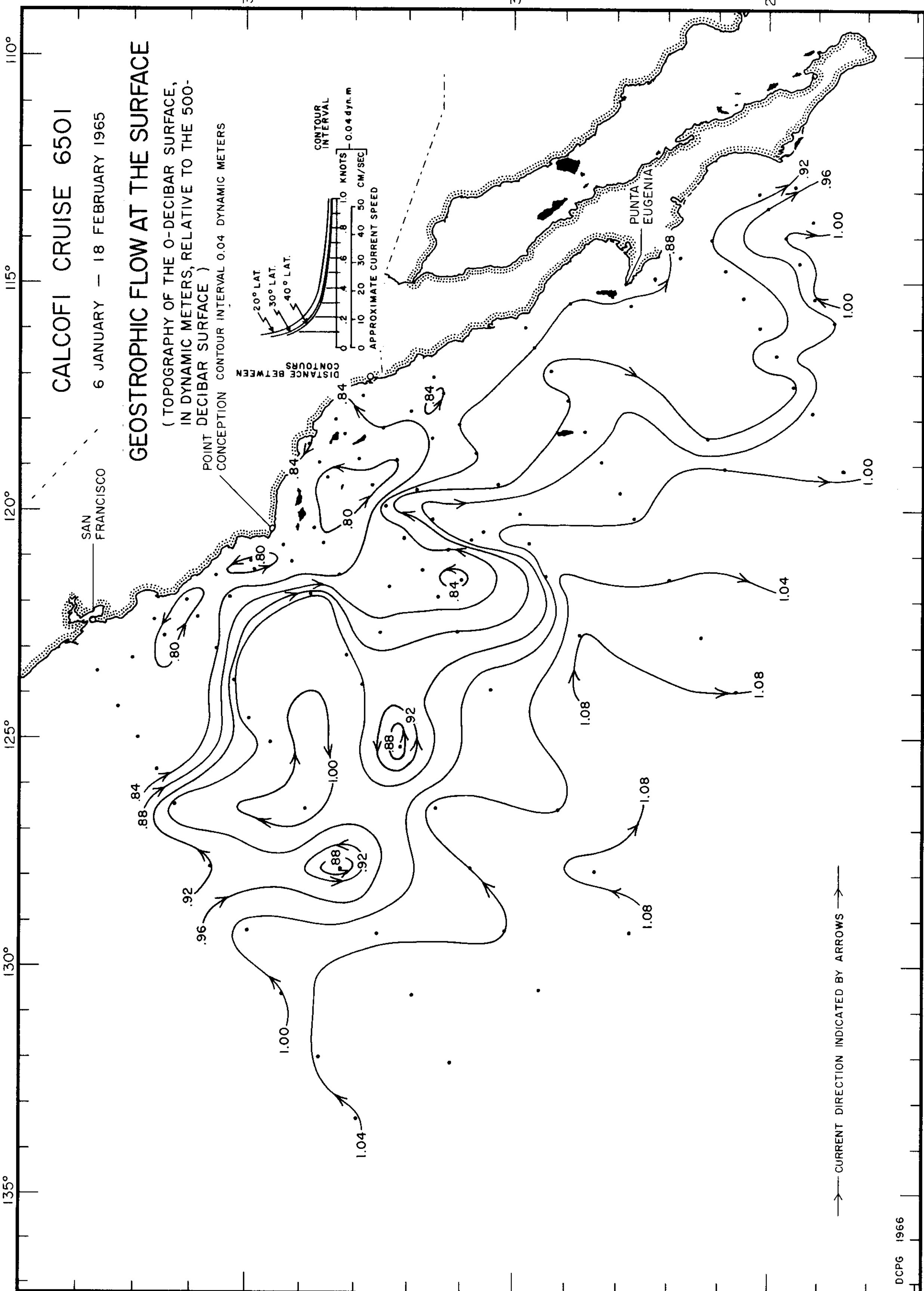
0/500 db
6404


CALCOFI CRUISE 6407
15 JUNE - 4 AUGUST 1964
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
CONTOUR INTERVAL
0.04 dyn.m
APPROXIMATE CURRENT SPEED
SAN FRANCISCO
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
35°
30°
25°
110°
115°
120°
125°
130°
135°

0/500 db
6407

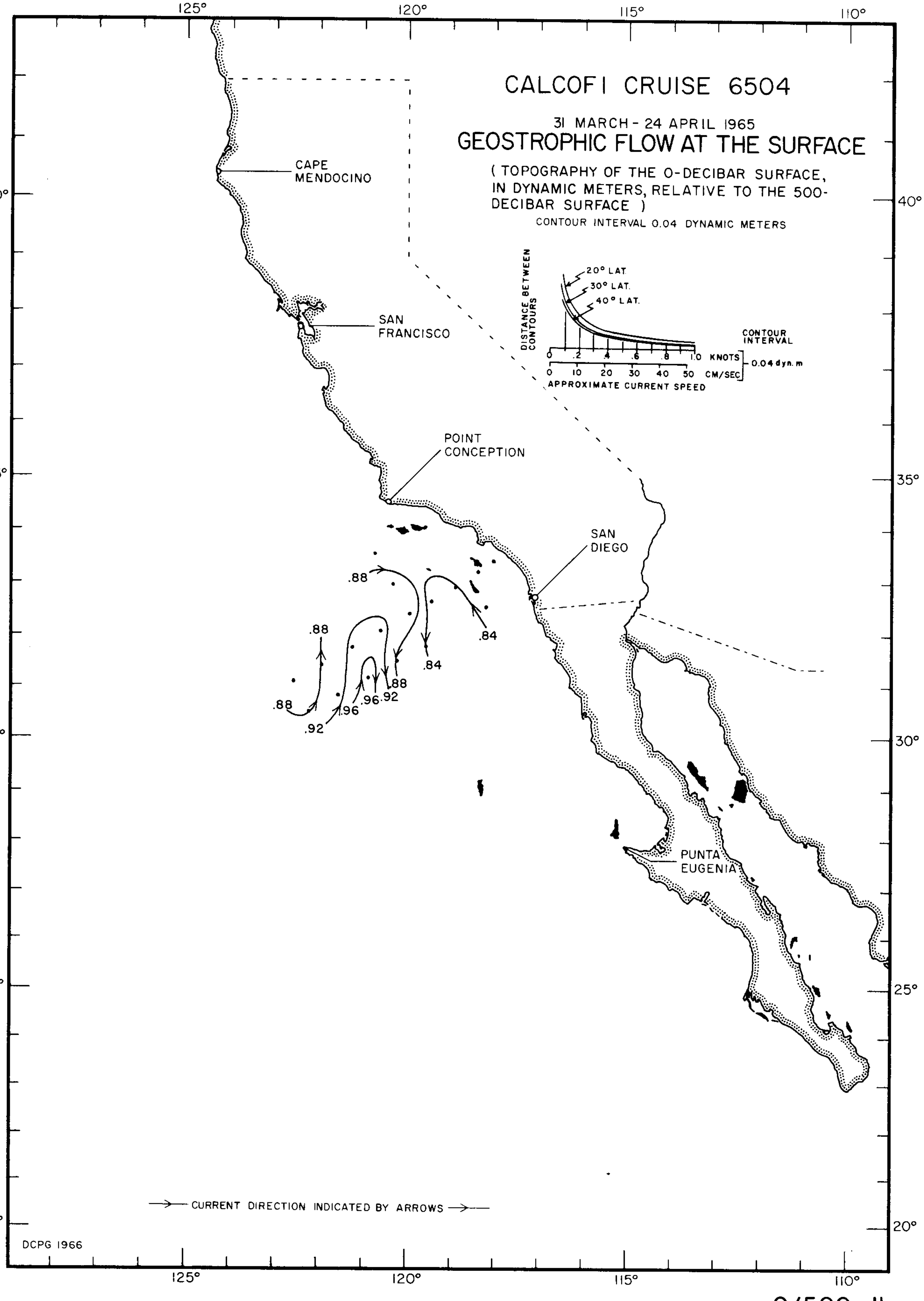

CALCOFI CRUISE 6410
2 OCTOBER - 1 NOVEMBER 1964
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
0.04 dyn. m
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.84
.84
.92
.88
.88
.84
.92
.84
125°
120°
115°
110°
40°
35°
30°
25°
20°
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

0/500 db
6410

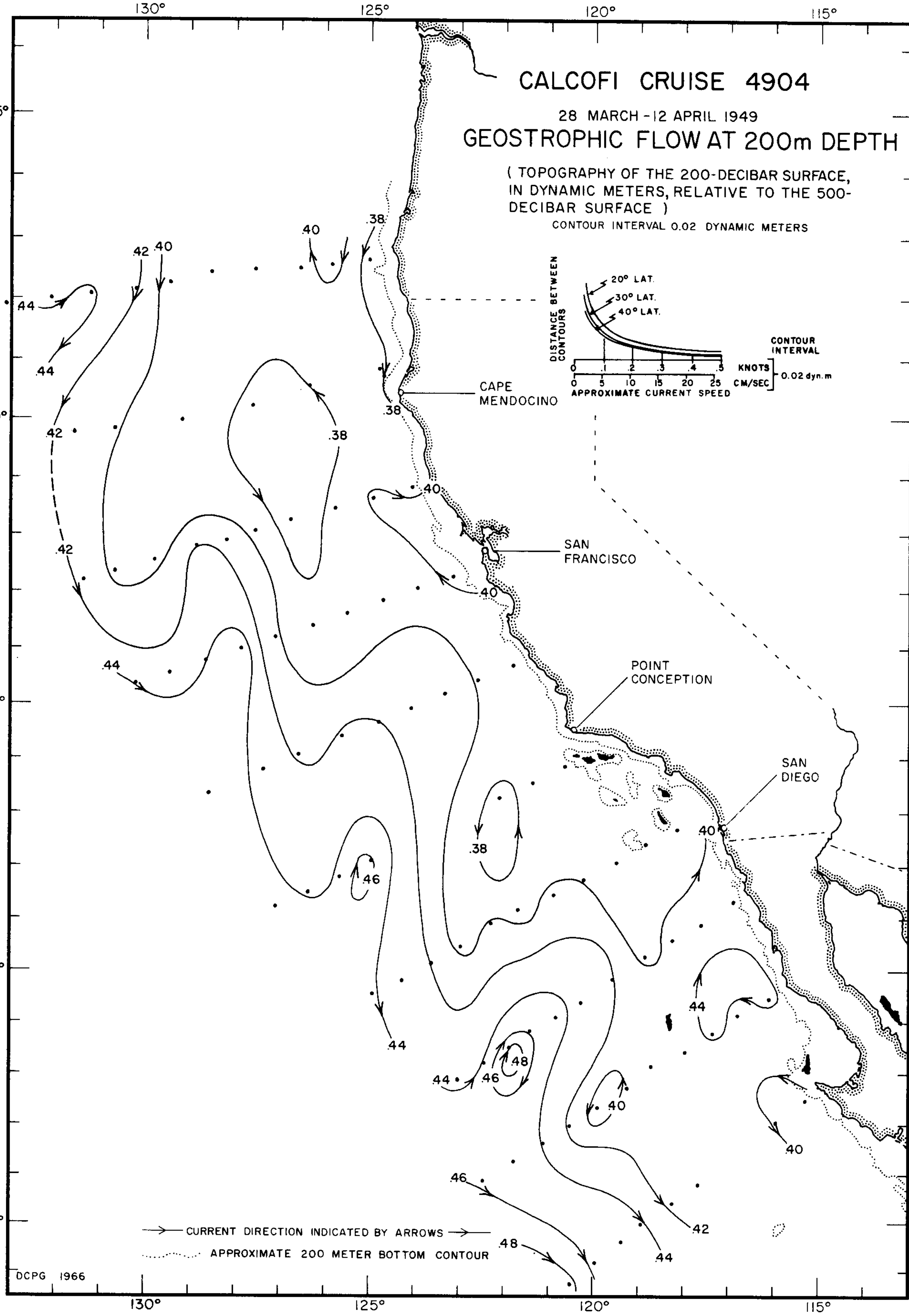

CALCOFI CRUISE 6501
6 JANUARY — 18 FEBRUARY 1965
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE 0-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CONTOUR INTERVAL
0.04 dyn.m
SAN FRANCISCO
POINT CONCEPTION
PUNTA EUGENIA
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966
35°
30°
25°
110°
115°
120°
125°
130°
135°

0/500 db

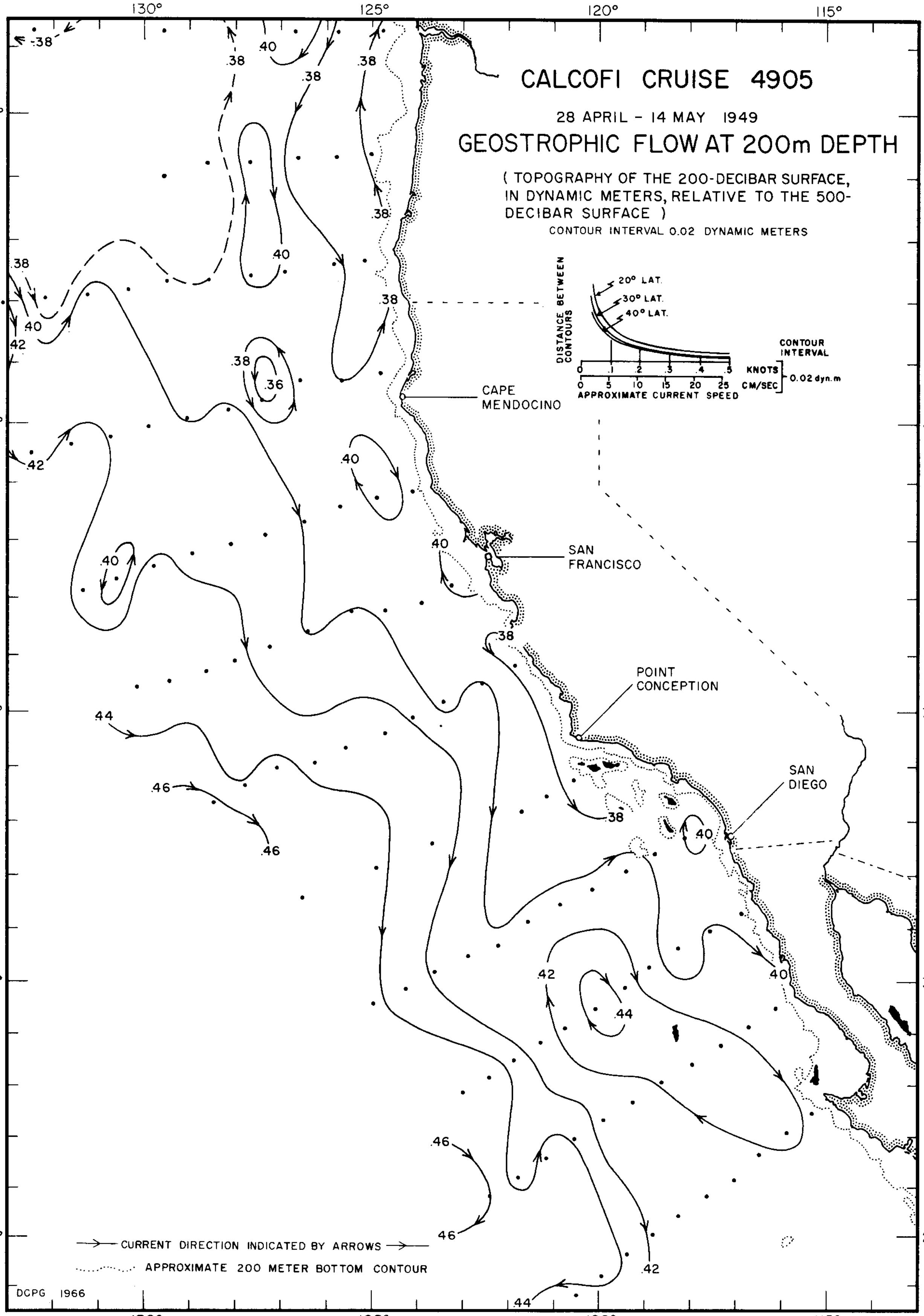
6501


CALCOFI CRUISE 6504
31 MARCH - 24 APRIL 1965
GEOSTROPHIC FLOW AT THE SURFACE
(TOPOGRAPHY OF THE O-DECIBAR SURFACE, IN DYNAMIC METERS, RELATIVE TO THE 500-DECIBAR SURFACE)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
CONTOUR INTERVAL
0.04 dyn. m
0 .2 .4 .6 .8 1.0 KNOTS
0 10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
125°
120°
115°
110°
40°
35°
30°
25°
20°
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.88
.88
.88
.92
.96
.96
.92
.88
.84
.84
CURRENT DIRECTION INDICATED BY ARROWS
DCPG 1966

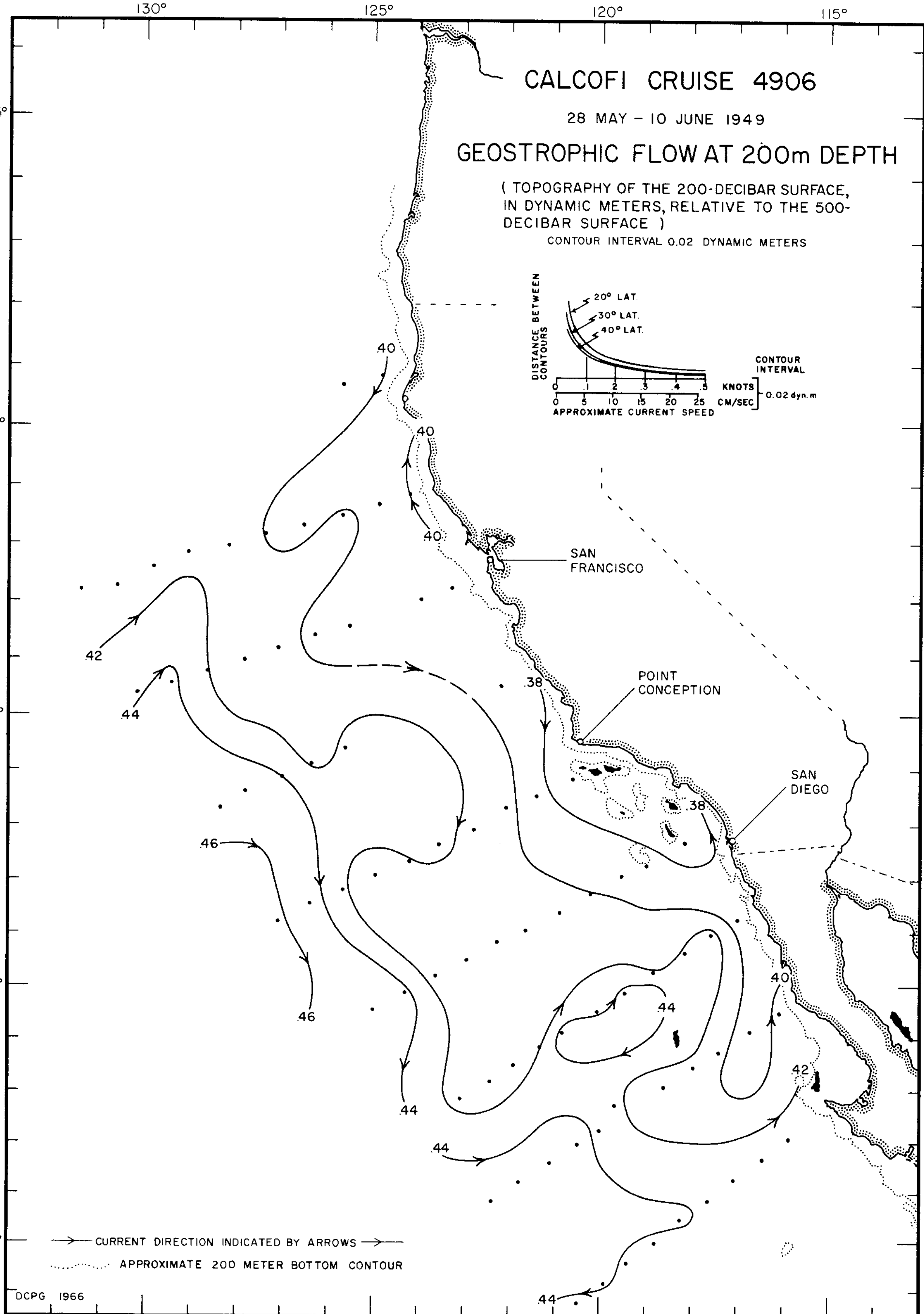
0/500 db
6504



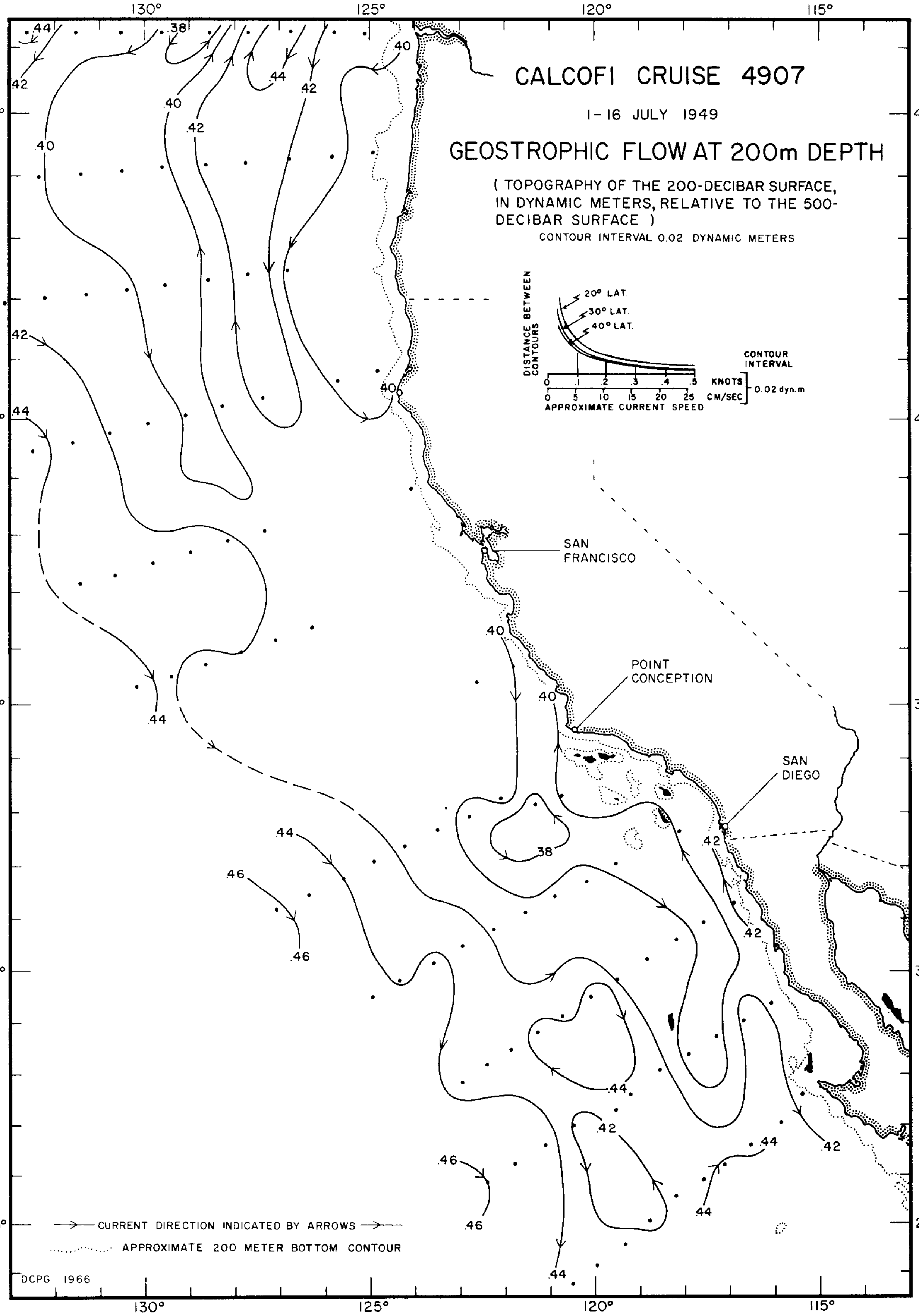
200/500 db
4904



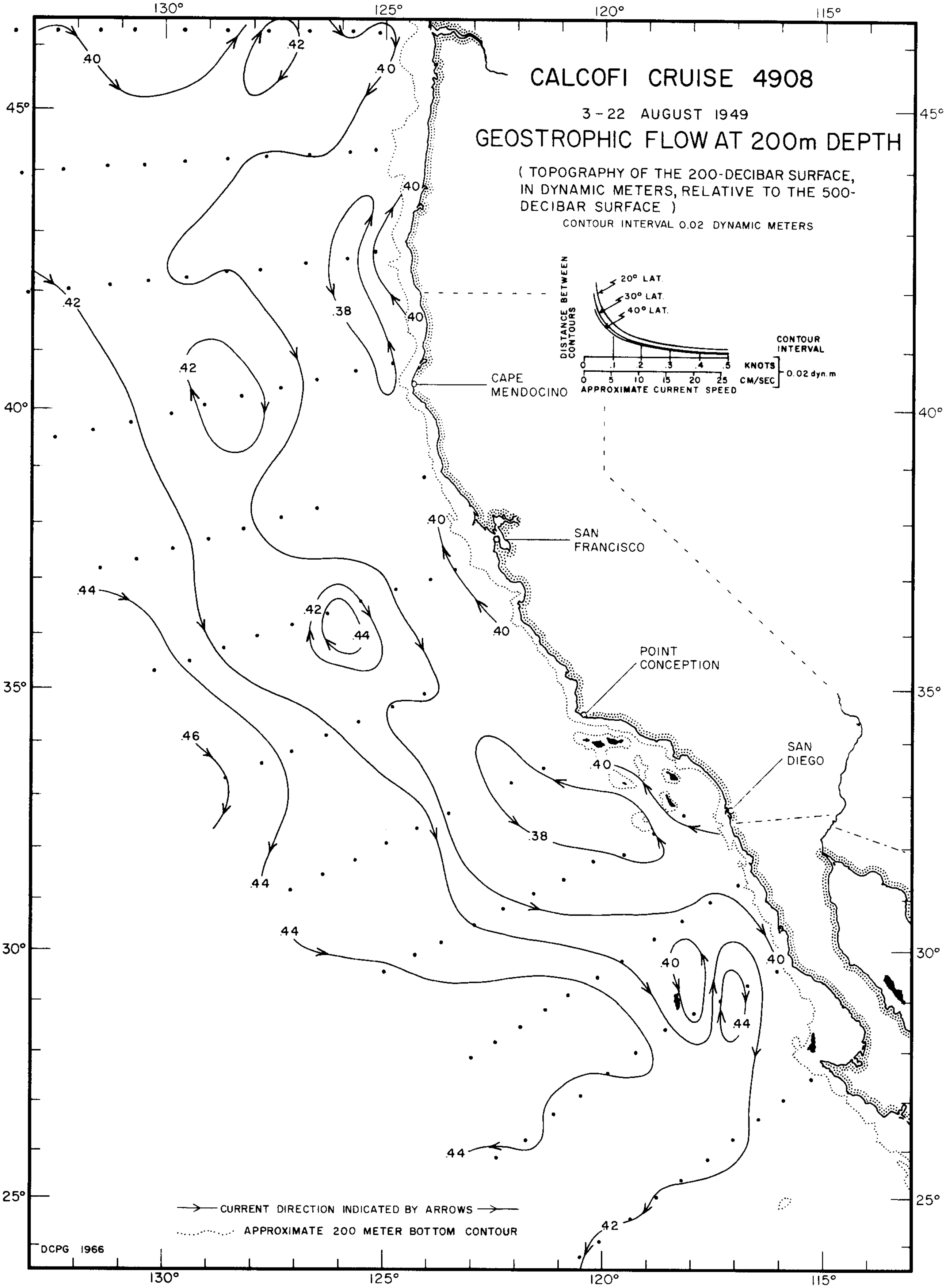
200/500 db
4905



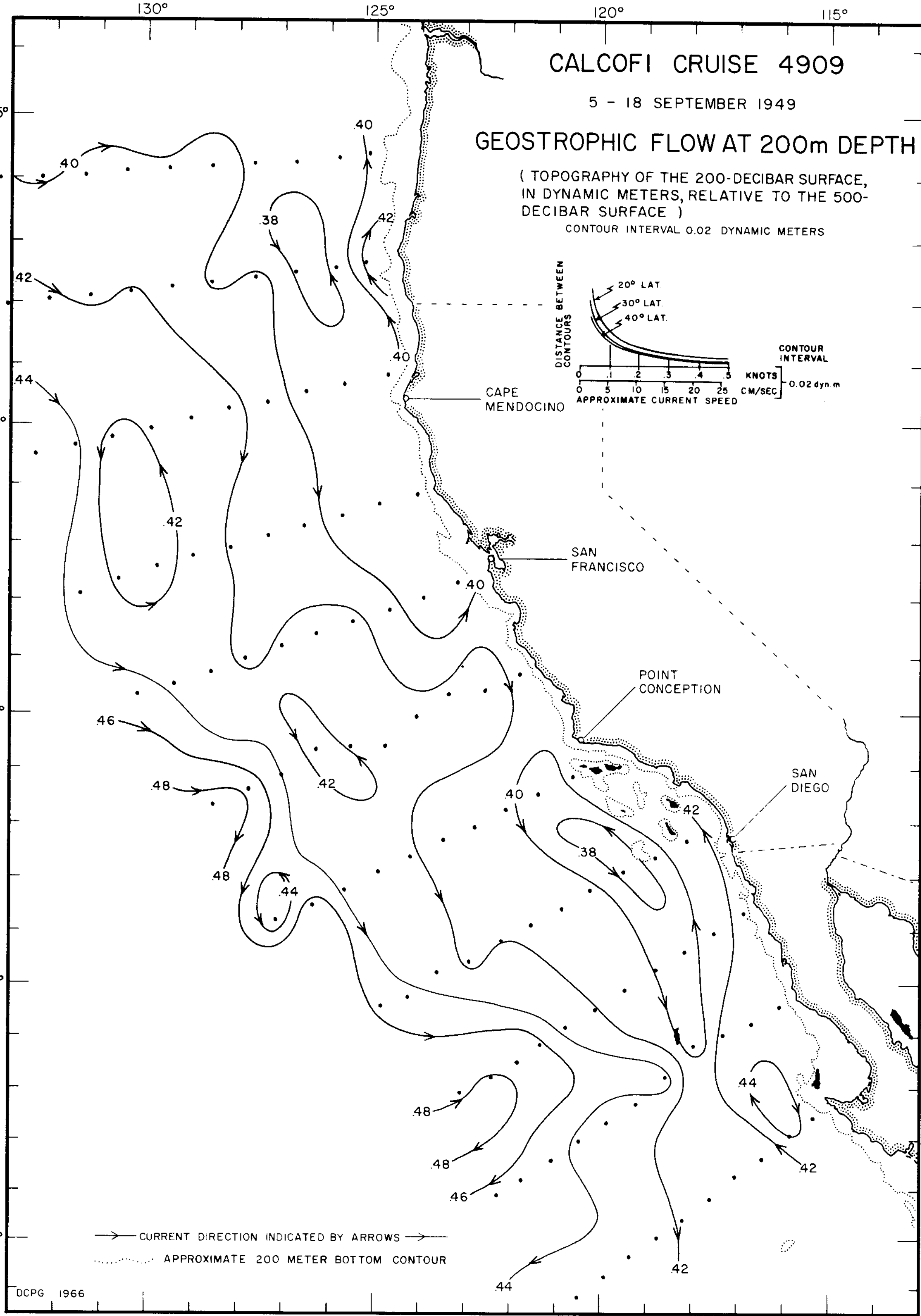
200/500 db
4906



200/500 db
4907

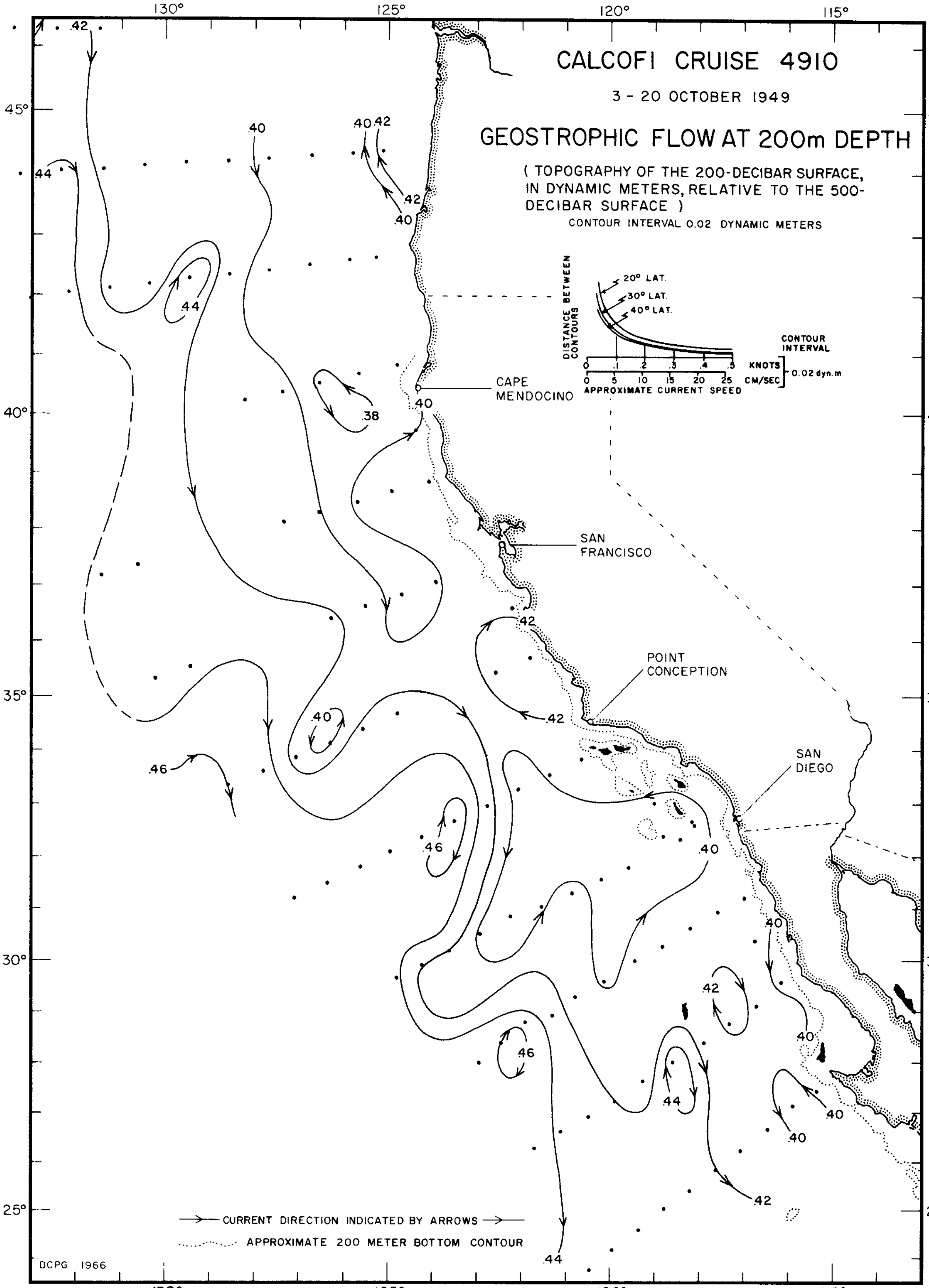


200/500 db
4908

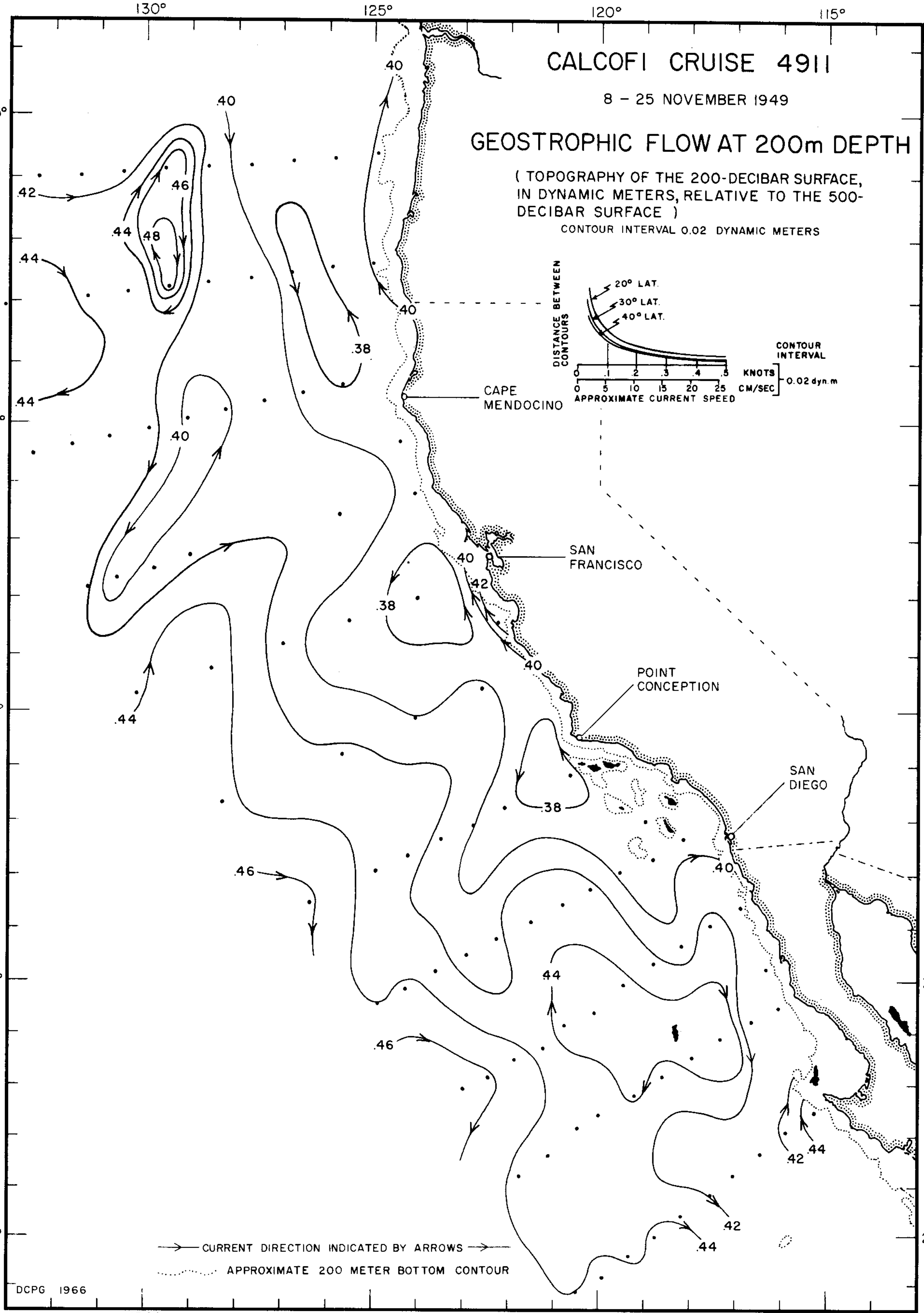


200/500 db

4909

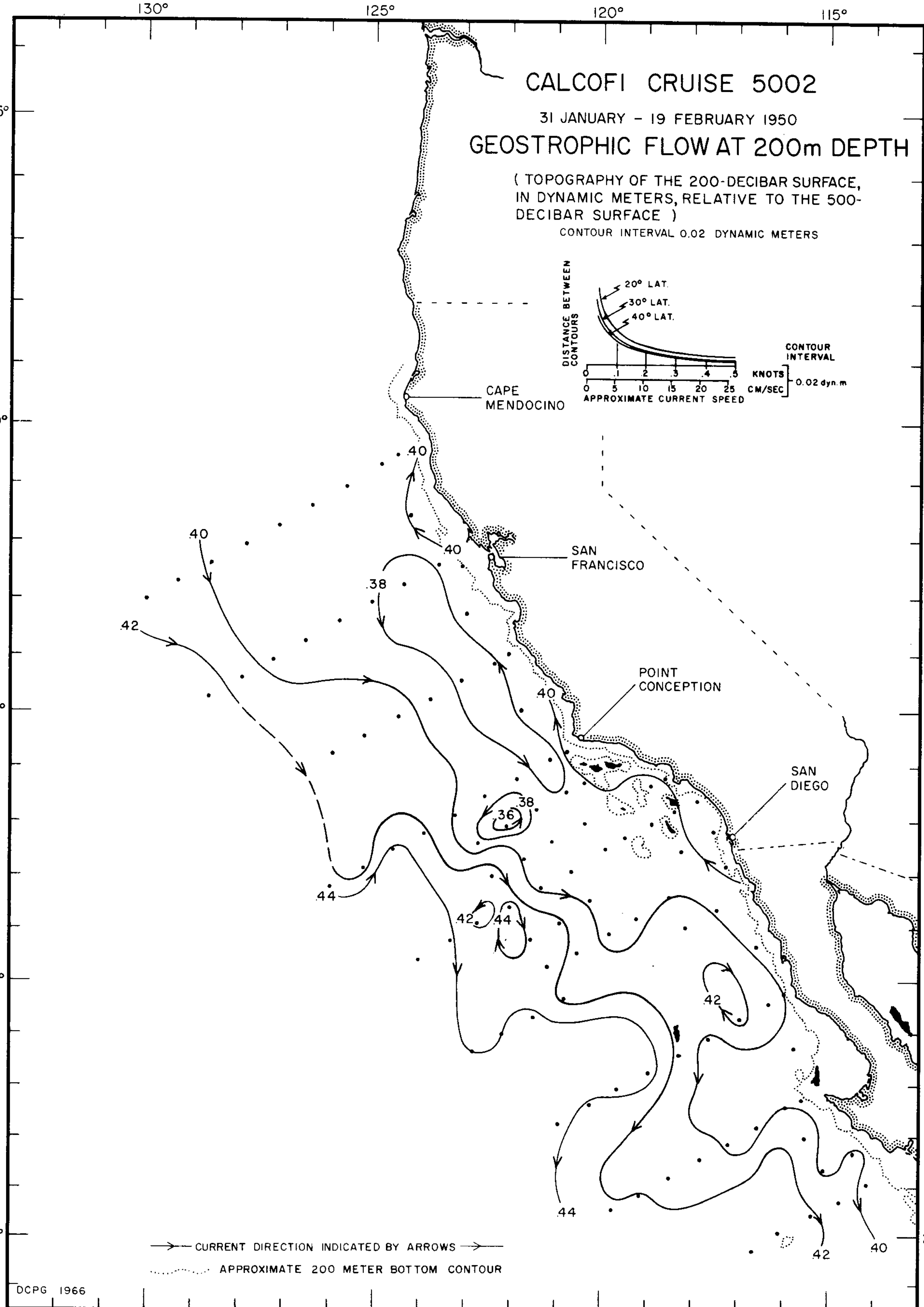


200/500 db
4910

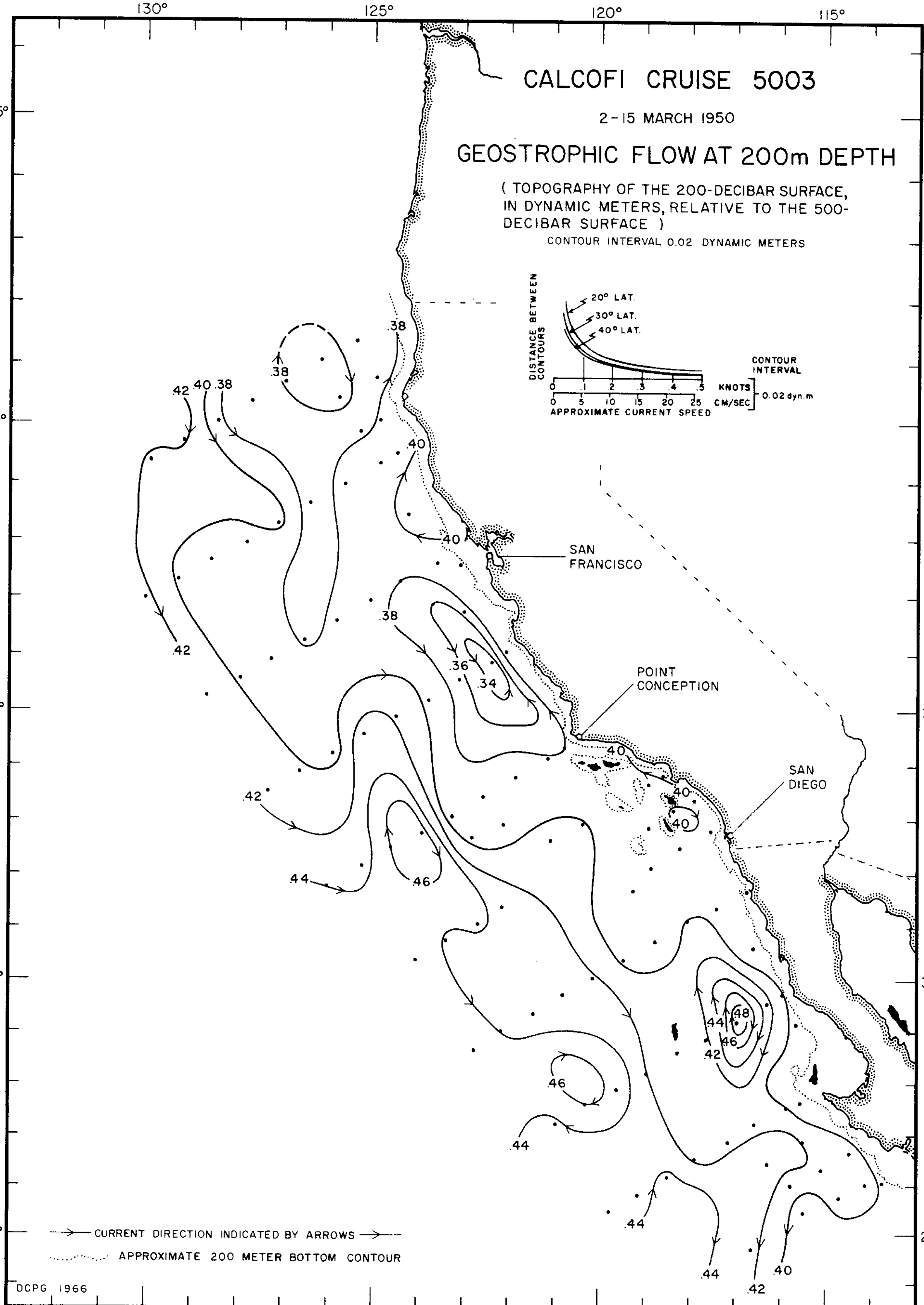


200/500 db

4911

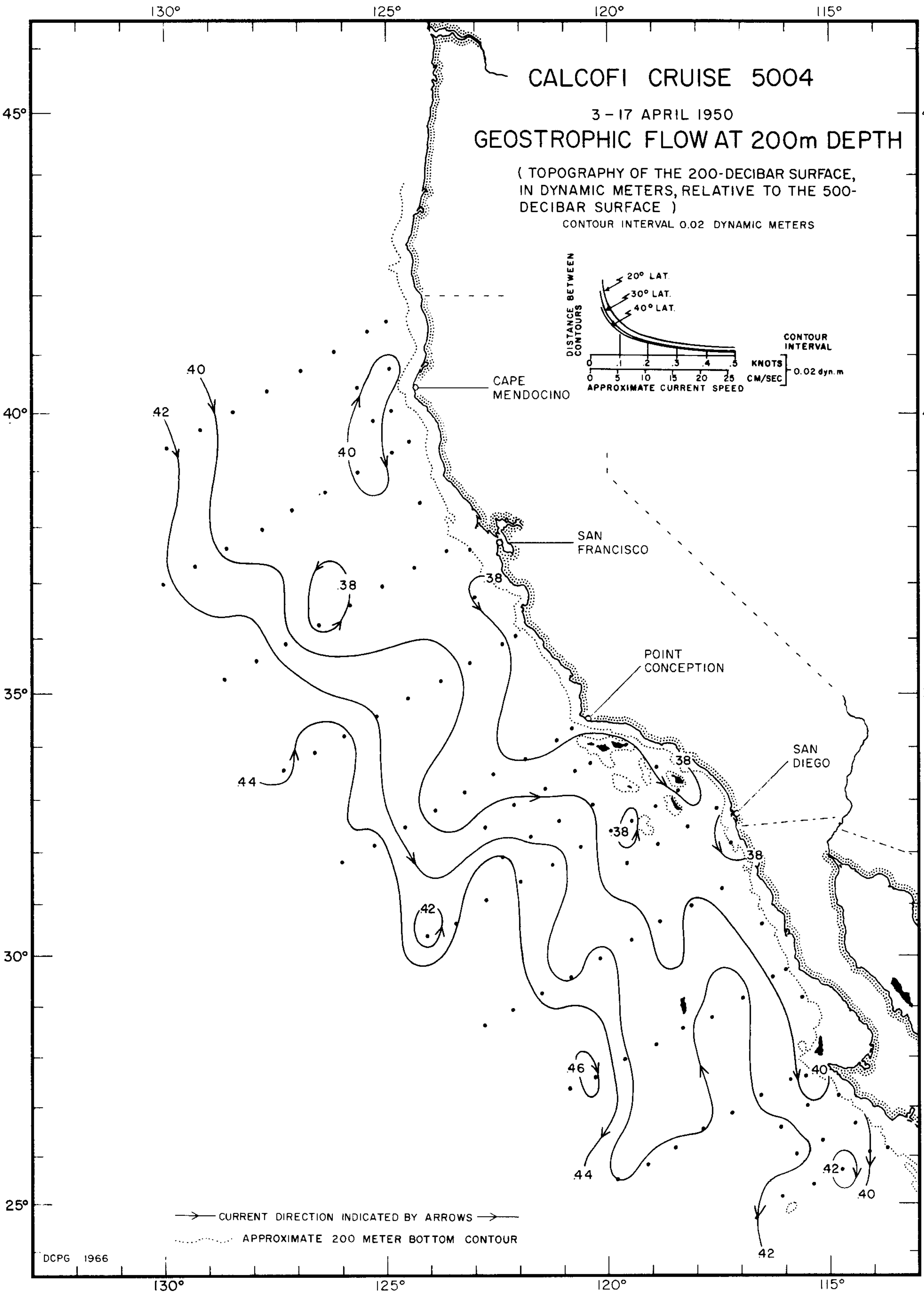


200/500 db
5002



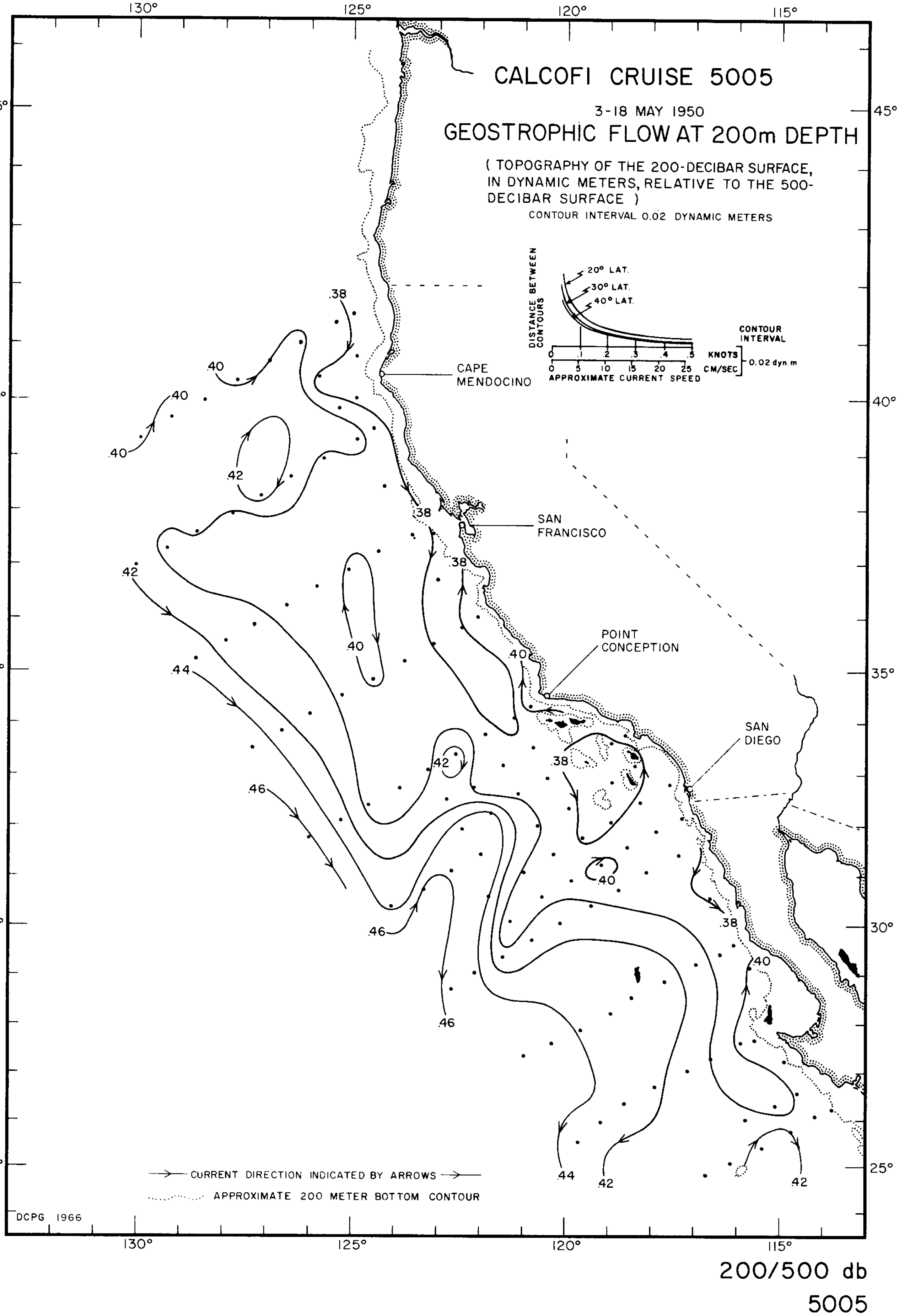
200/500 db

5003

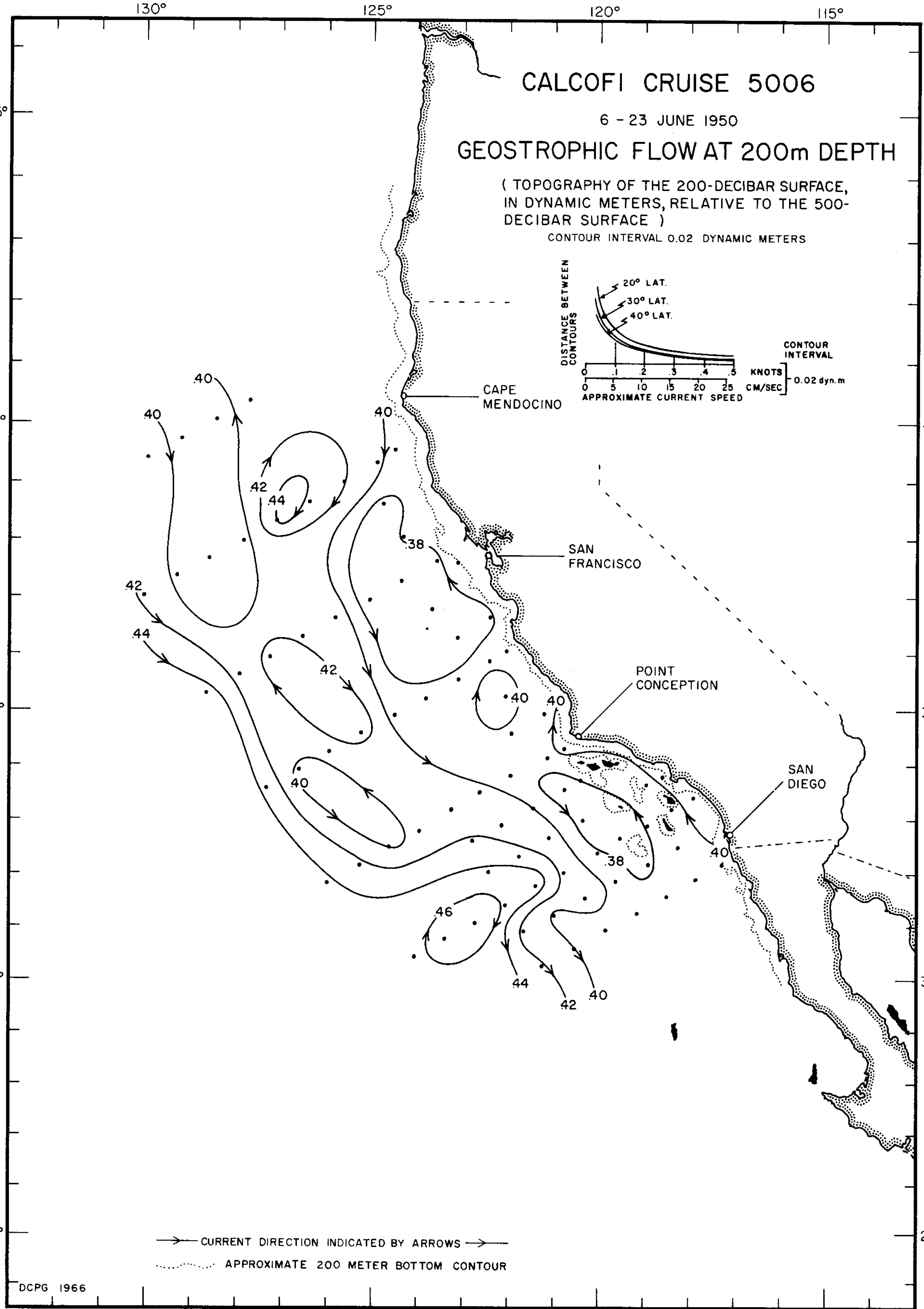


200/500 db

5004



200/500 db
5005



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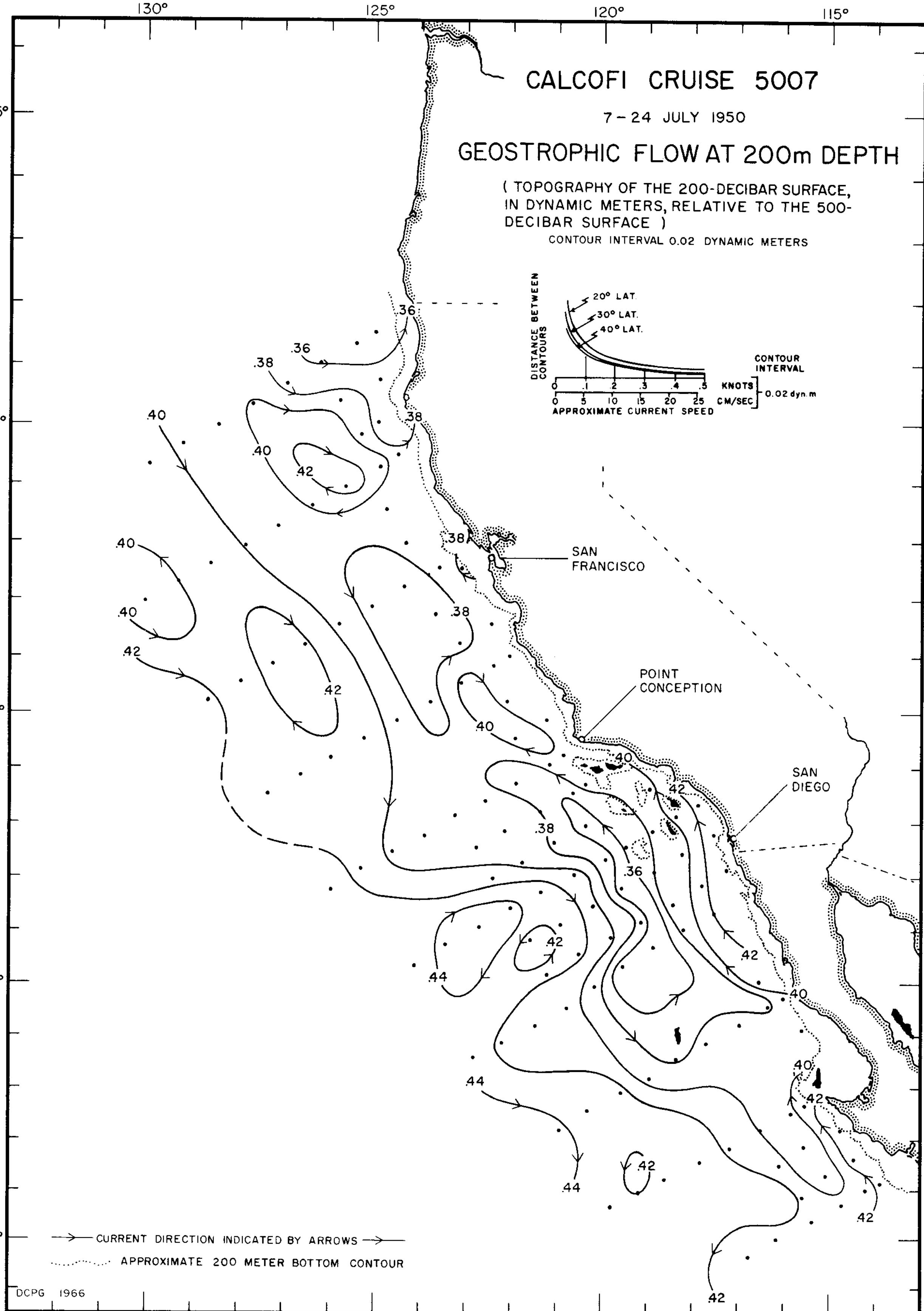

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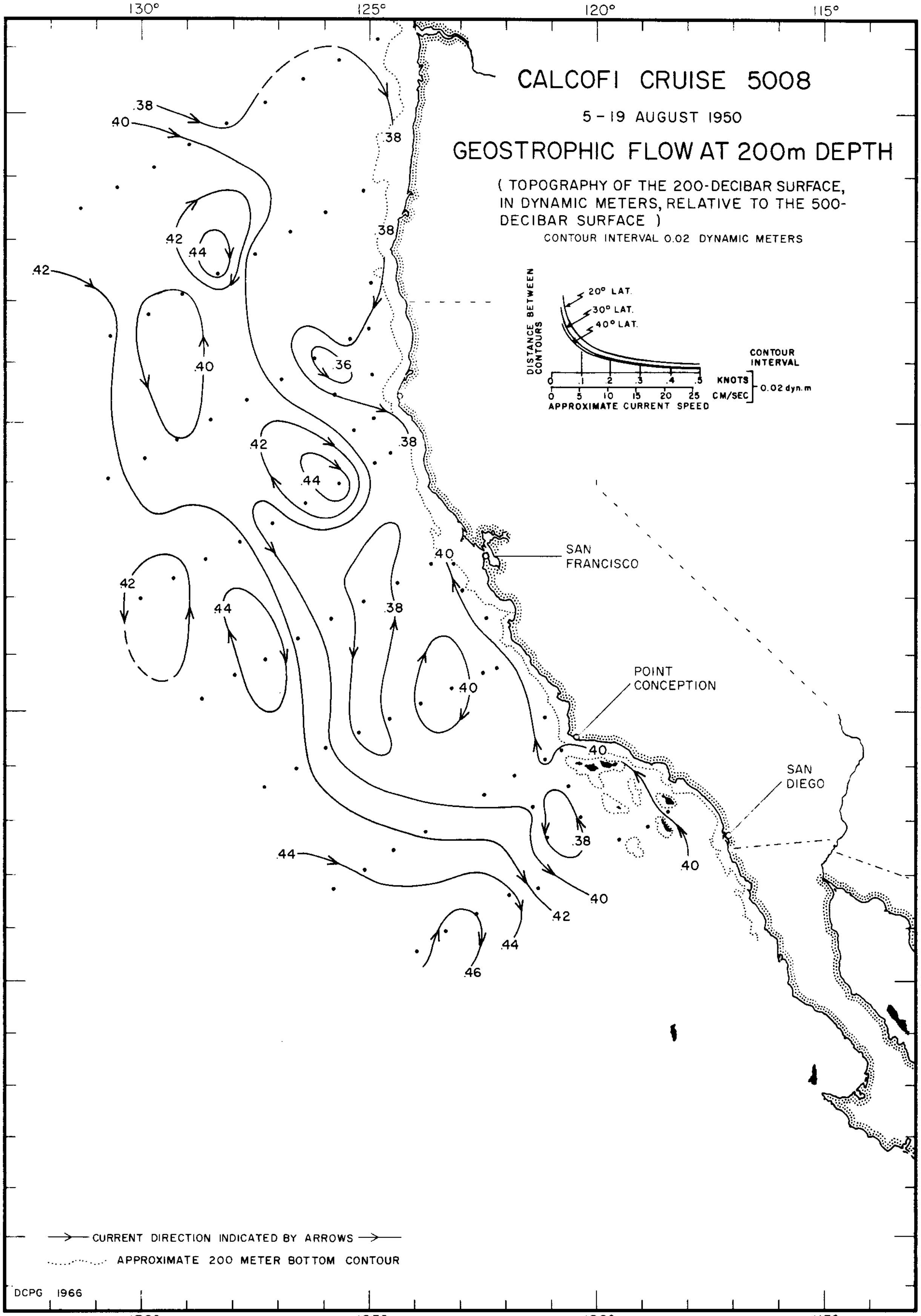

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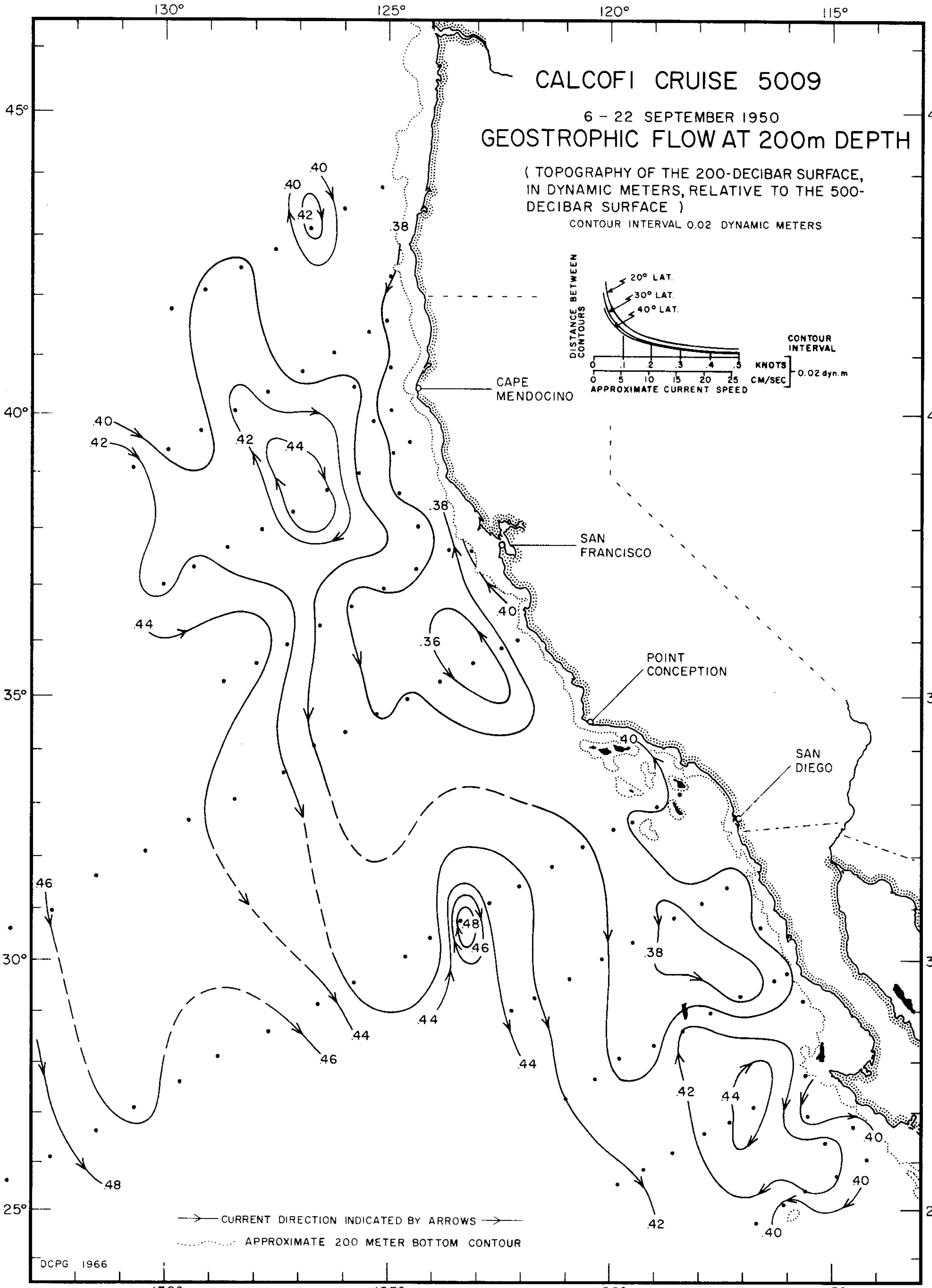

200/500 db

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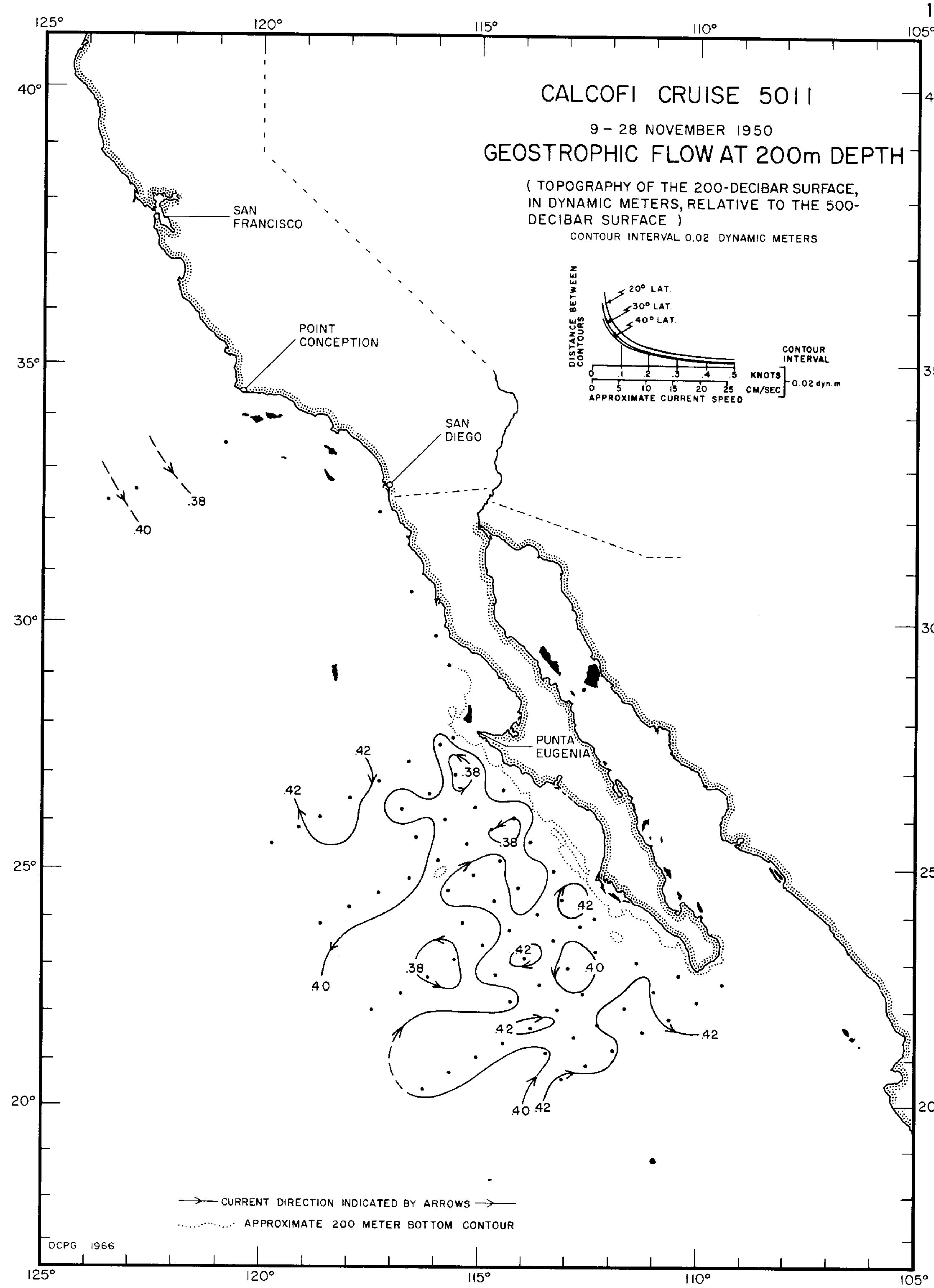

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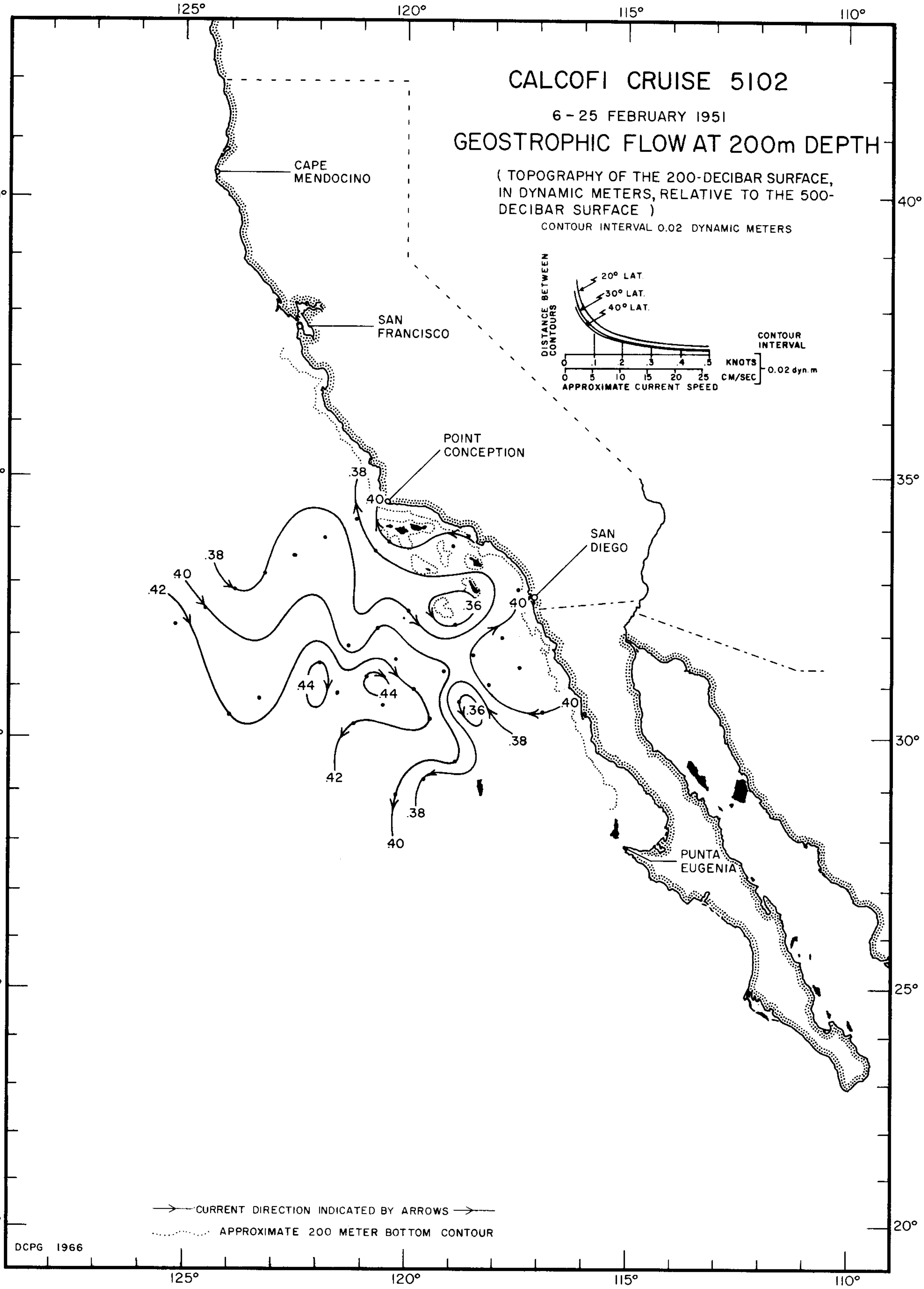

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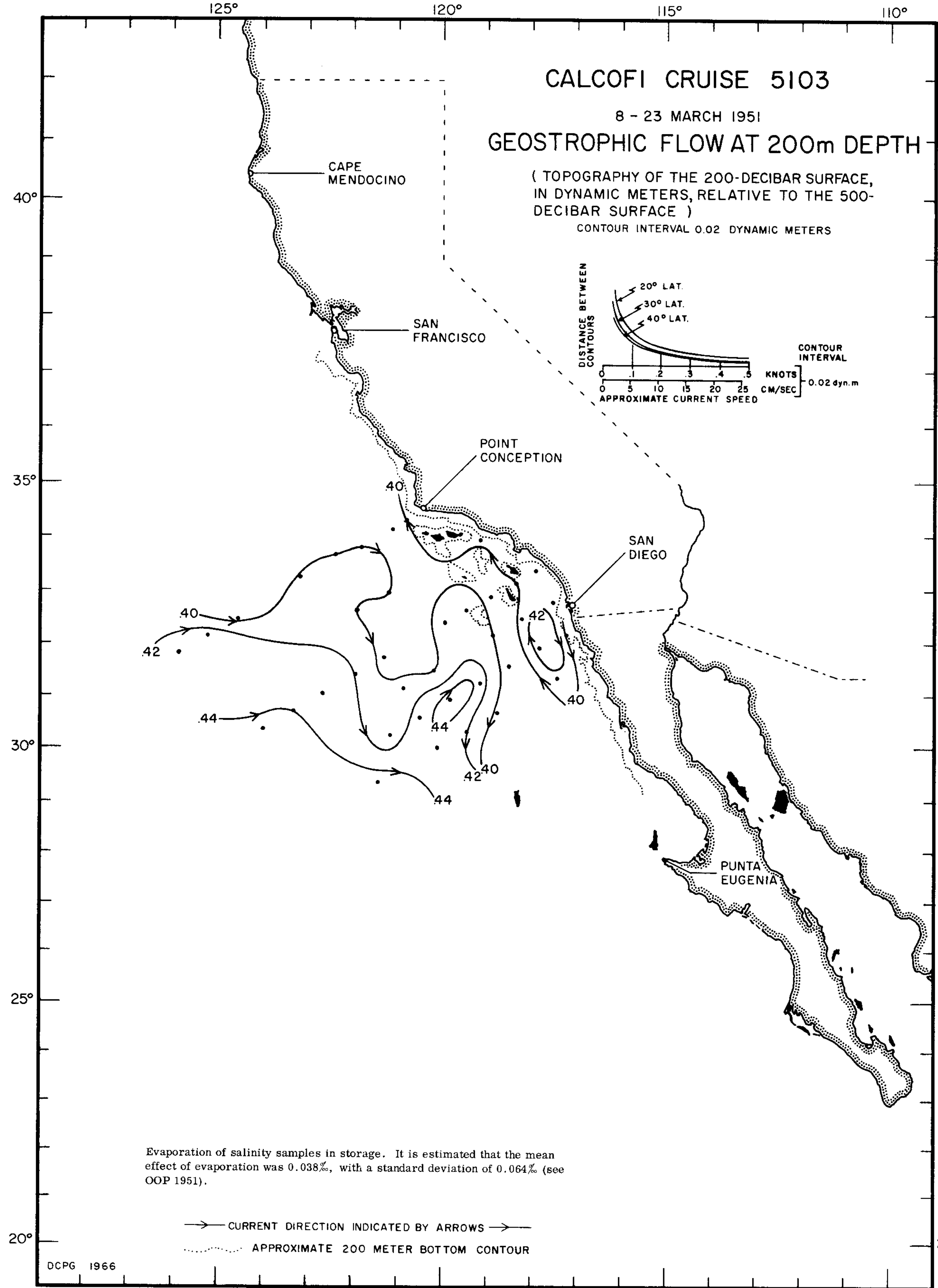
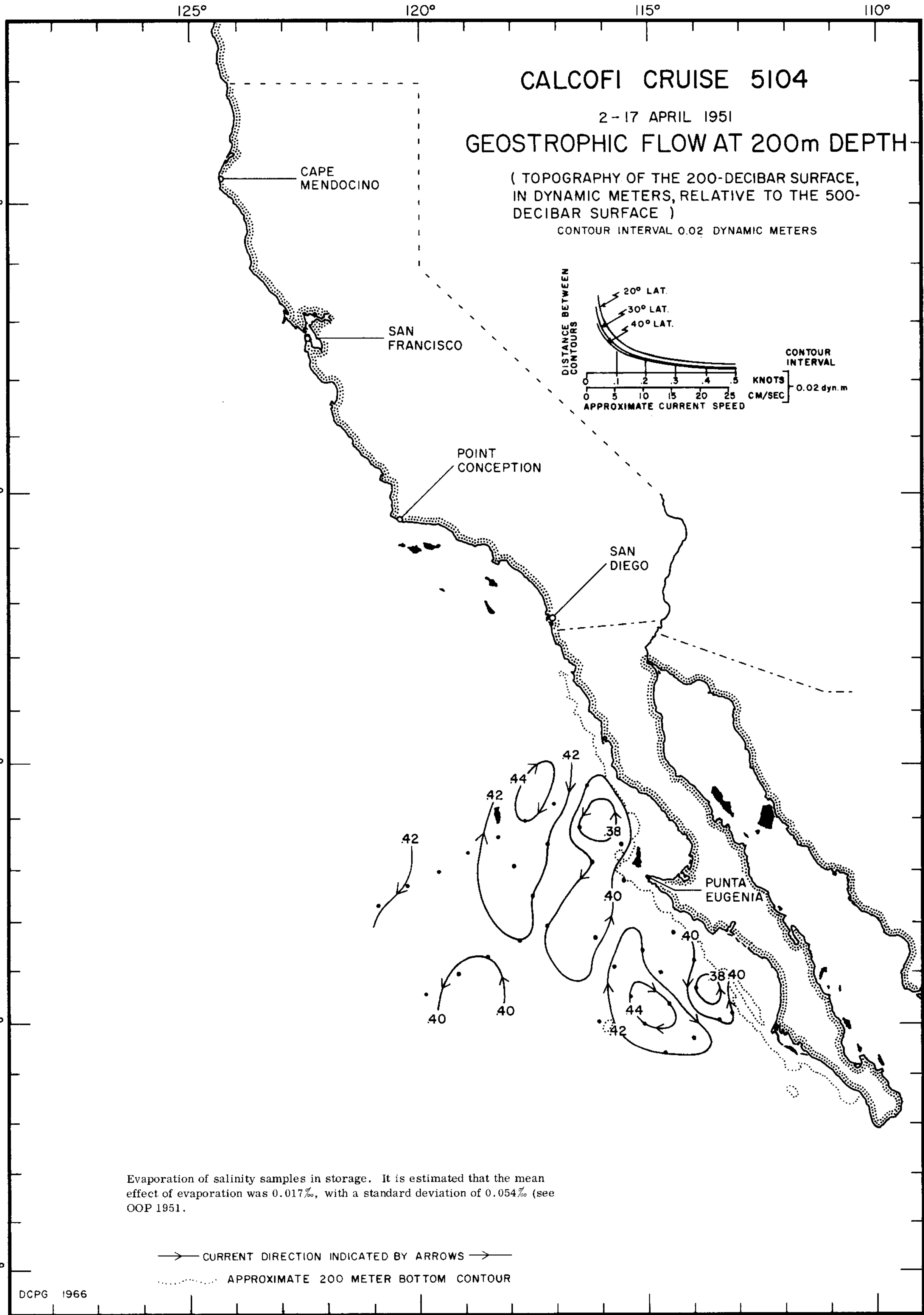


Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.038‰, with a standard deviation of 0.064‰ (see OOP 1951).

200/500 db

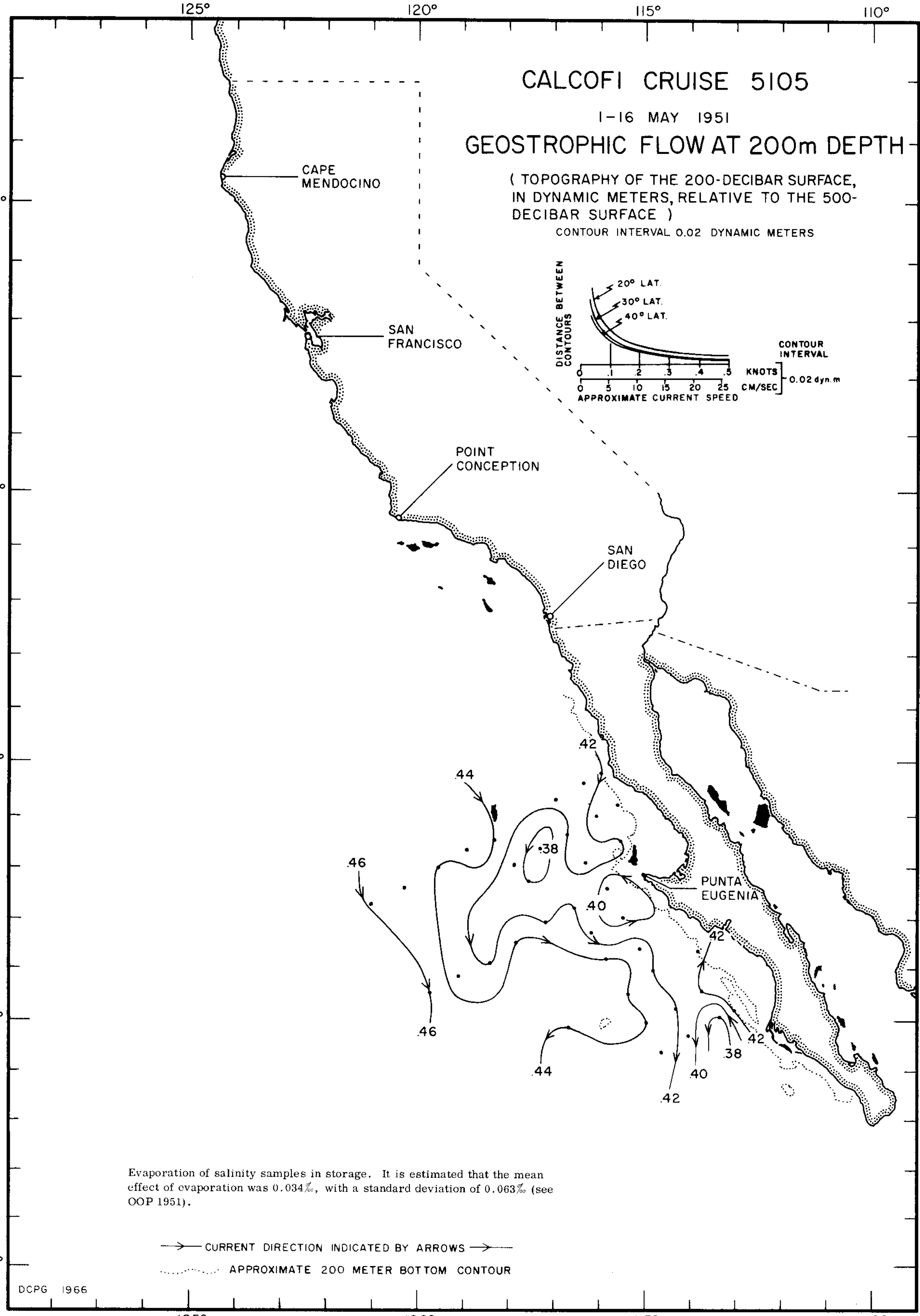
5103



Evaporation of salinity samples in storage. It is estimated that the mean effect of evaporation was 0.017‰, with a standard deviation of 0.054‰ (see OOP 1951.

200/500 db

5104



200/500 db

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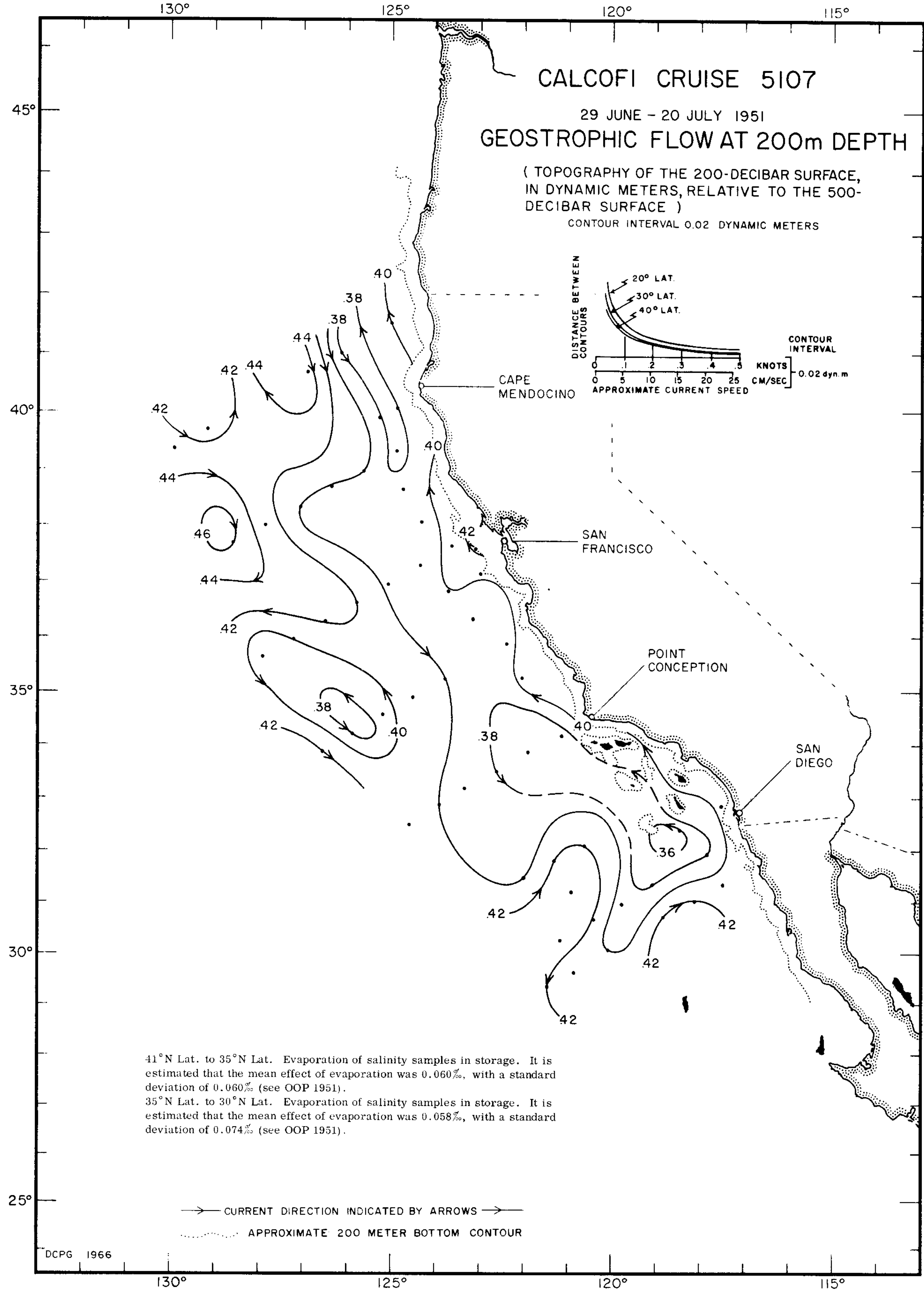

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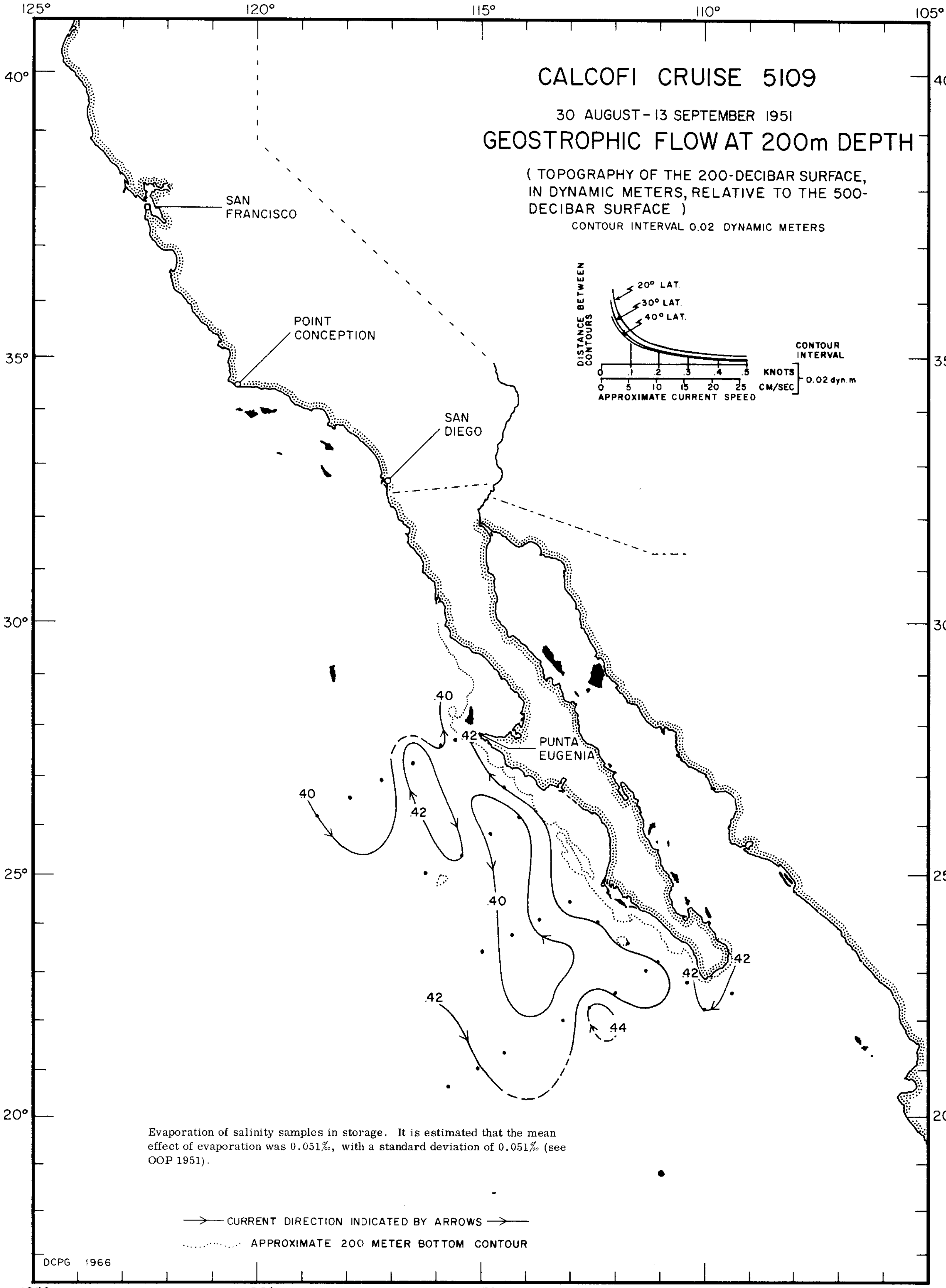

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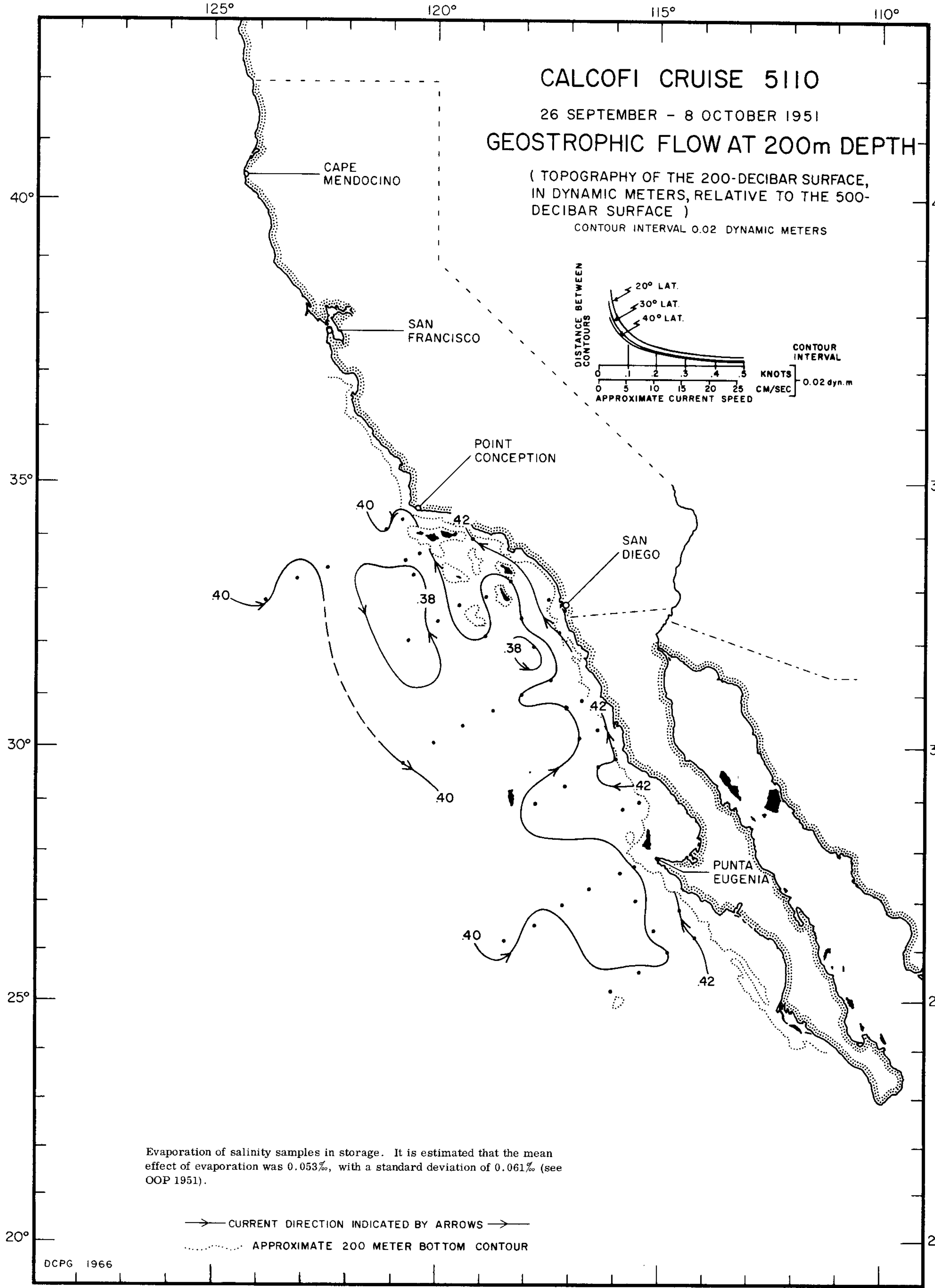

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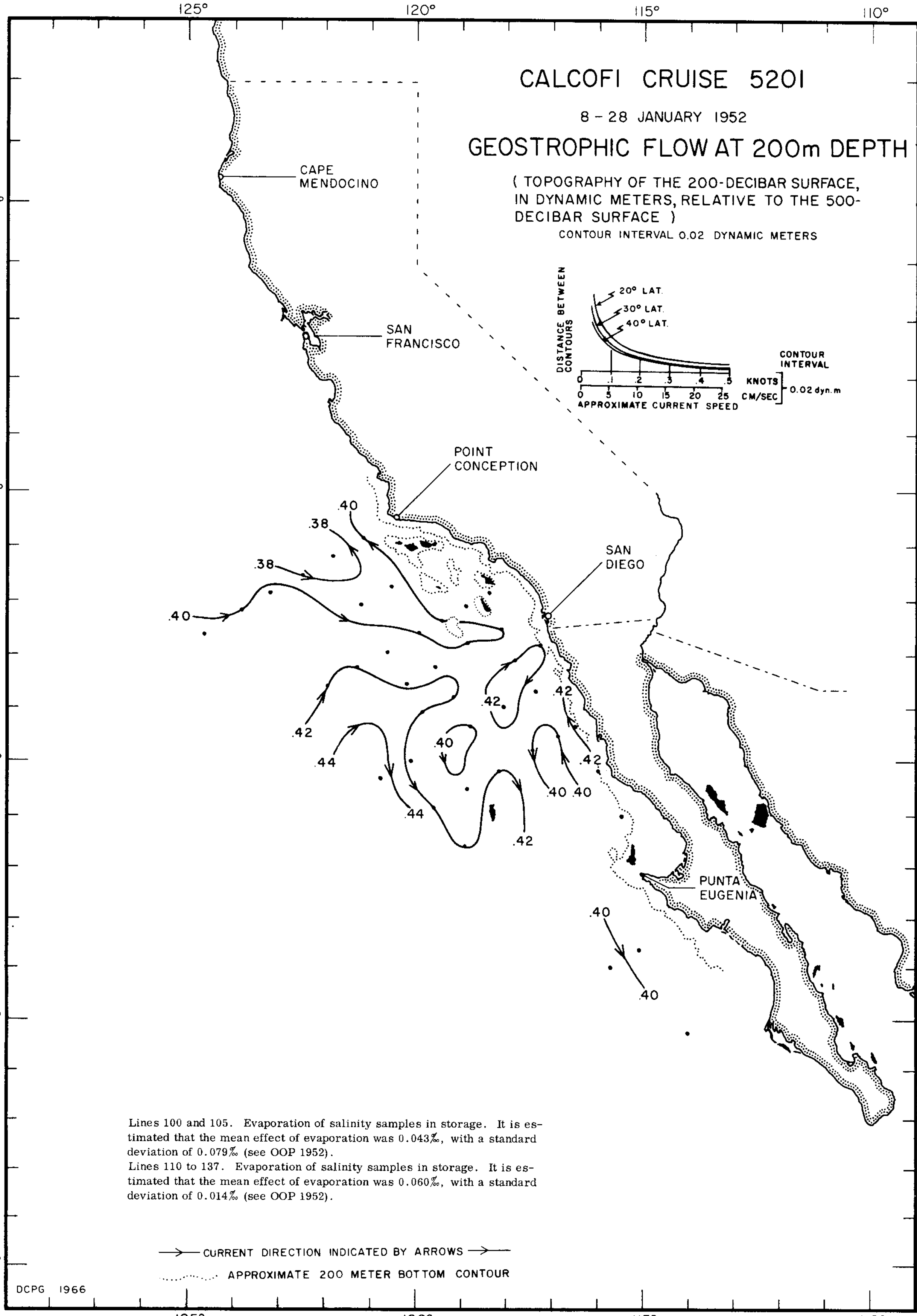

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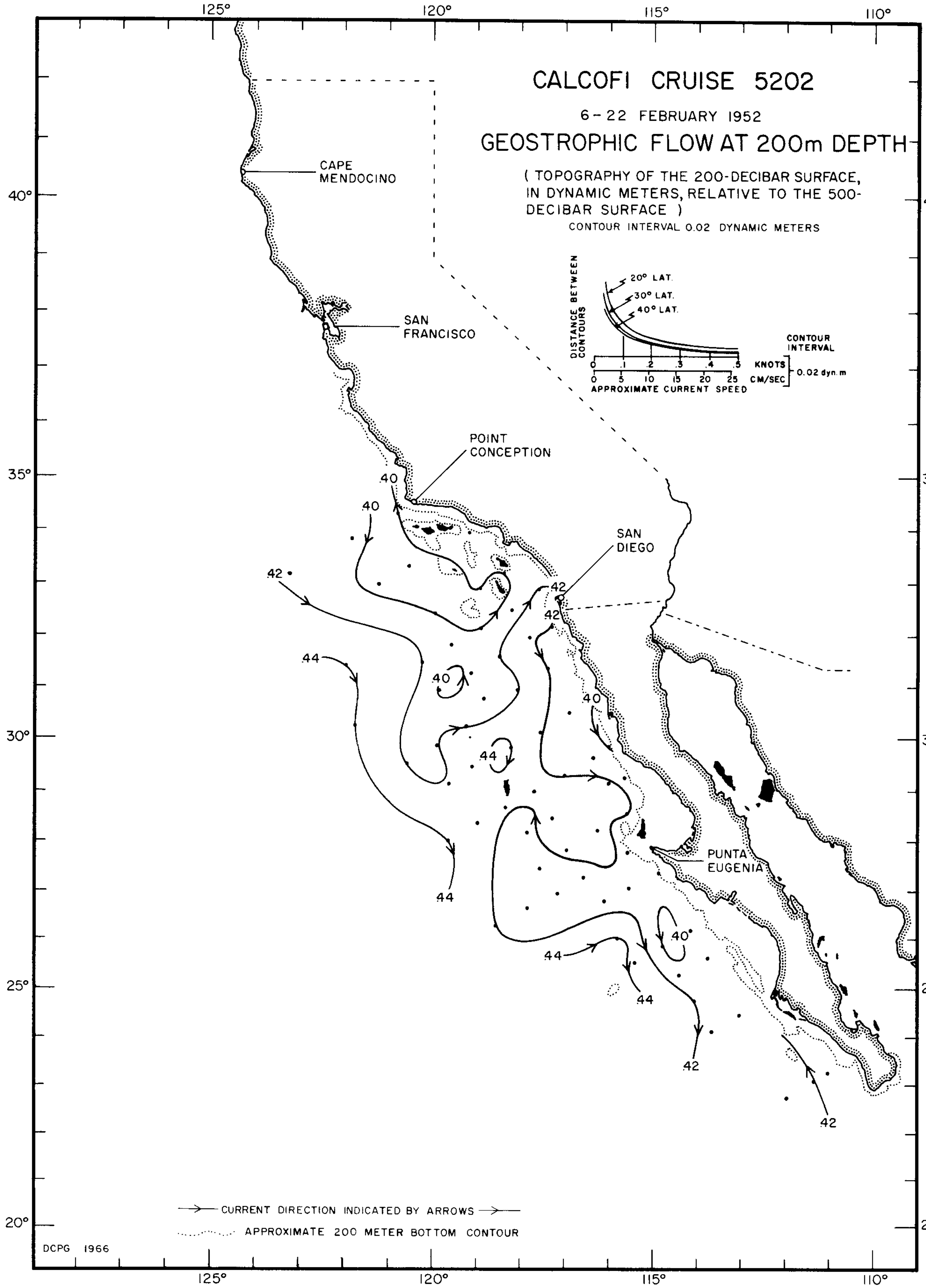

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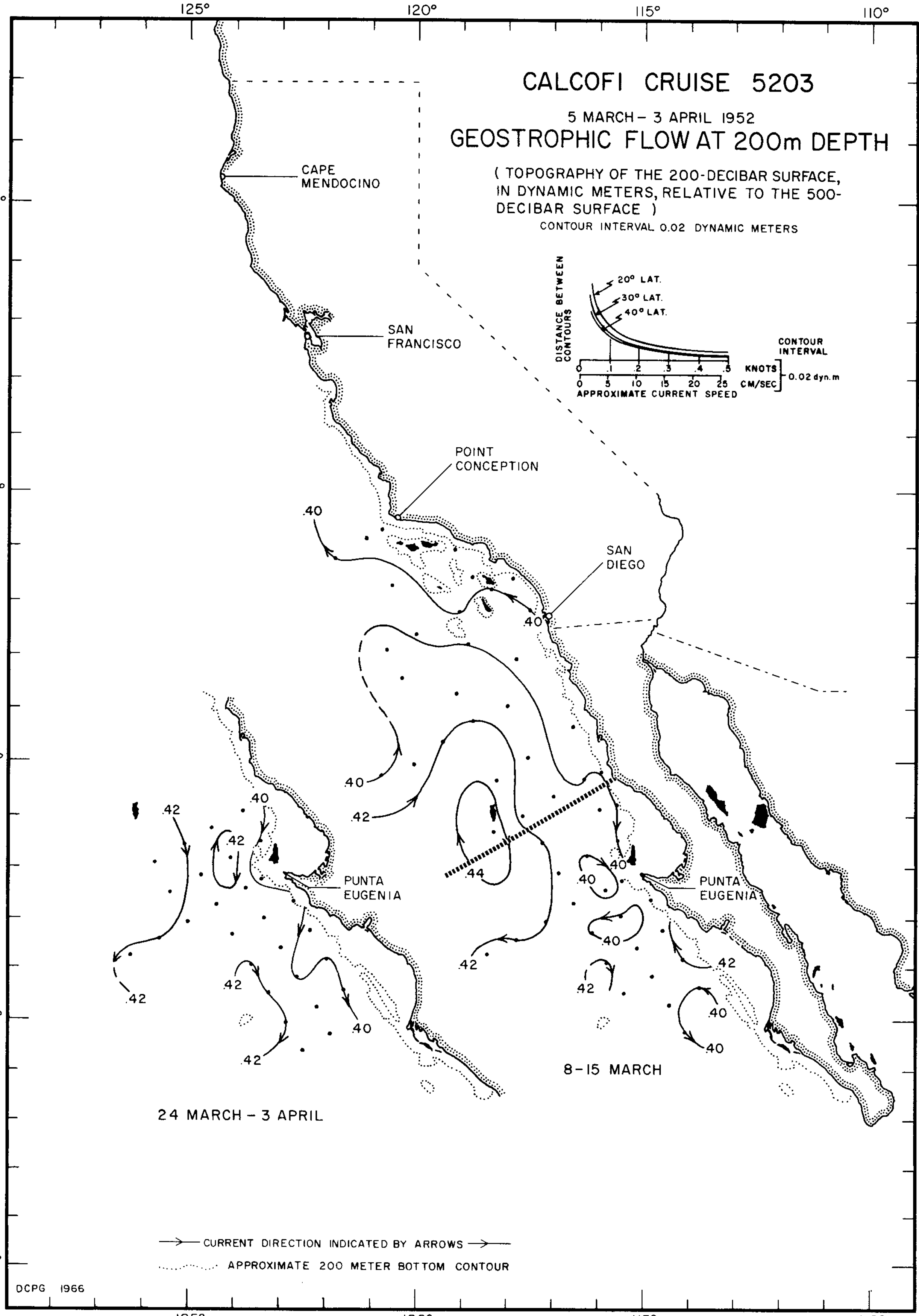

200/500 db

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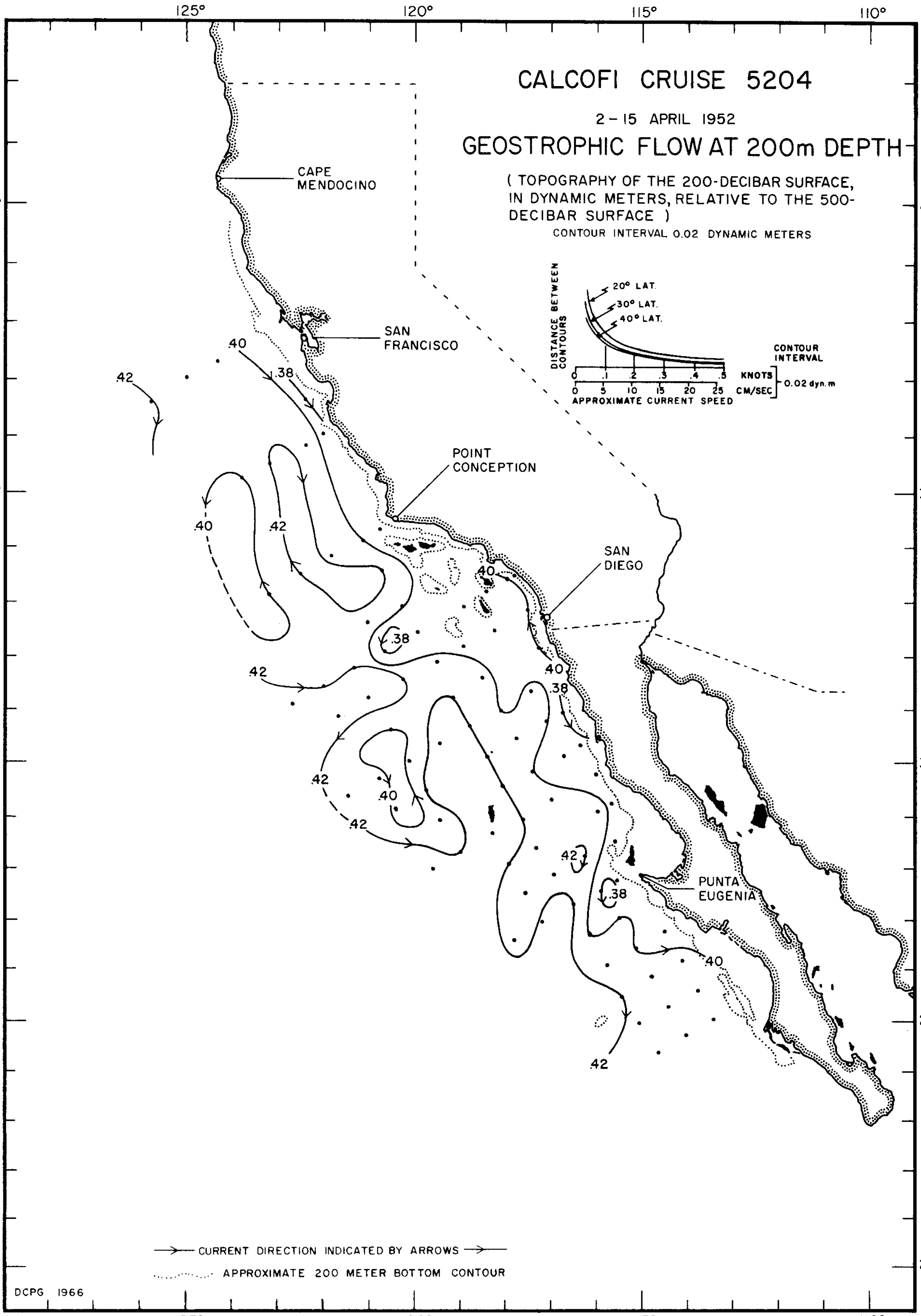

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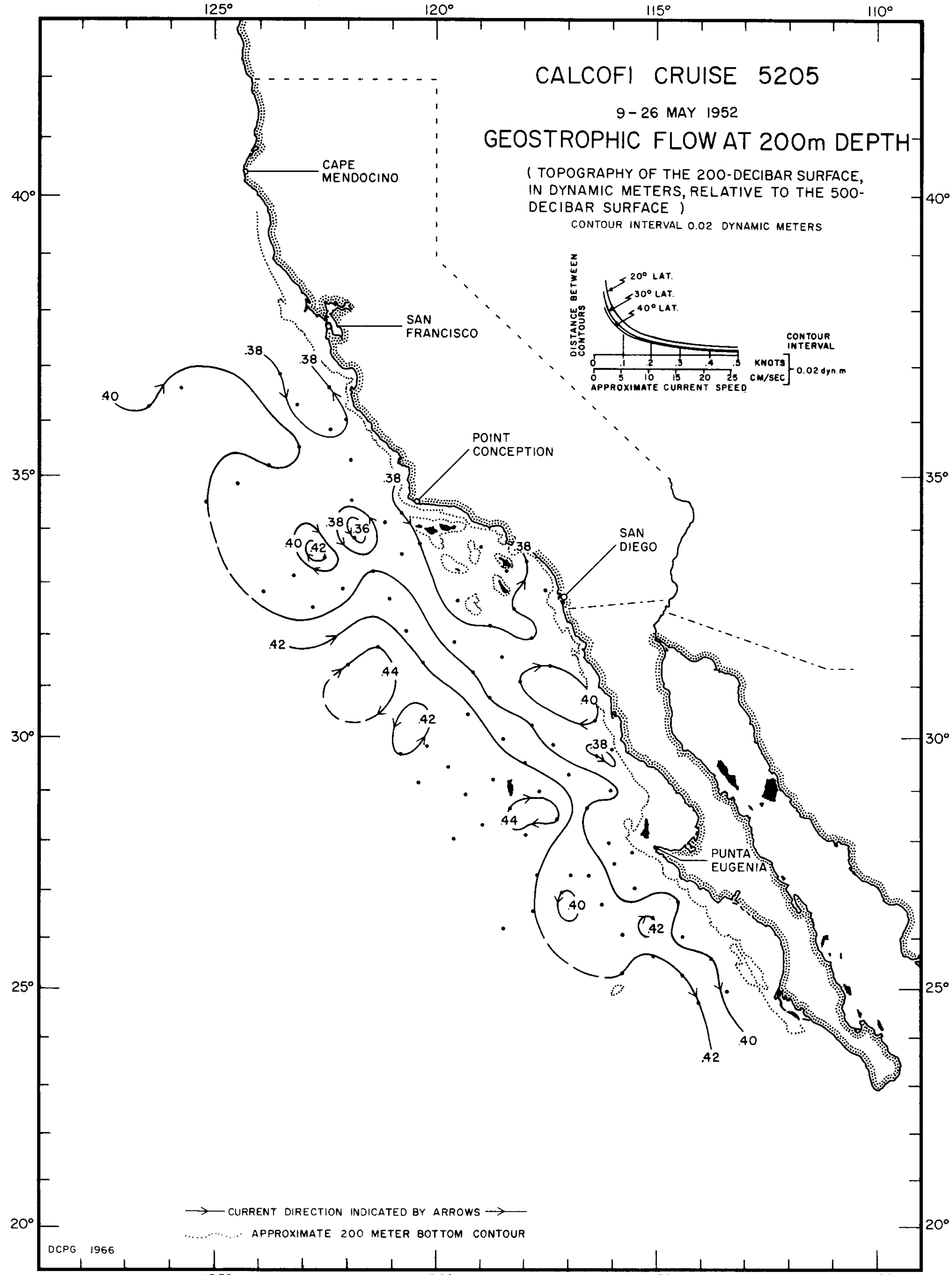

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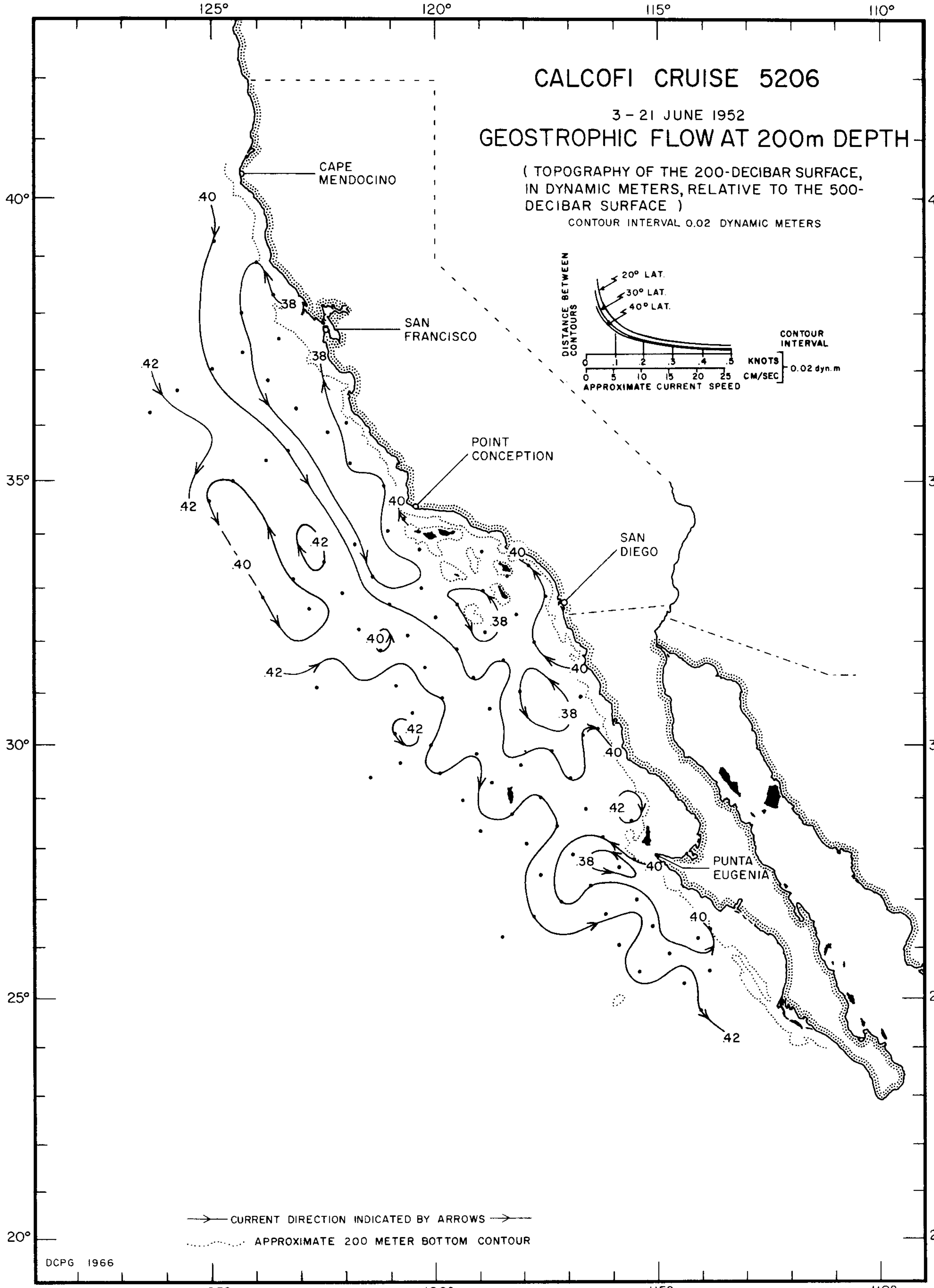

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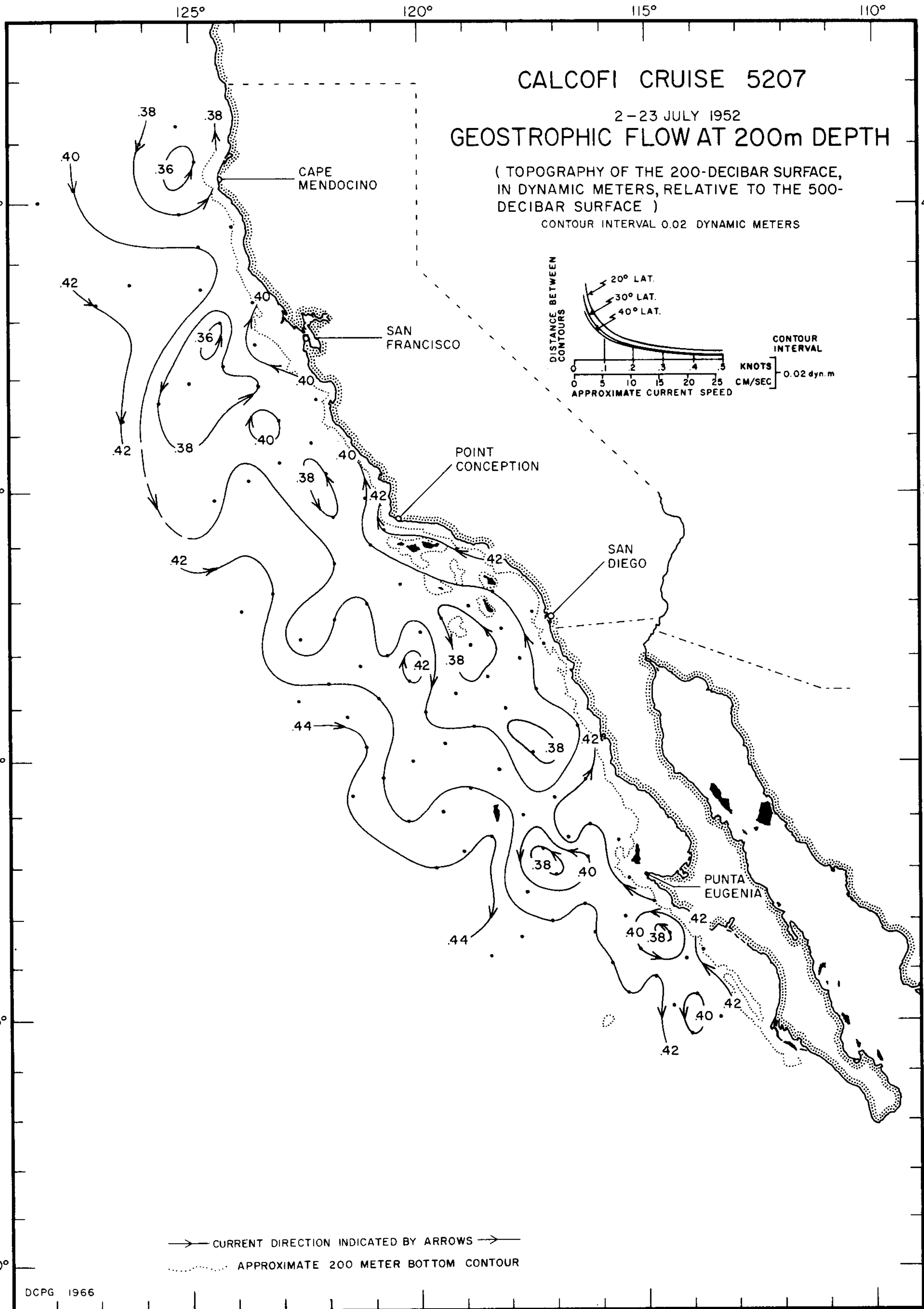

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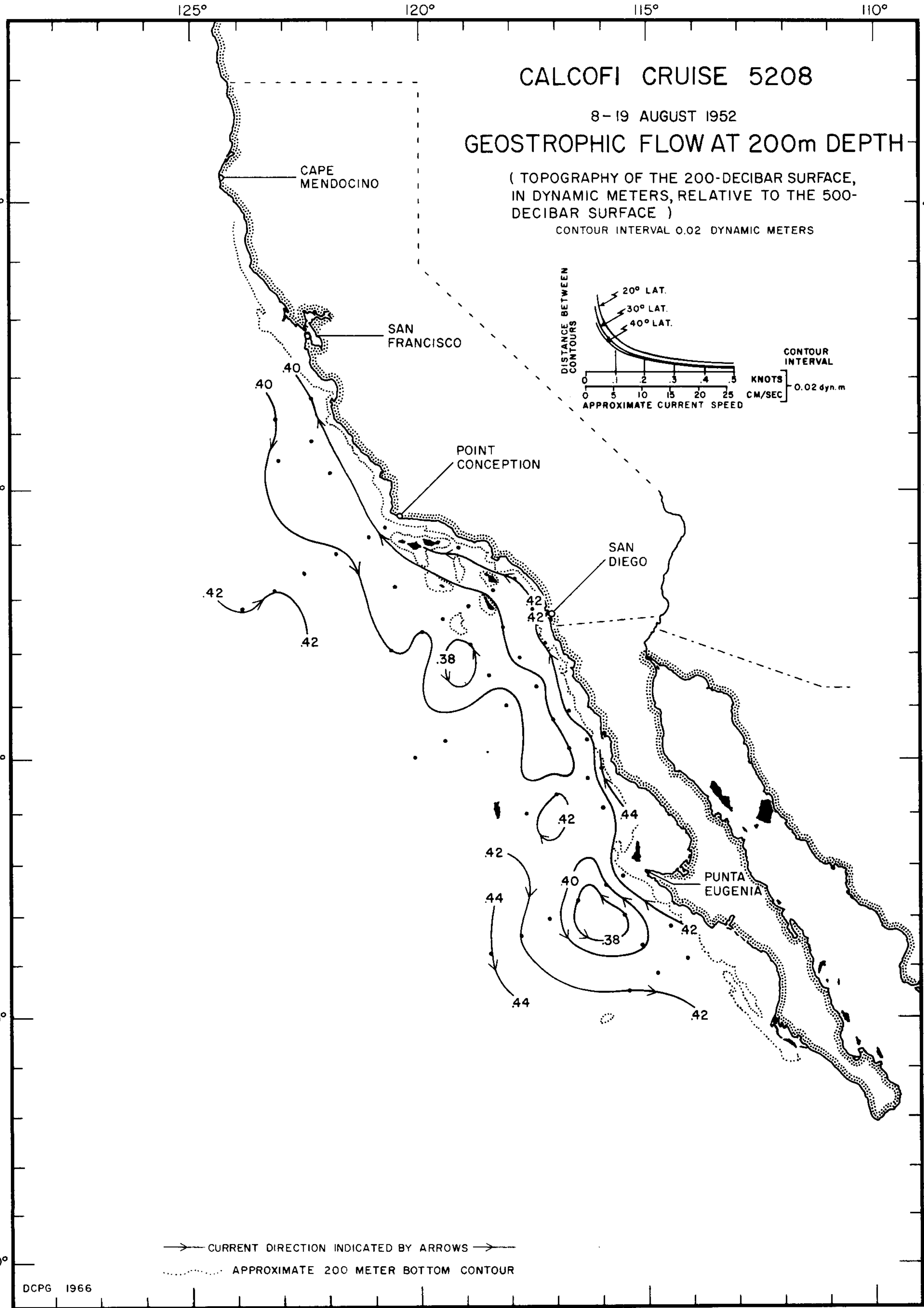

200/500 db

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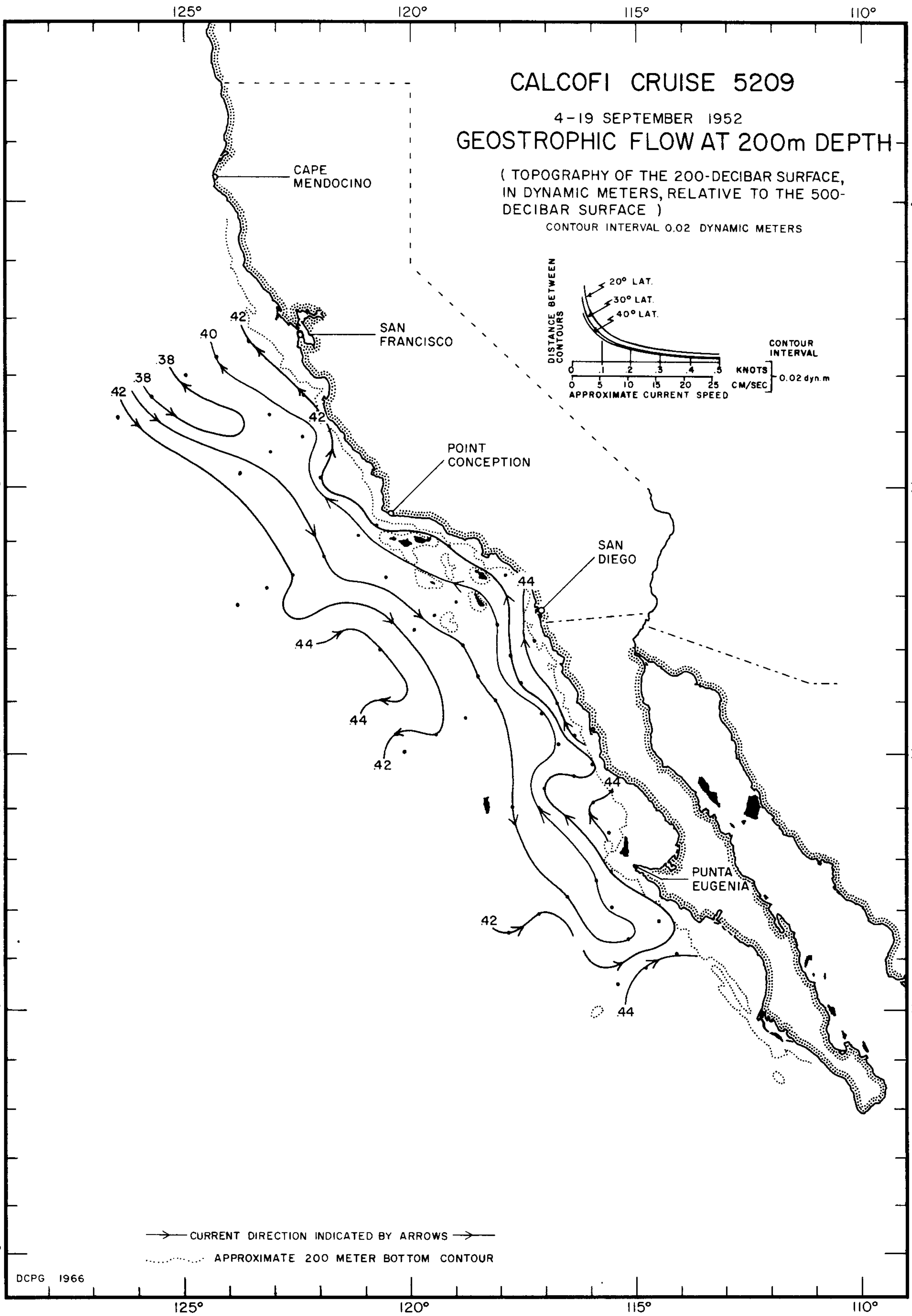

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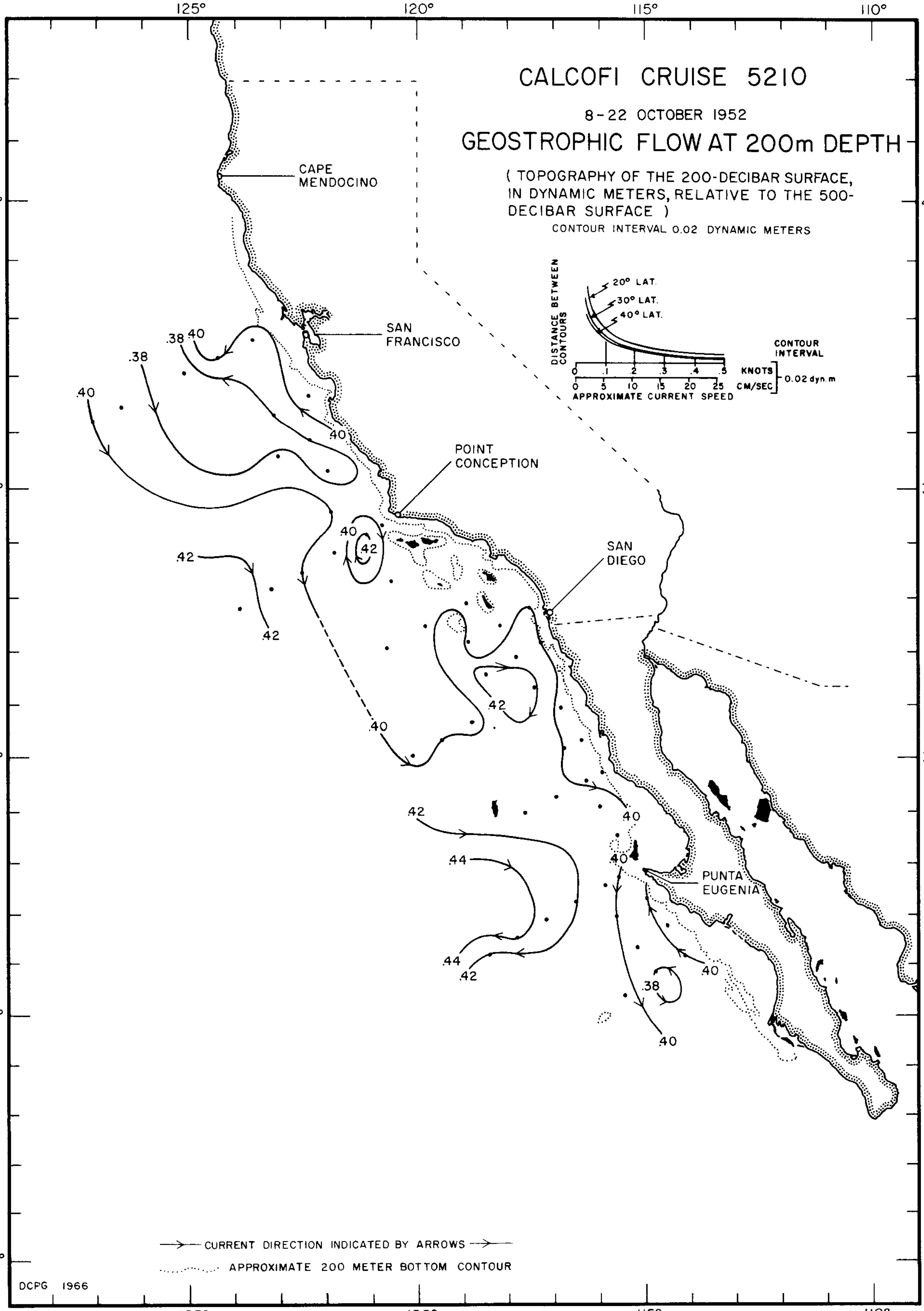

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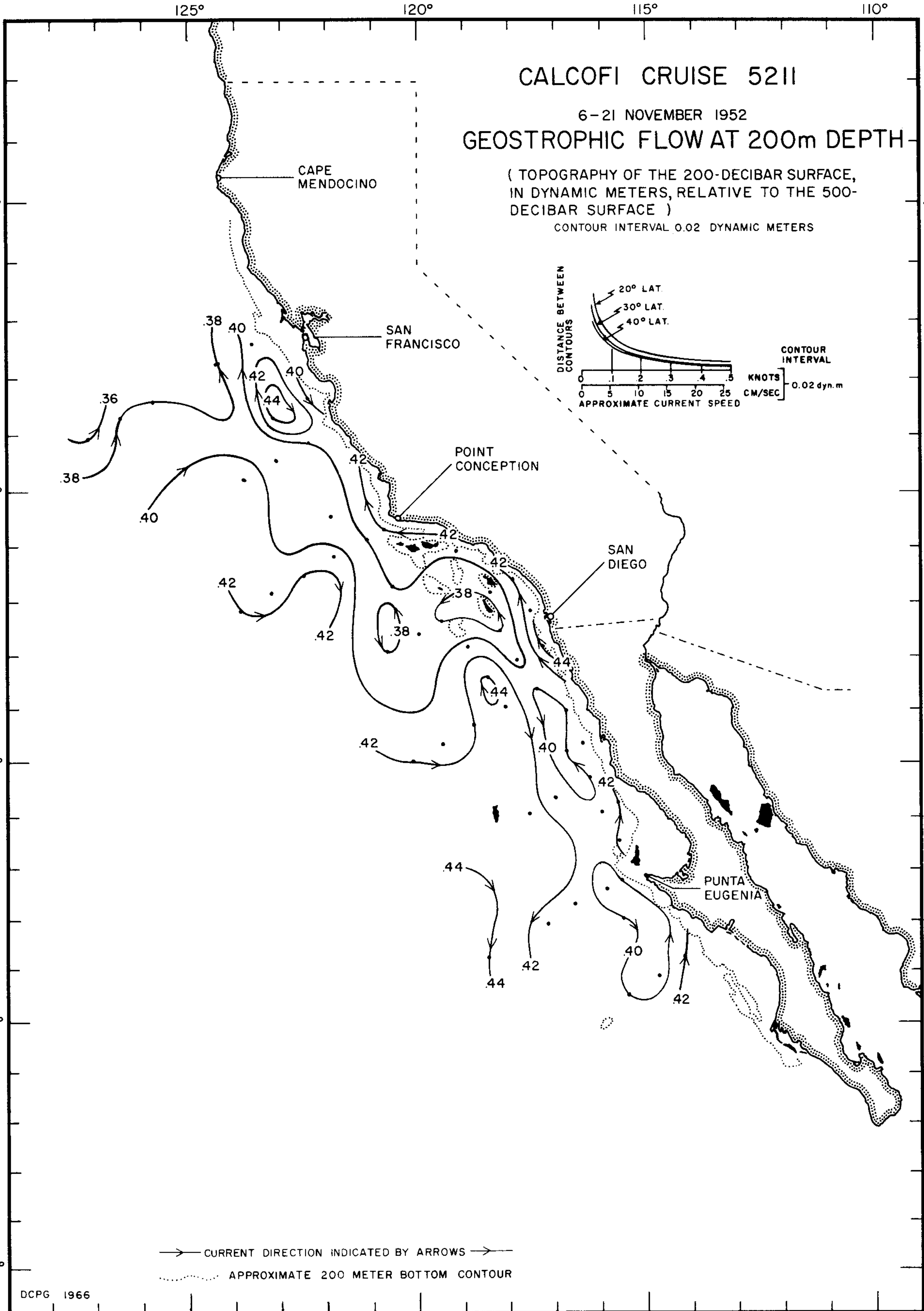

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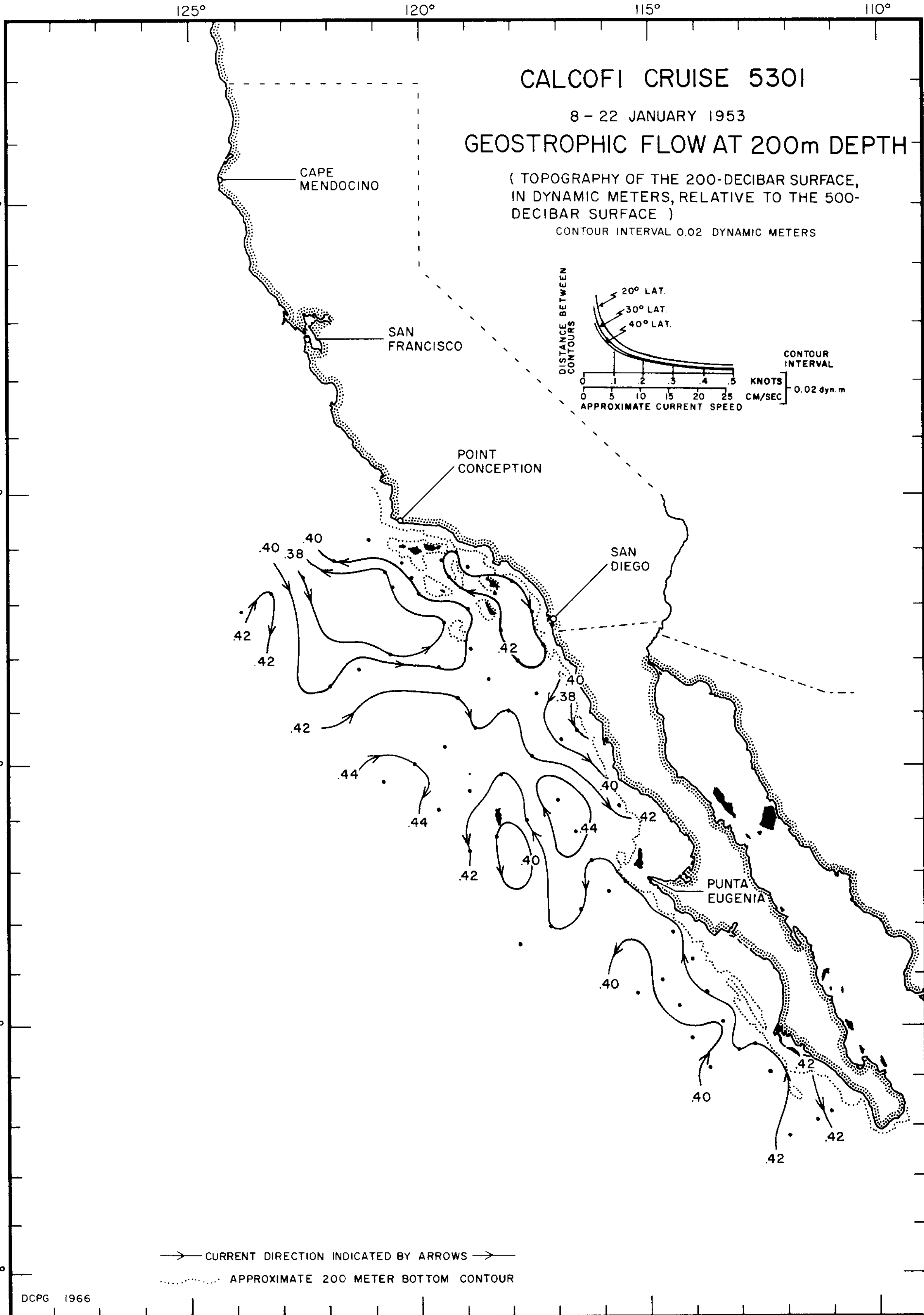

200/500 db

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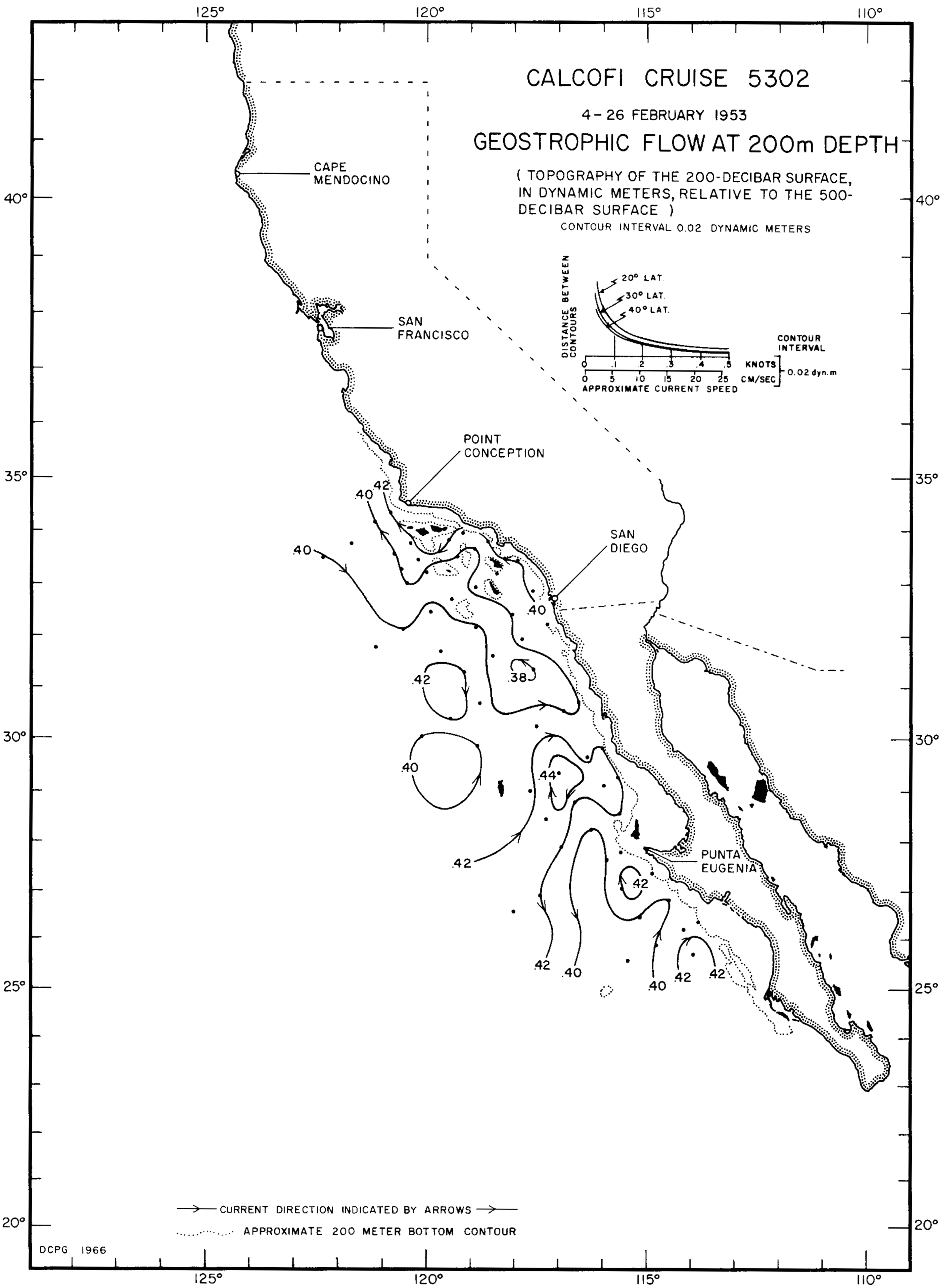

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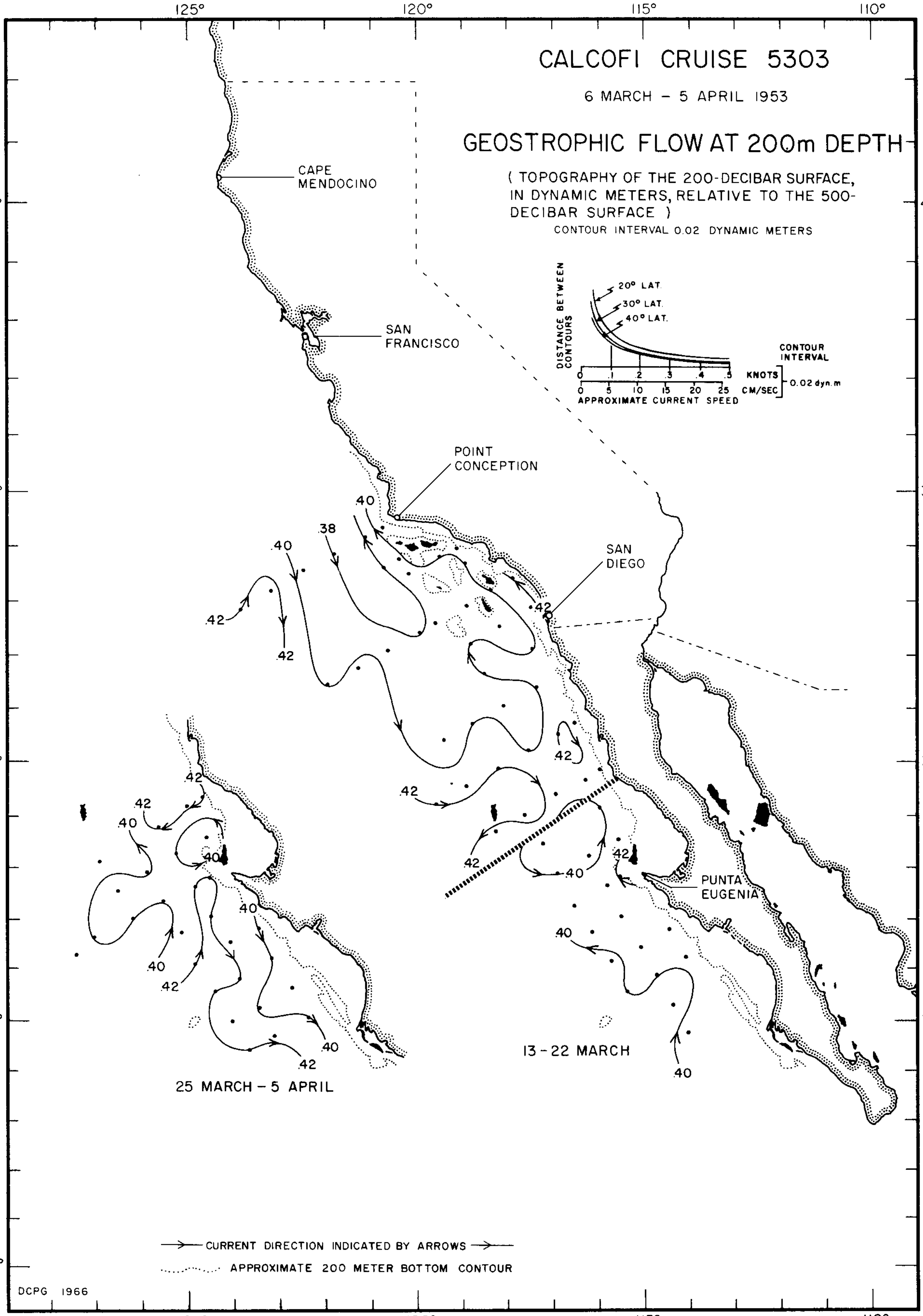

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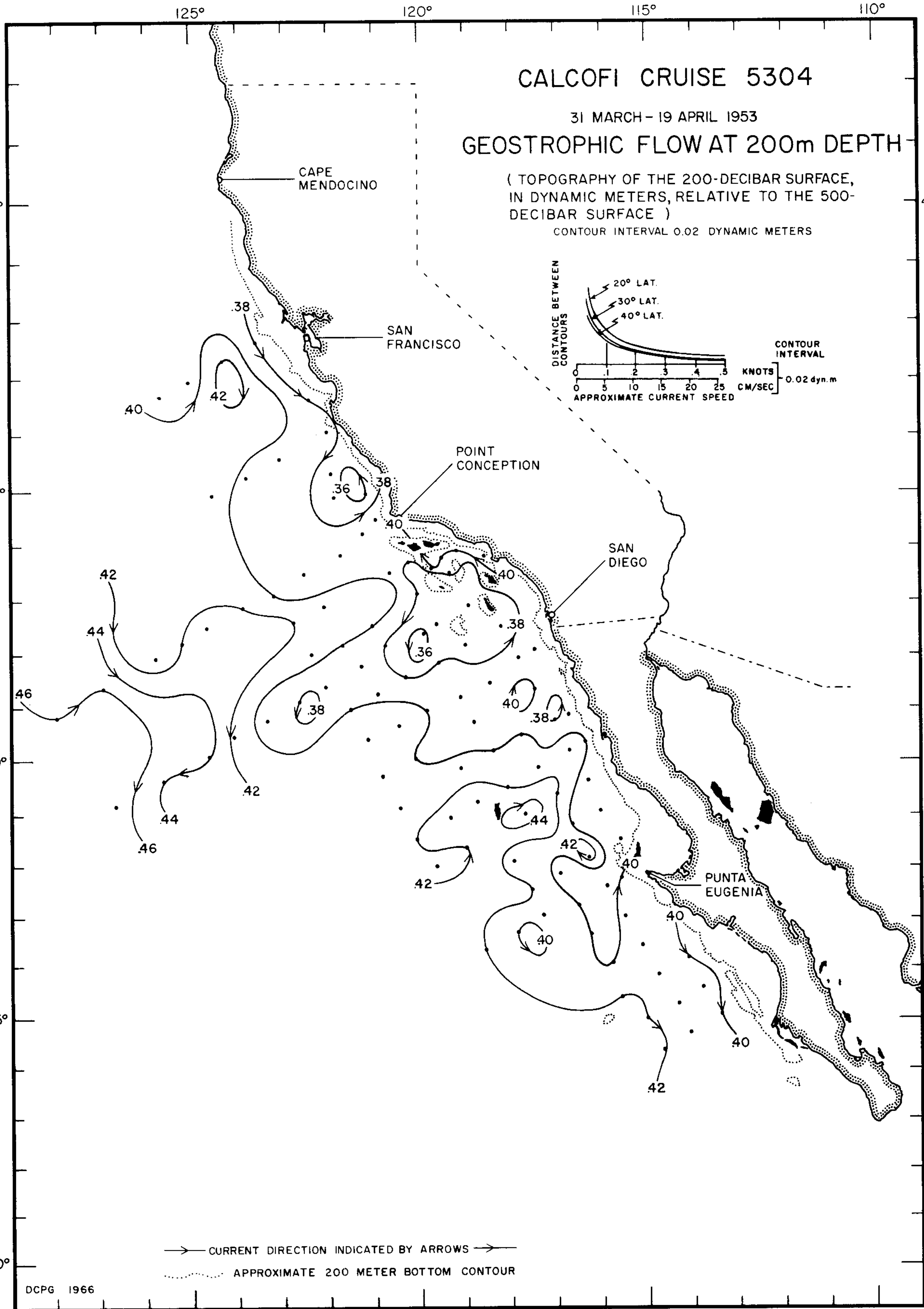

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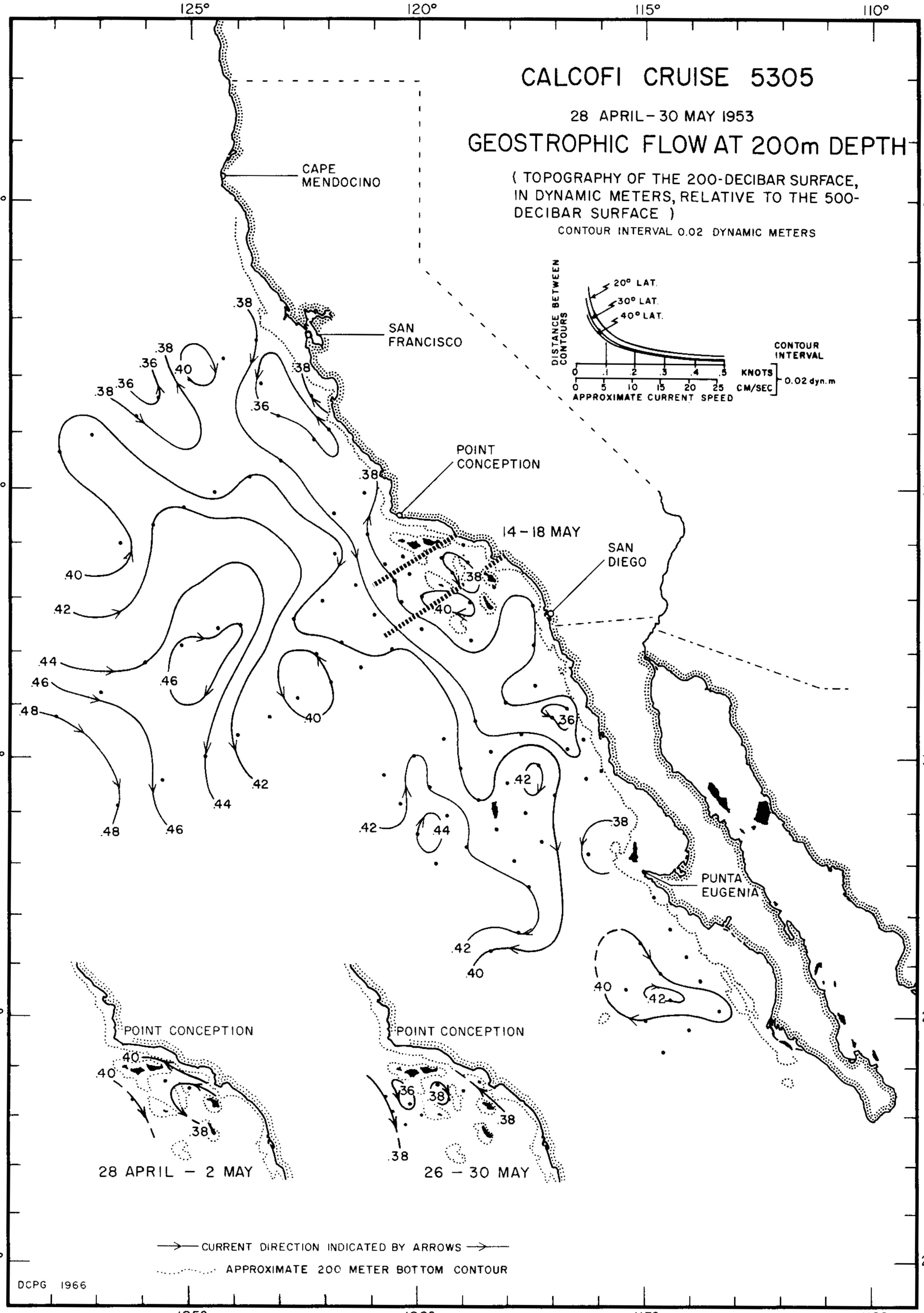

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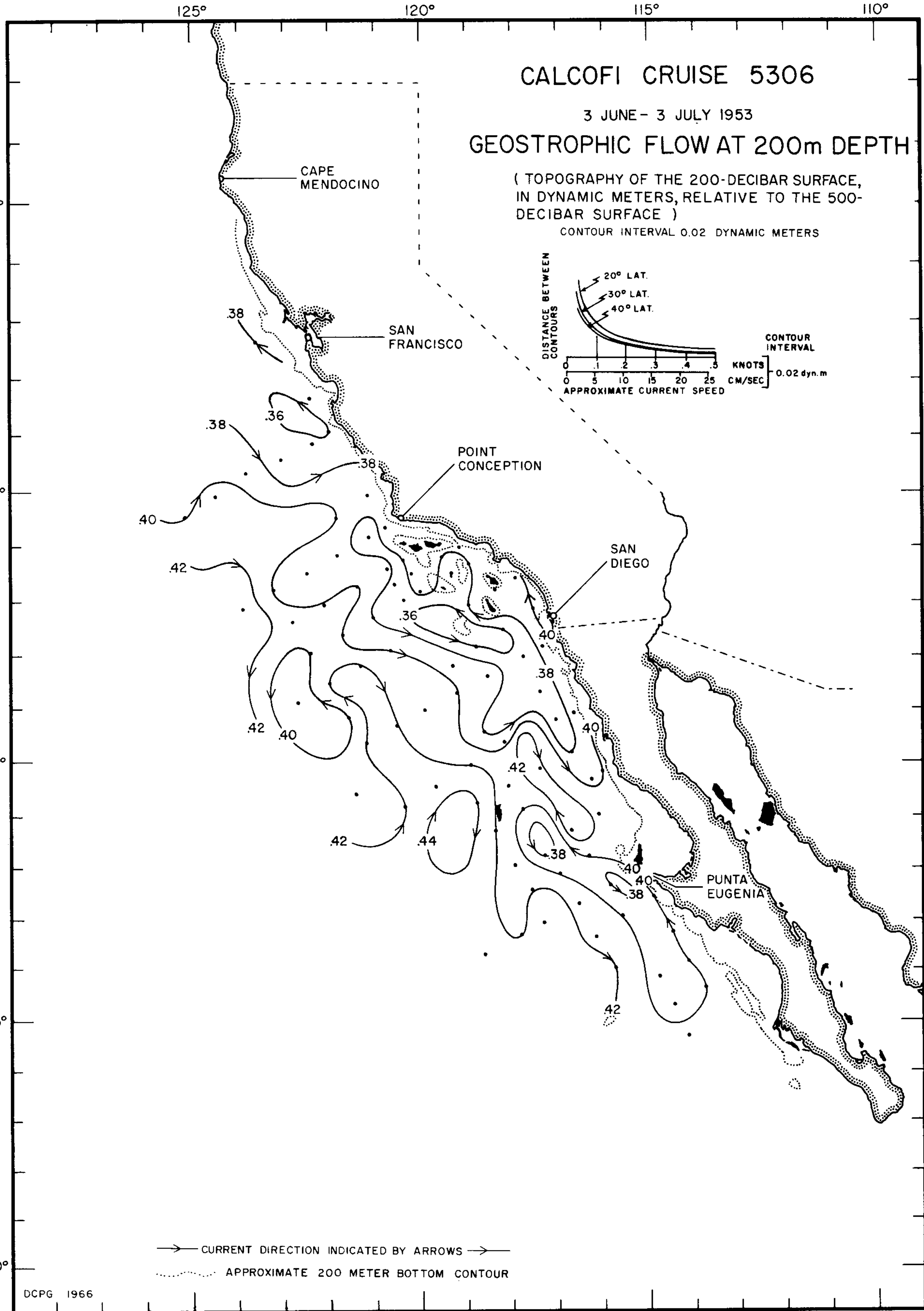

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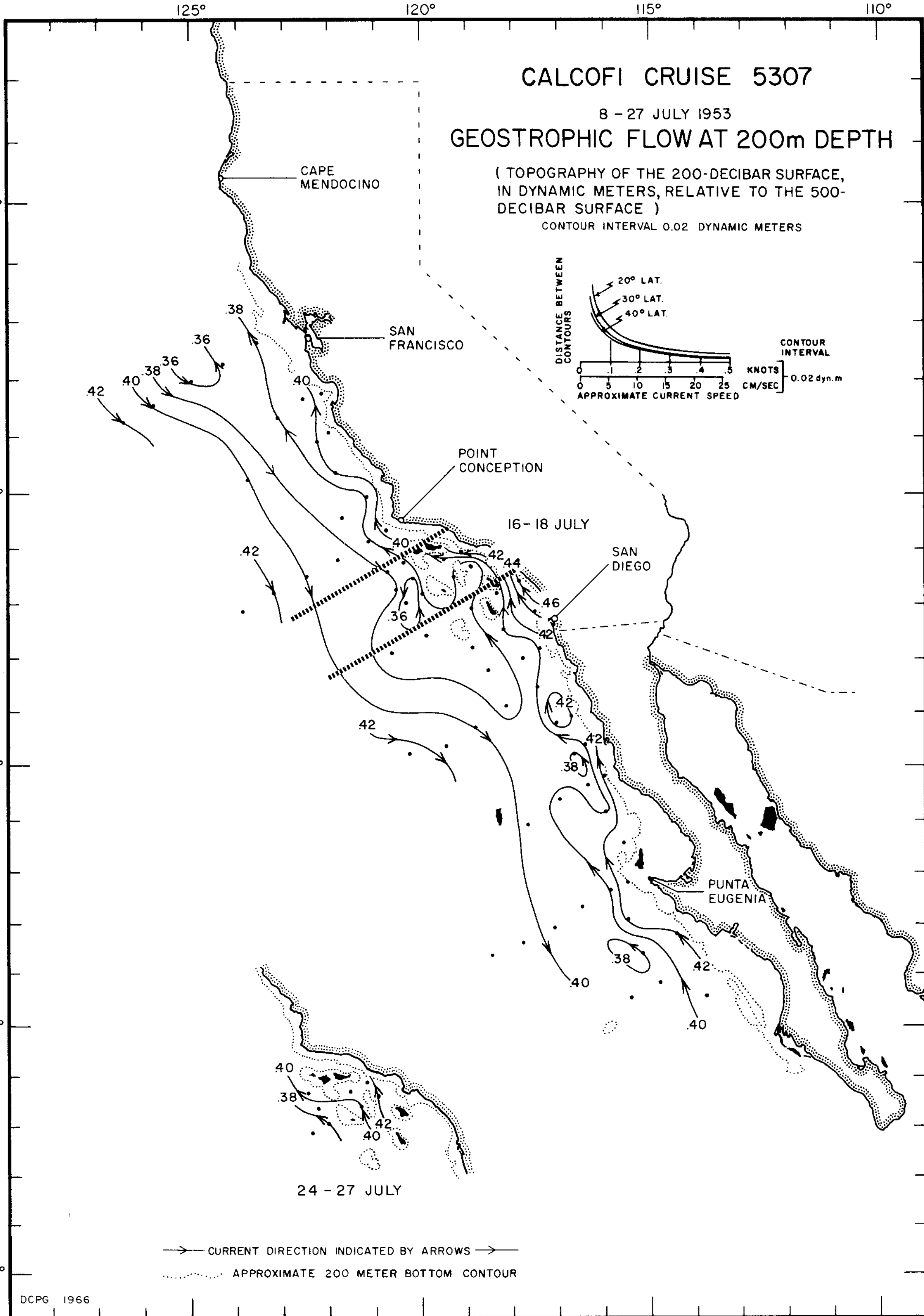

200/500 db

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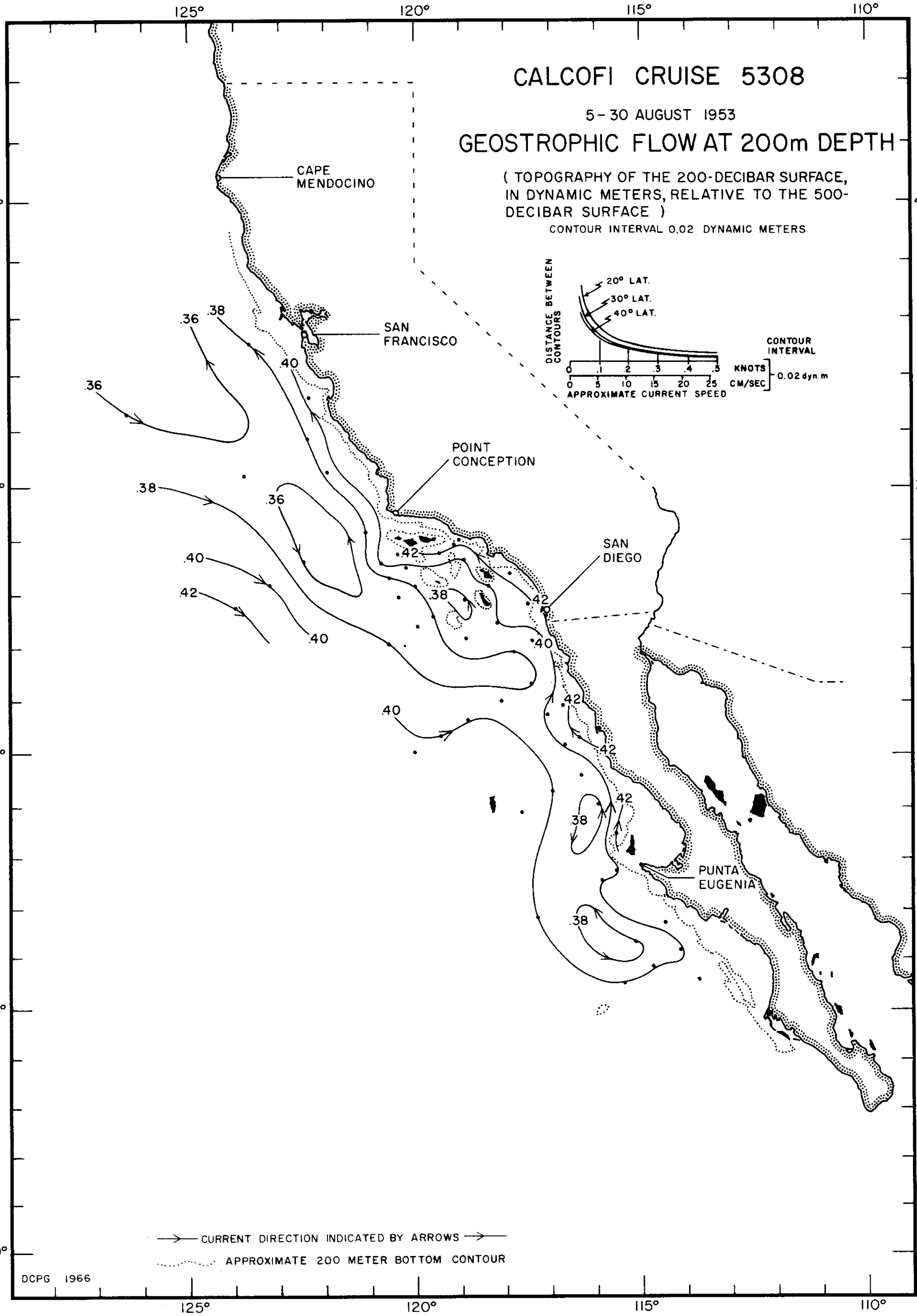

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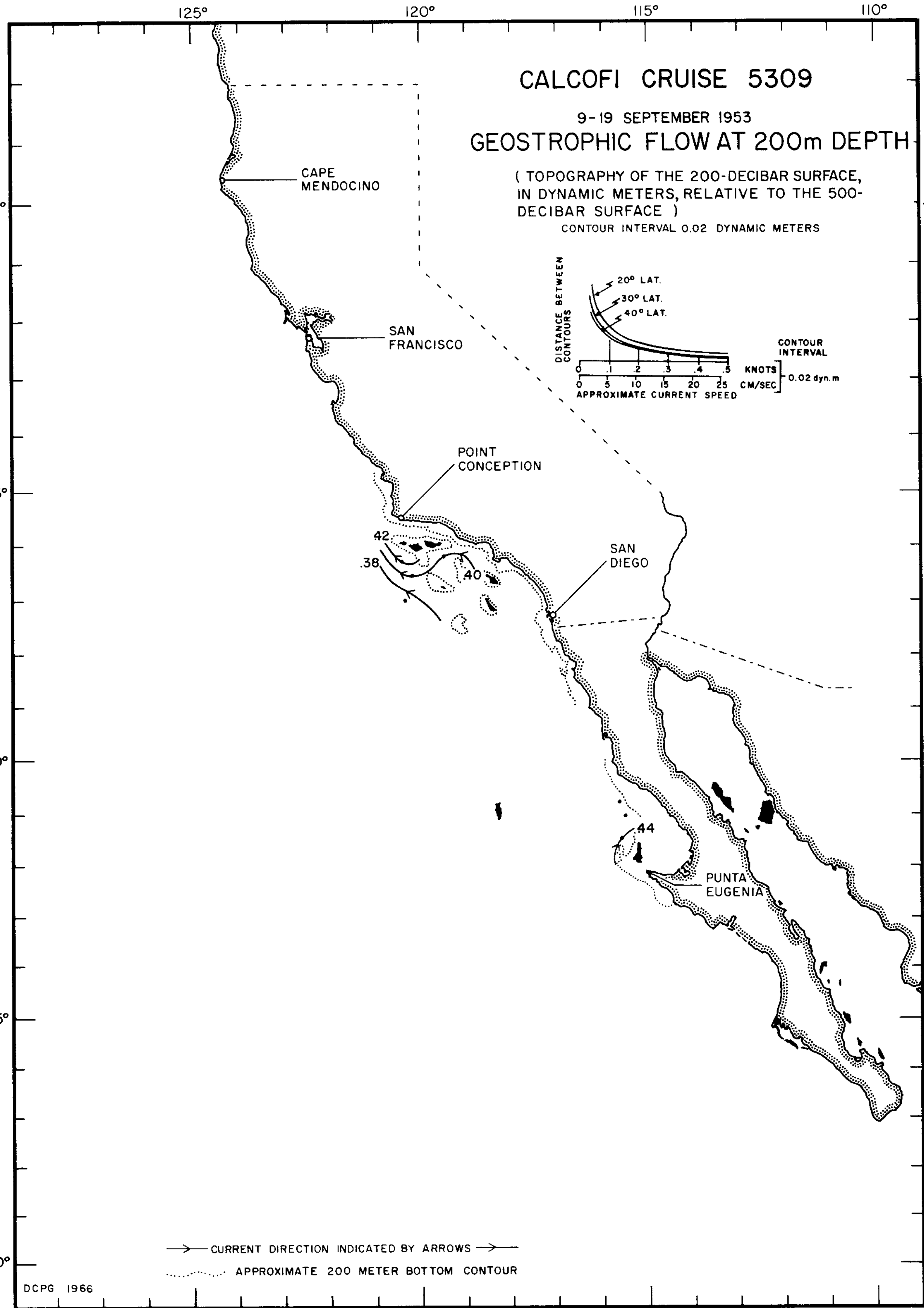

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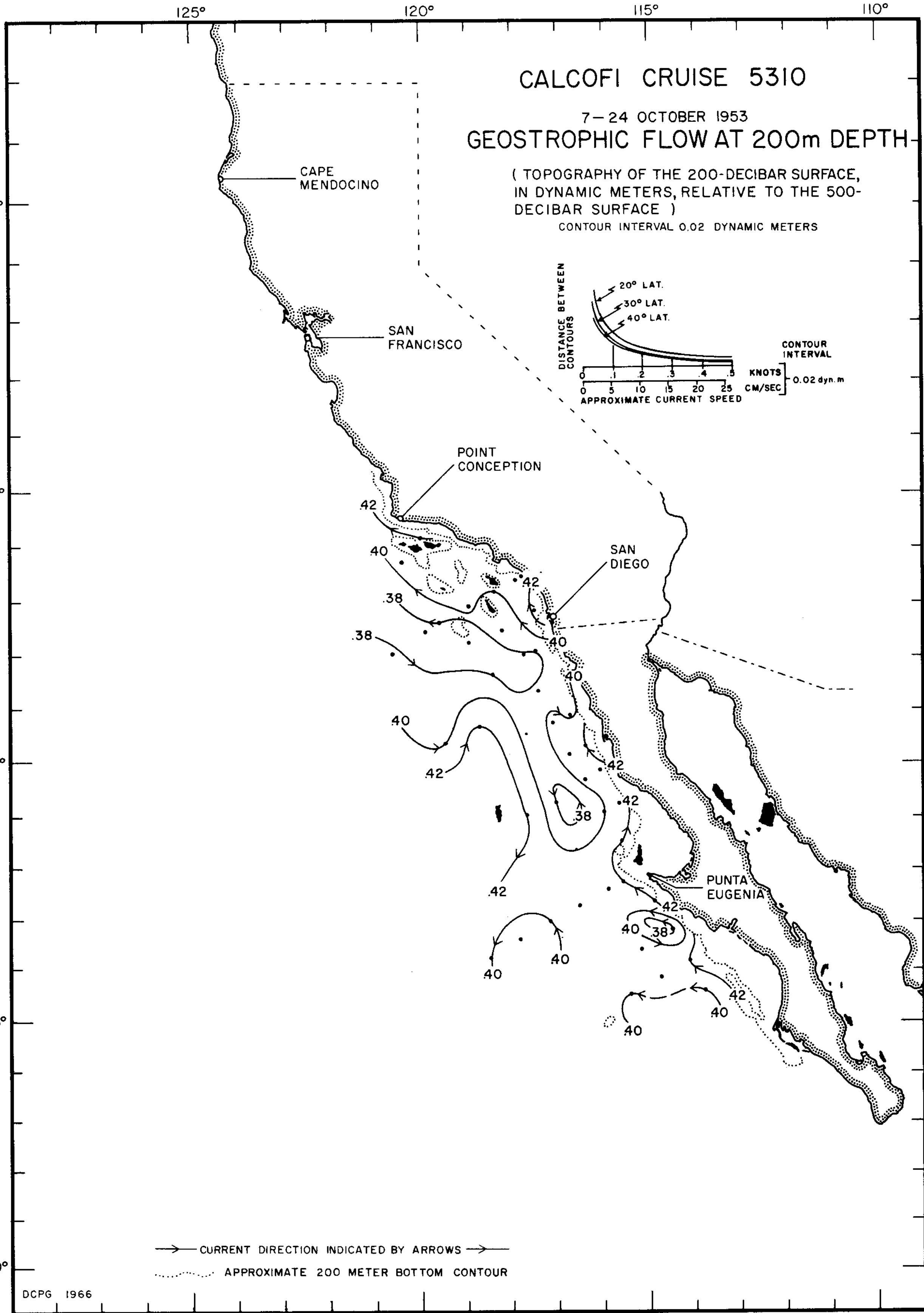

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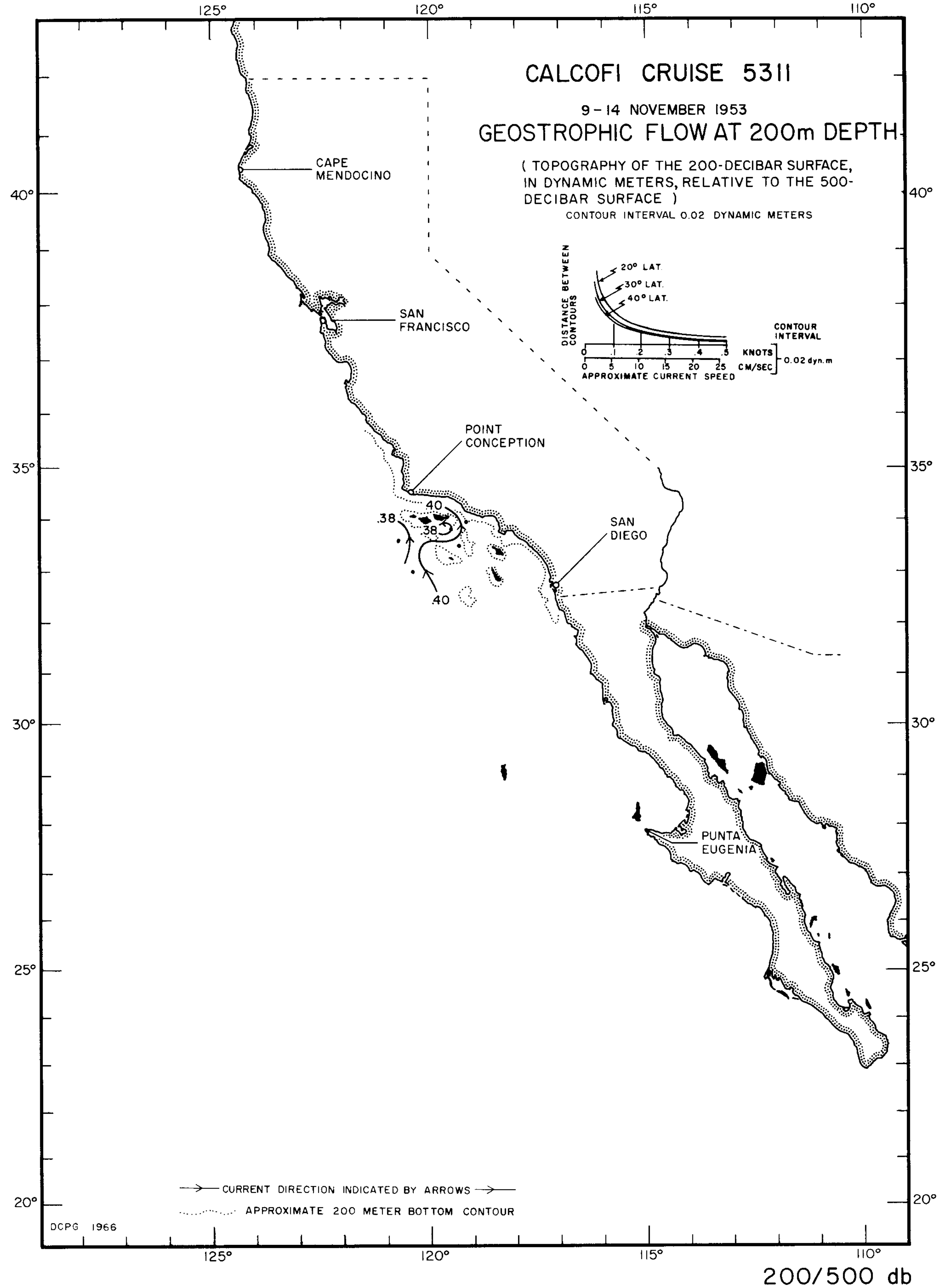

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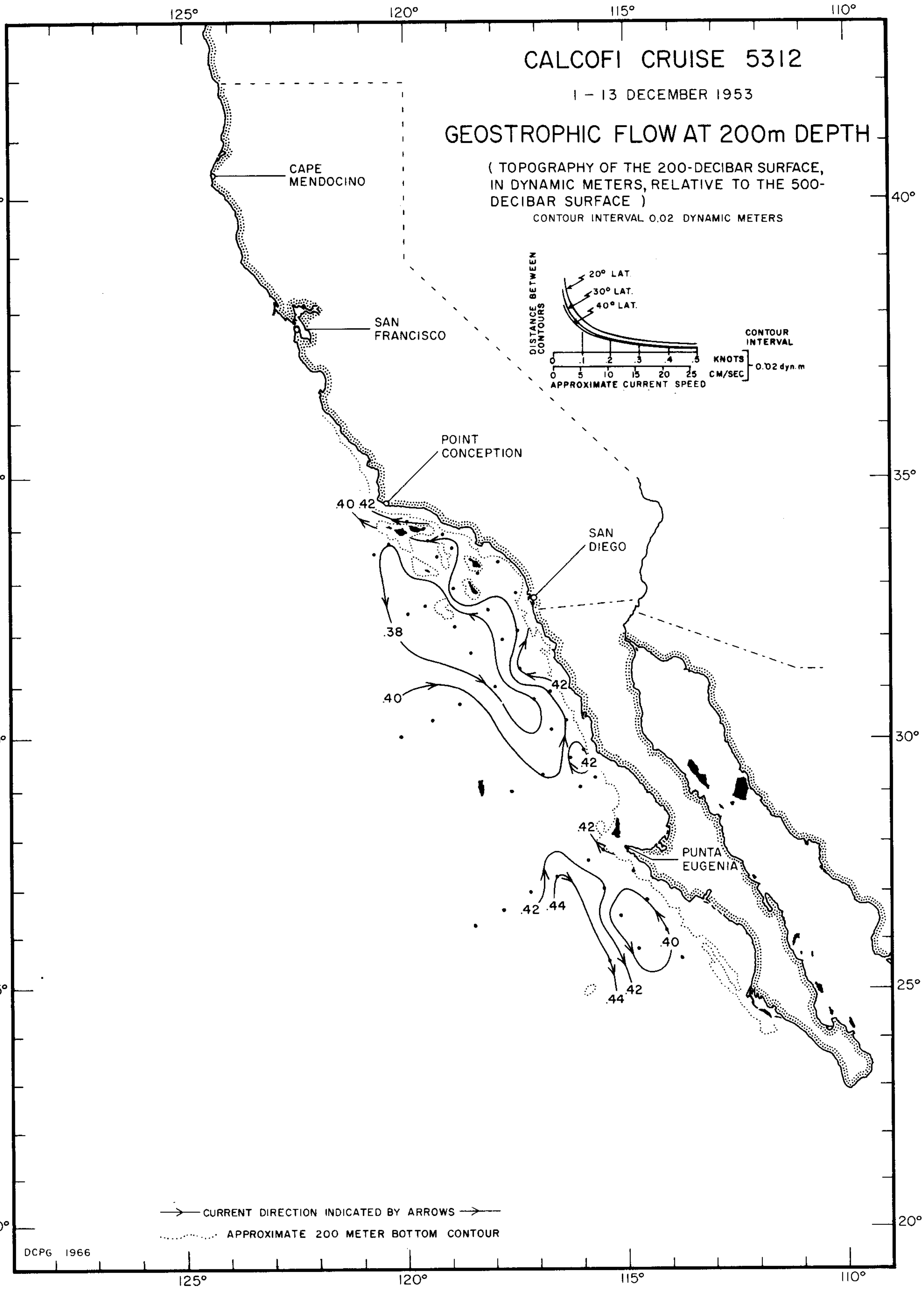

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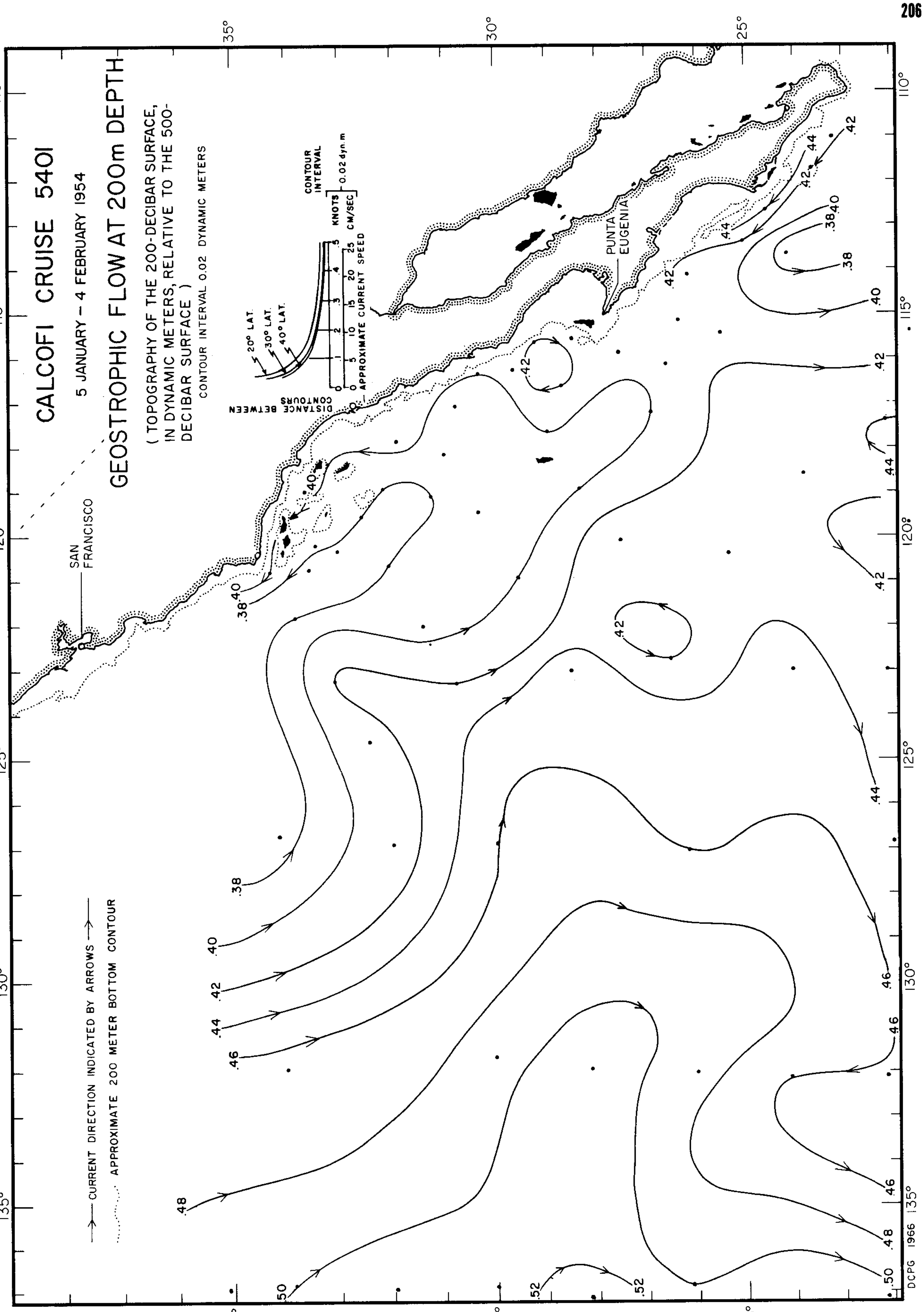

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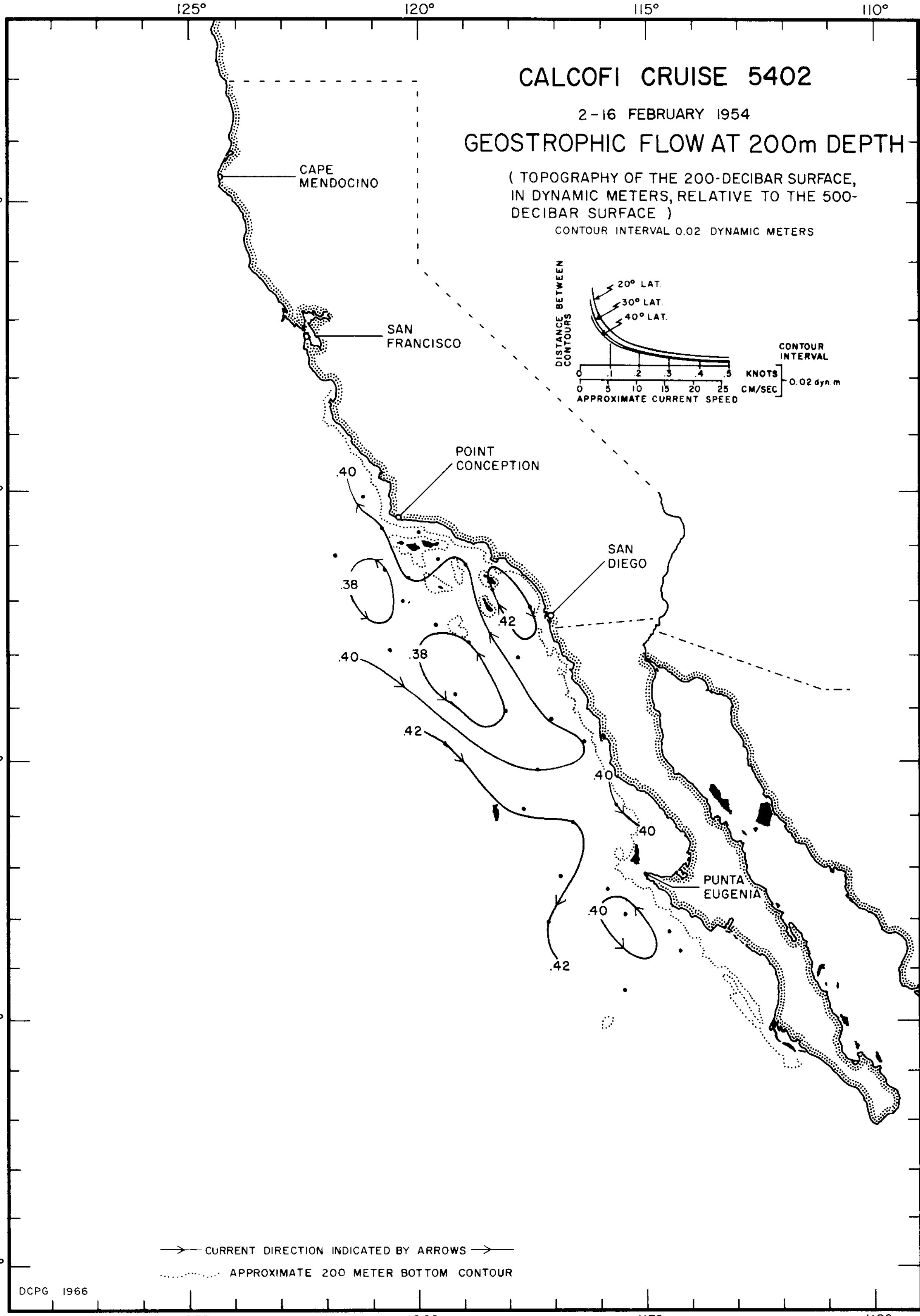

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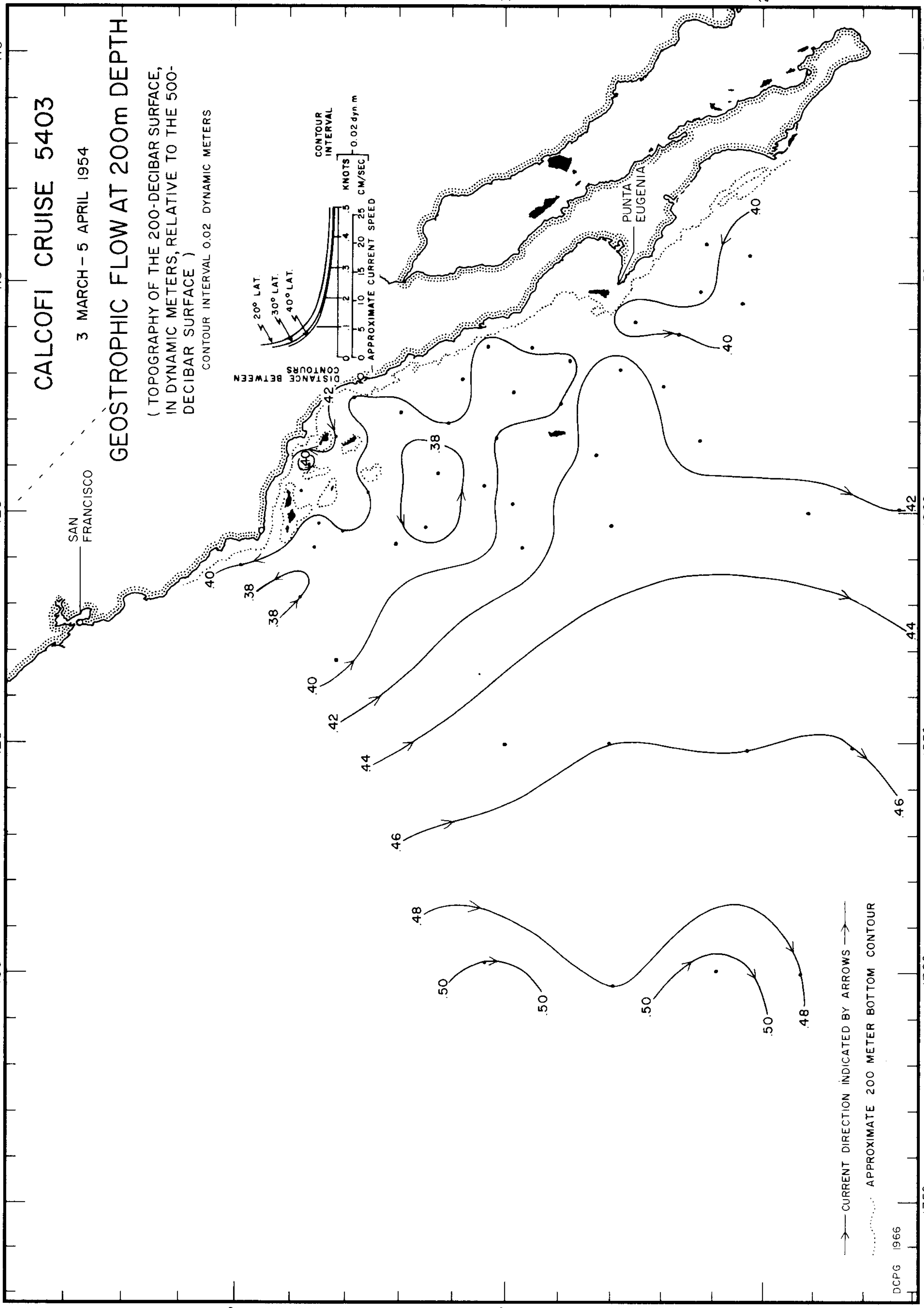

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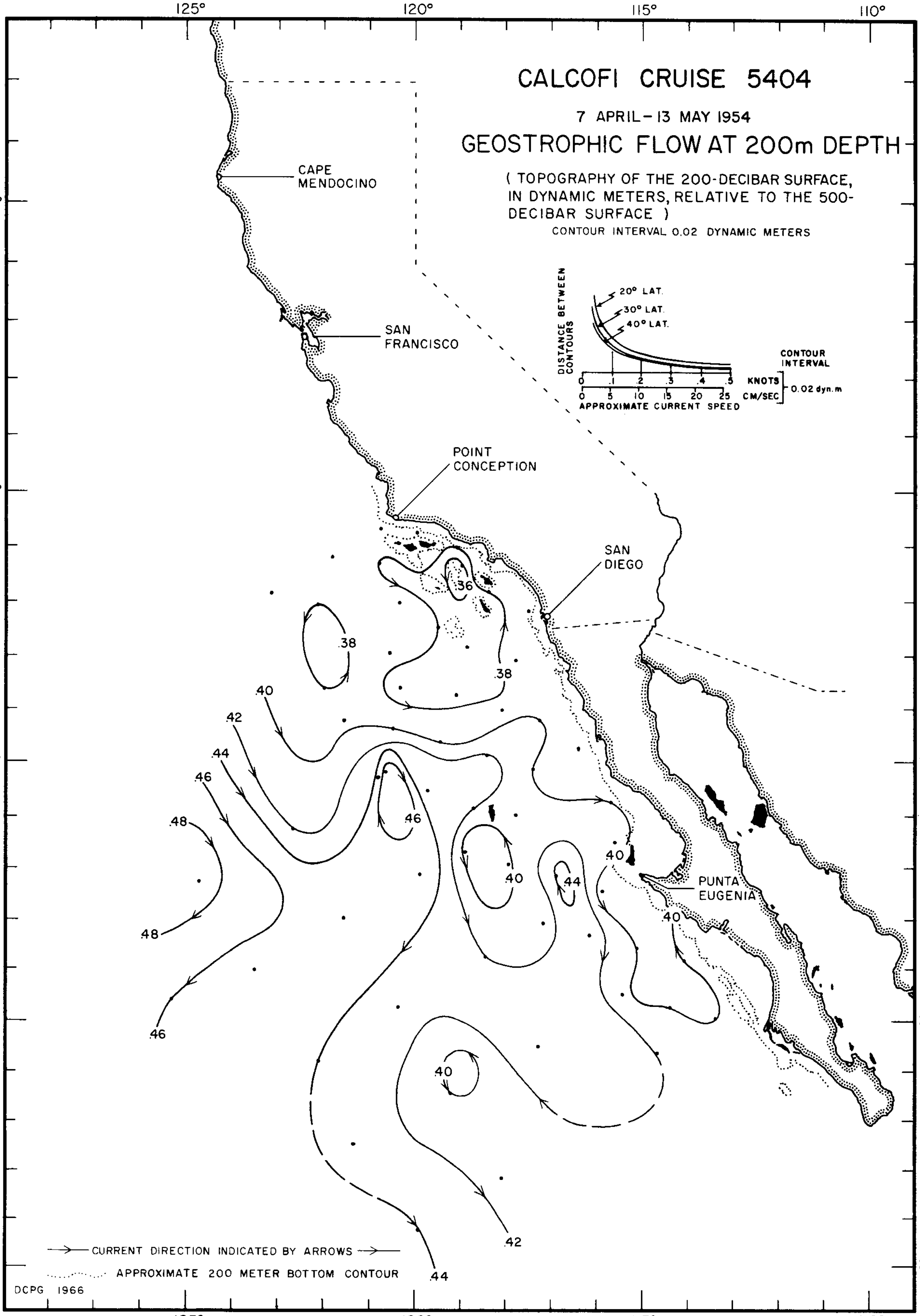

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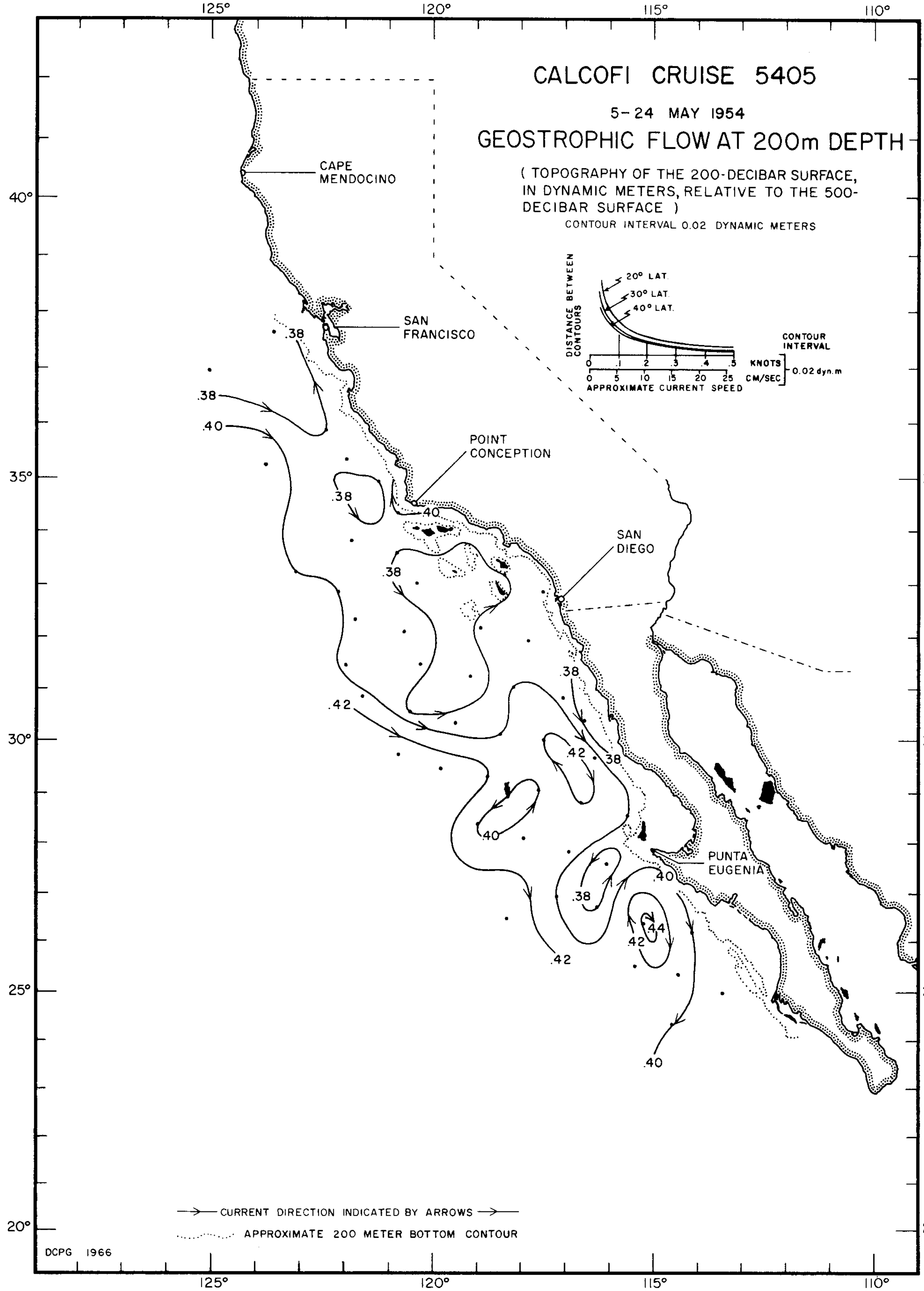

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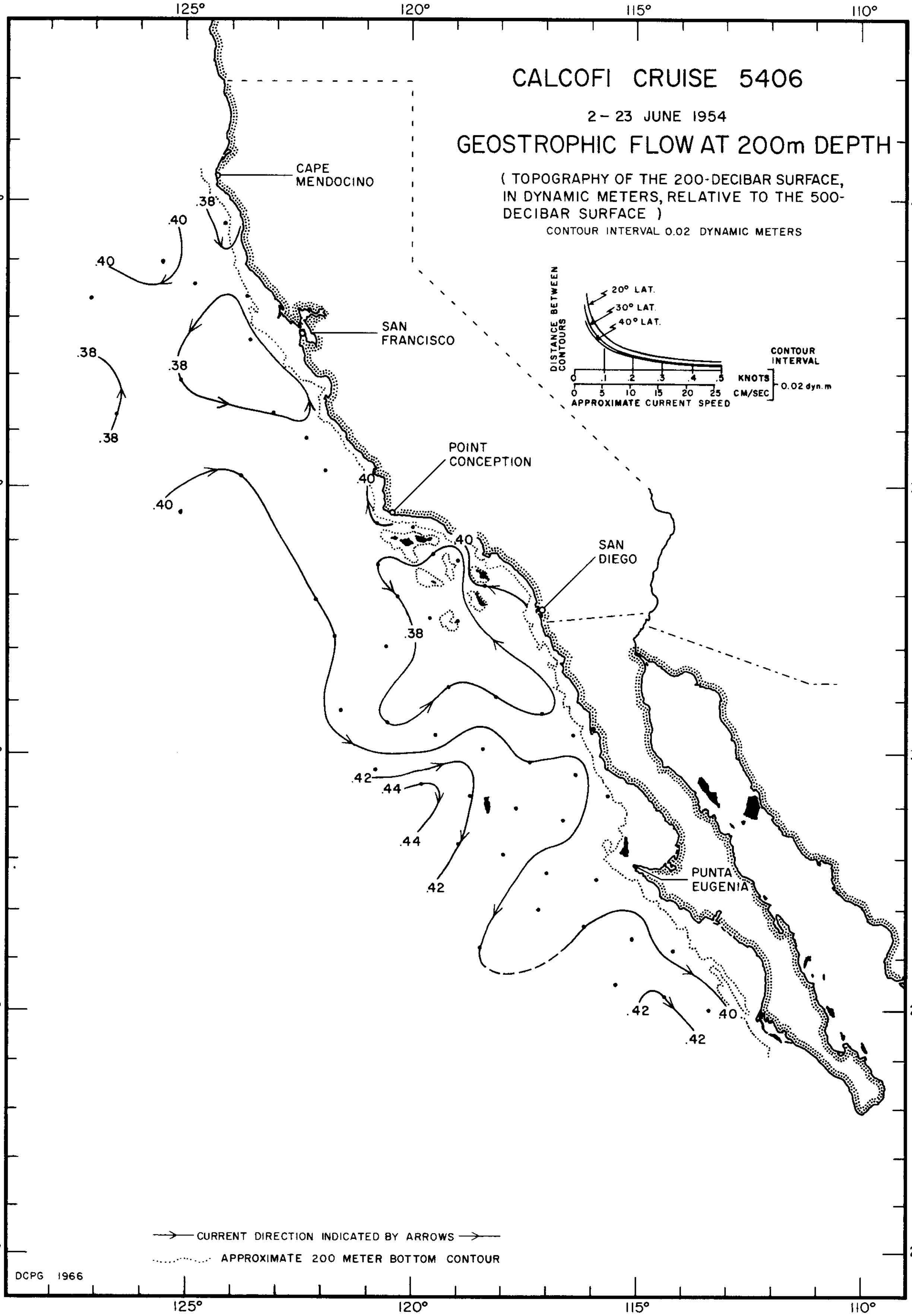

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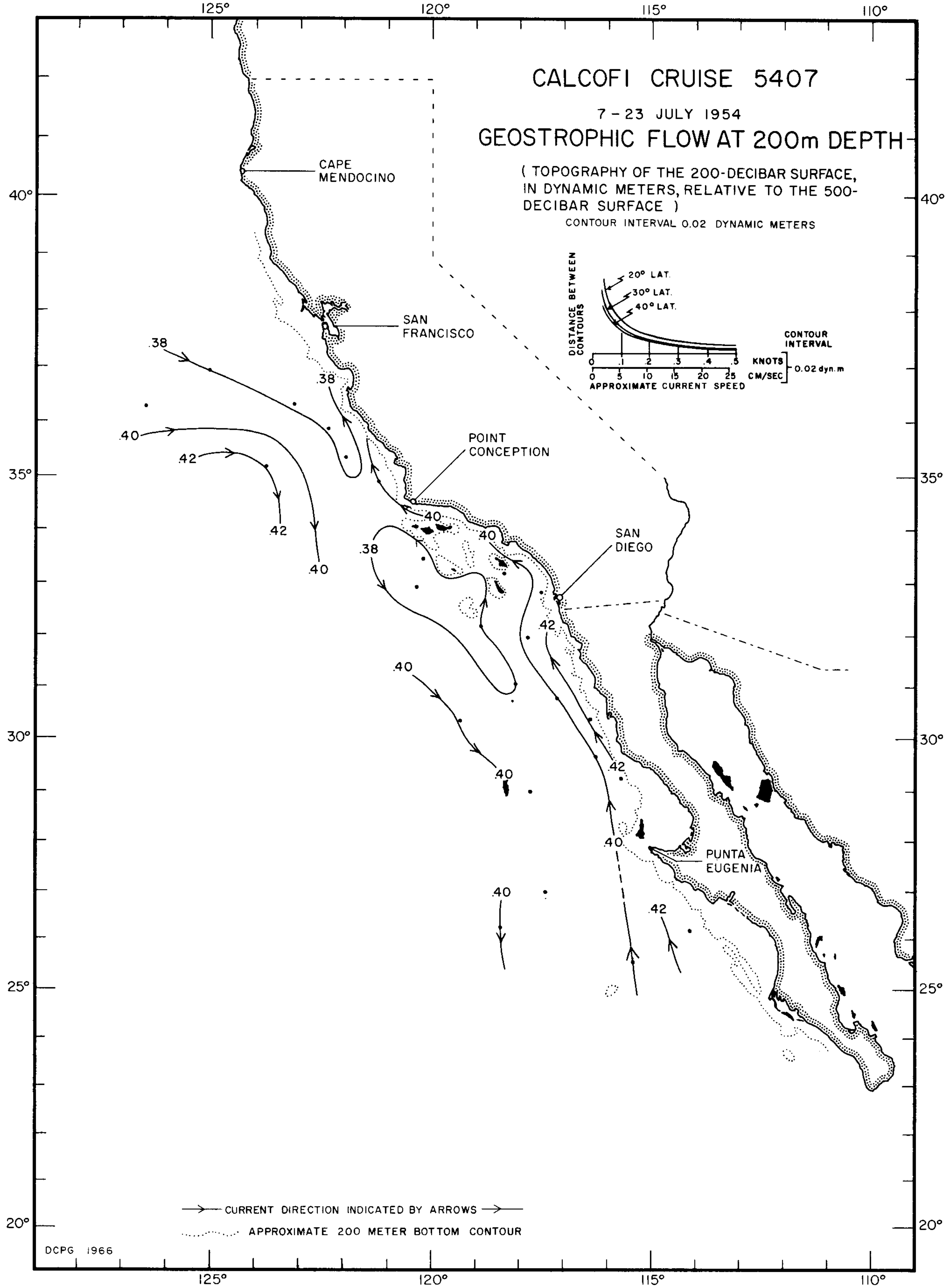

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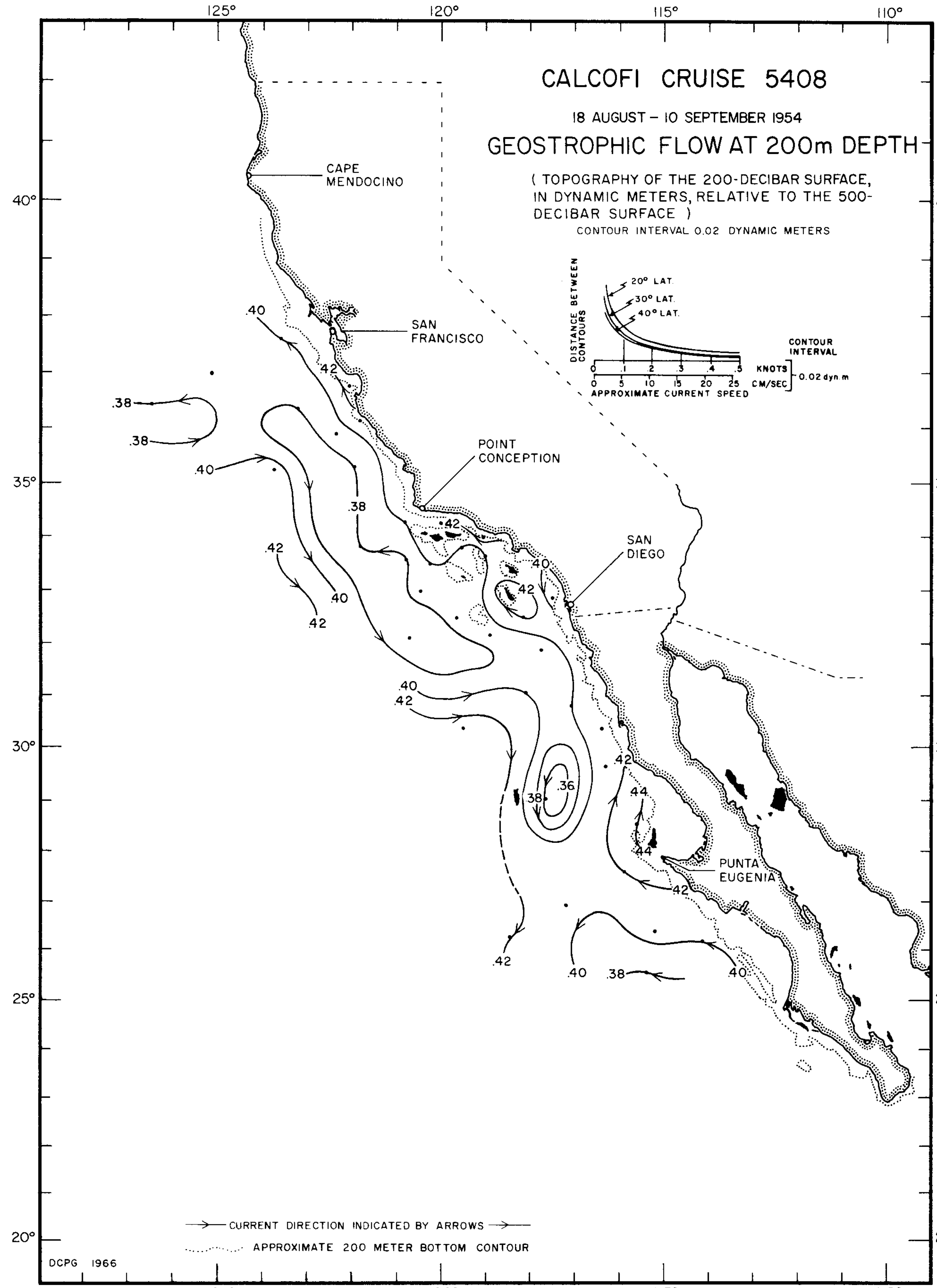

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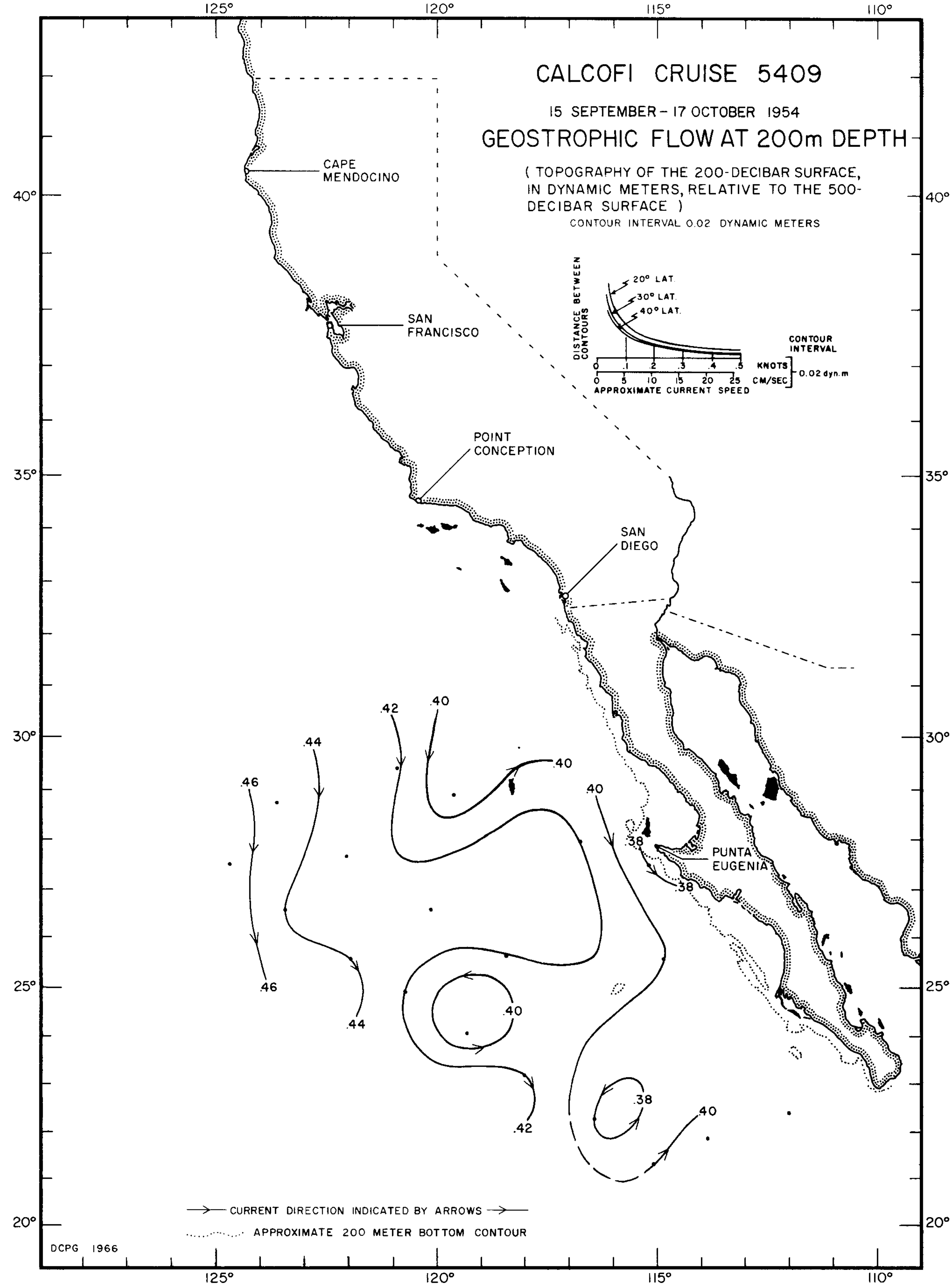

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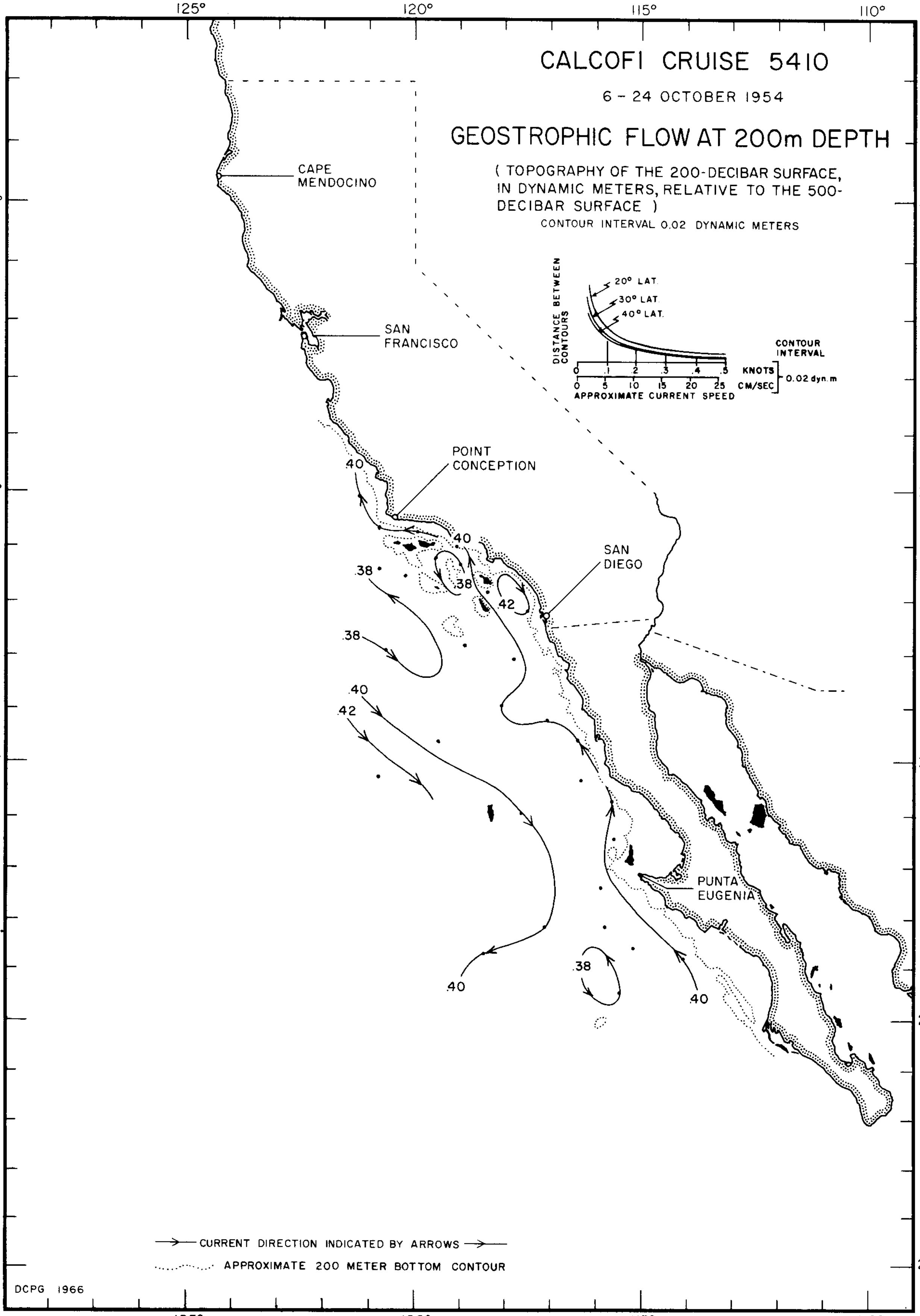

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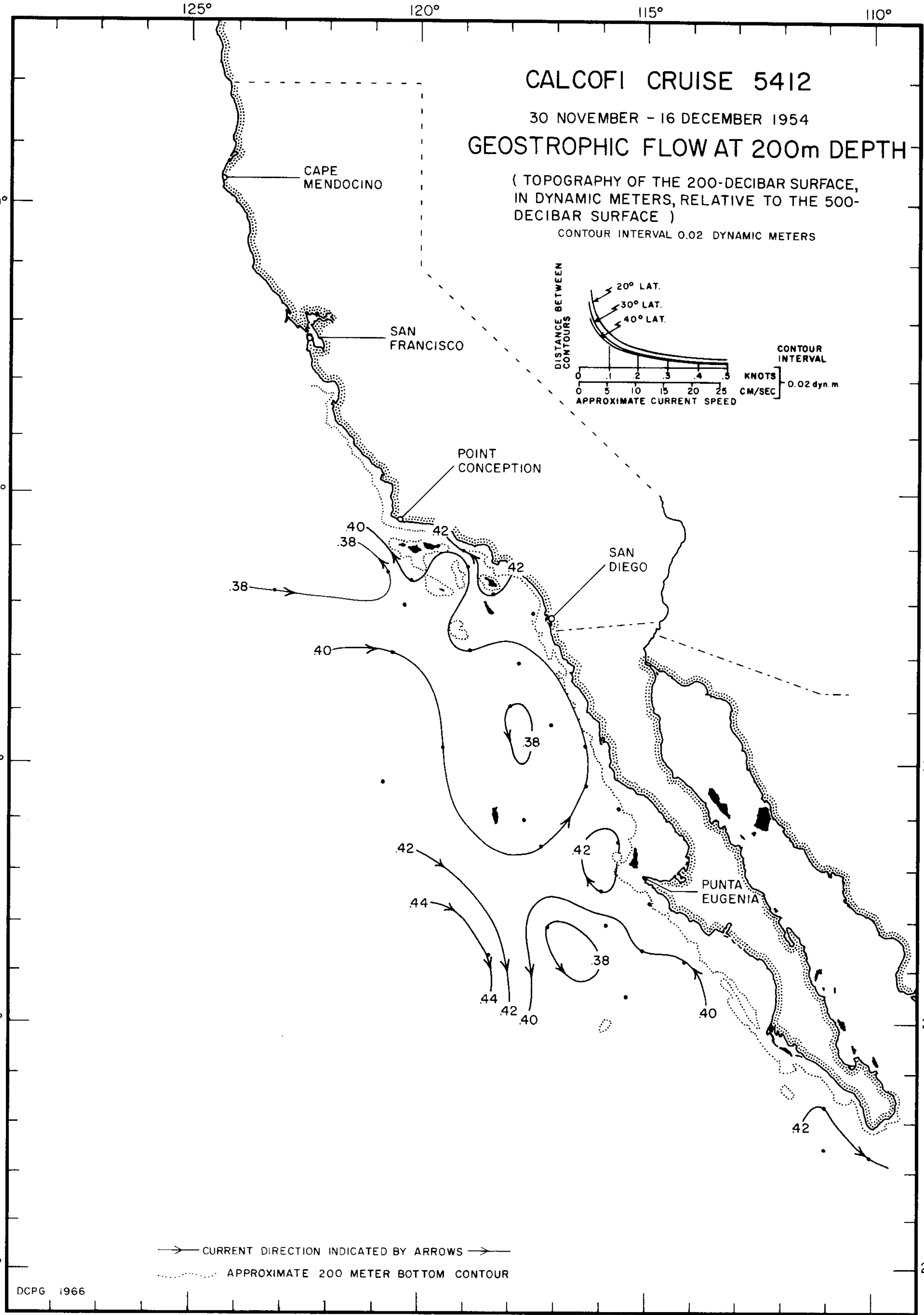

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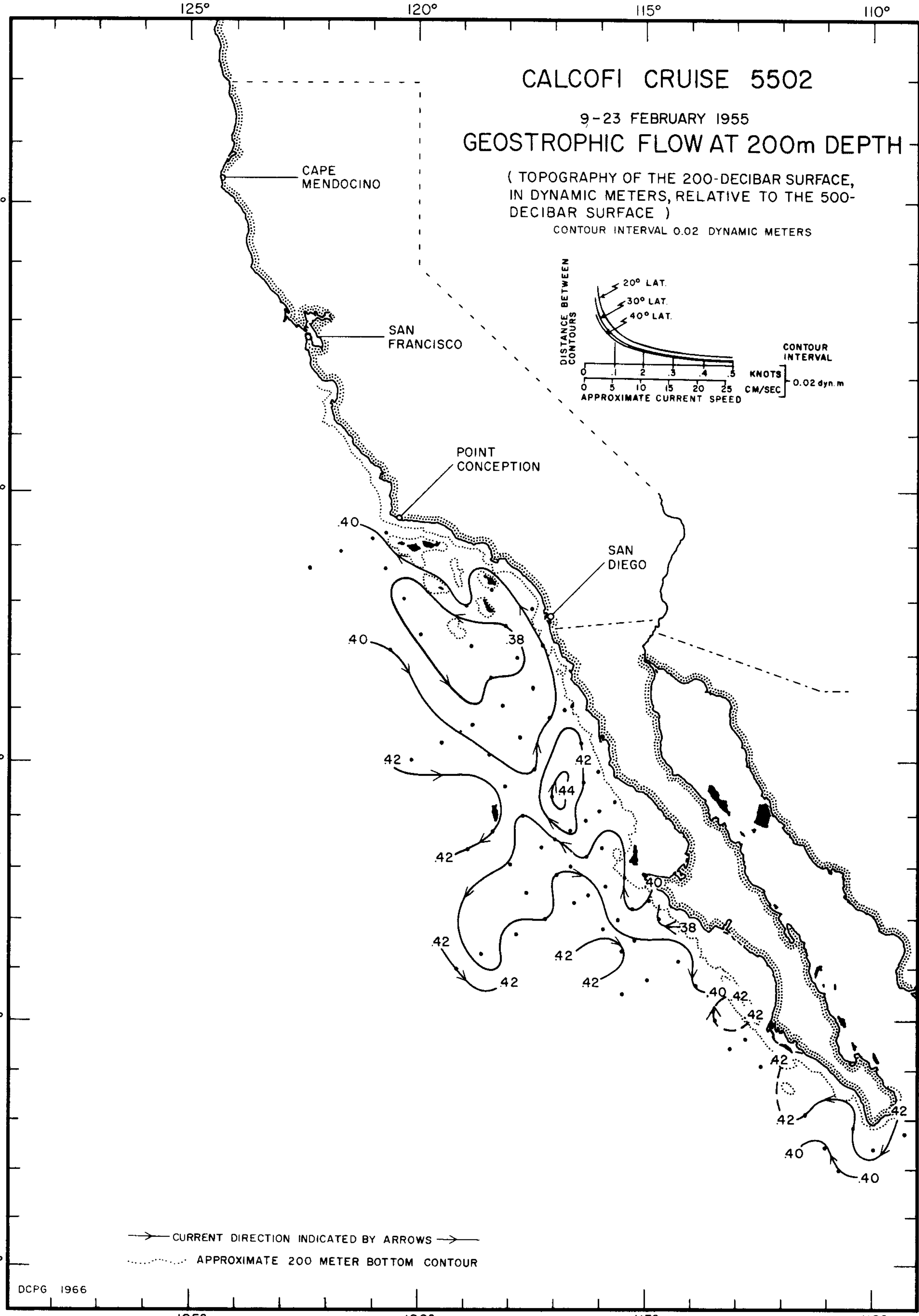

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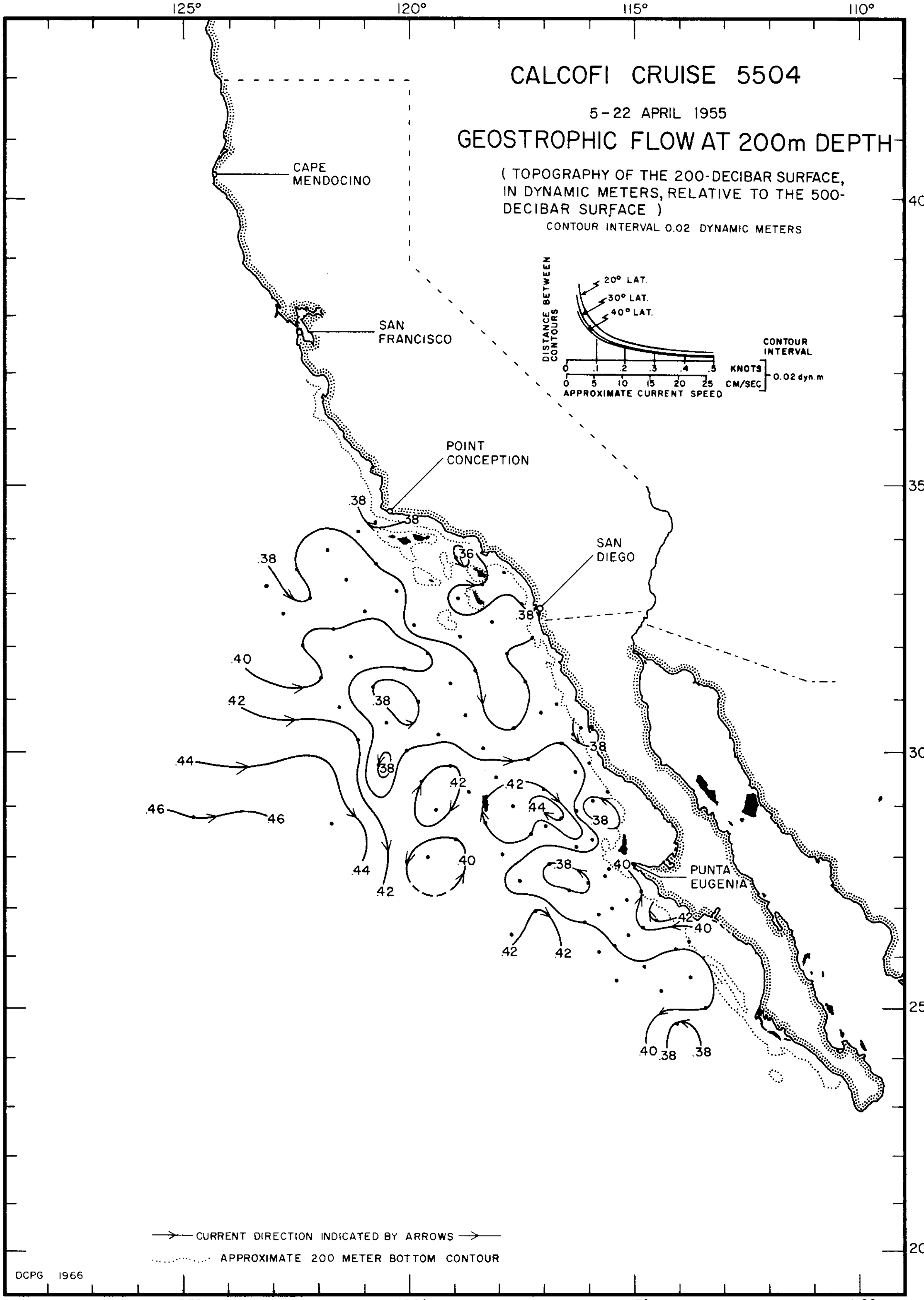

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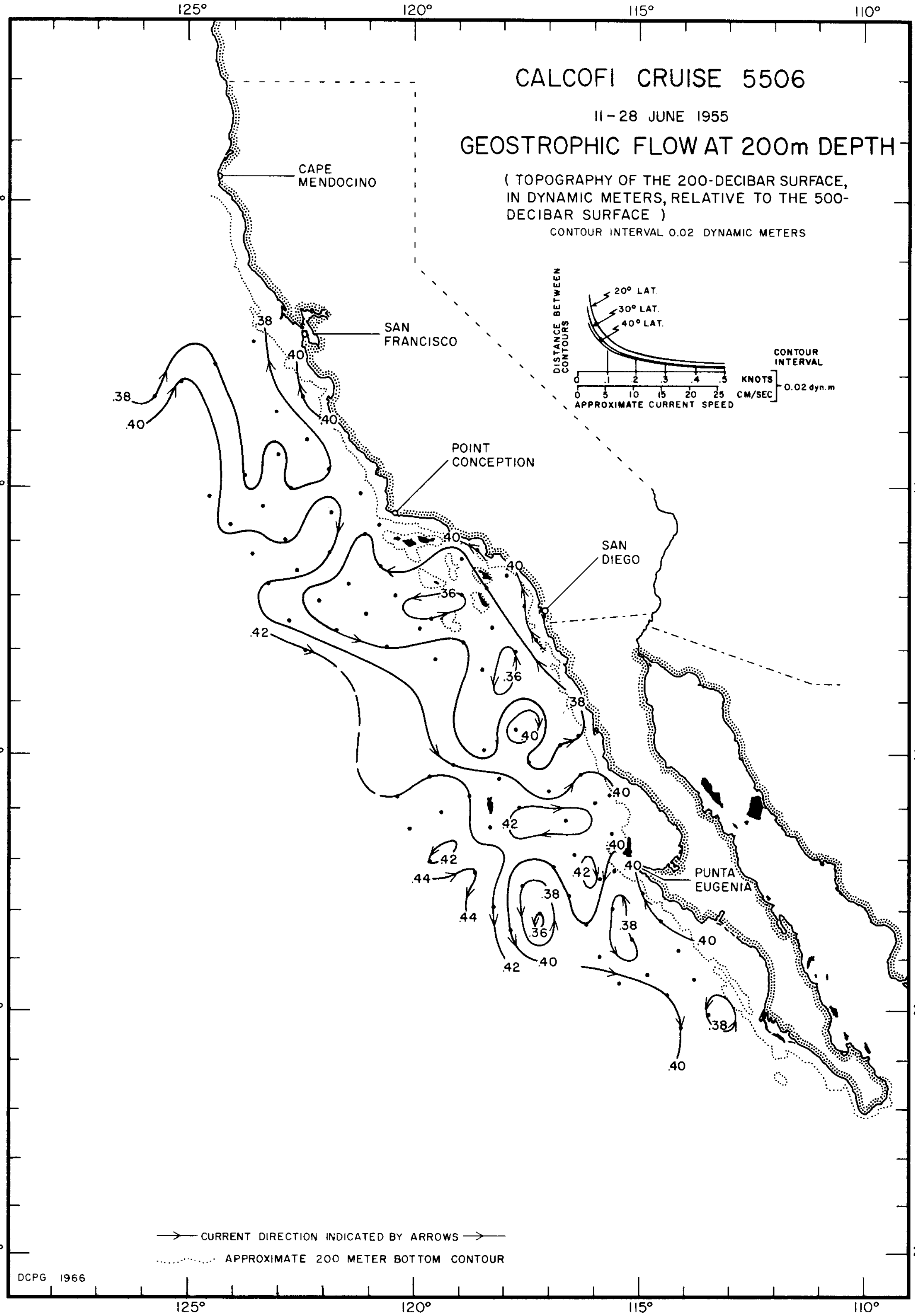

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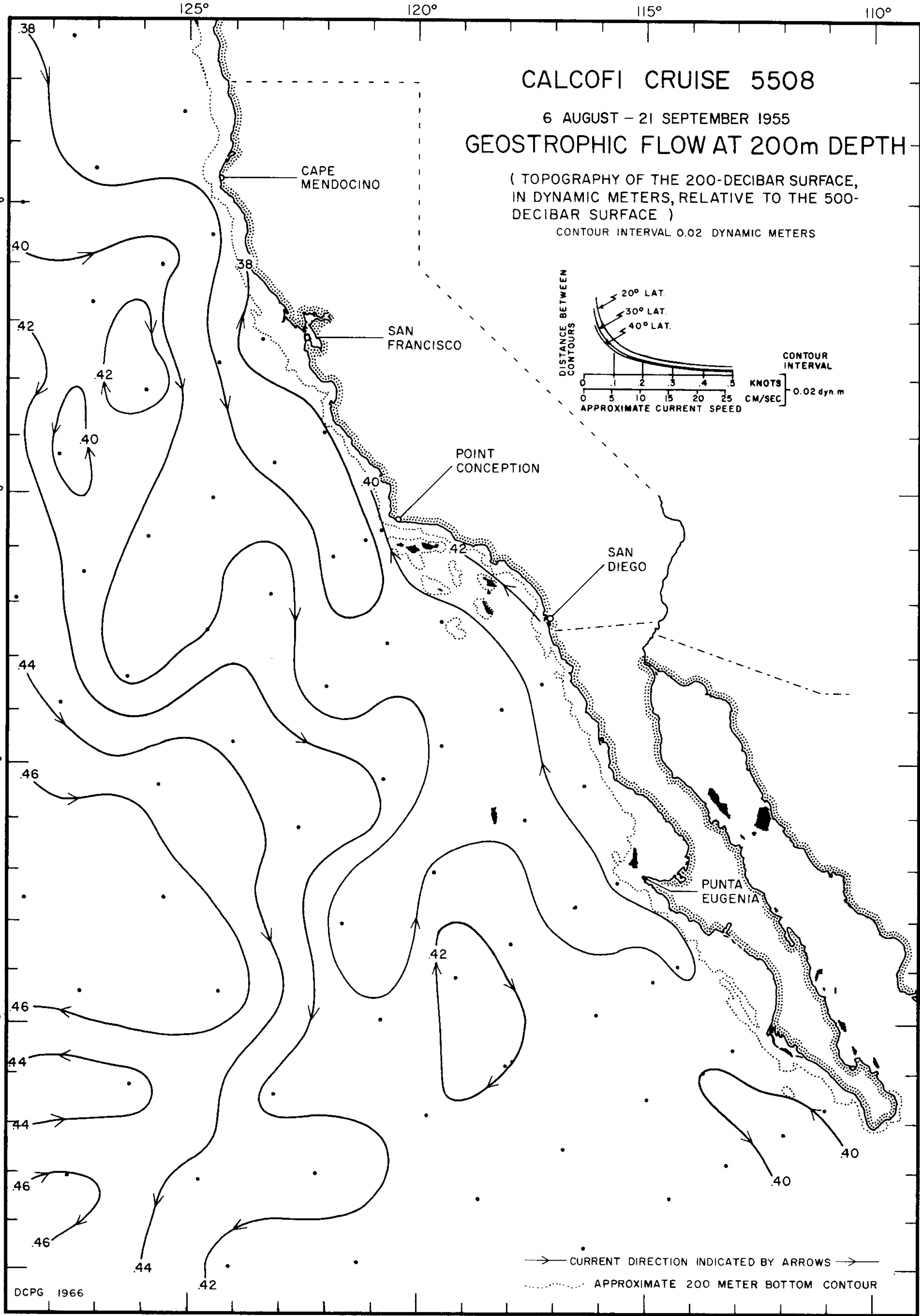

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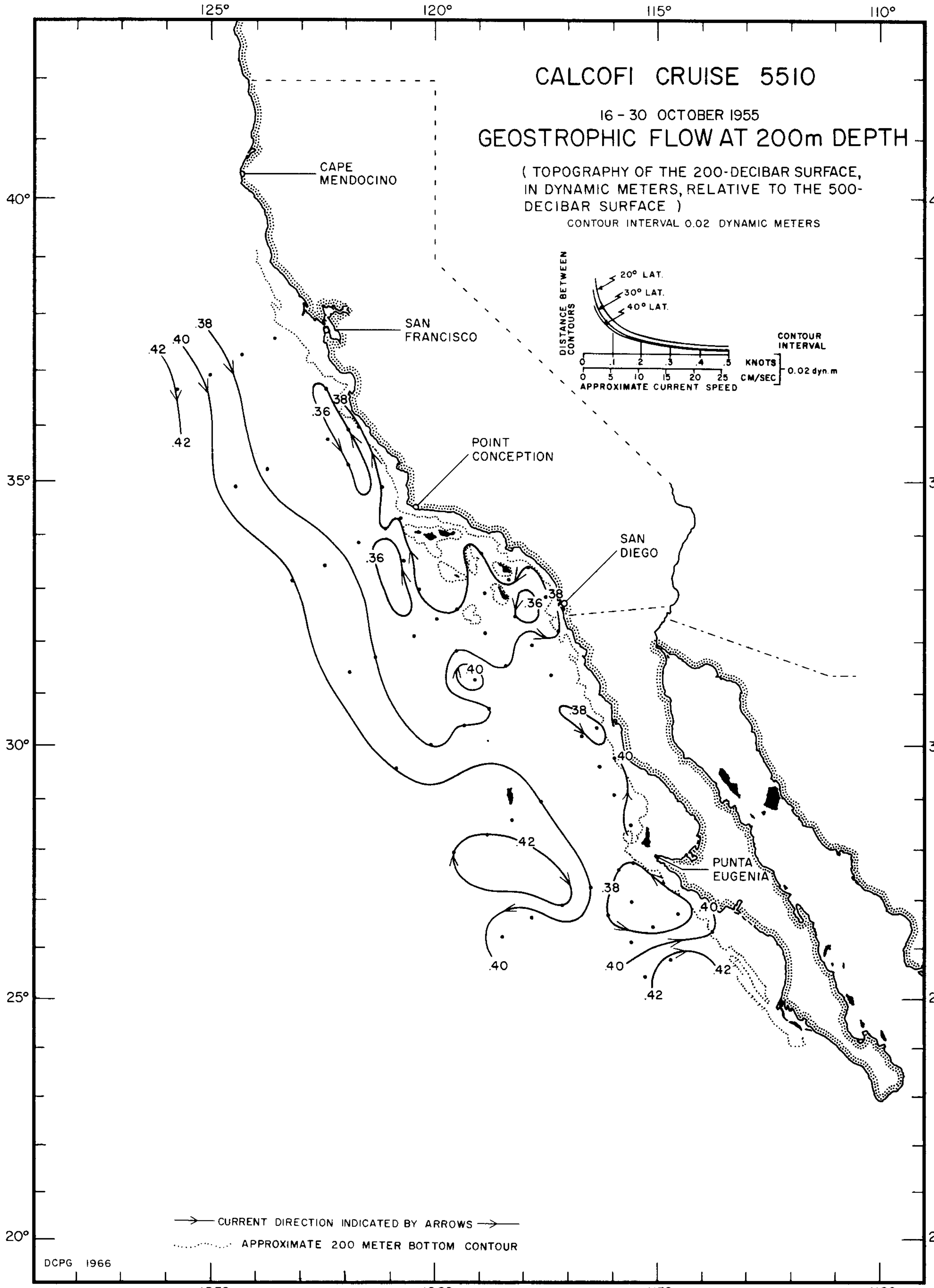

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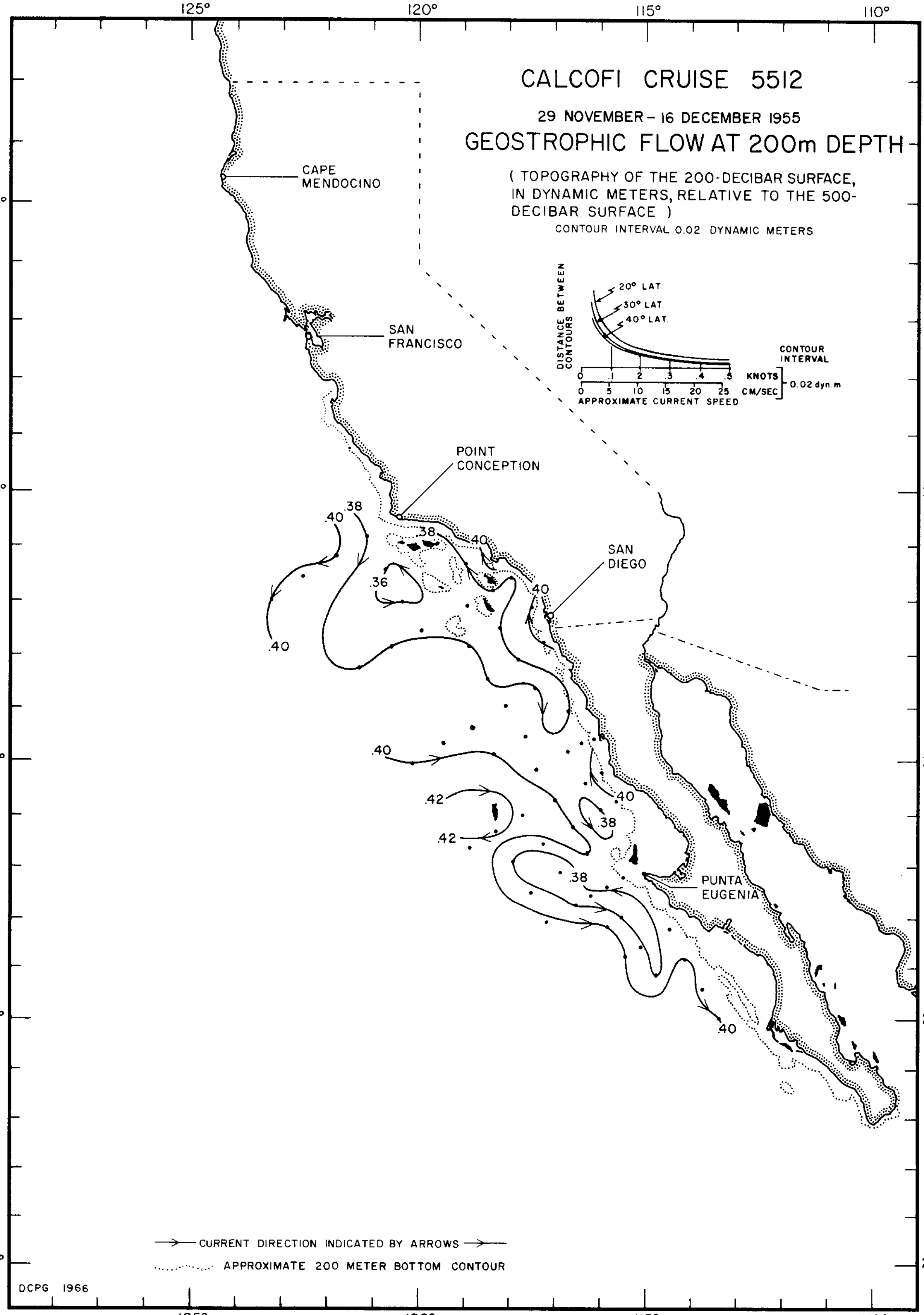

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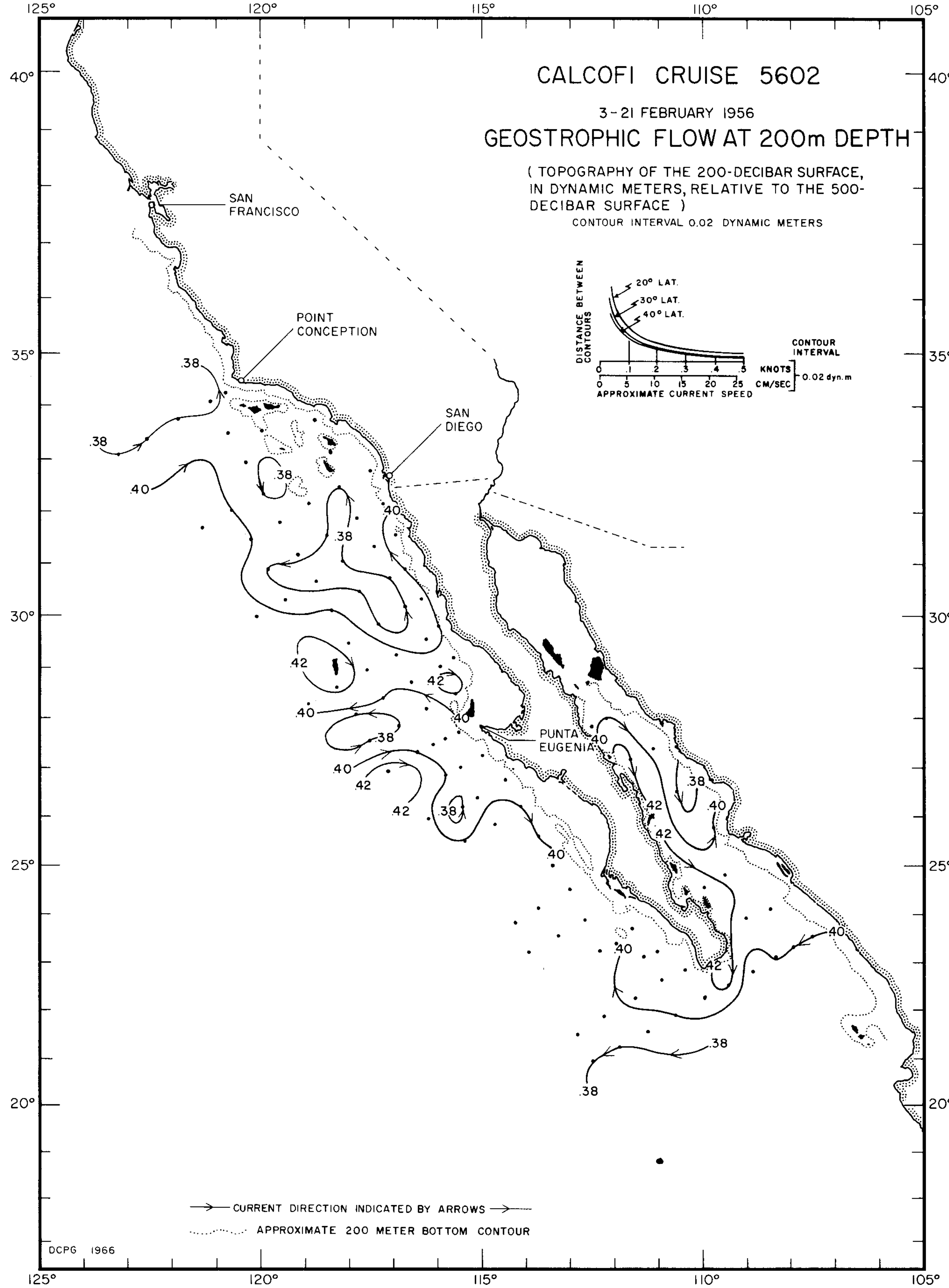

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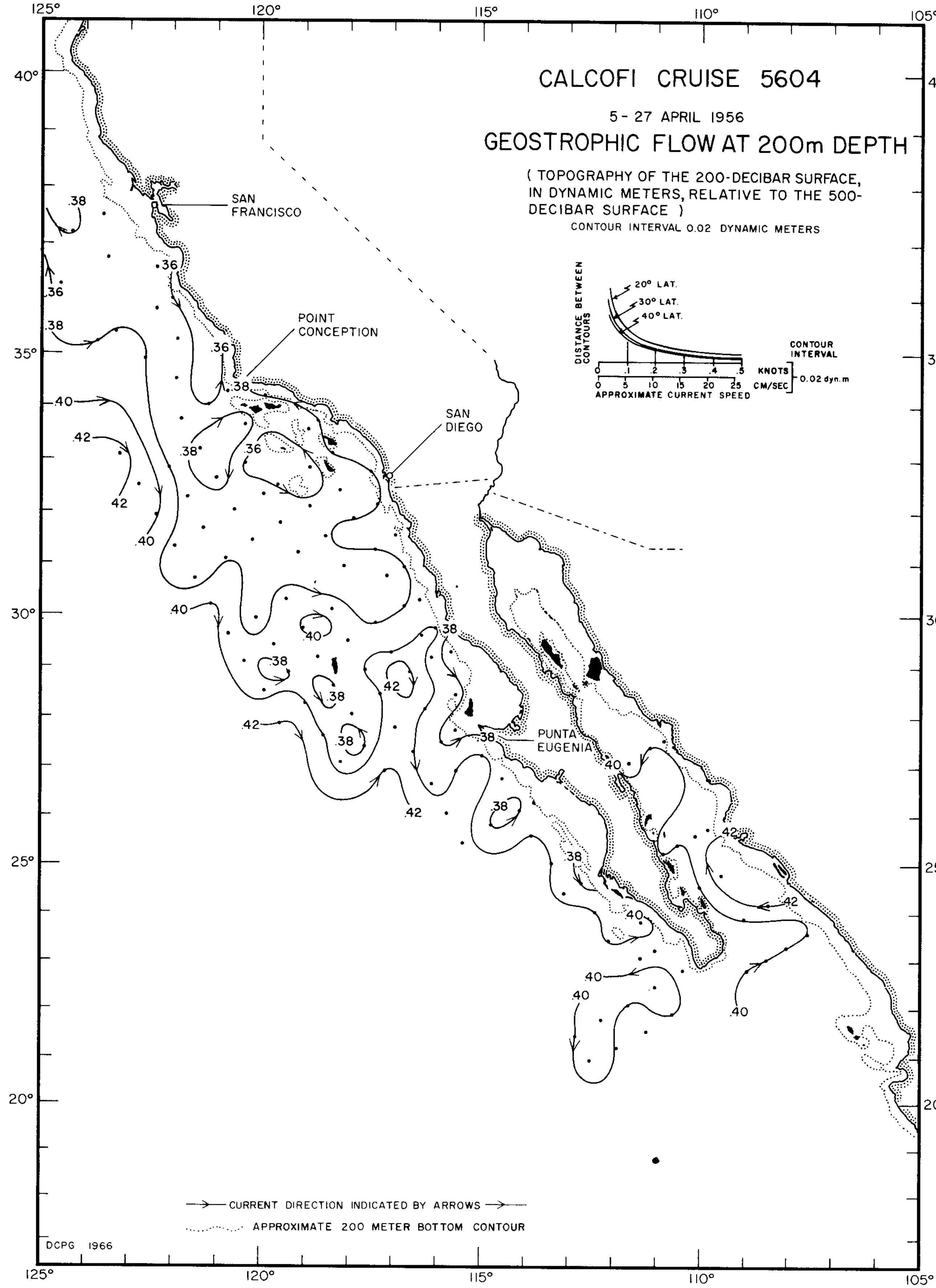

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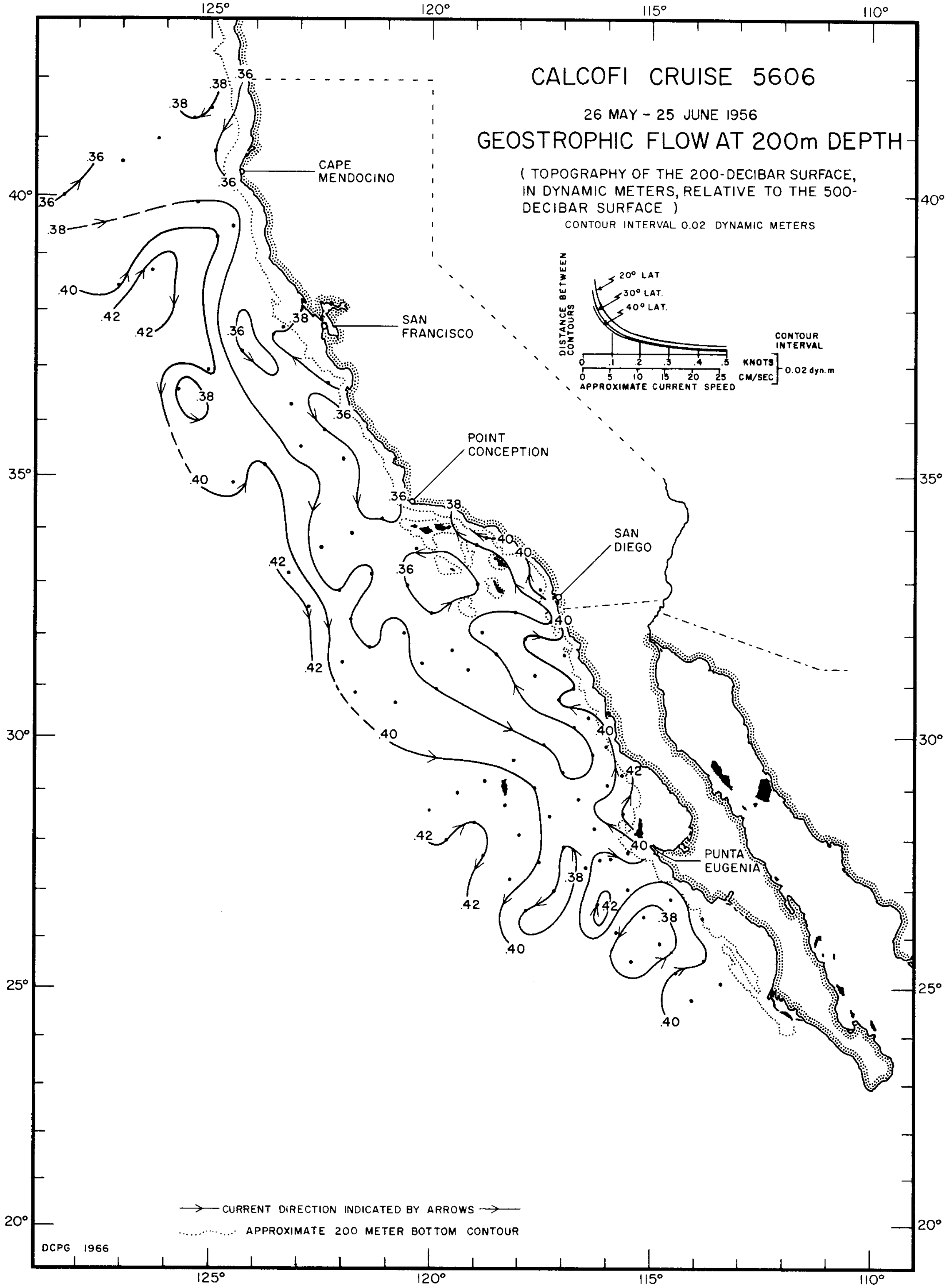

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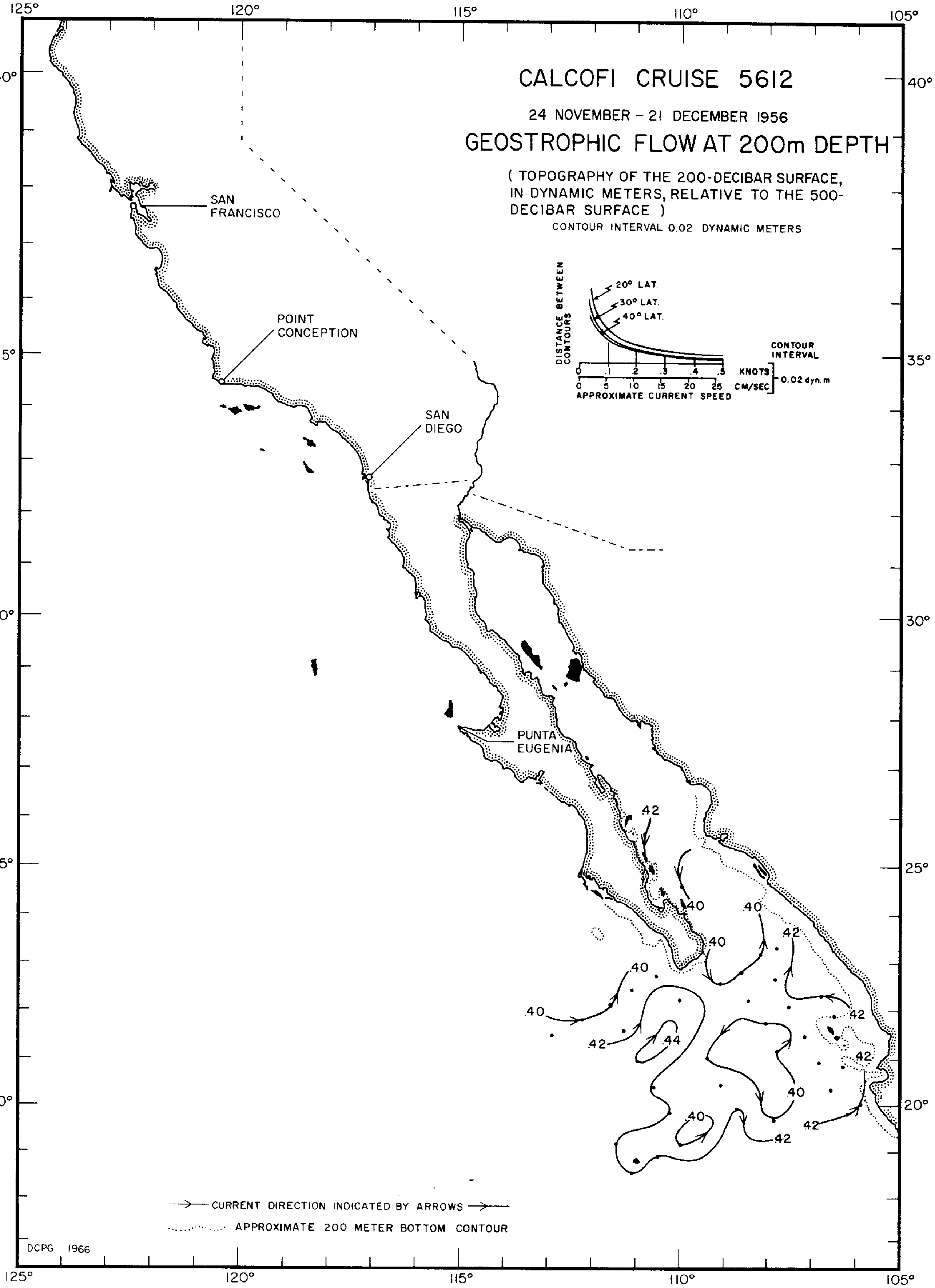

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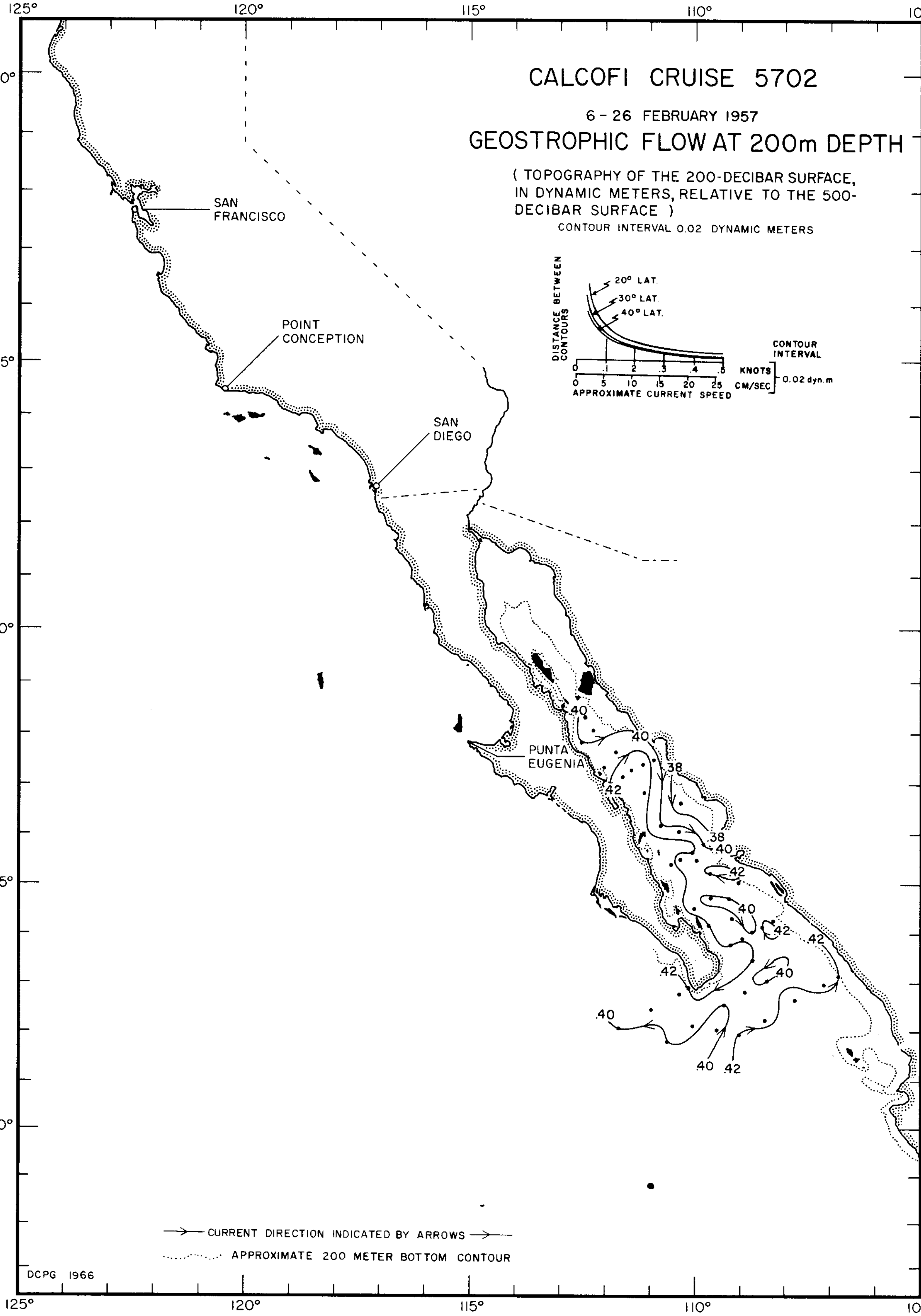

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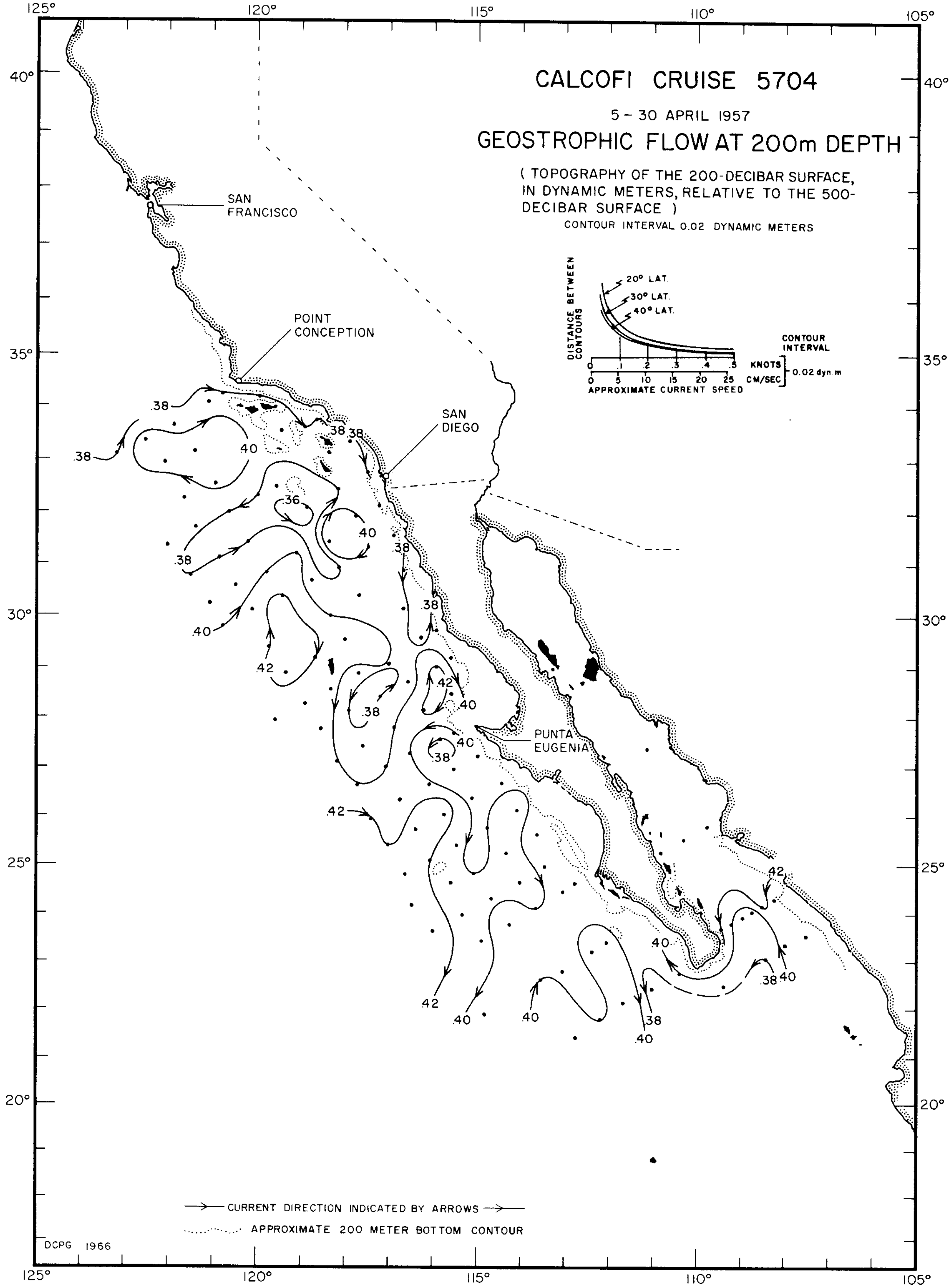

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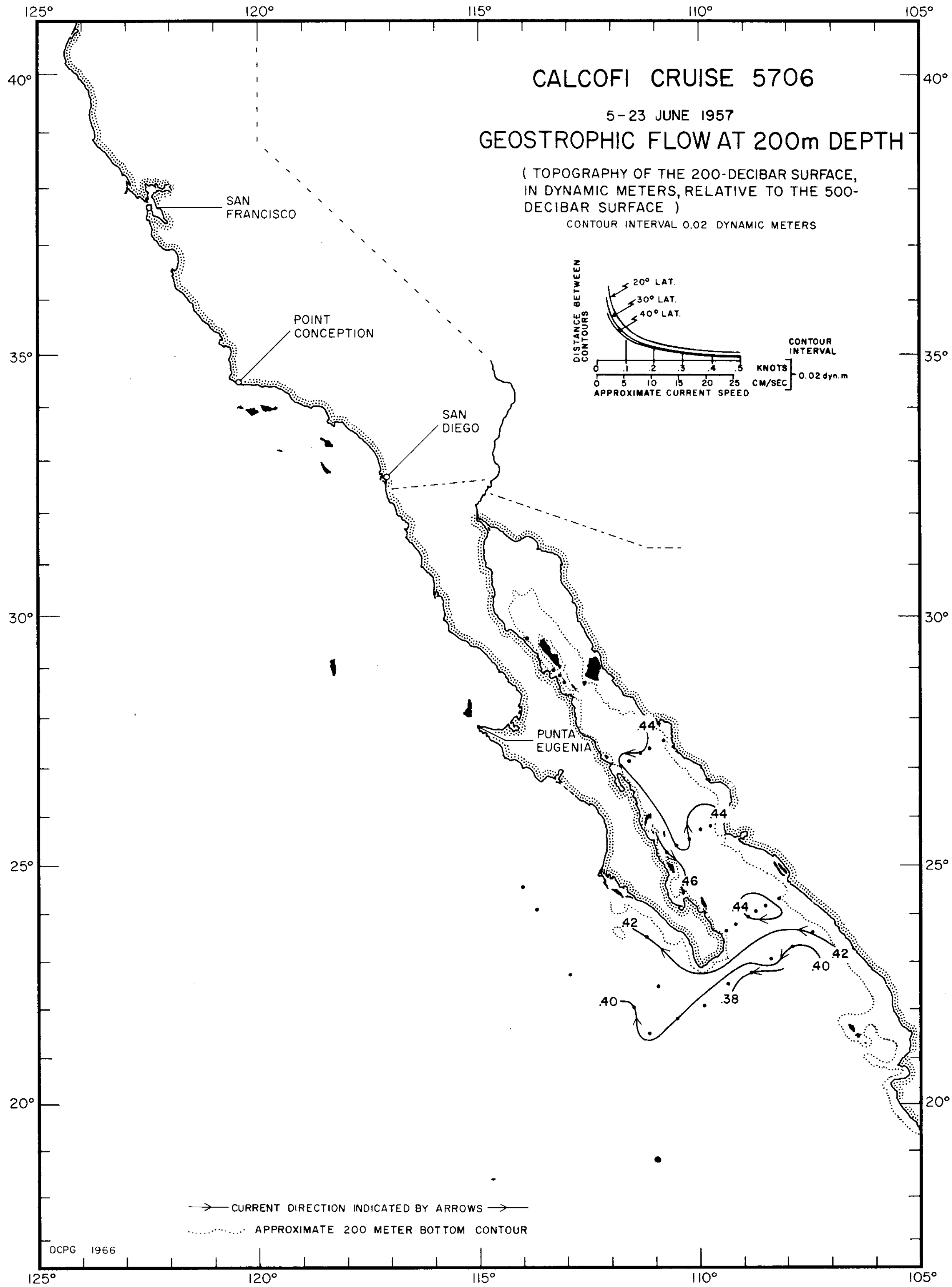

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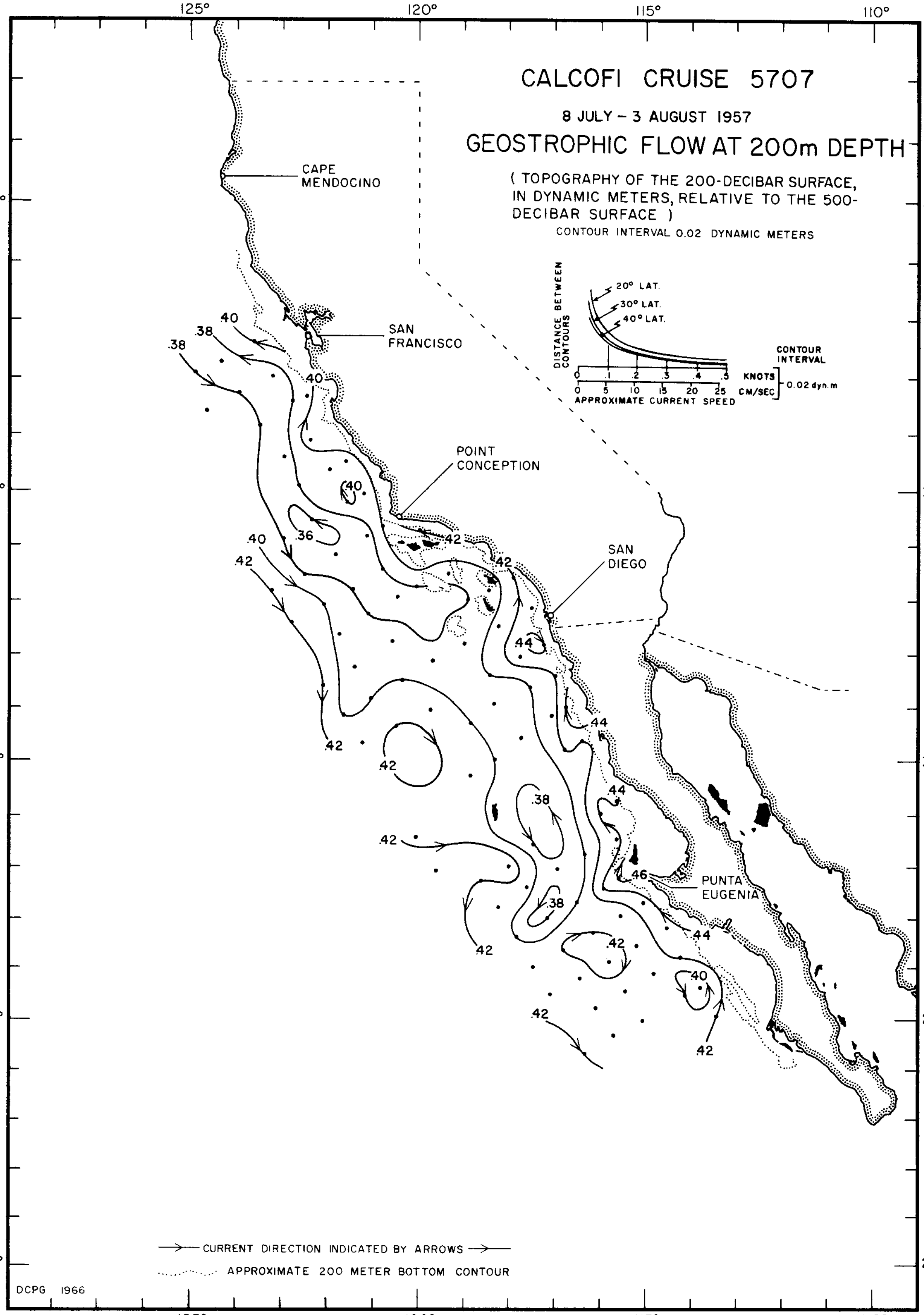

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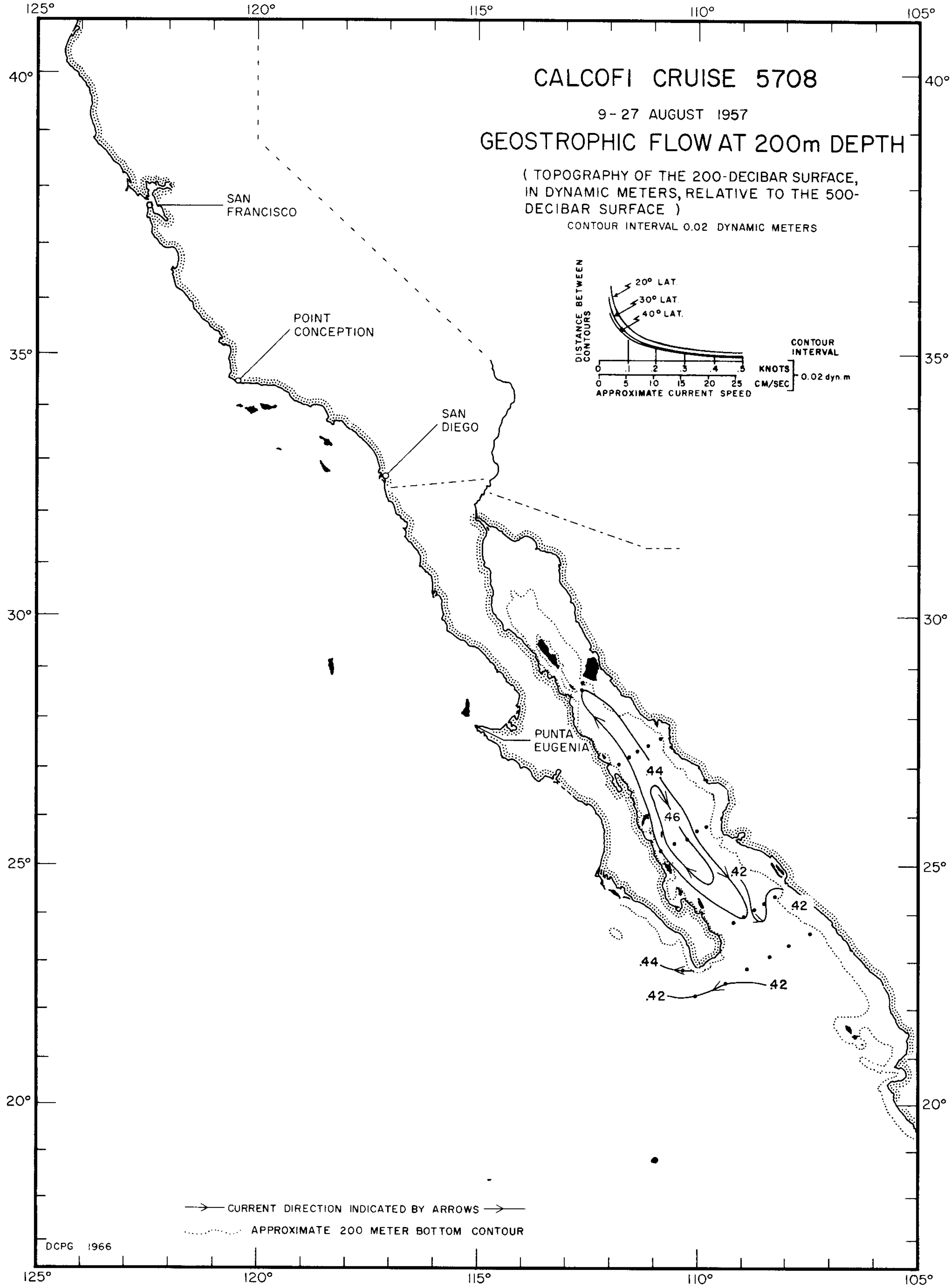

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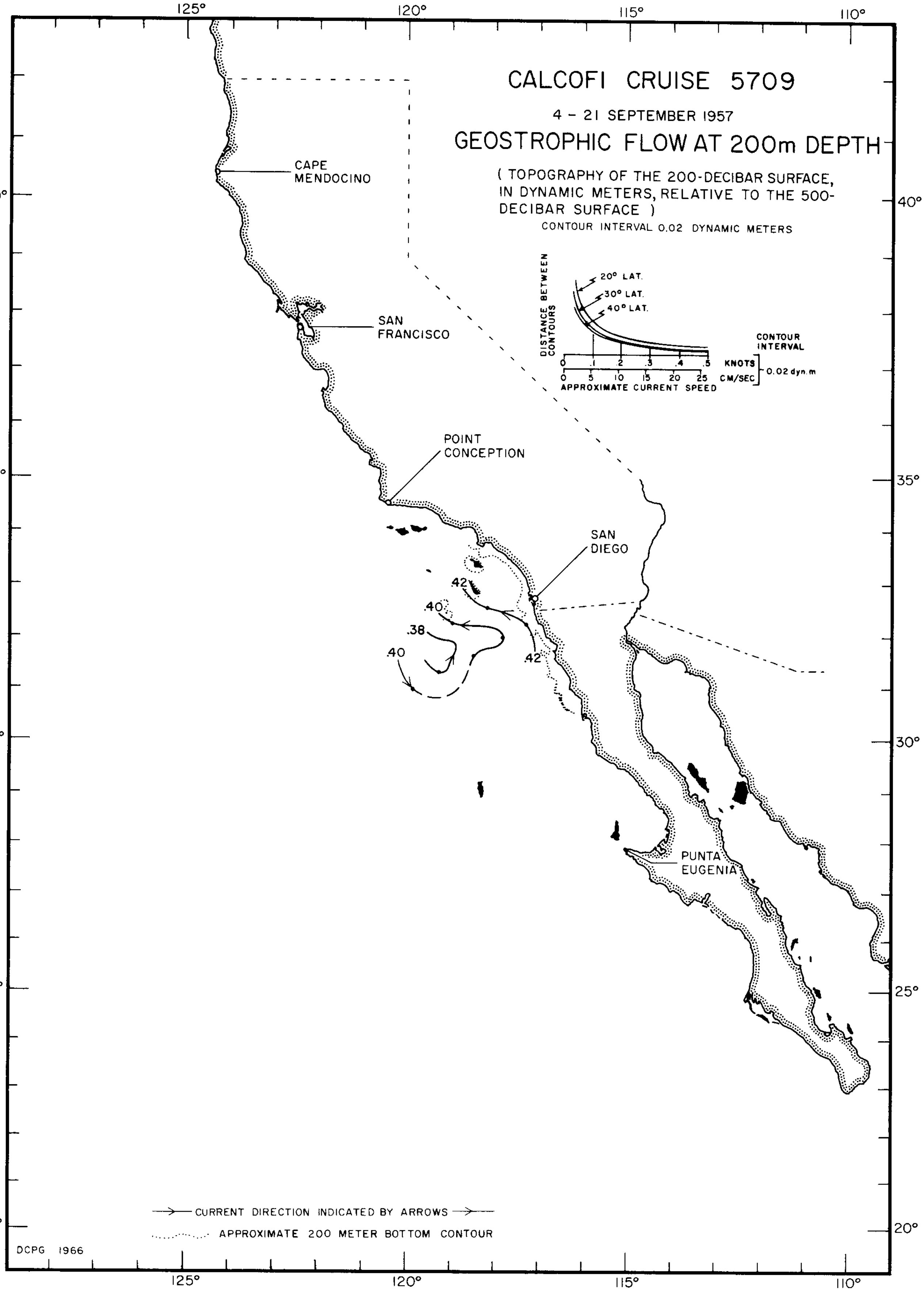

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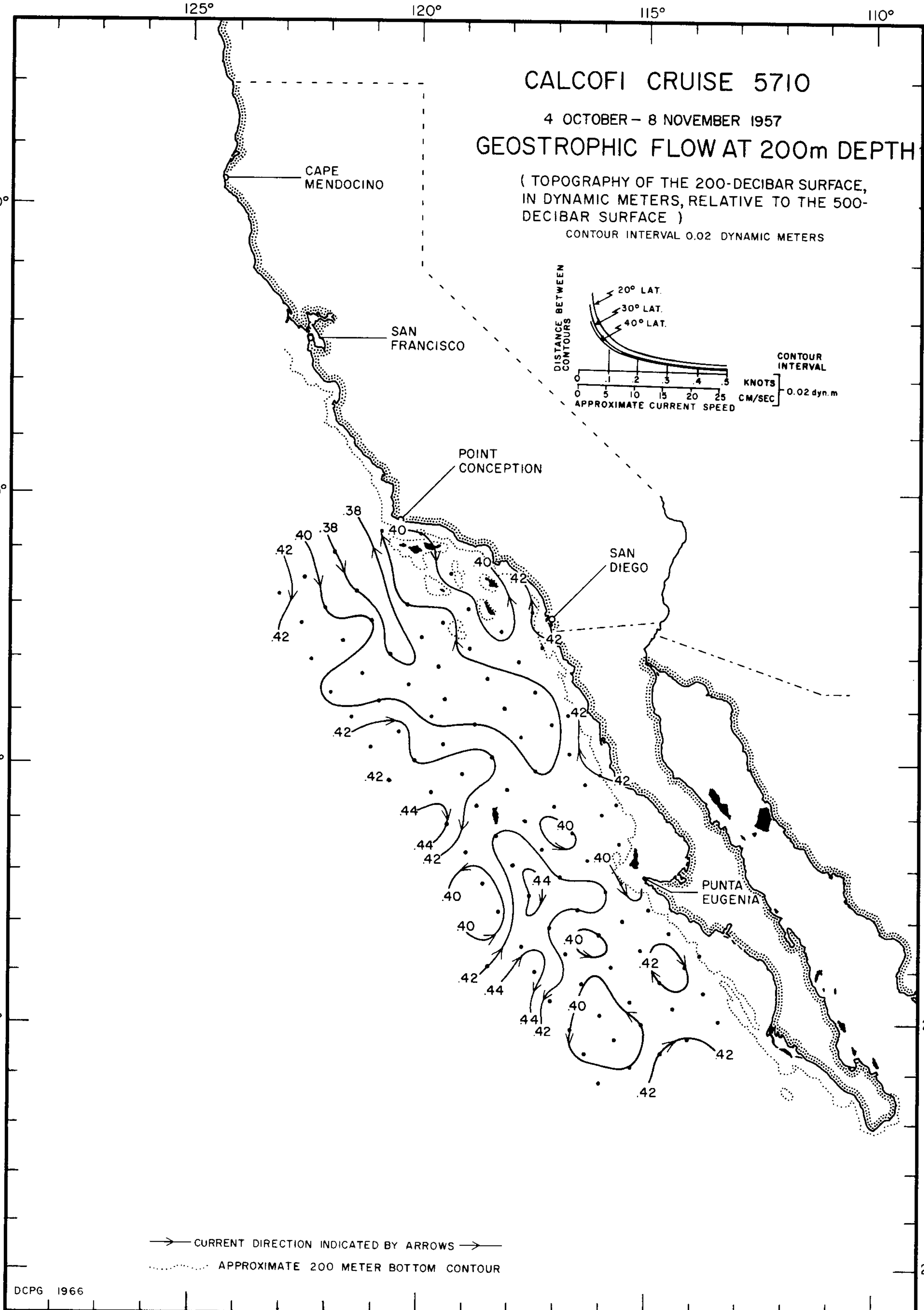

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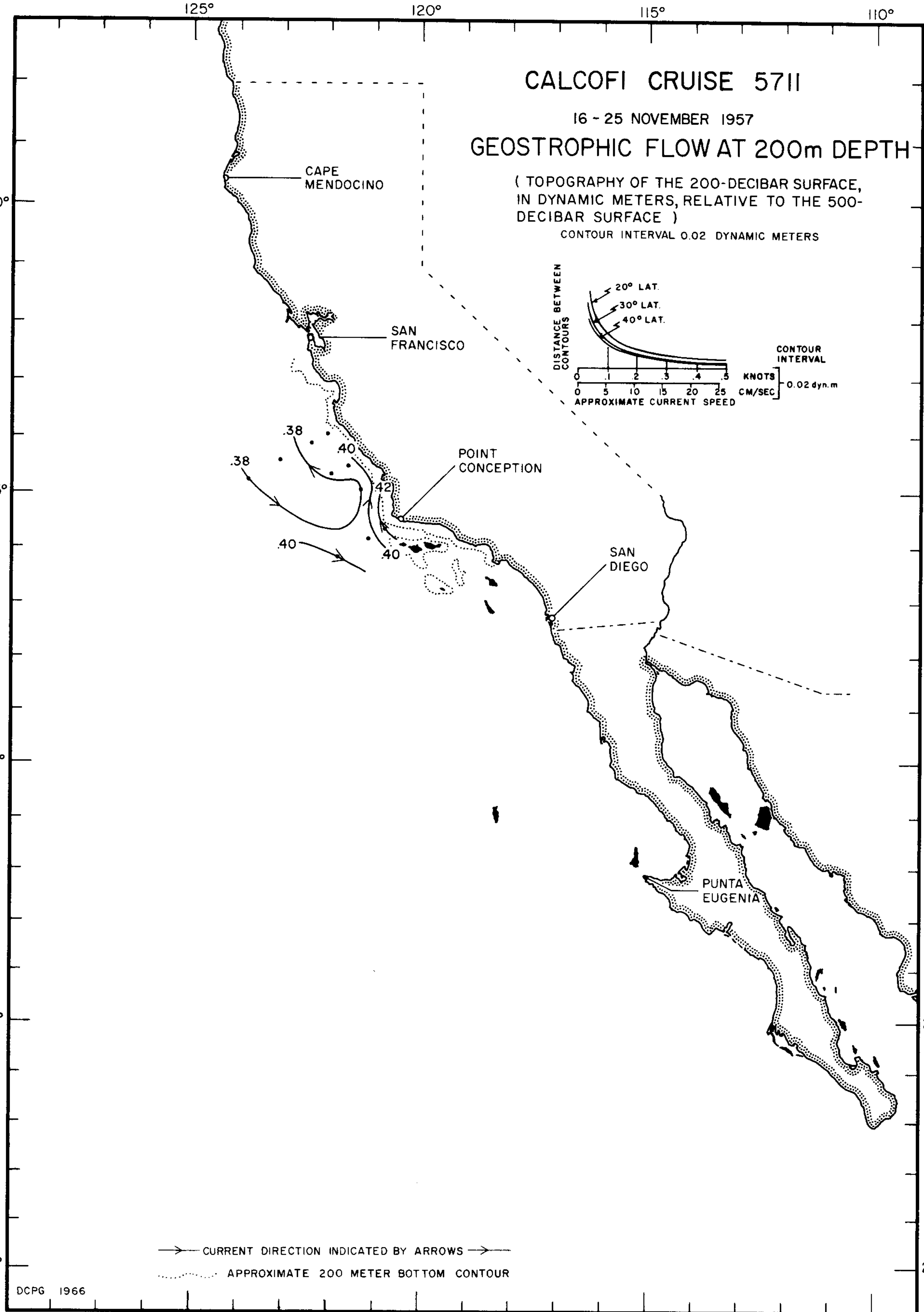

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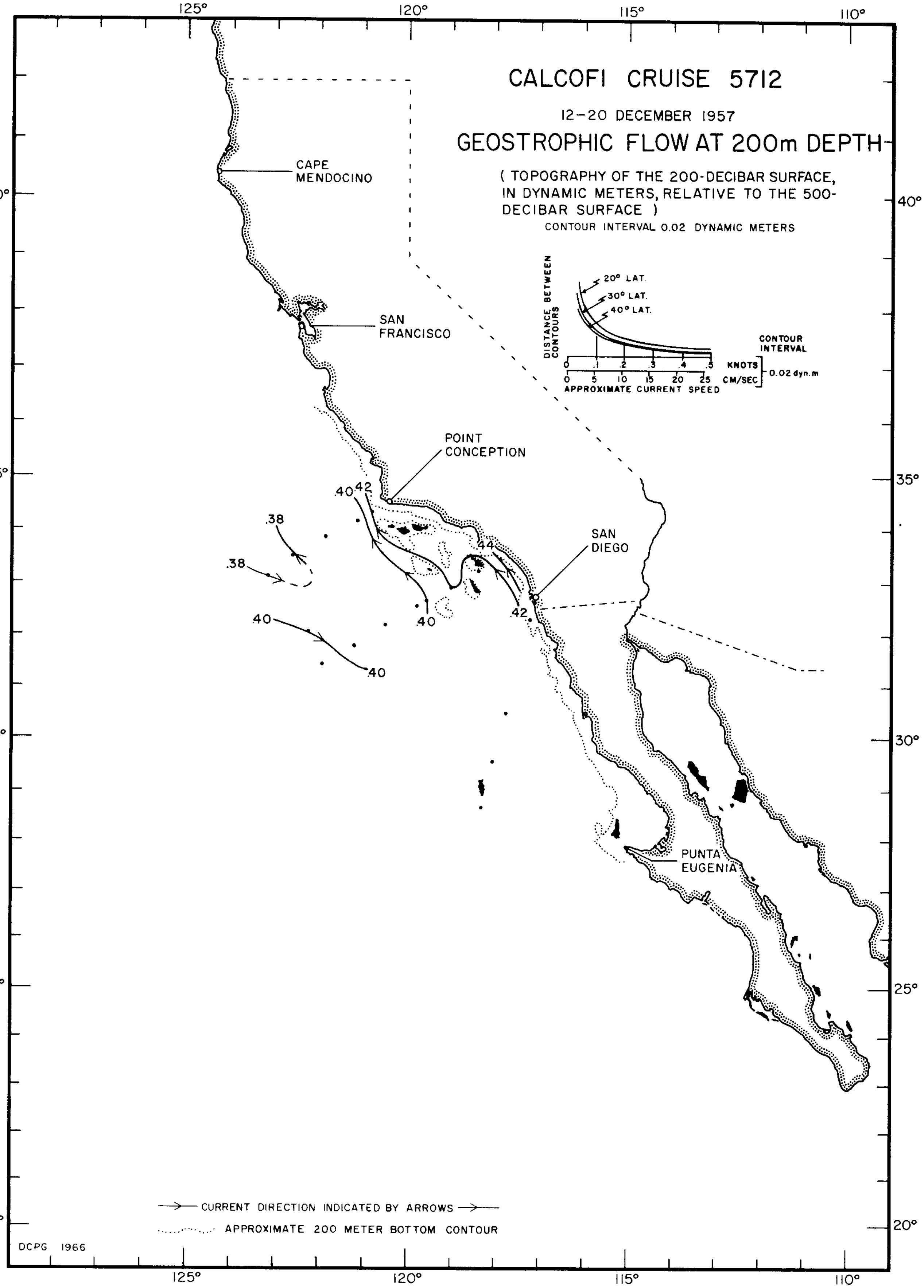

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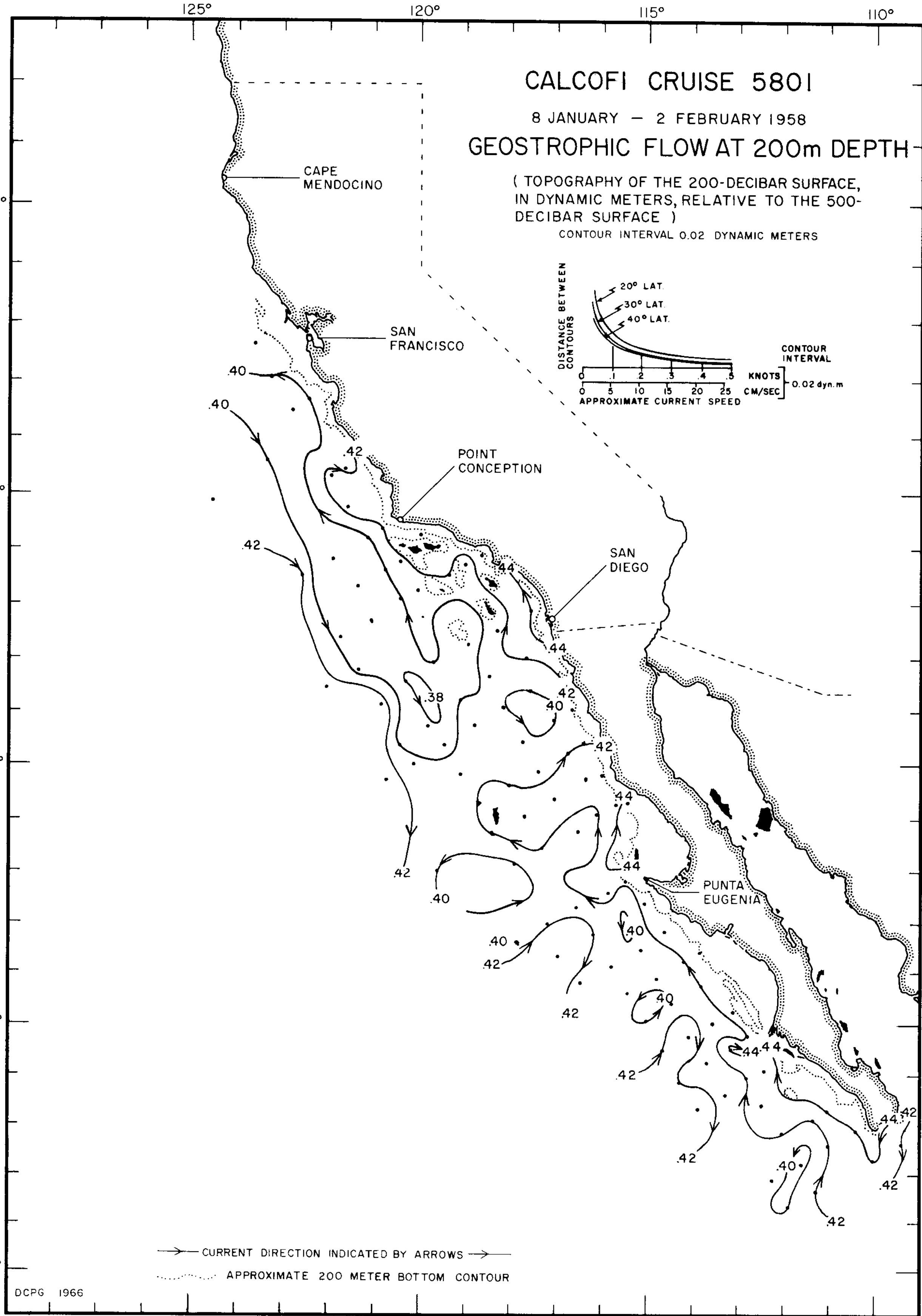

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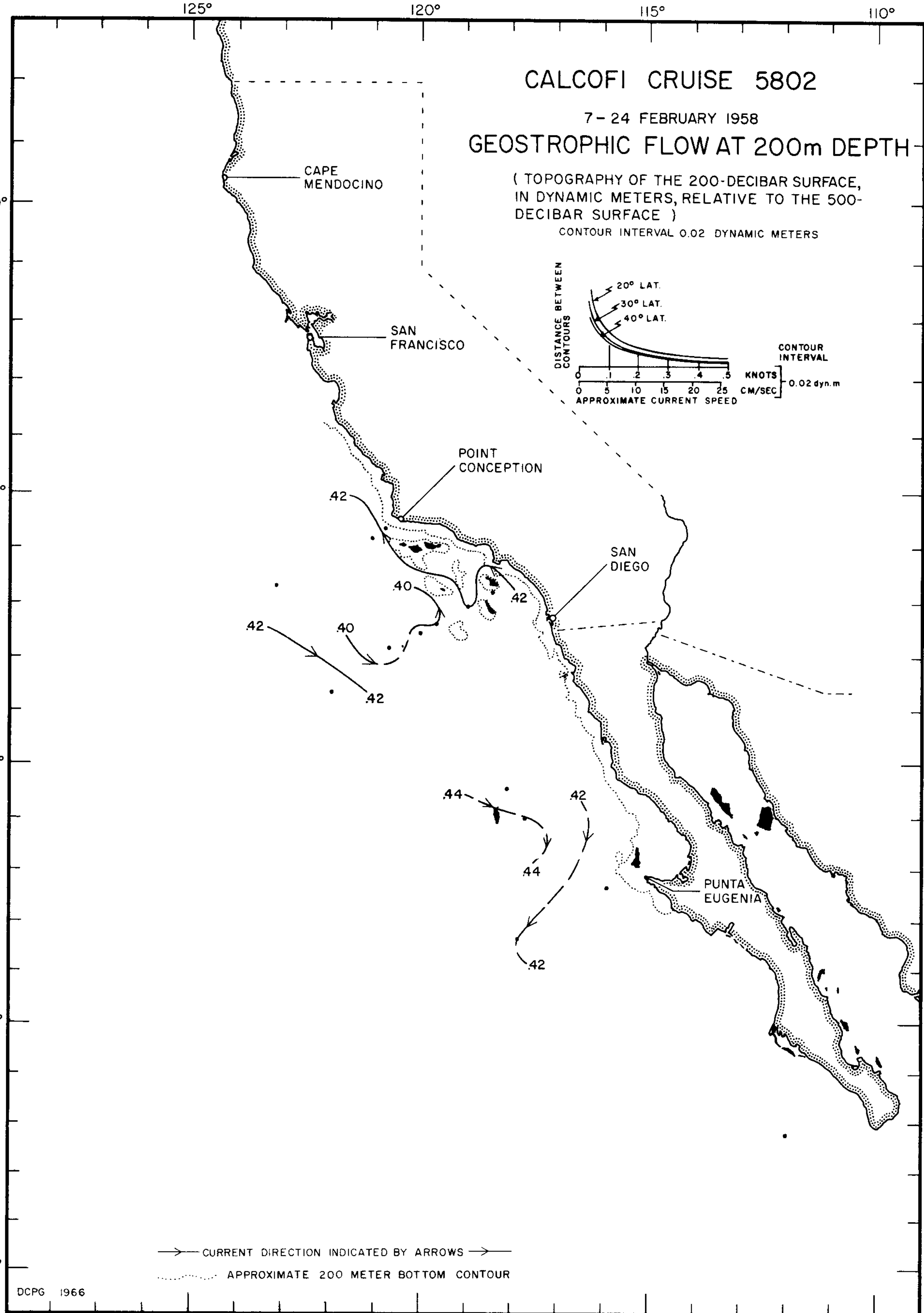

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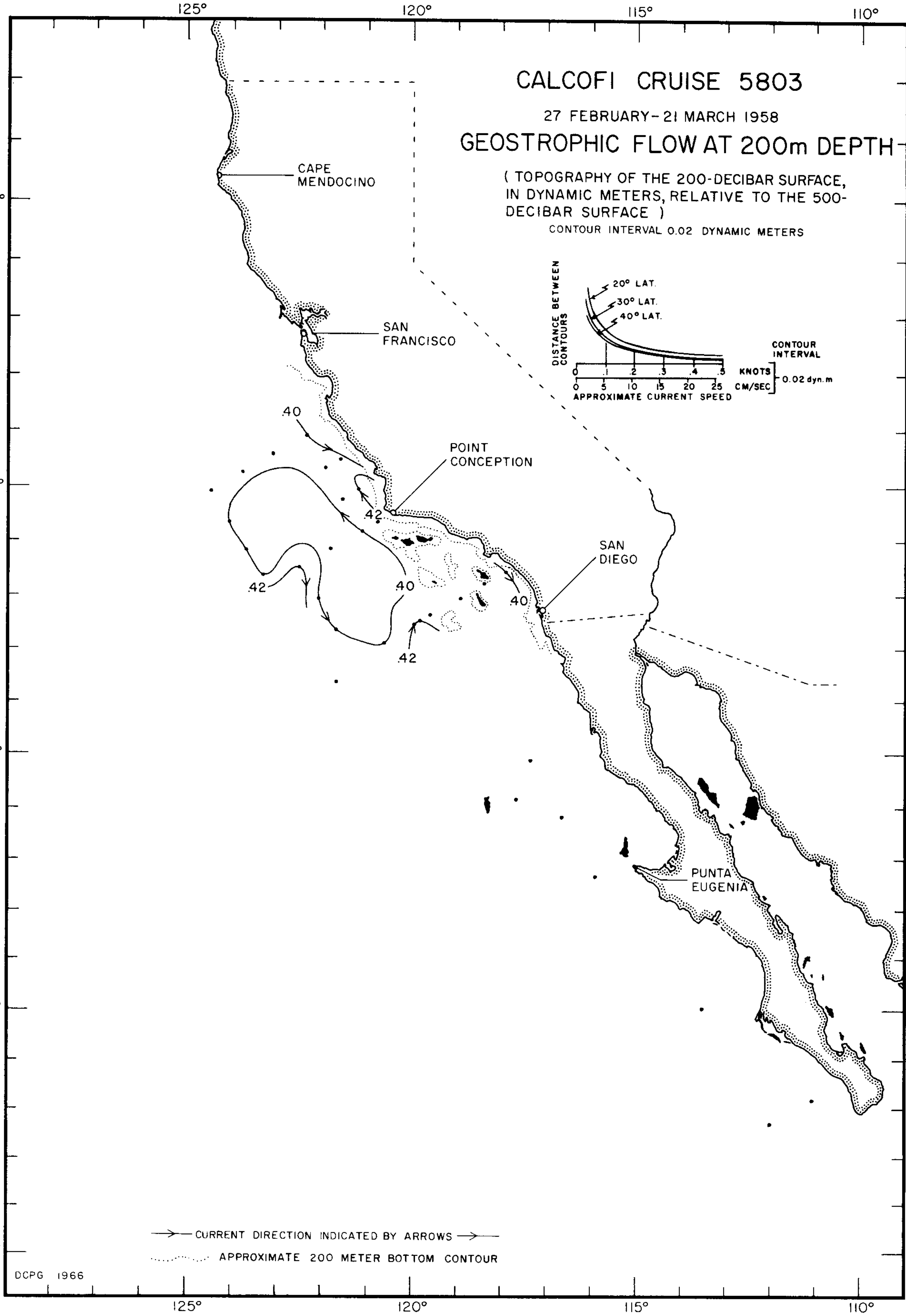

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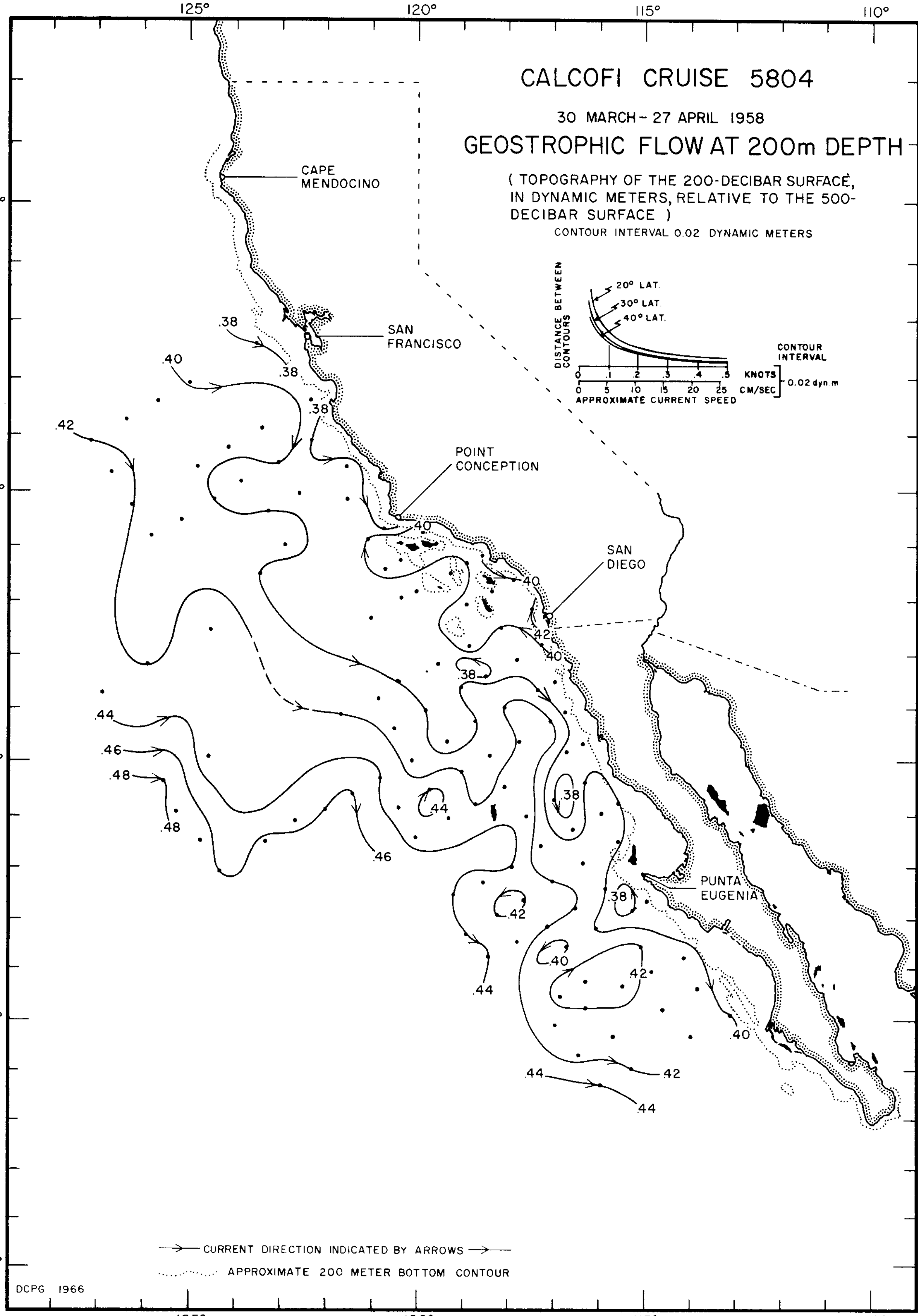

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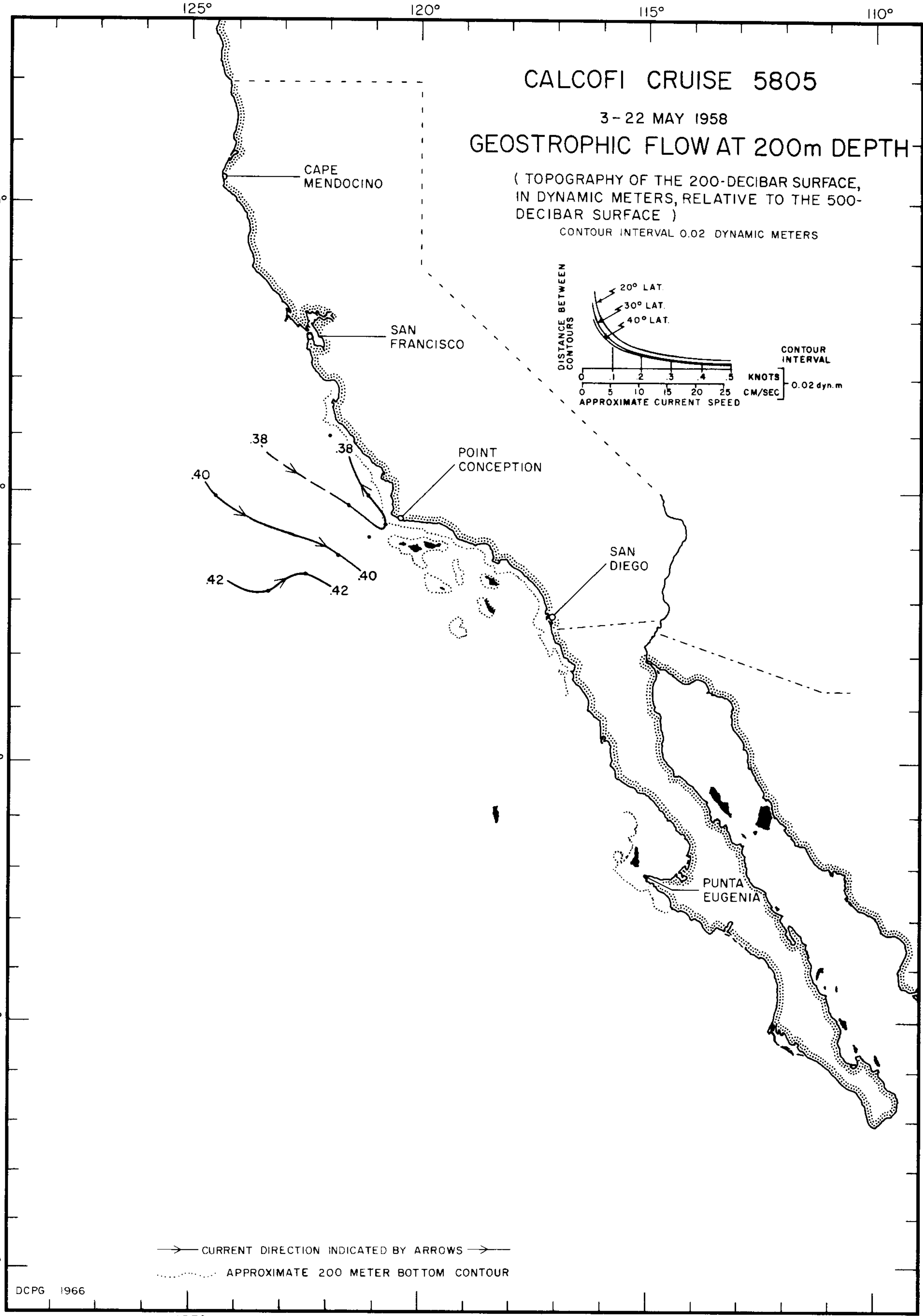

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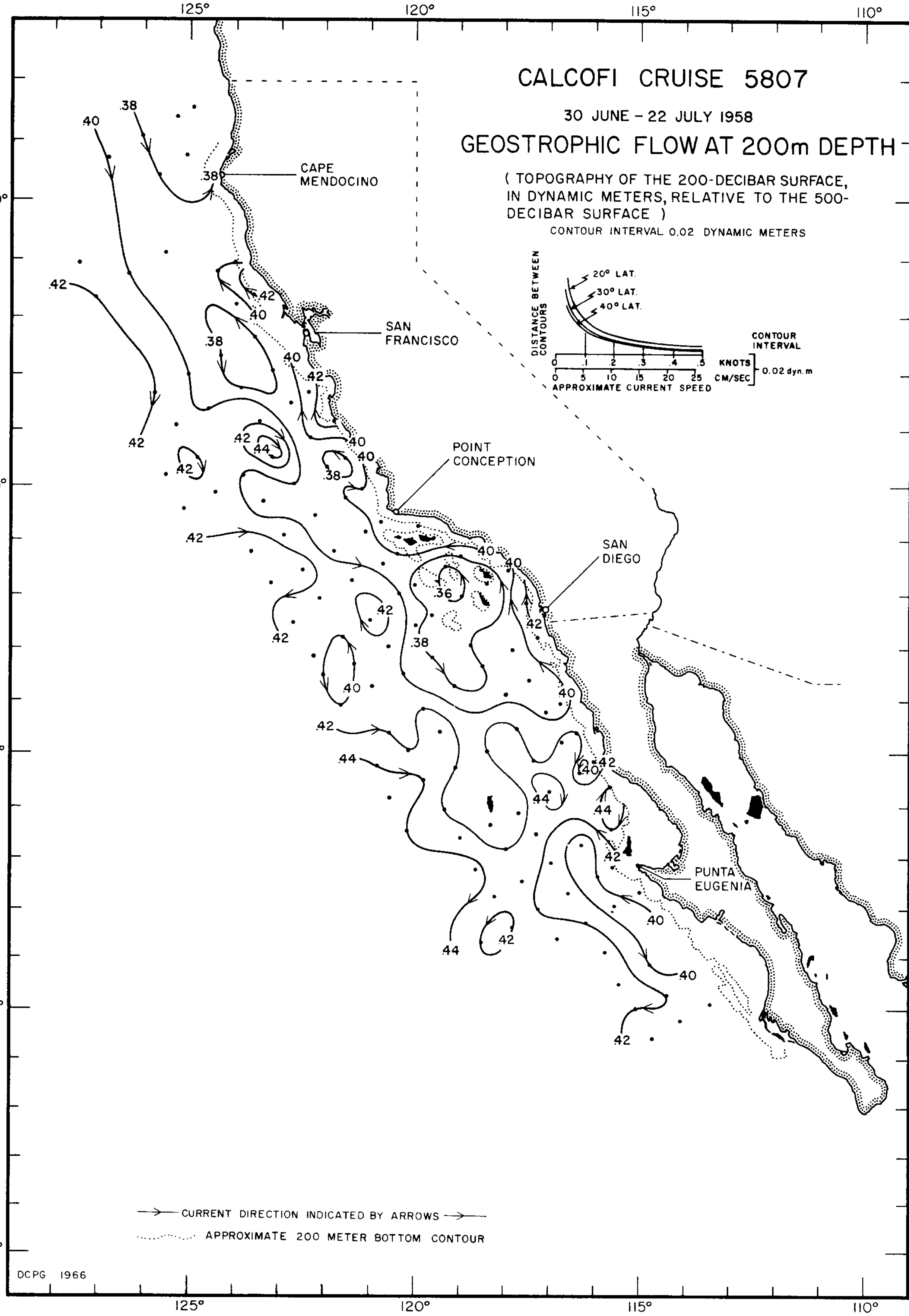

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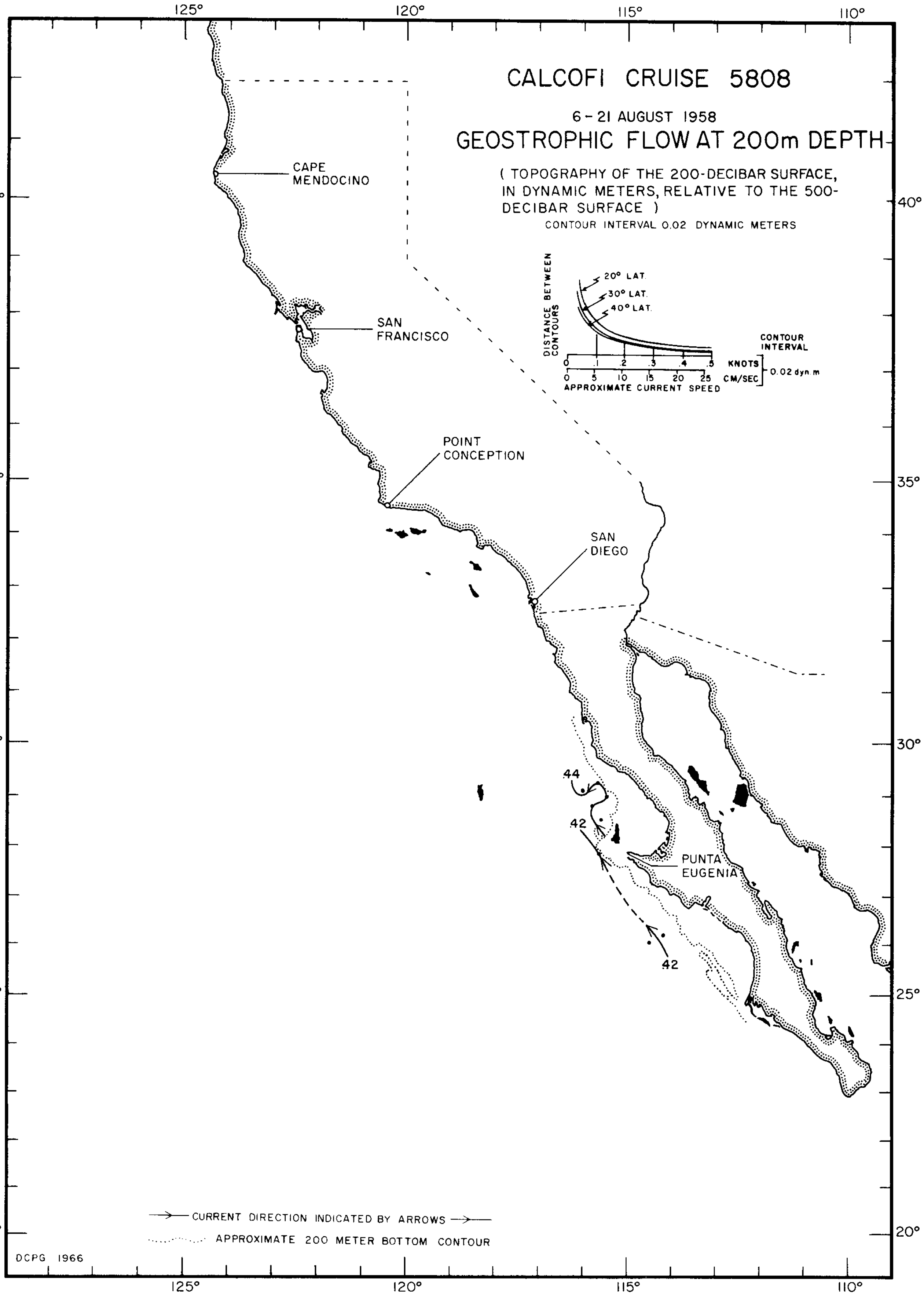

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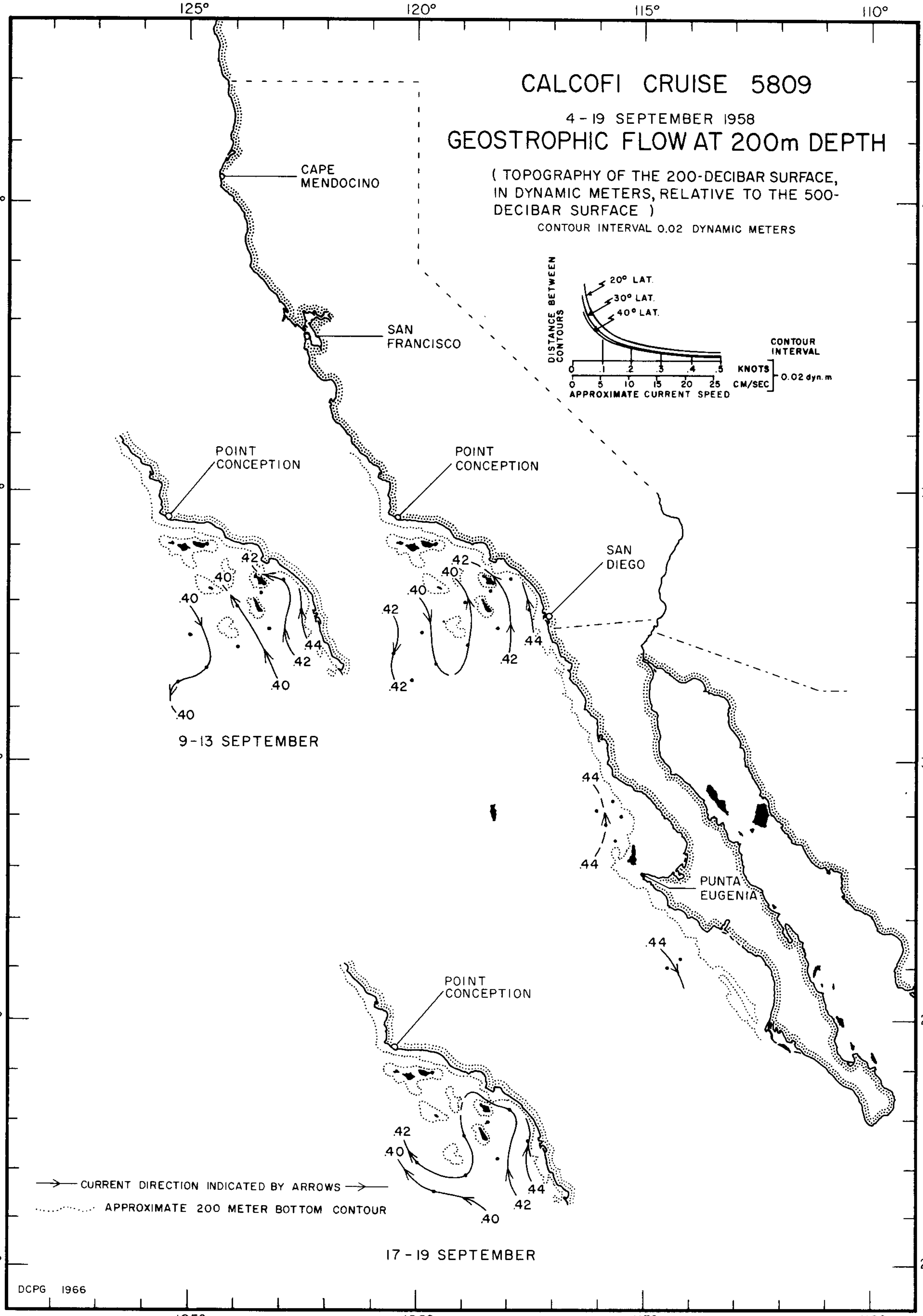

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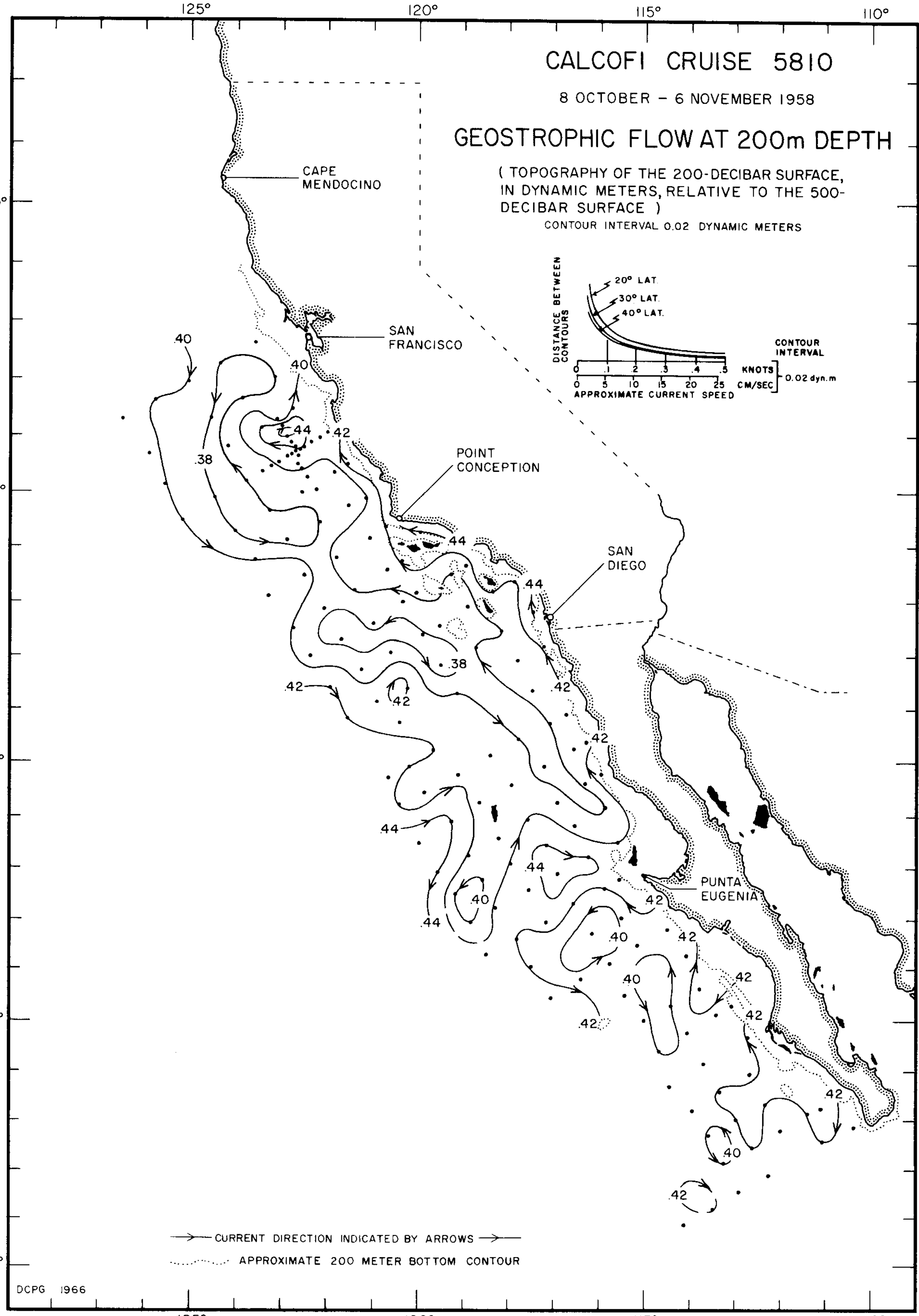

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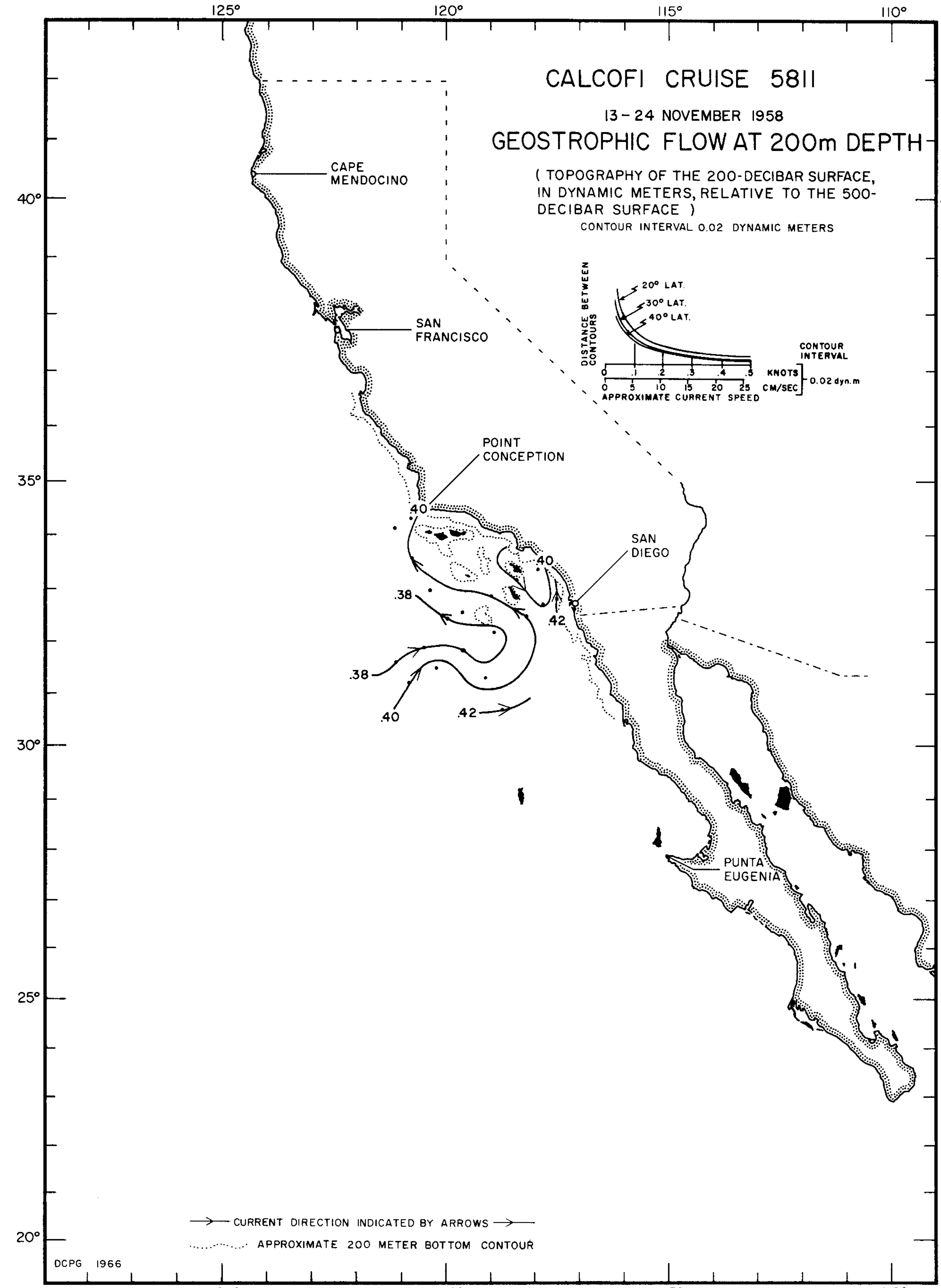

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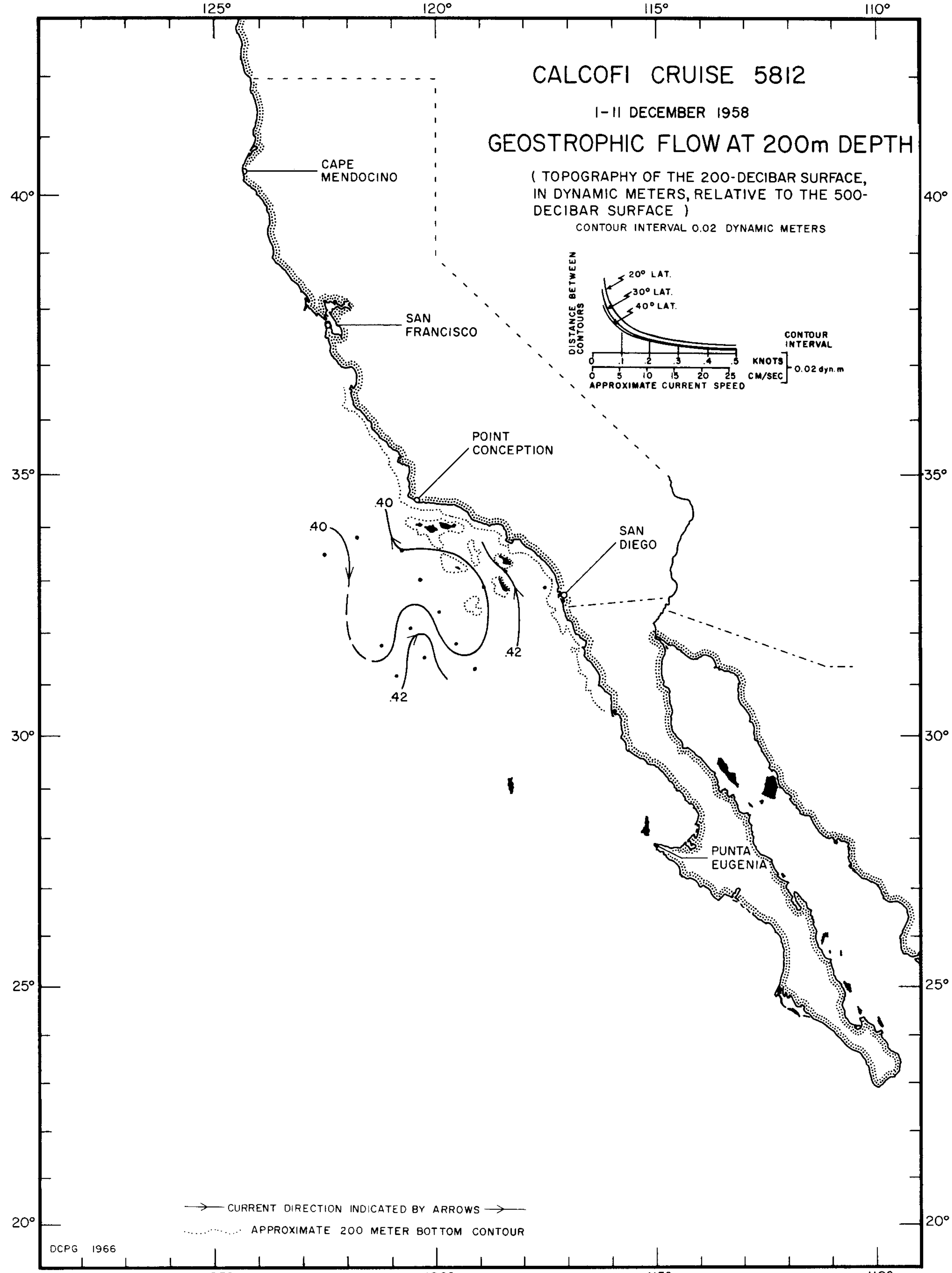

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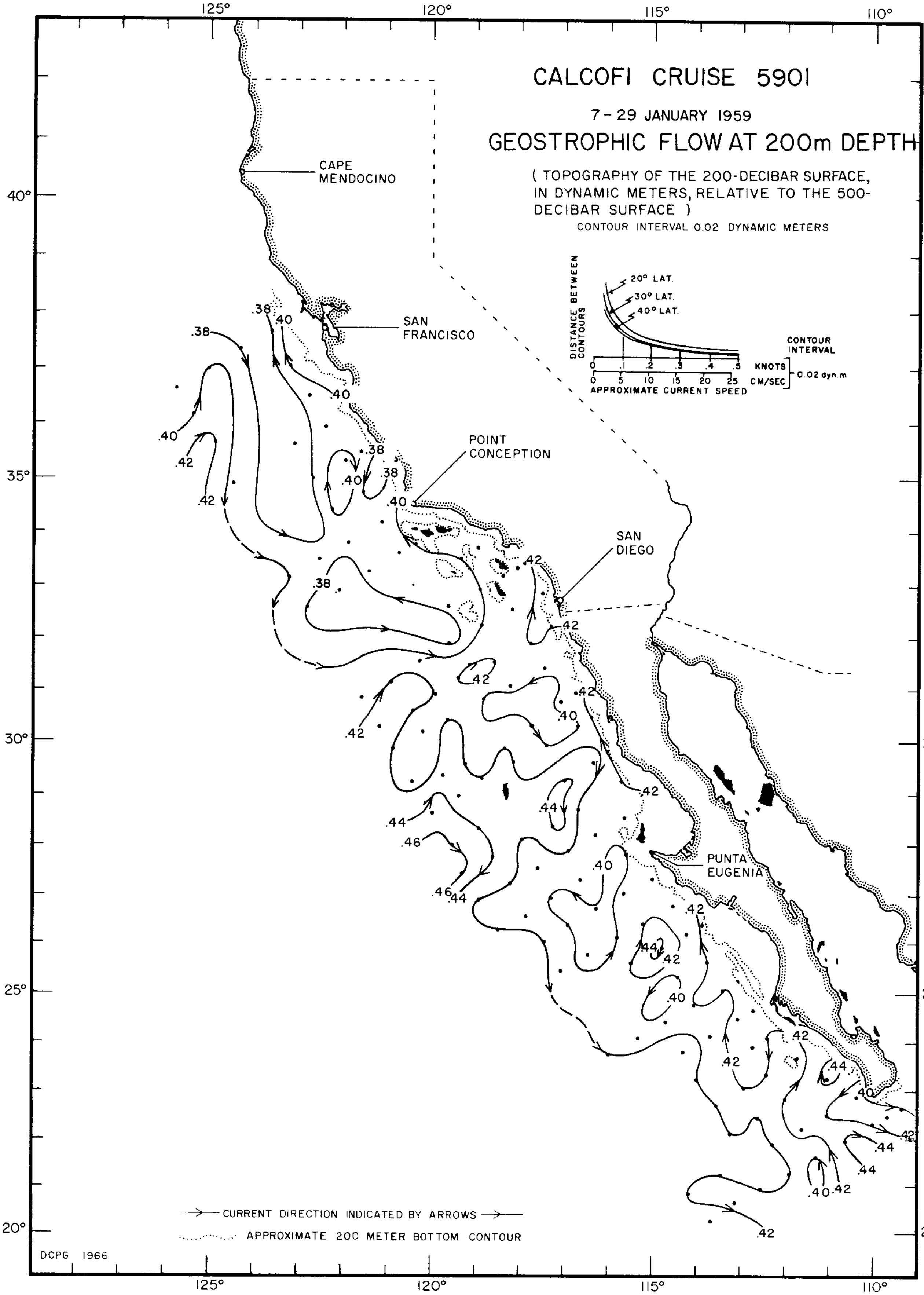

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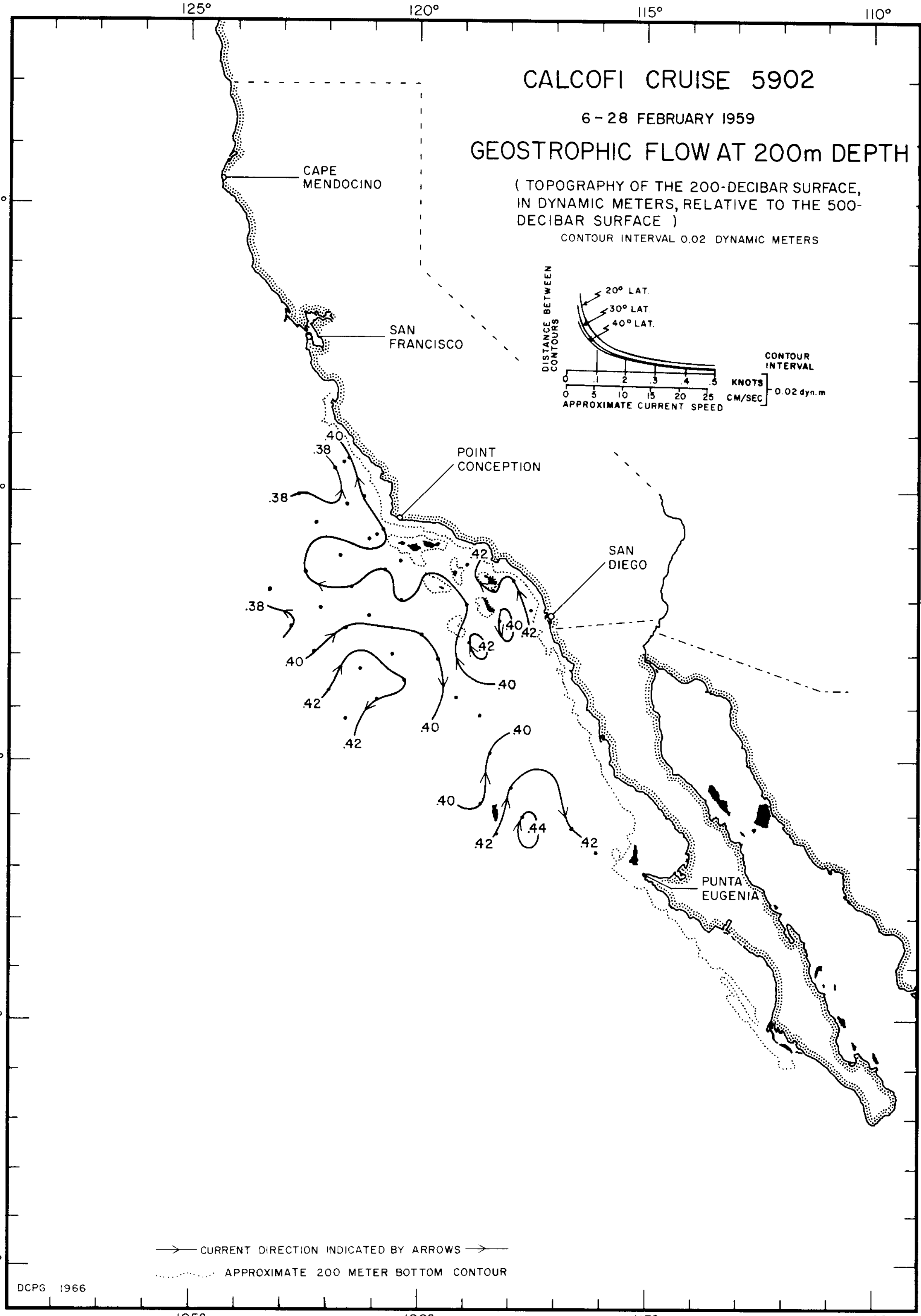

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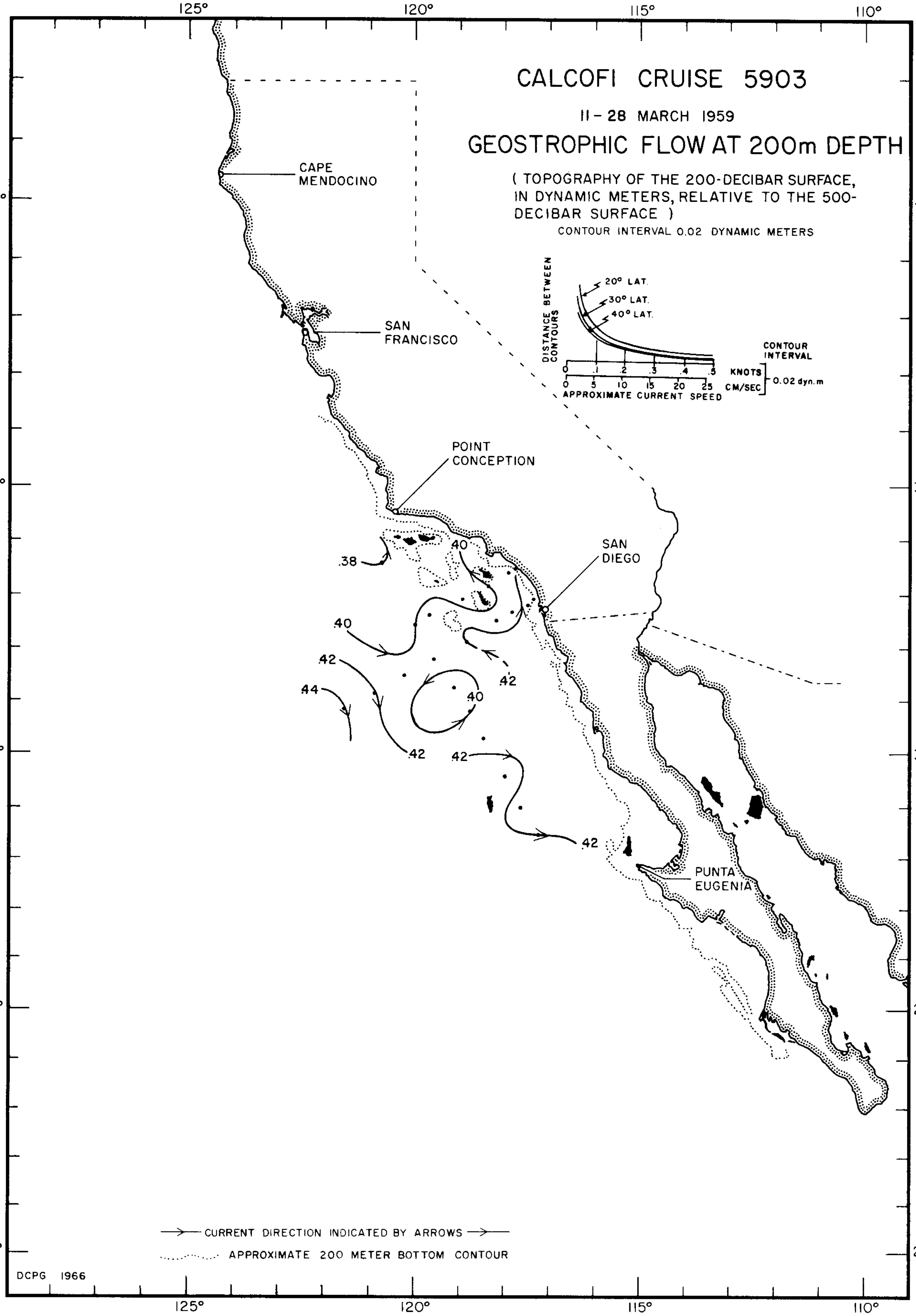

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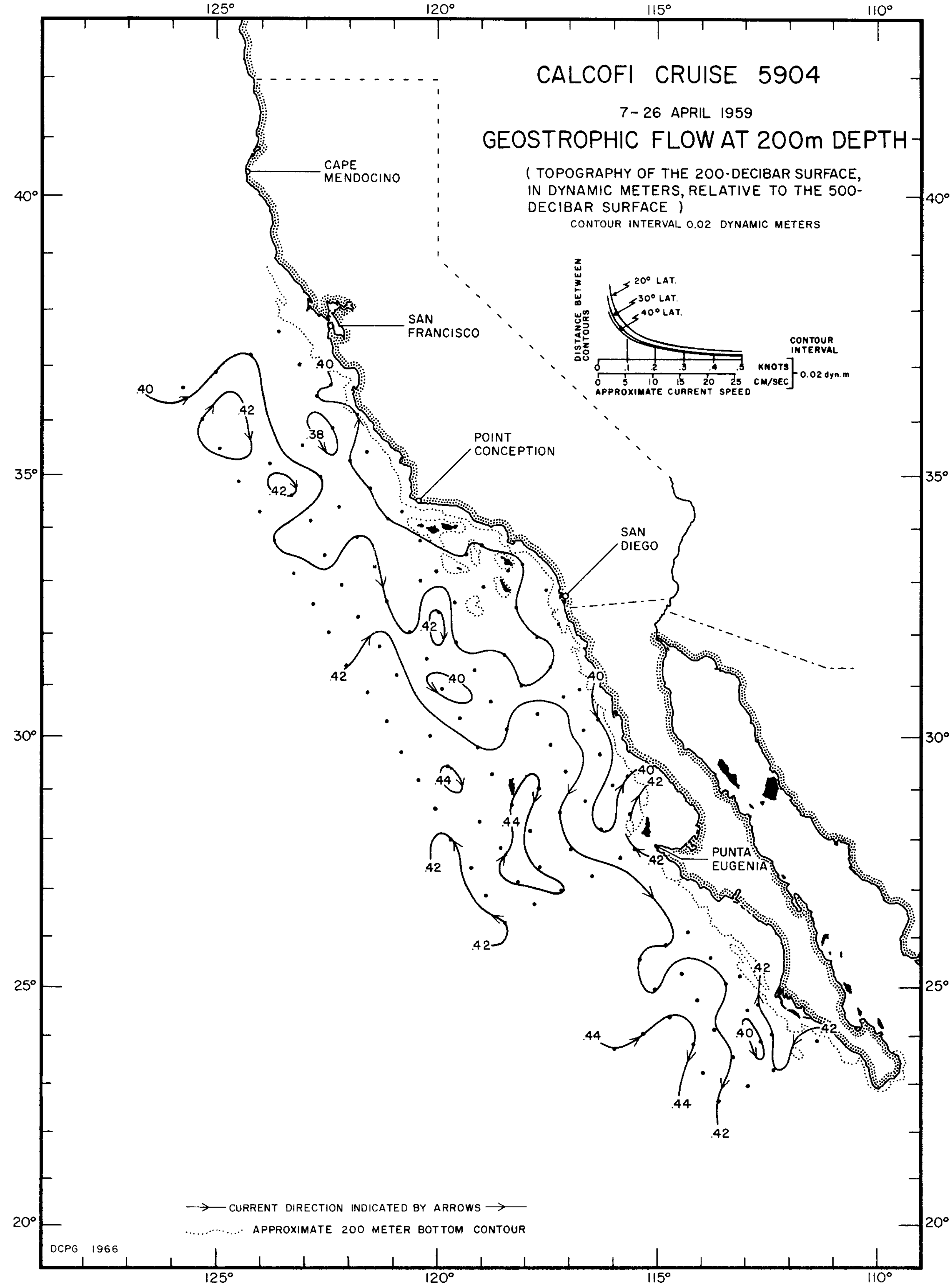

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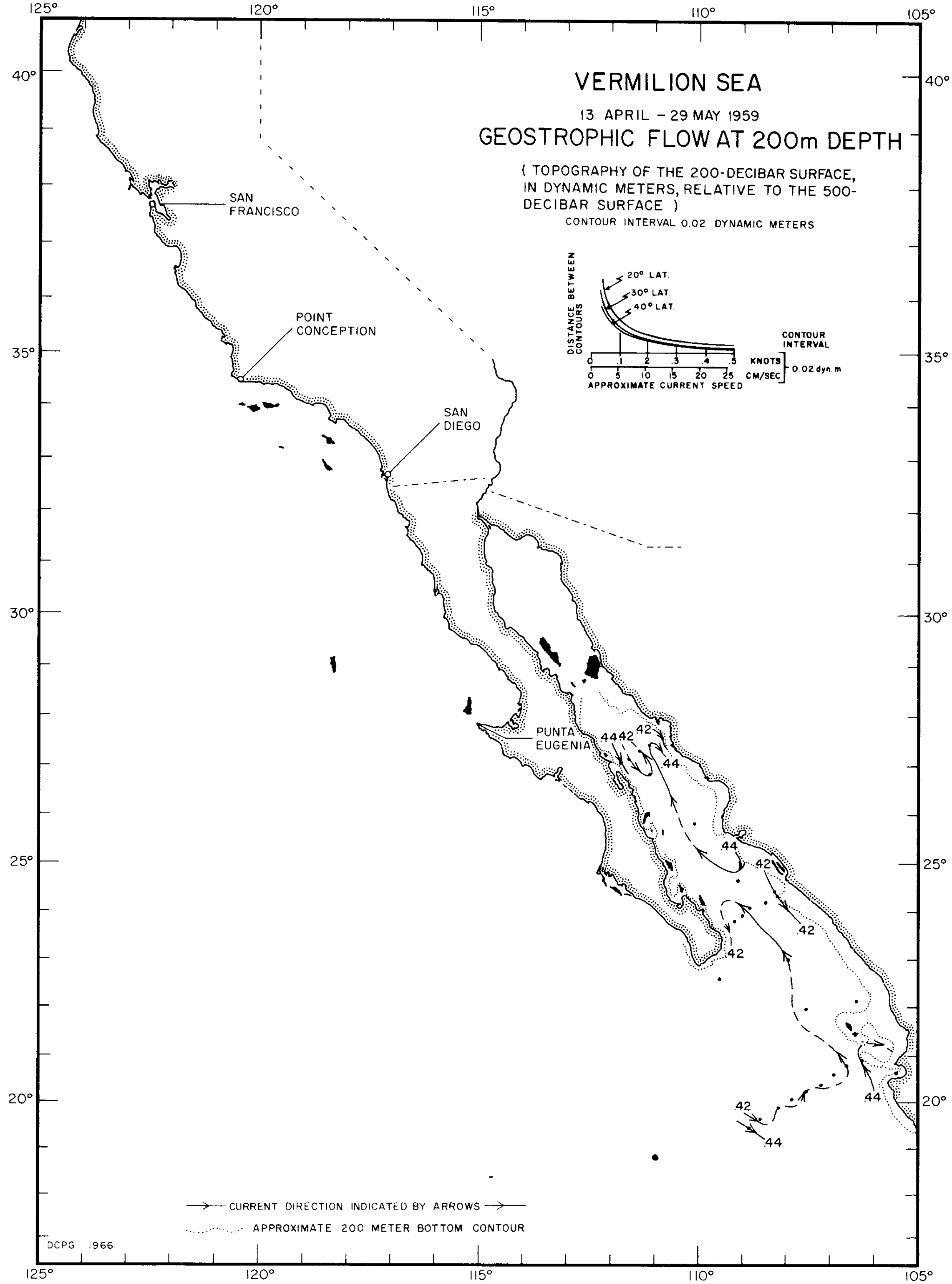

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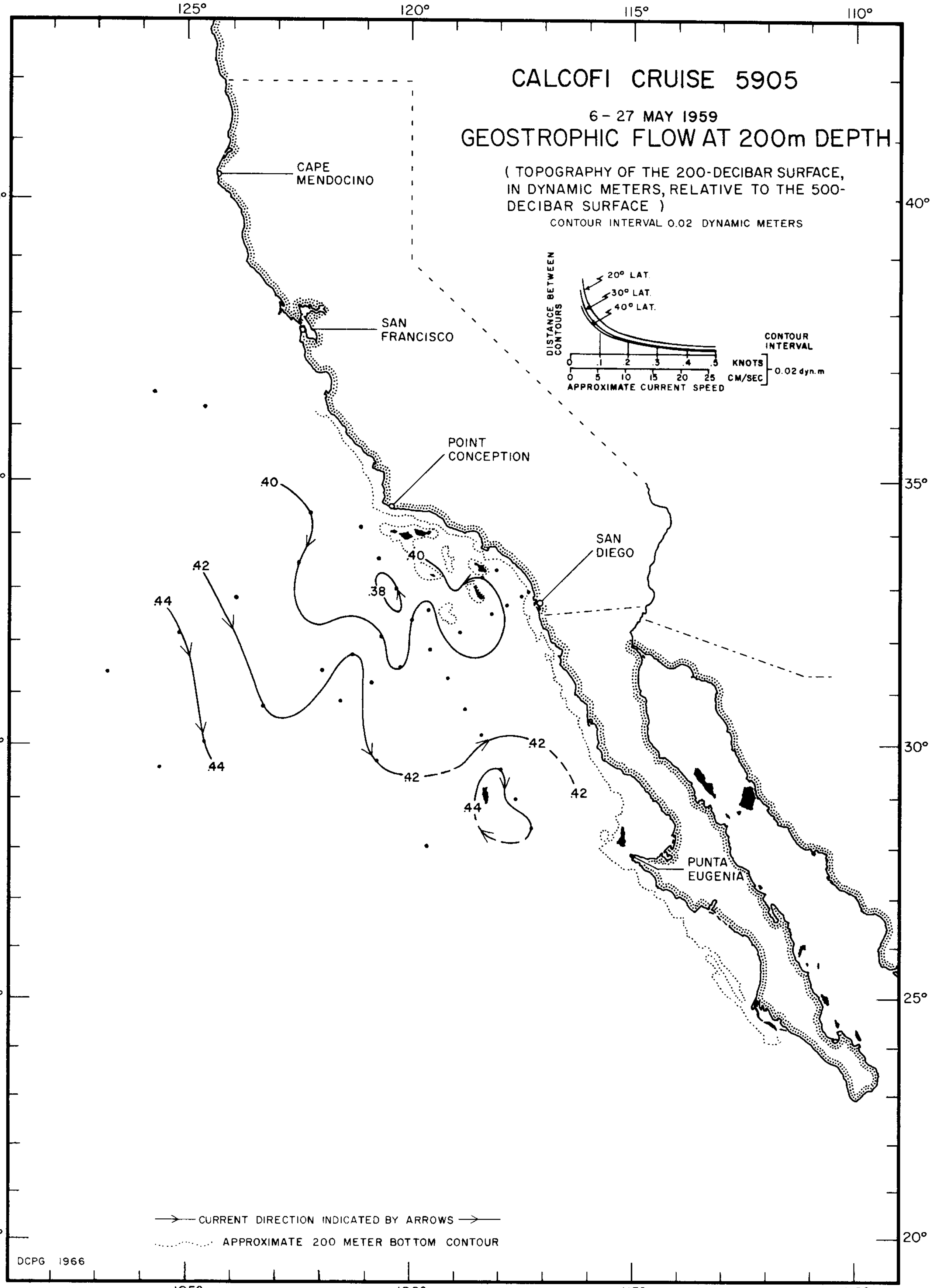

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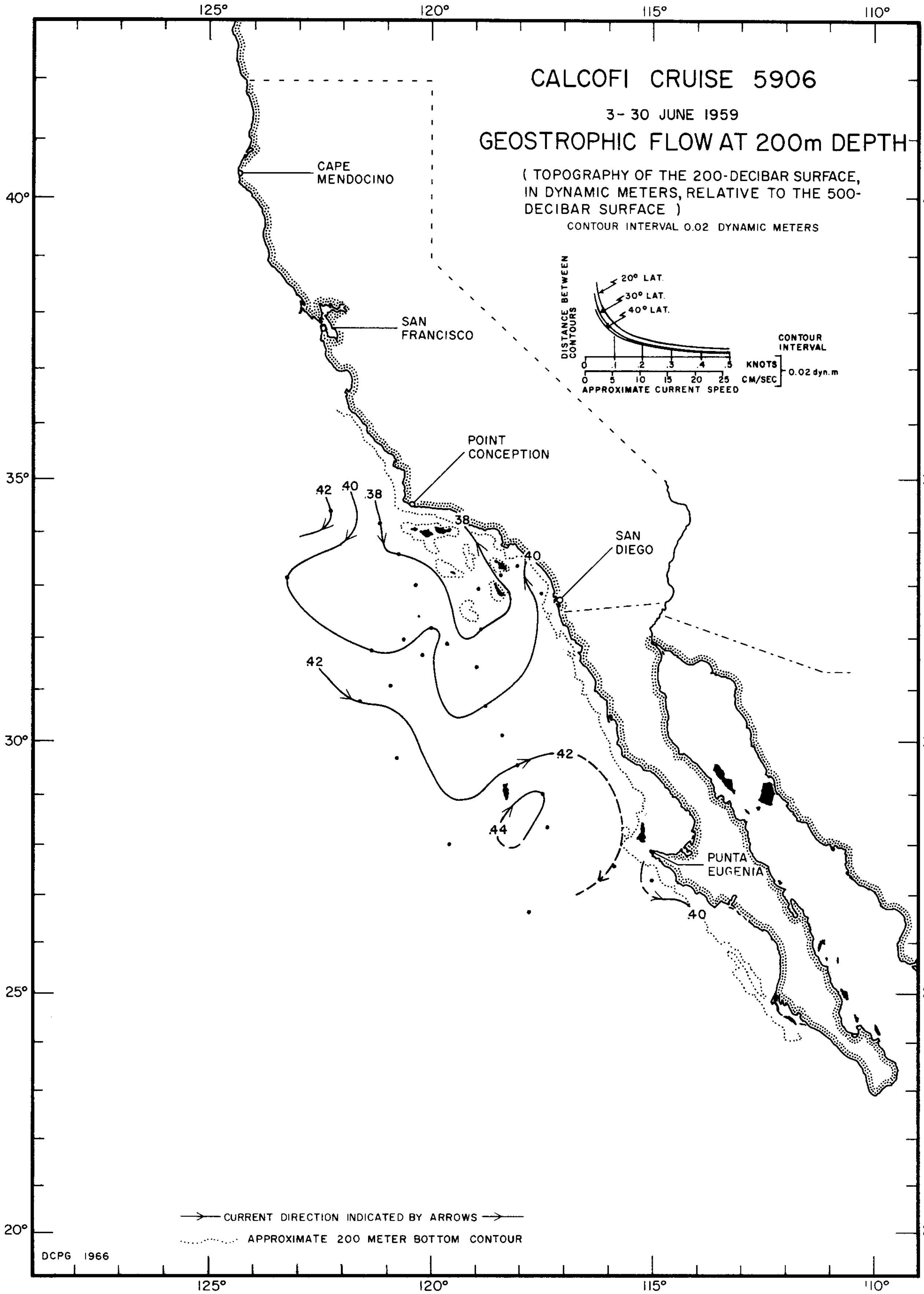

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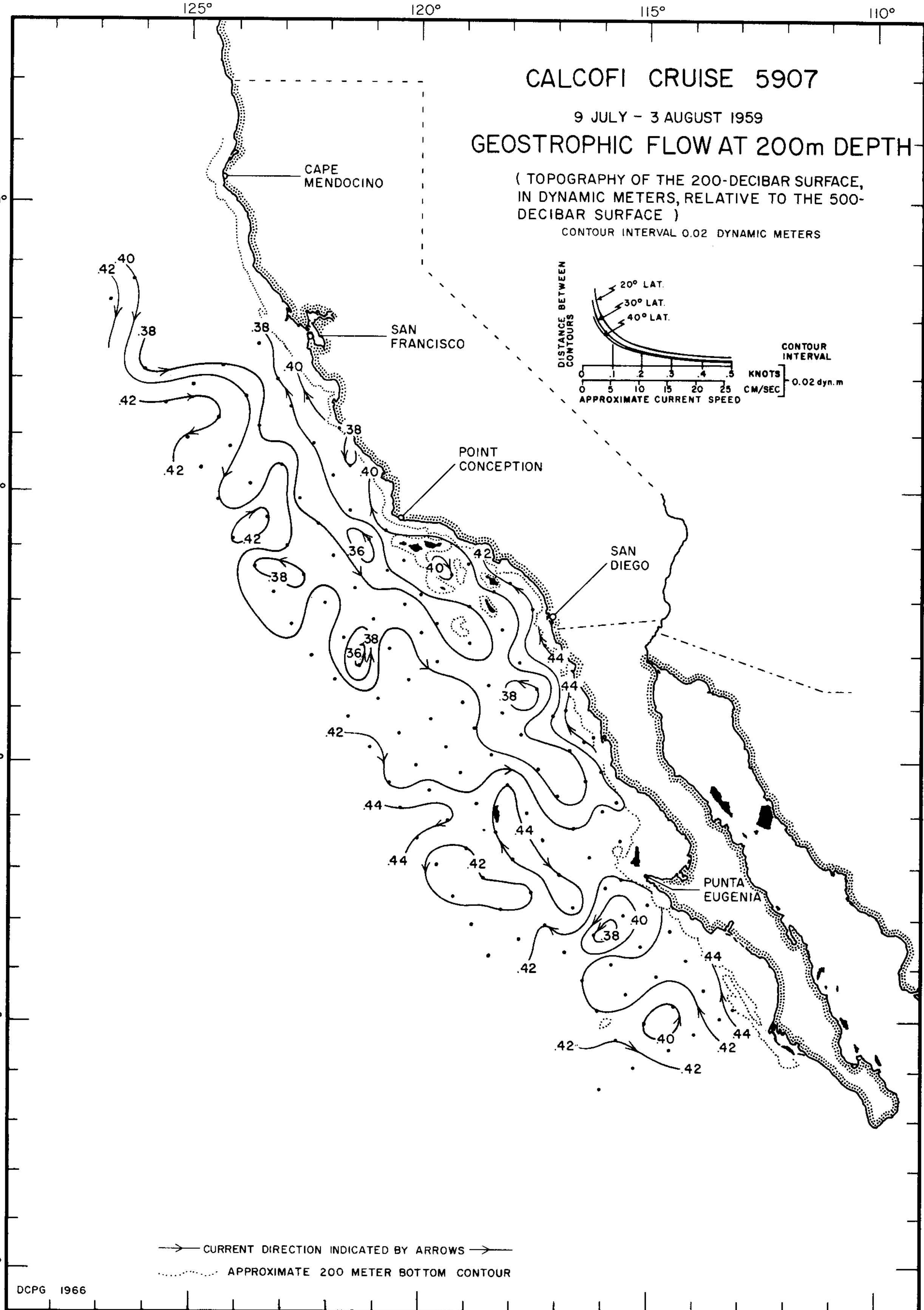

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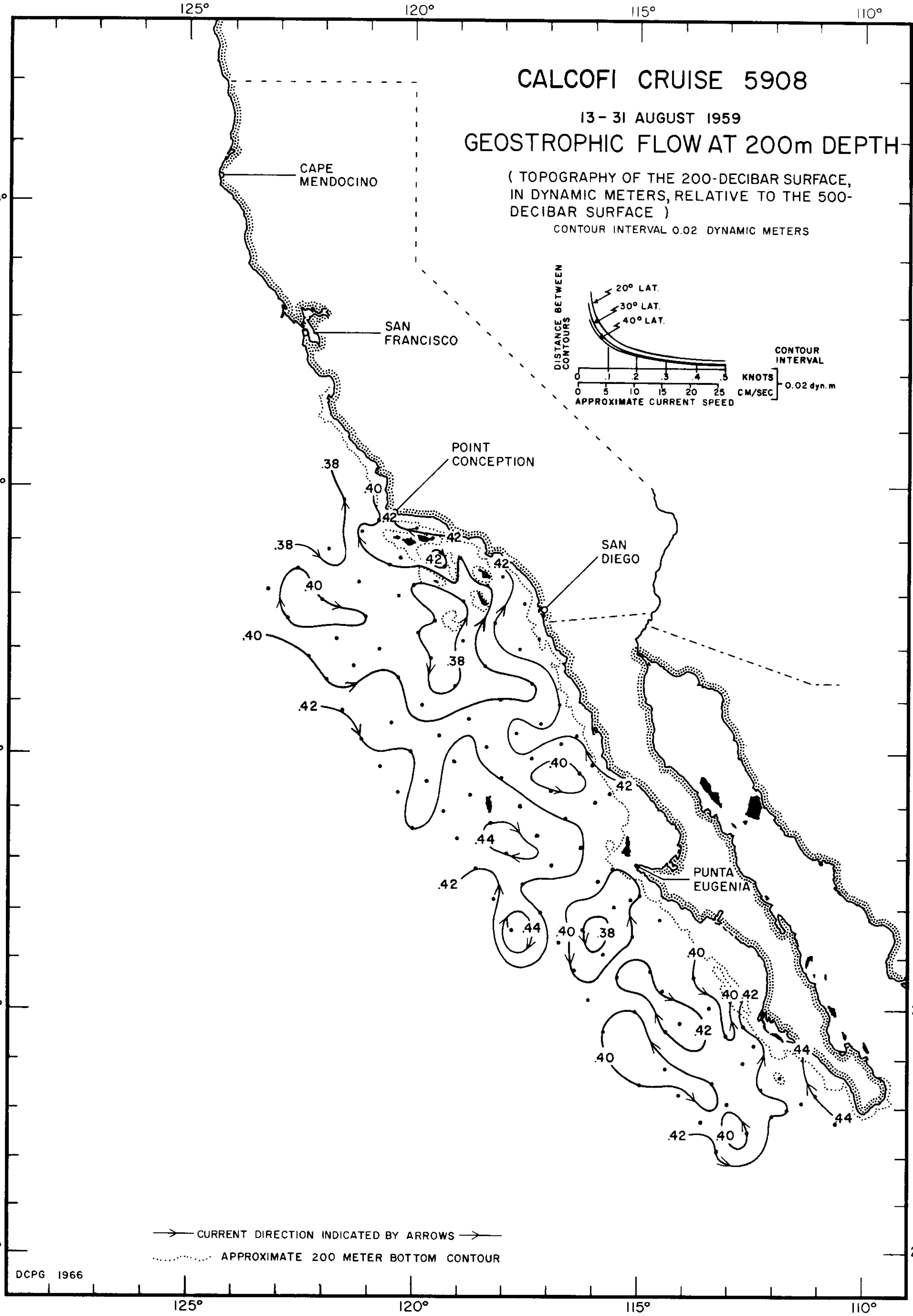

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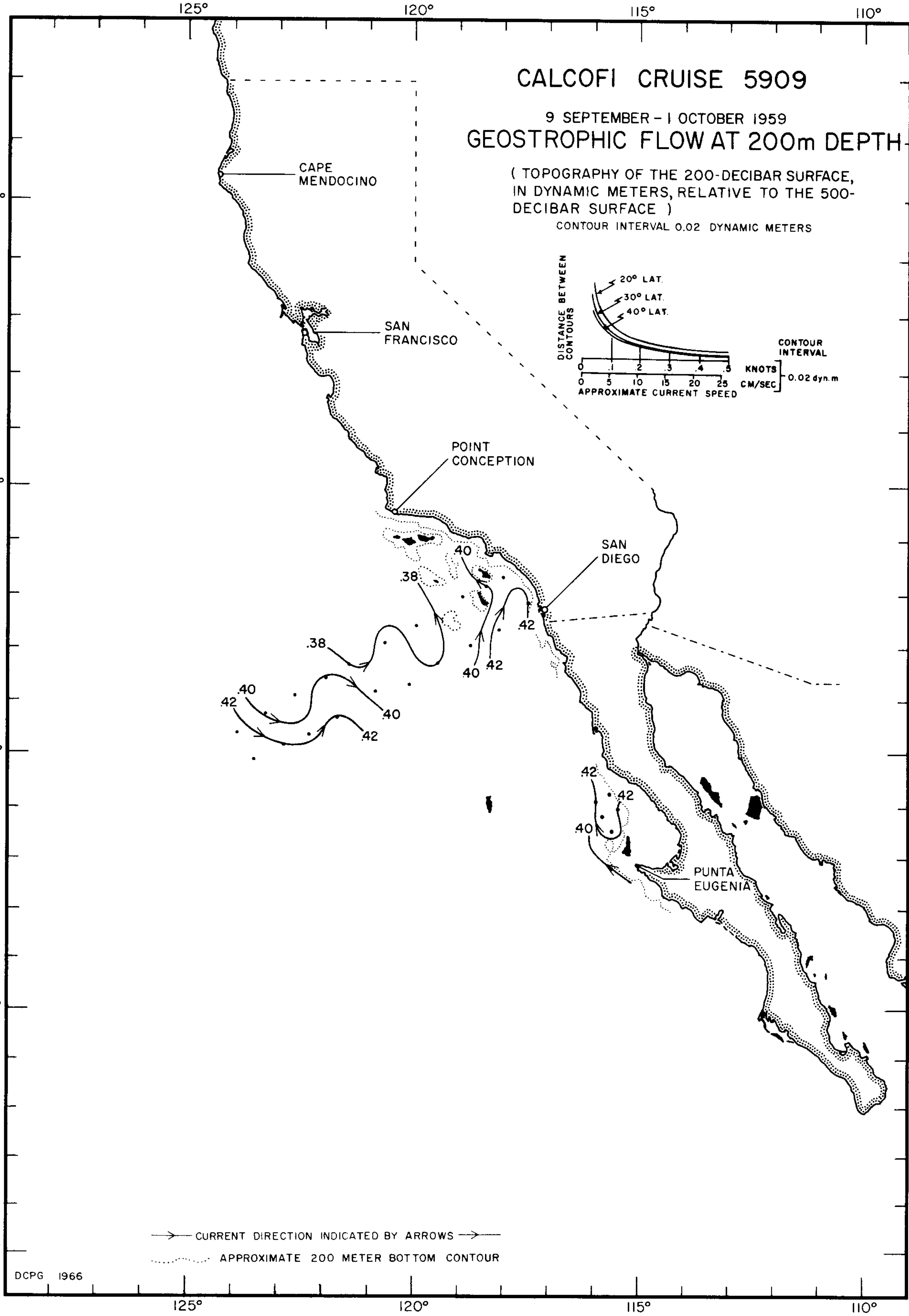

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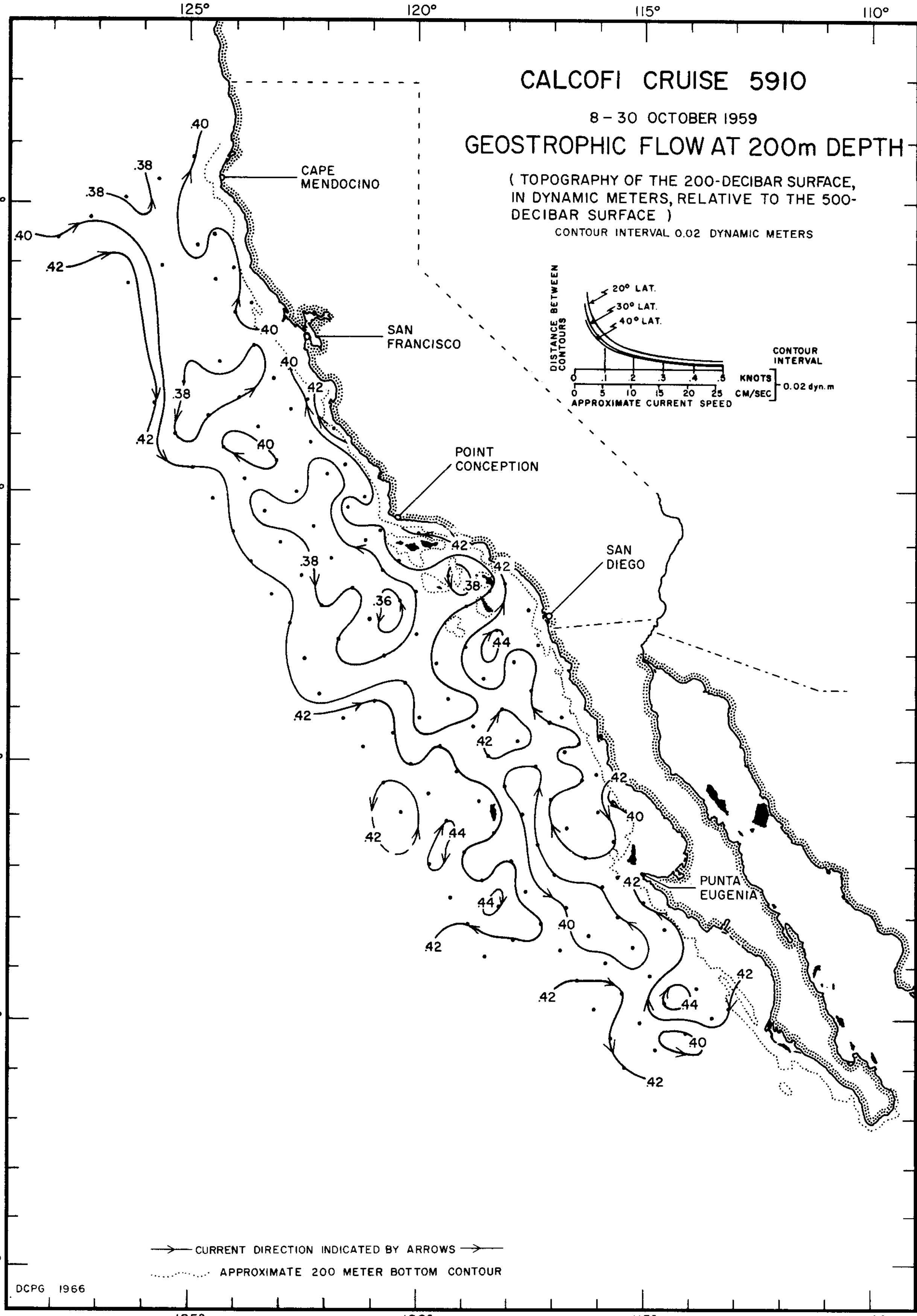

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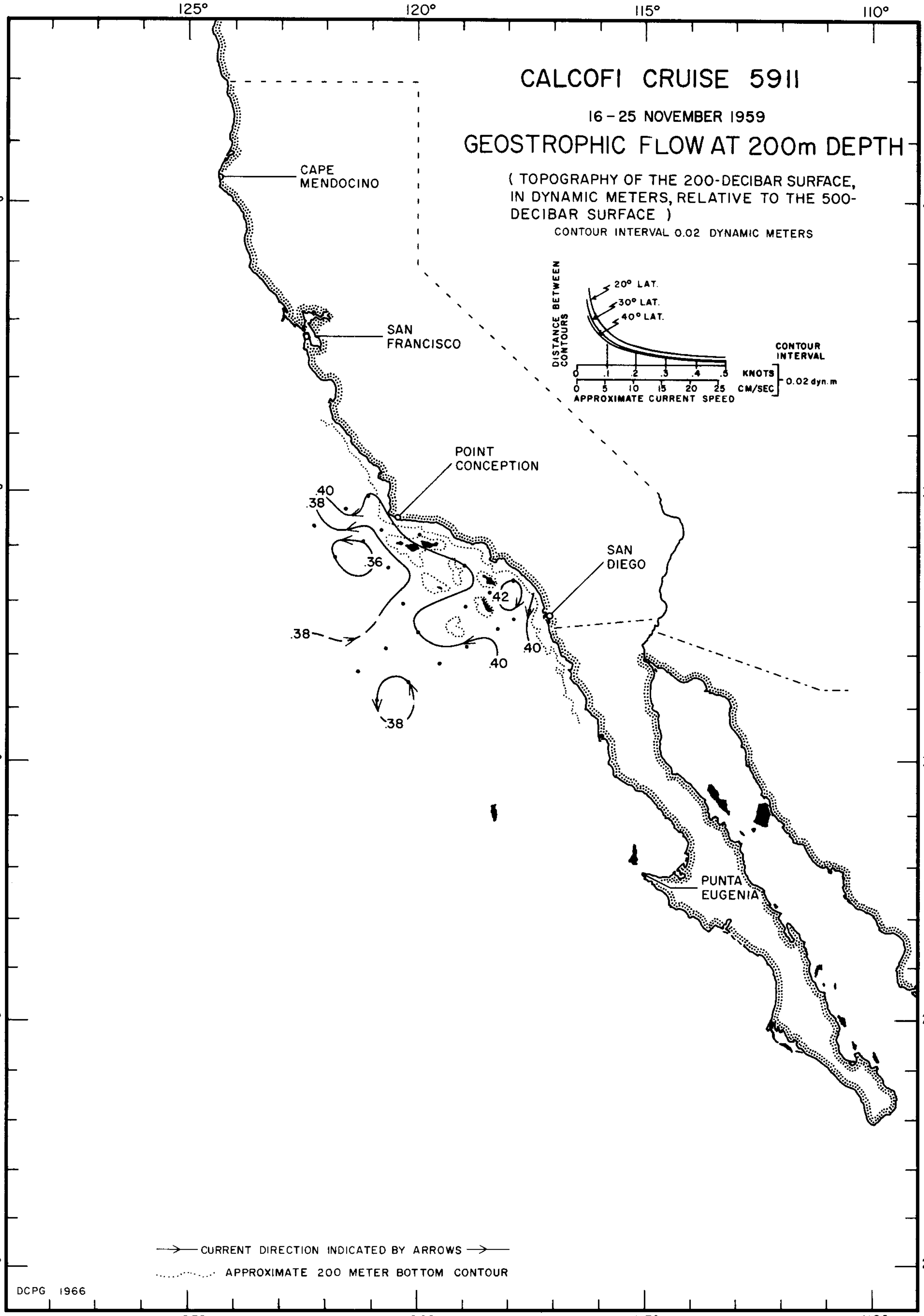

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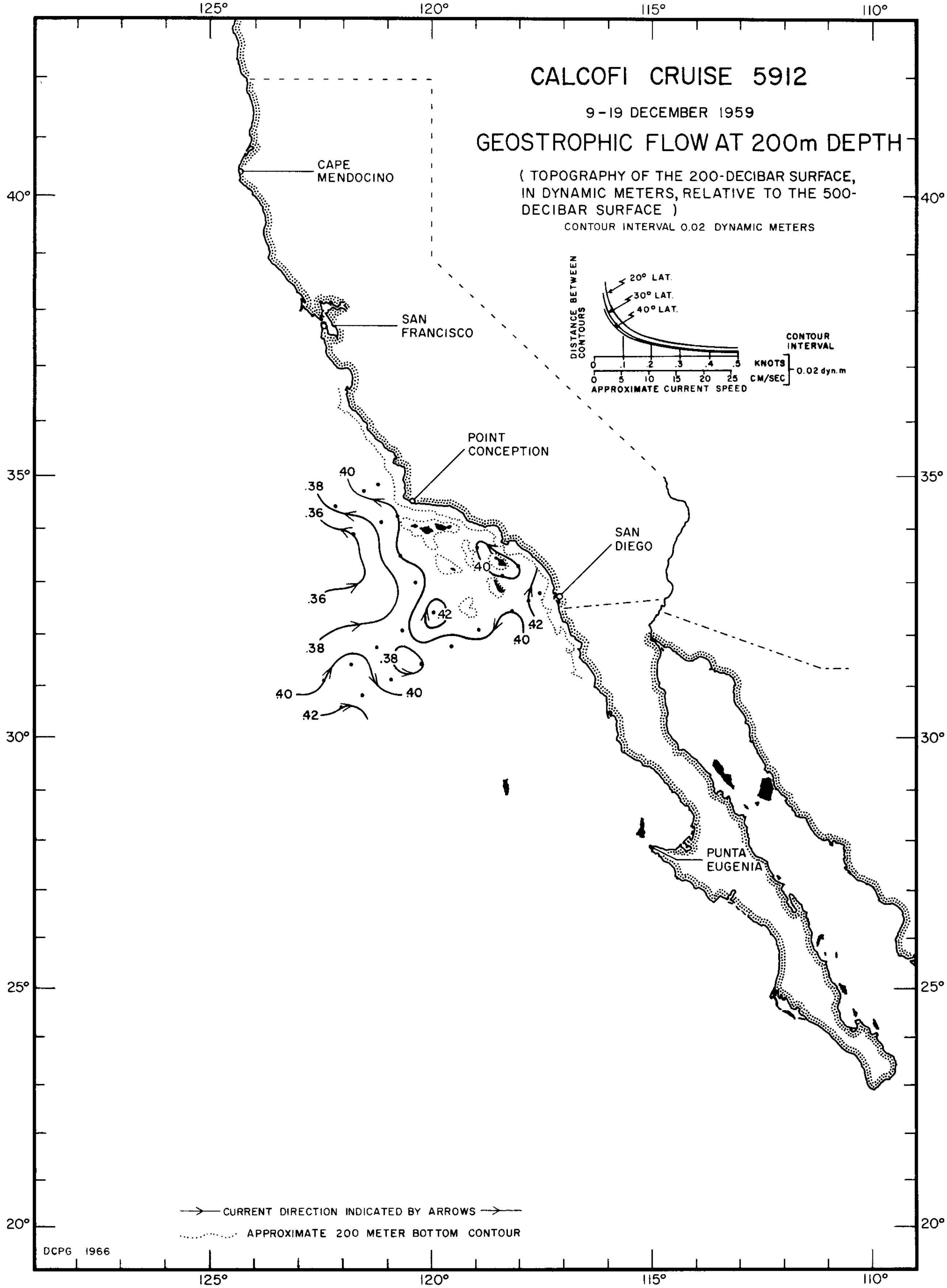

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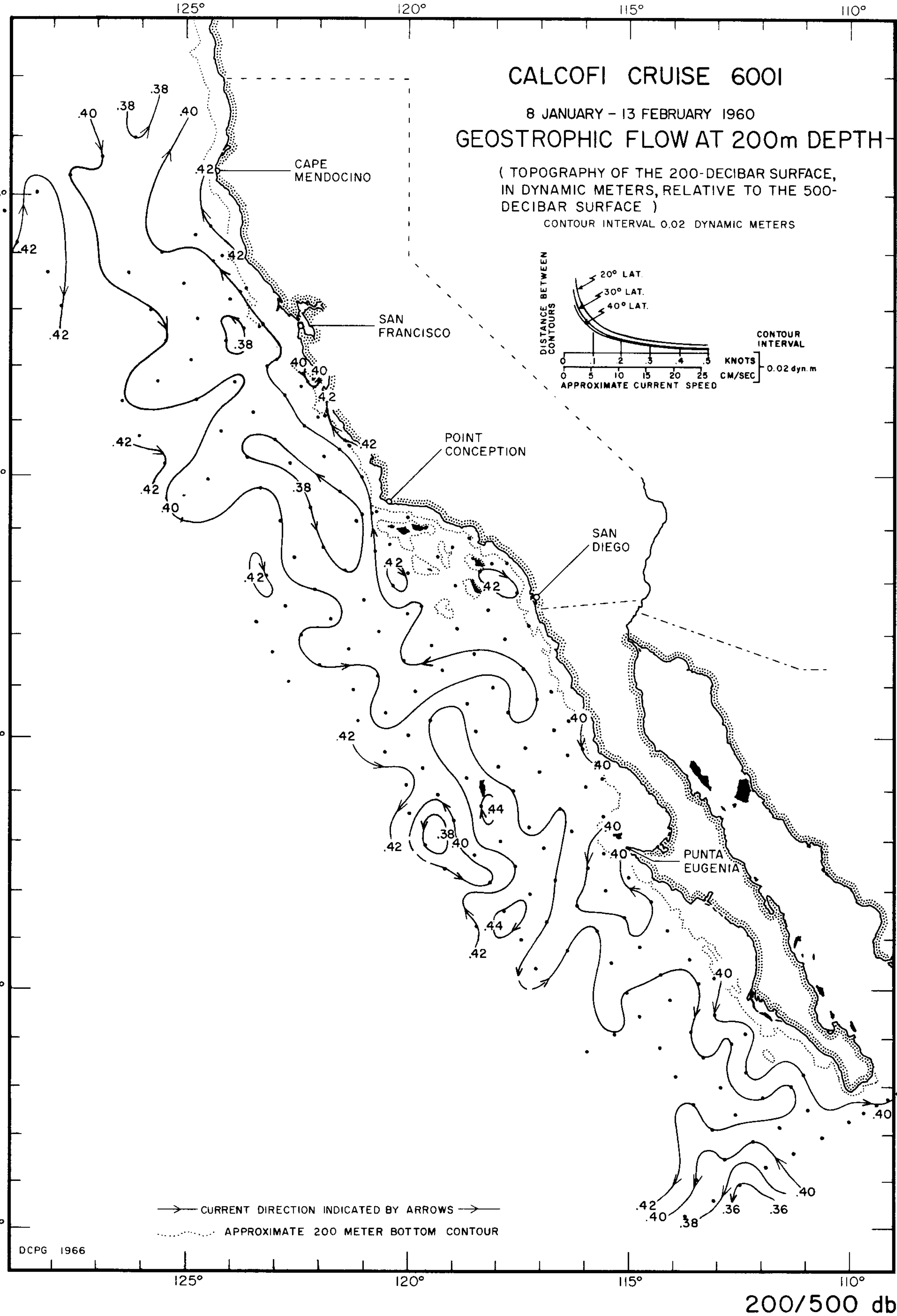

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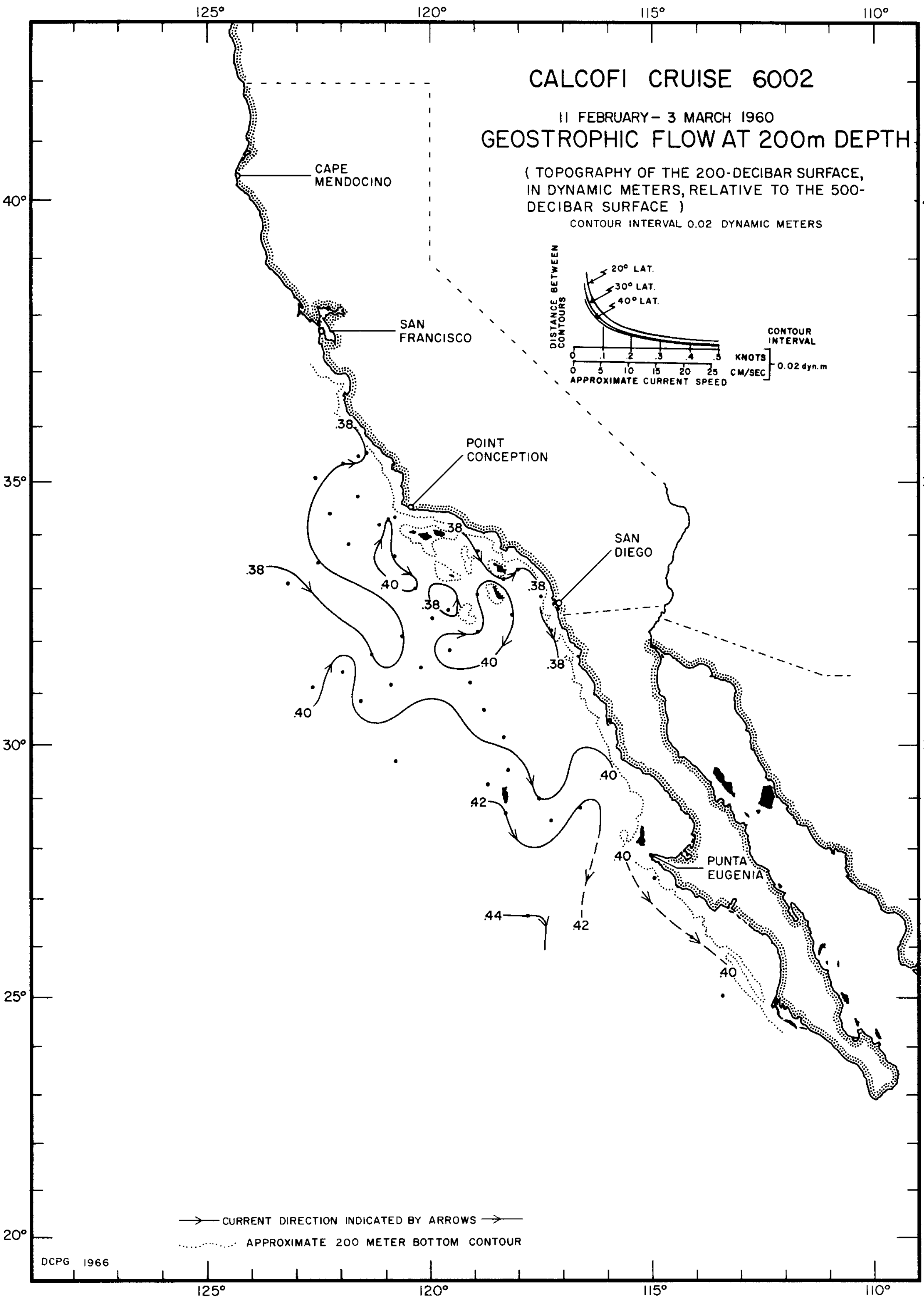

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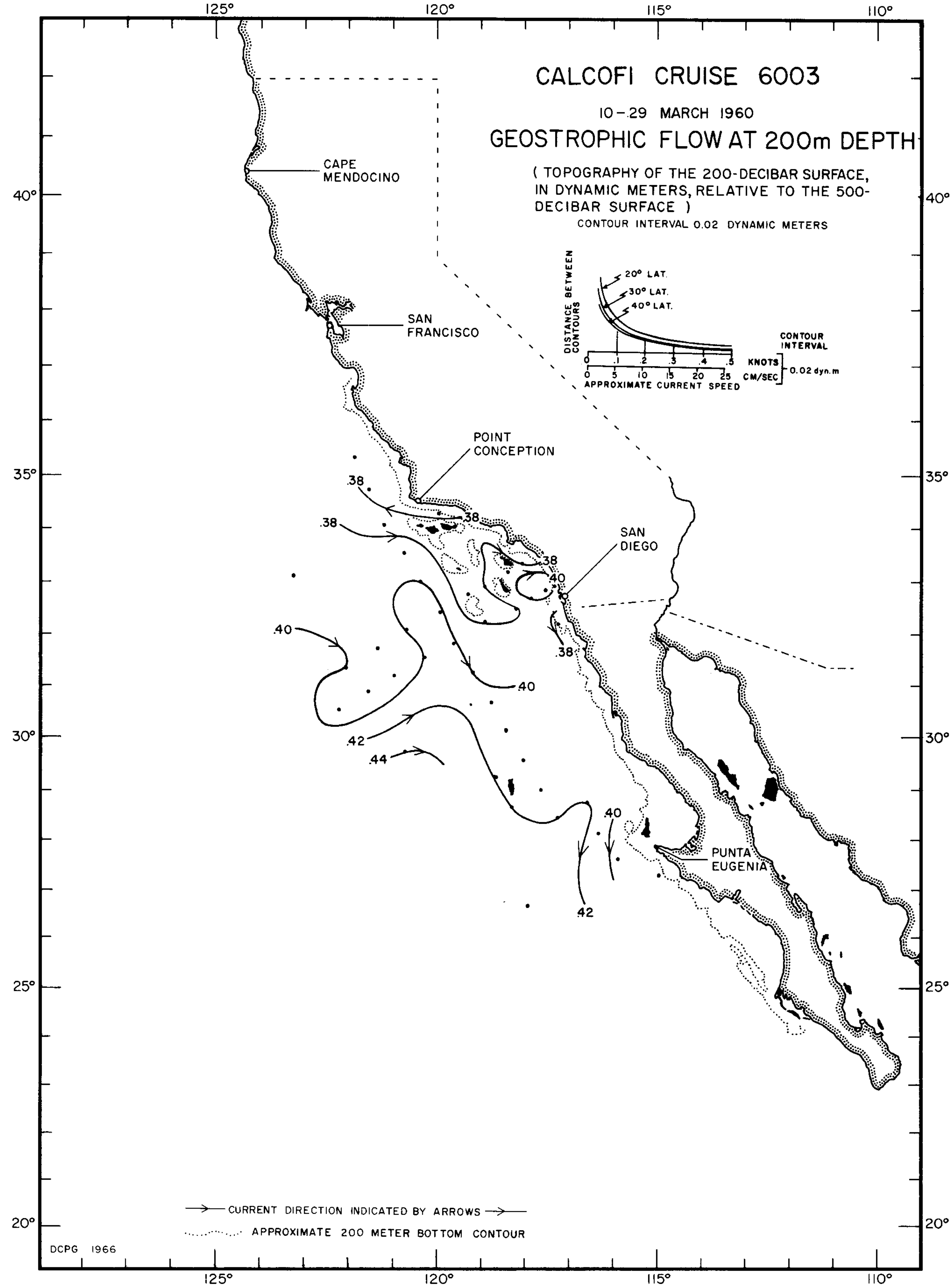

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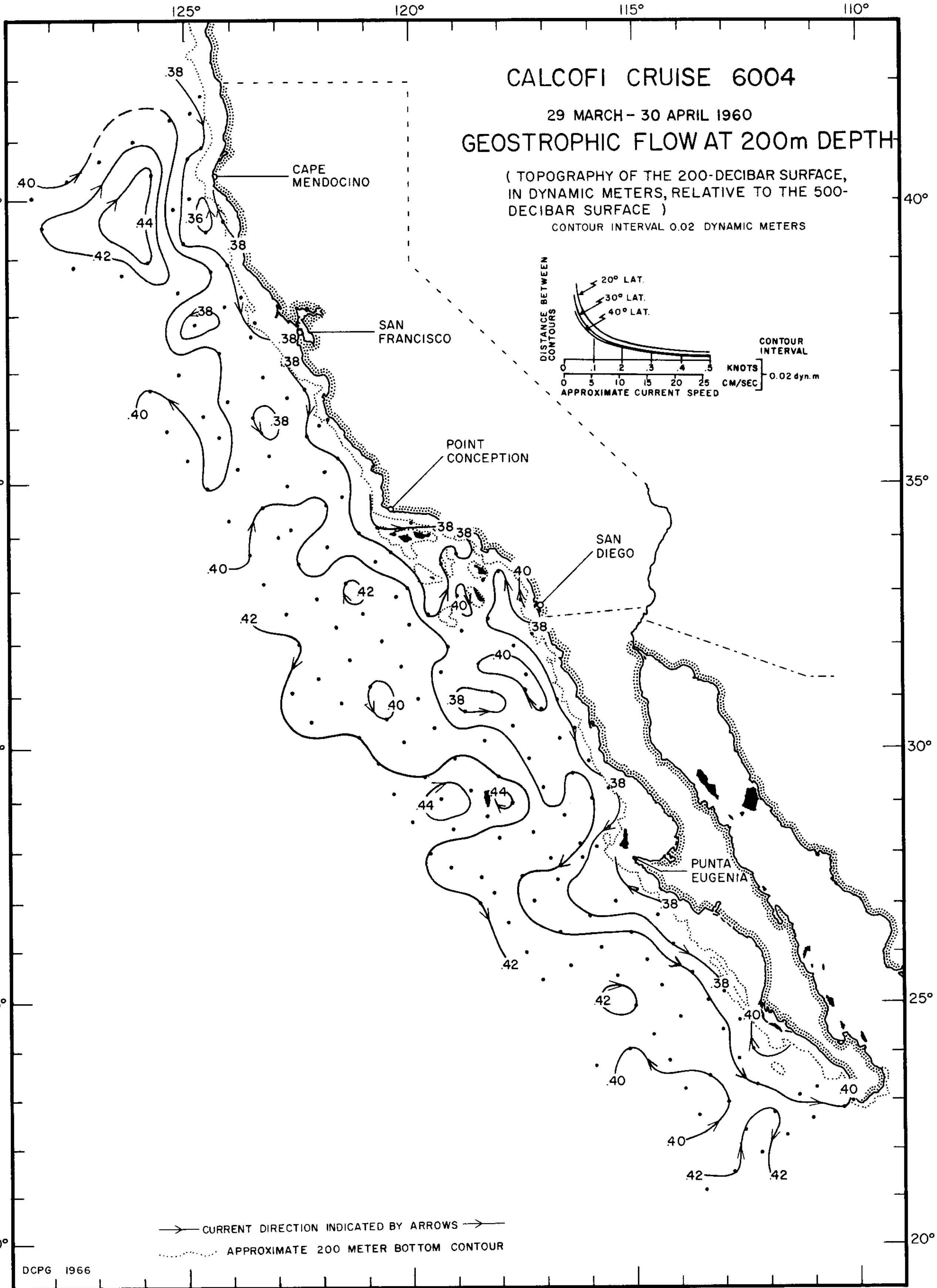

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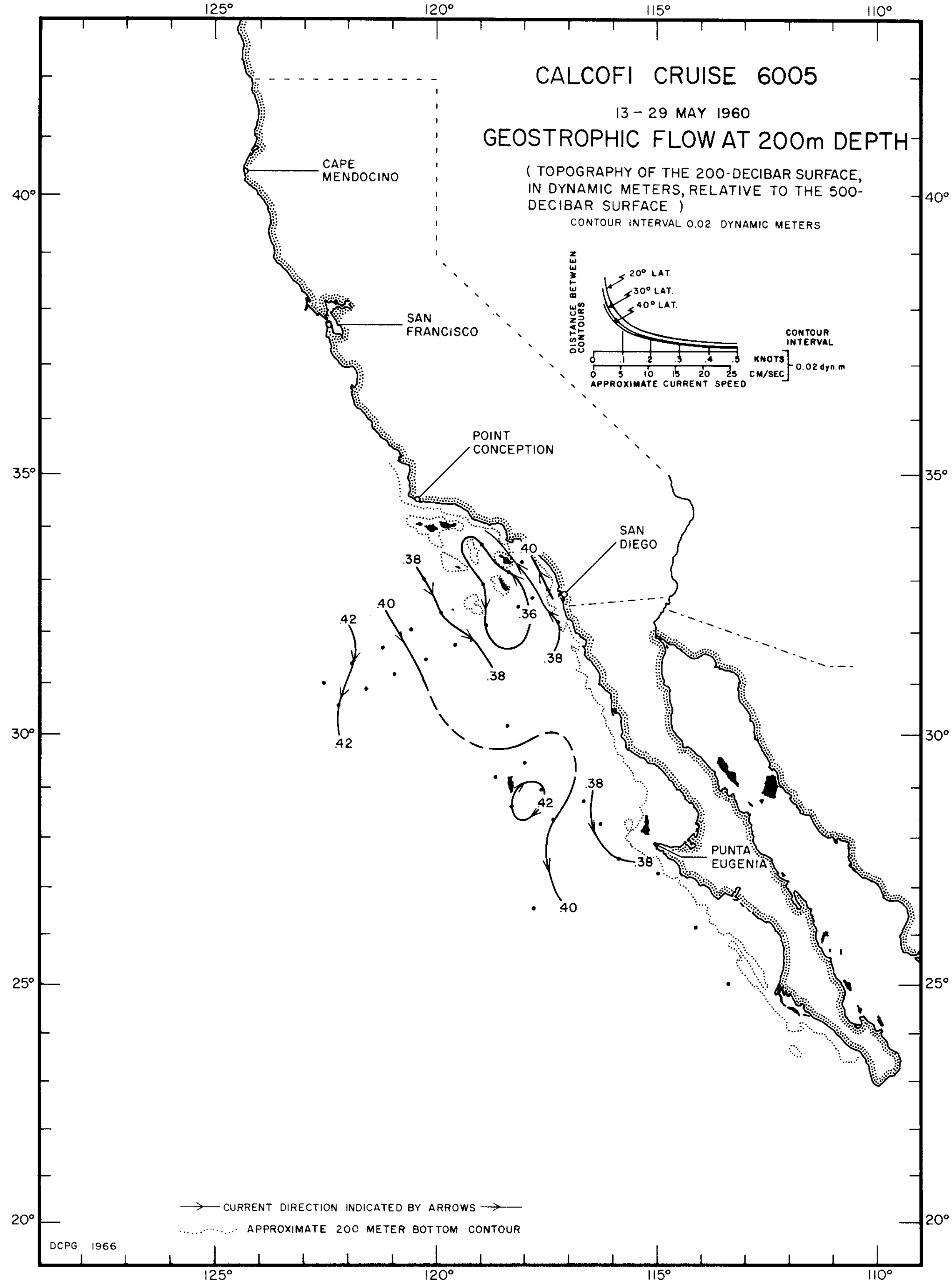

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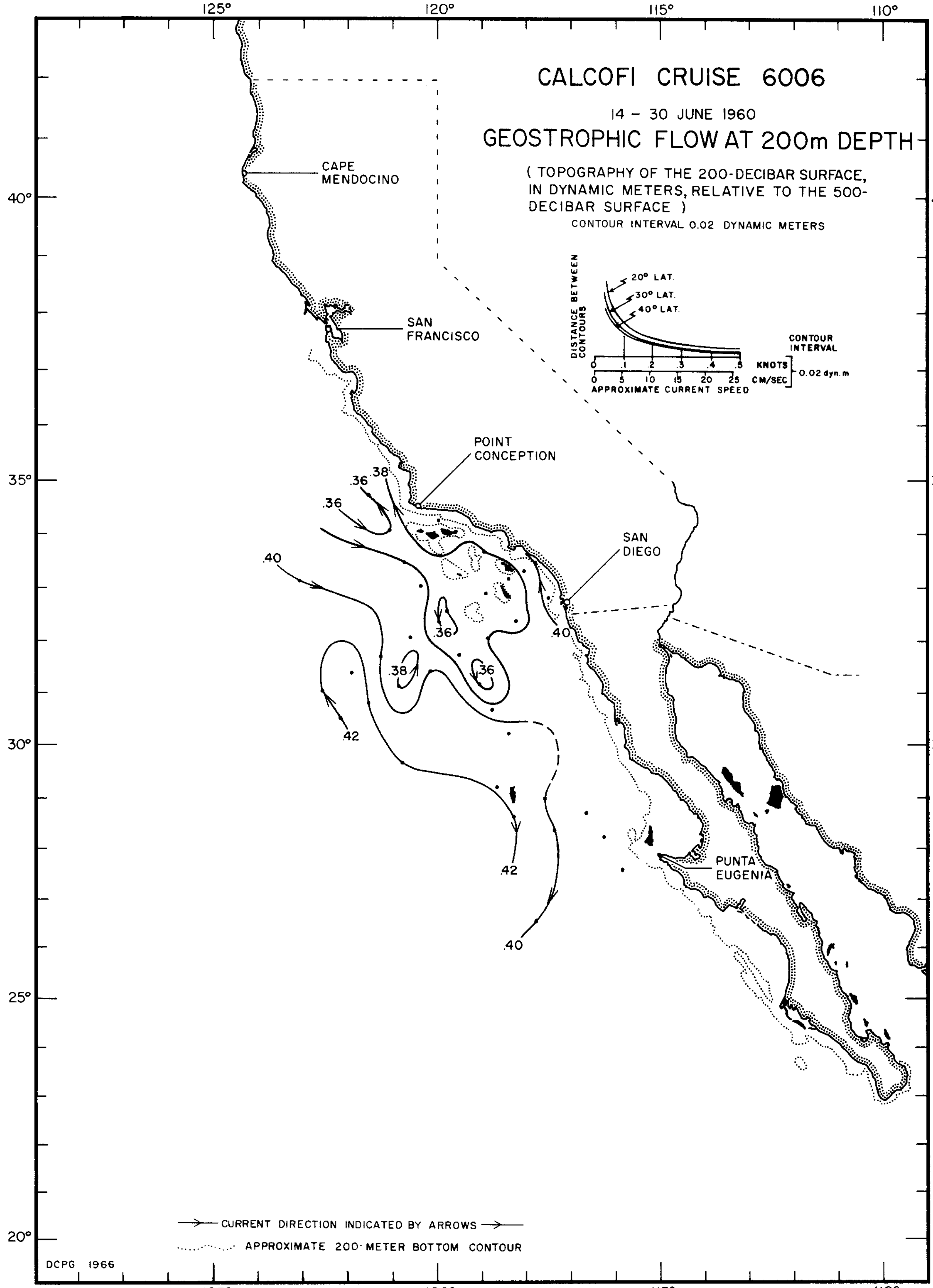

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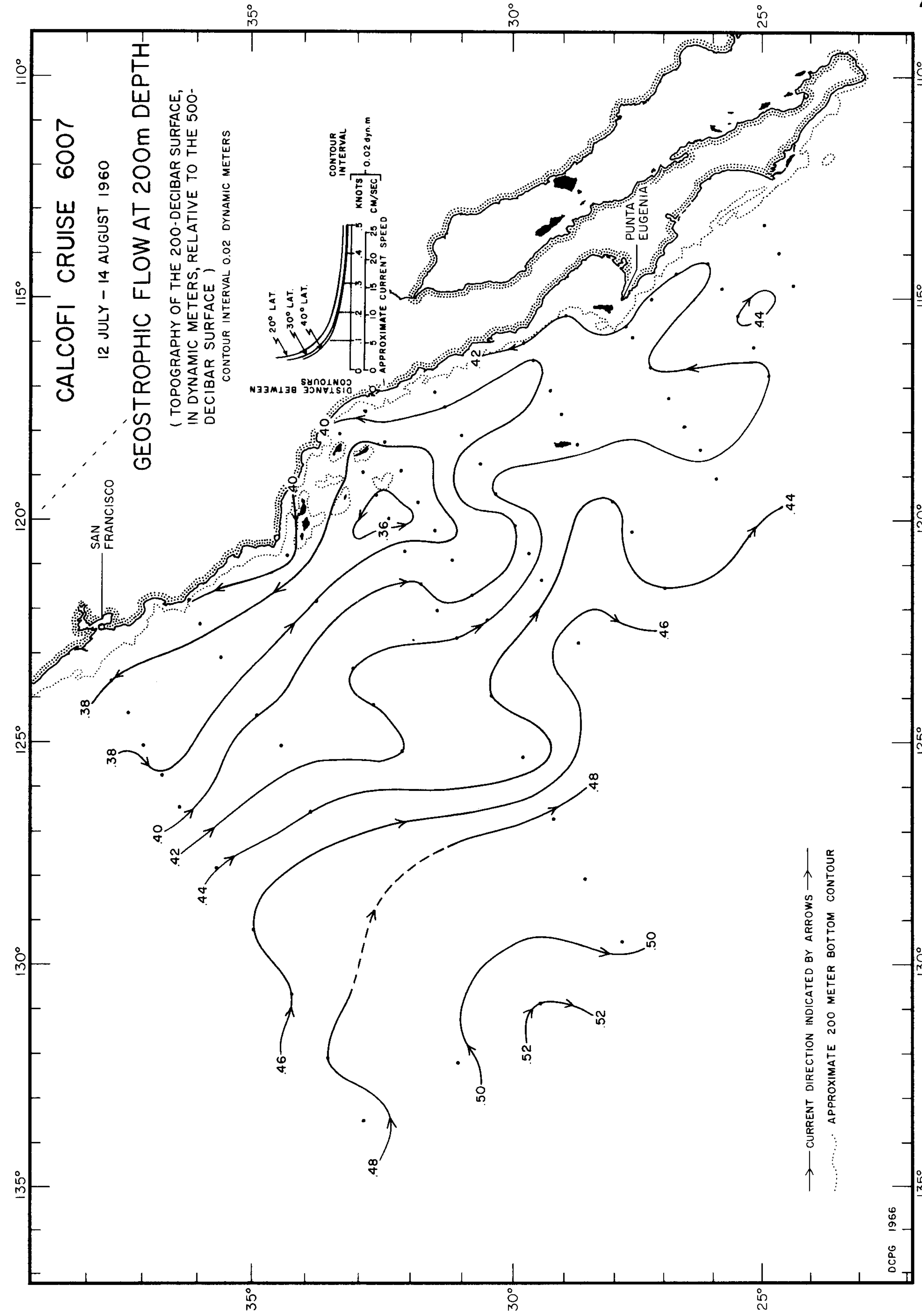

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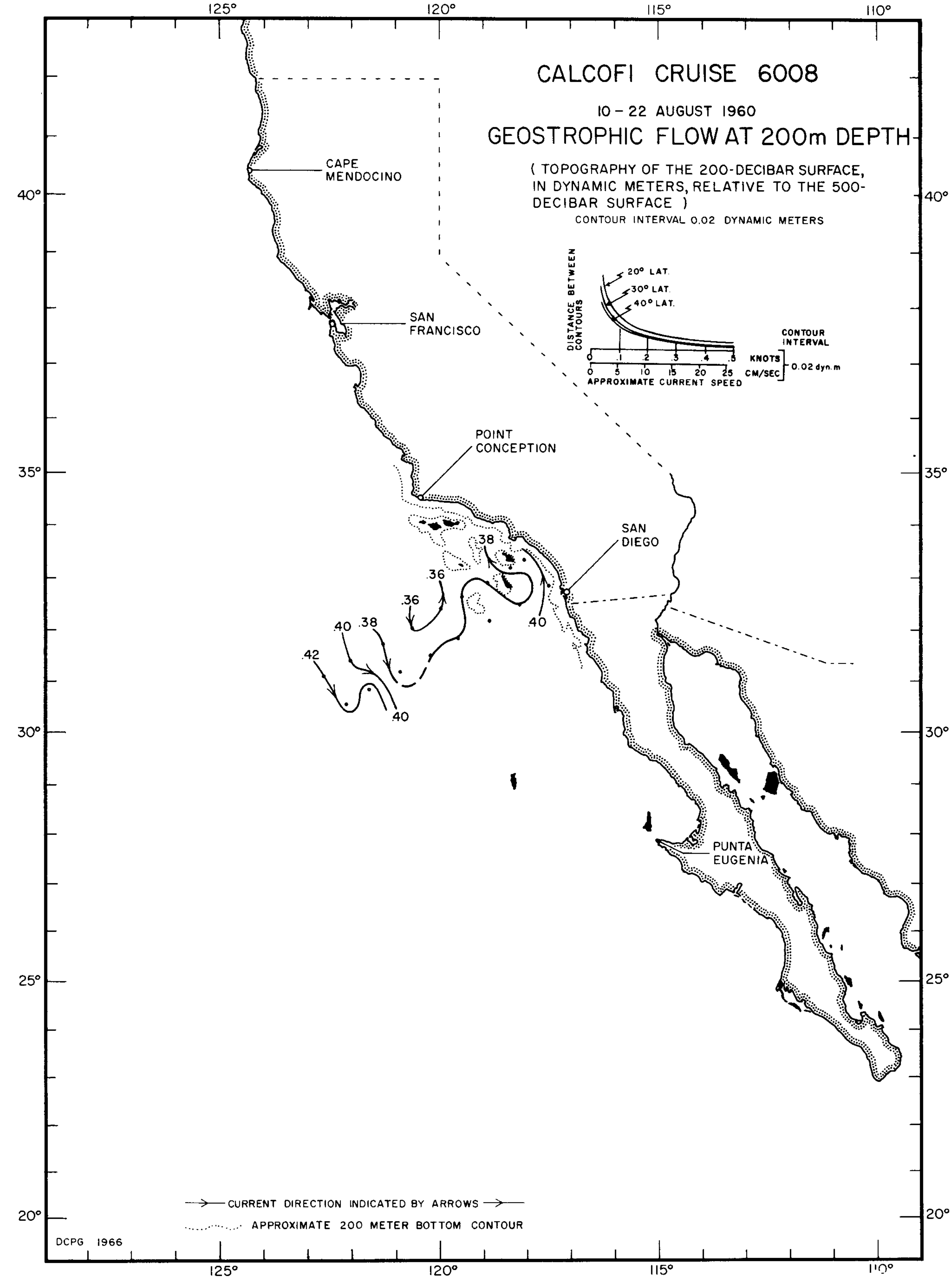

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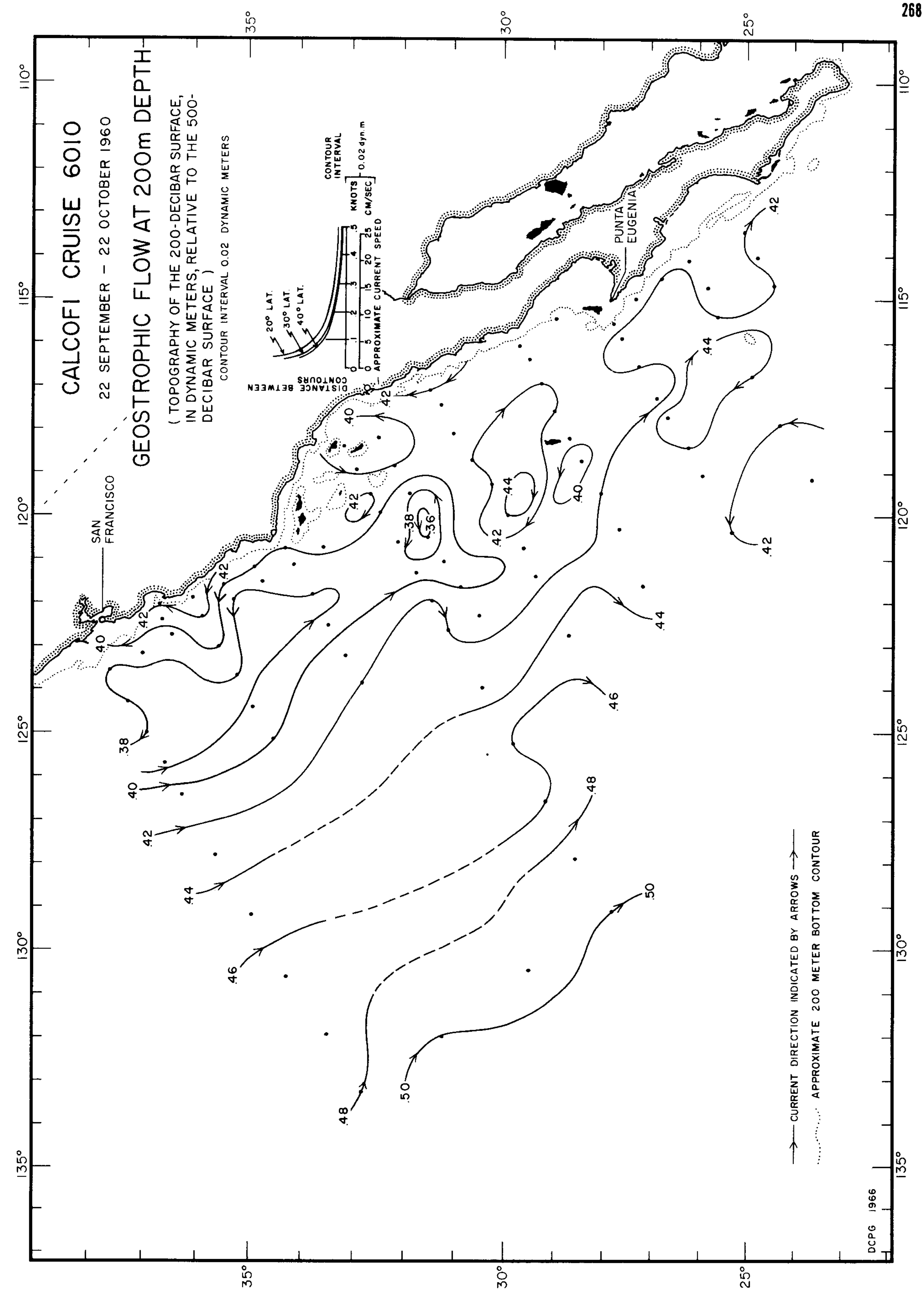

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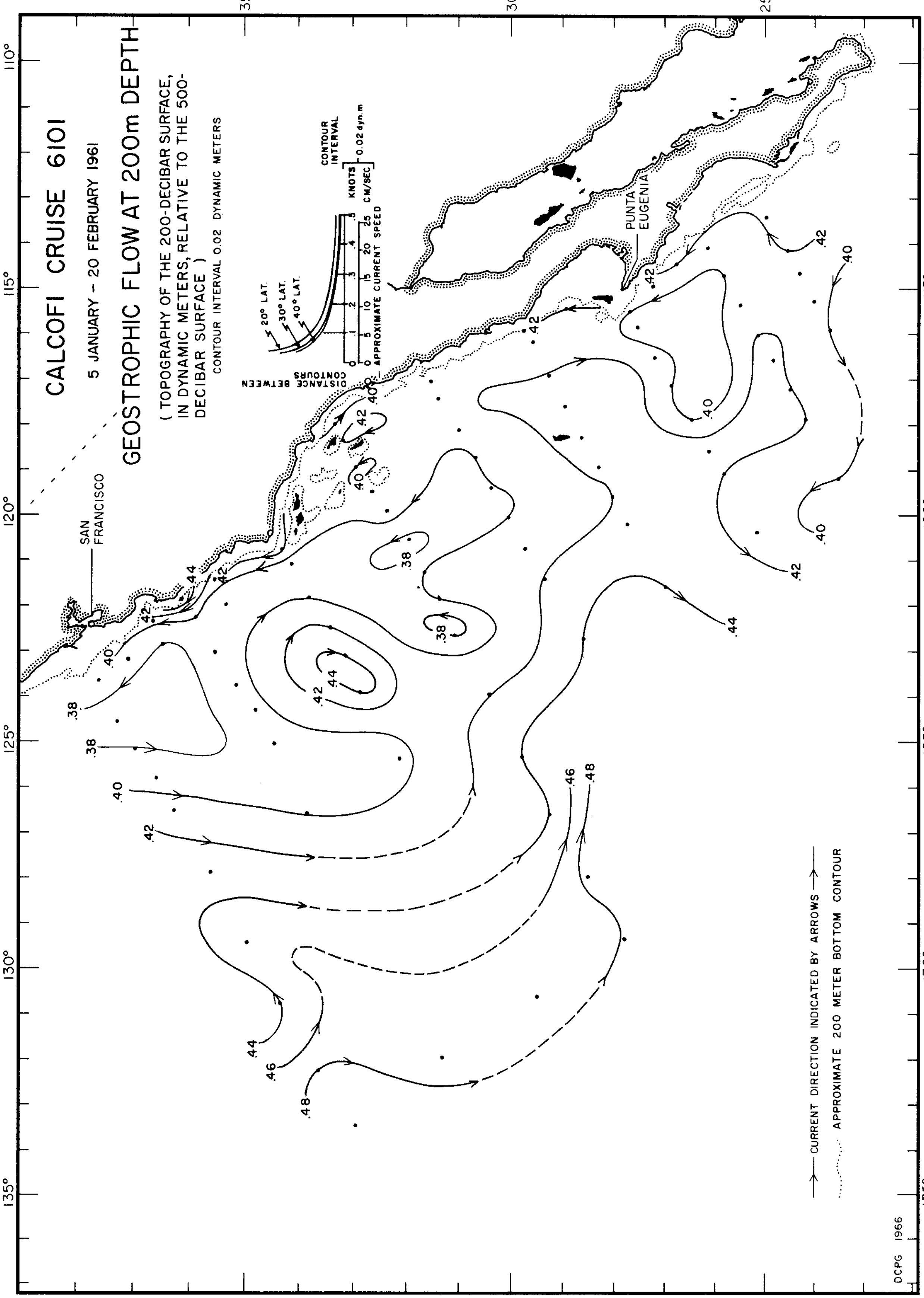

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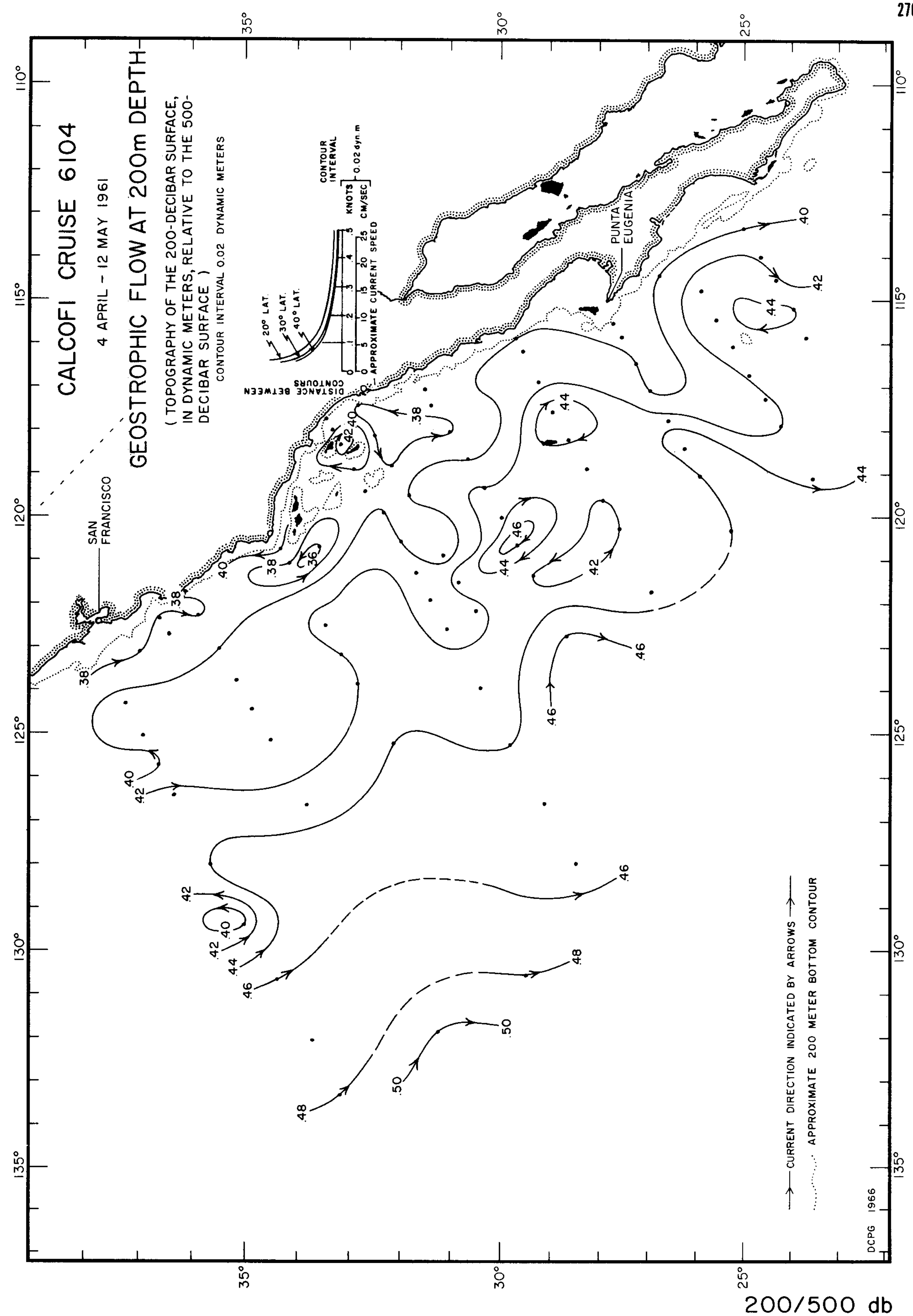

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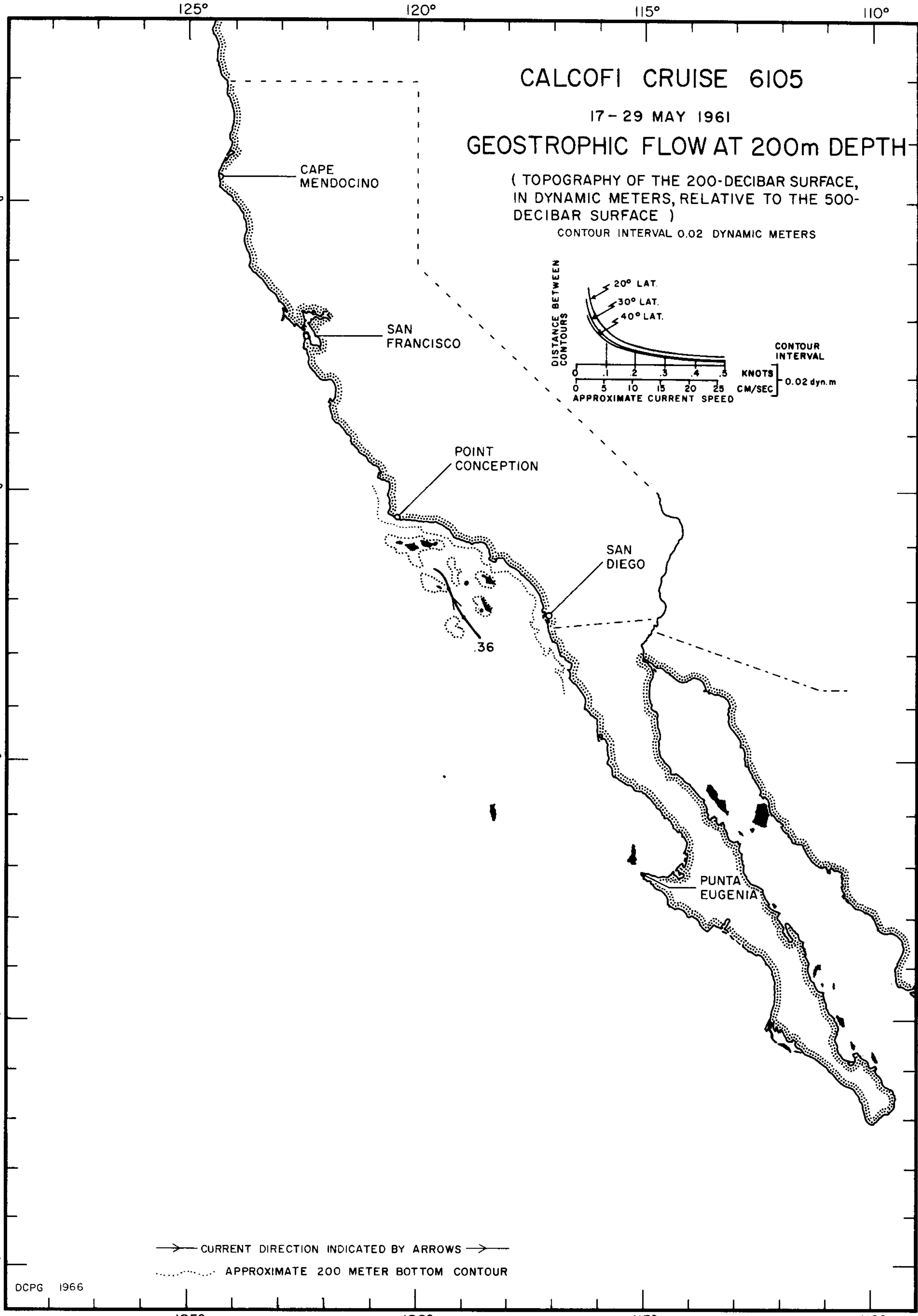

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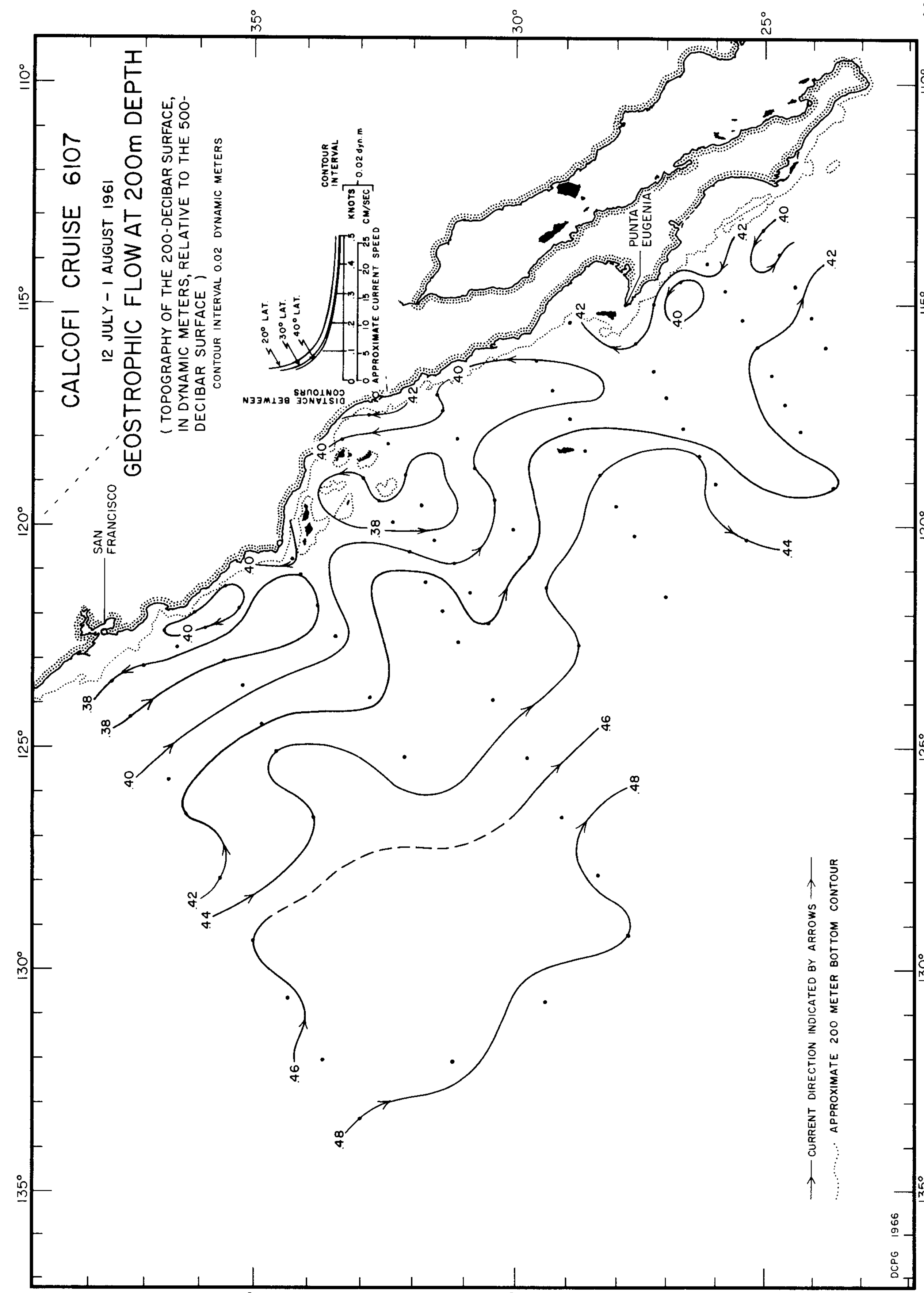

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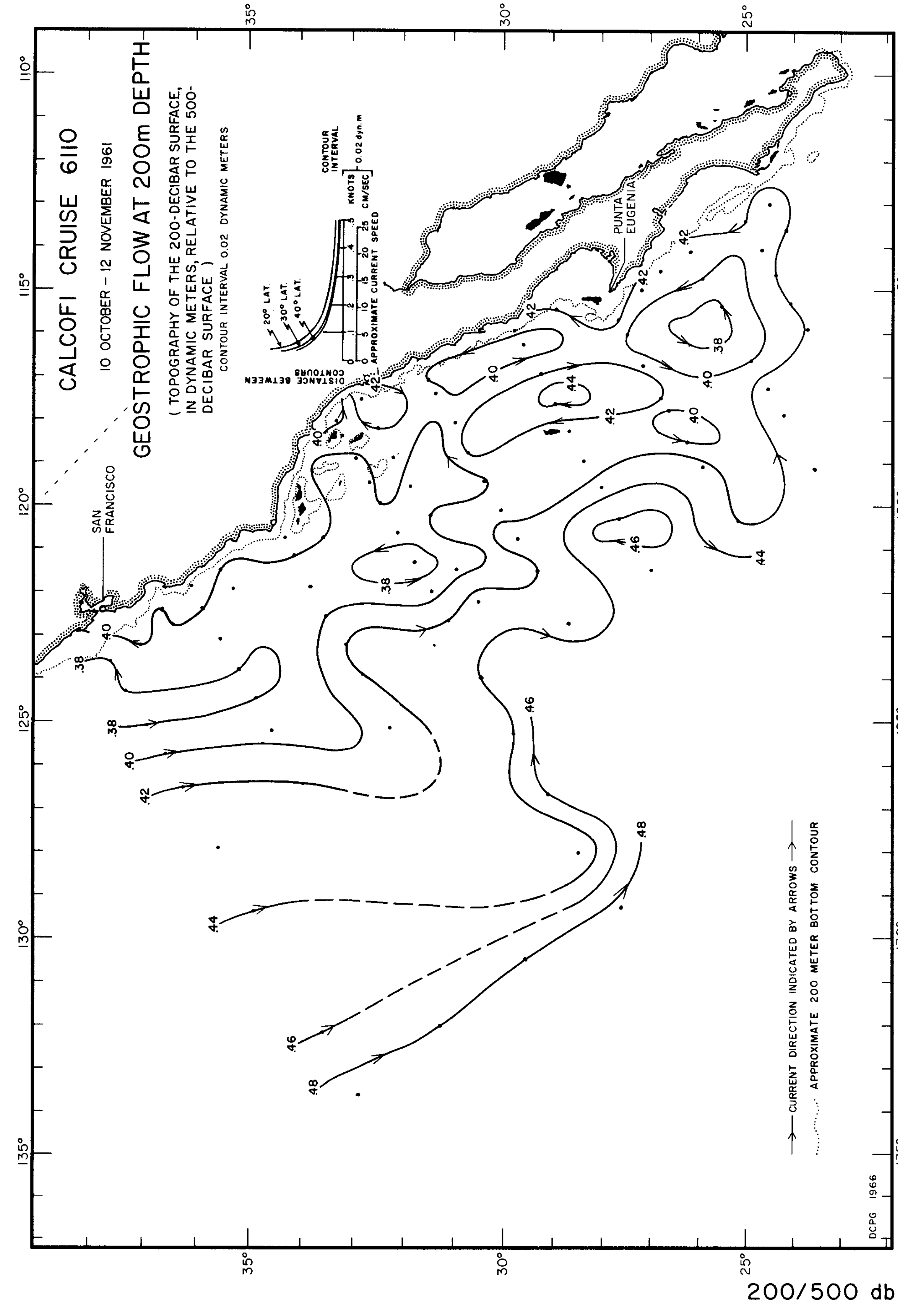

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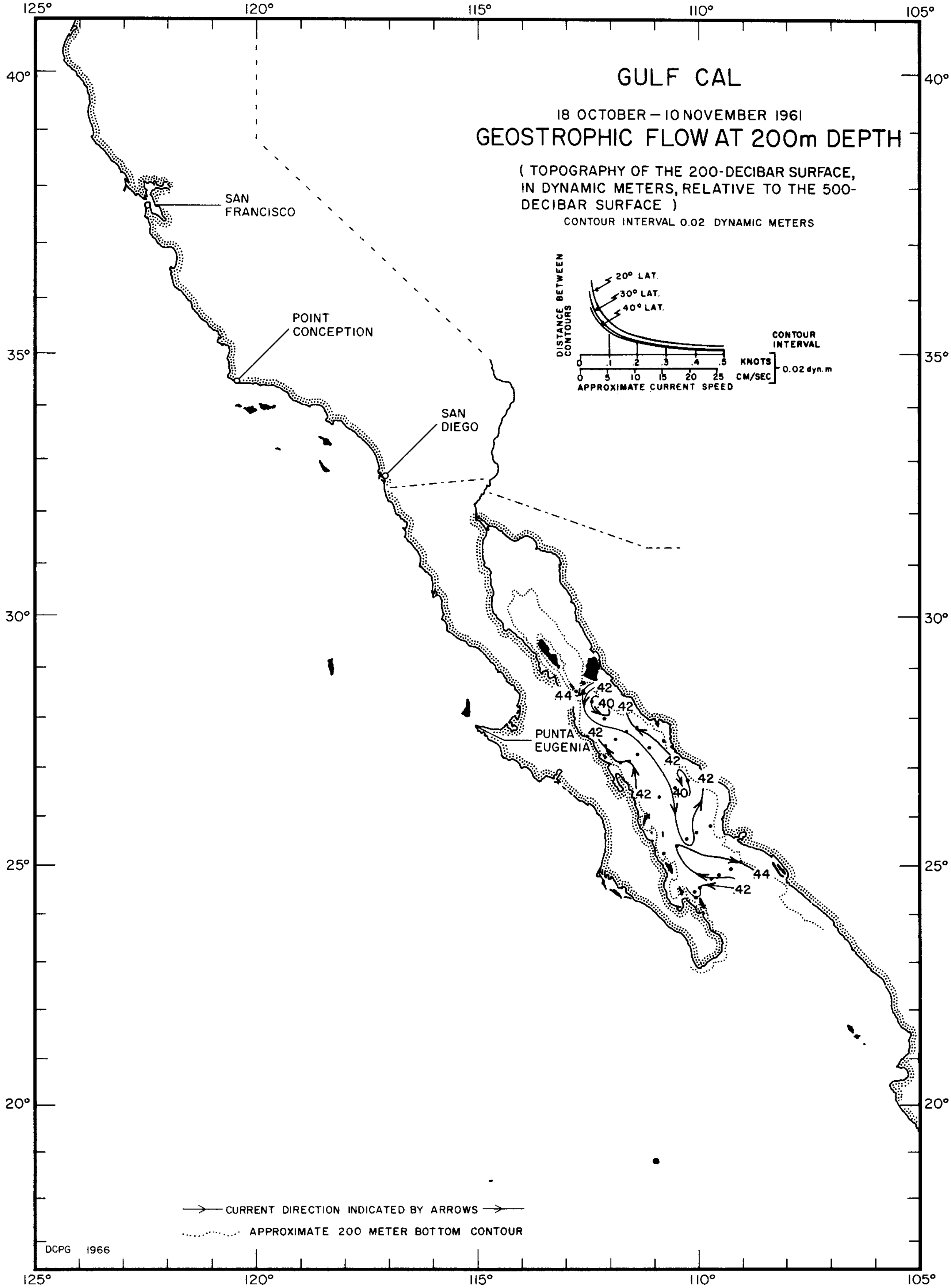

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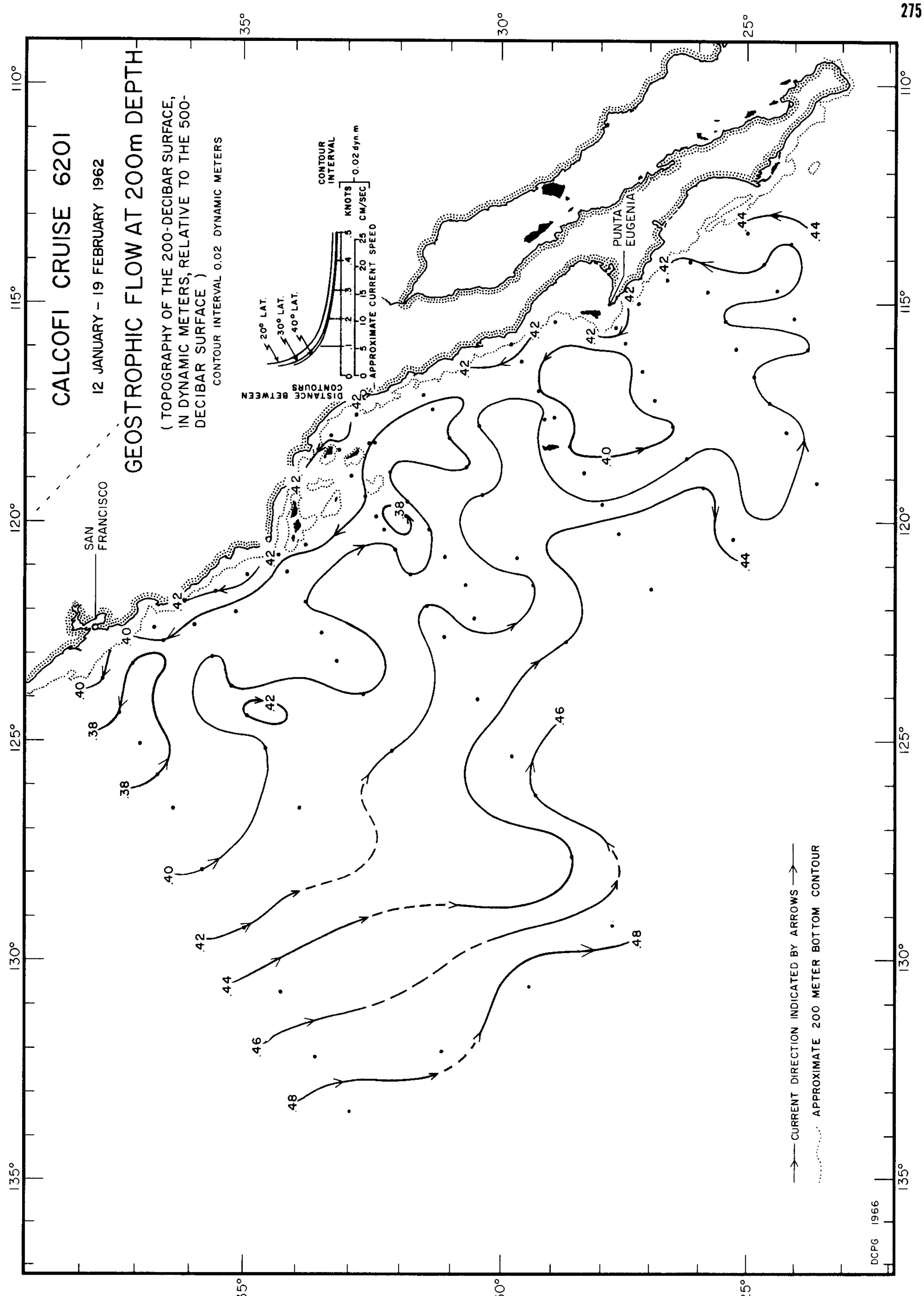

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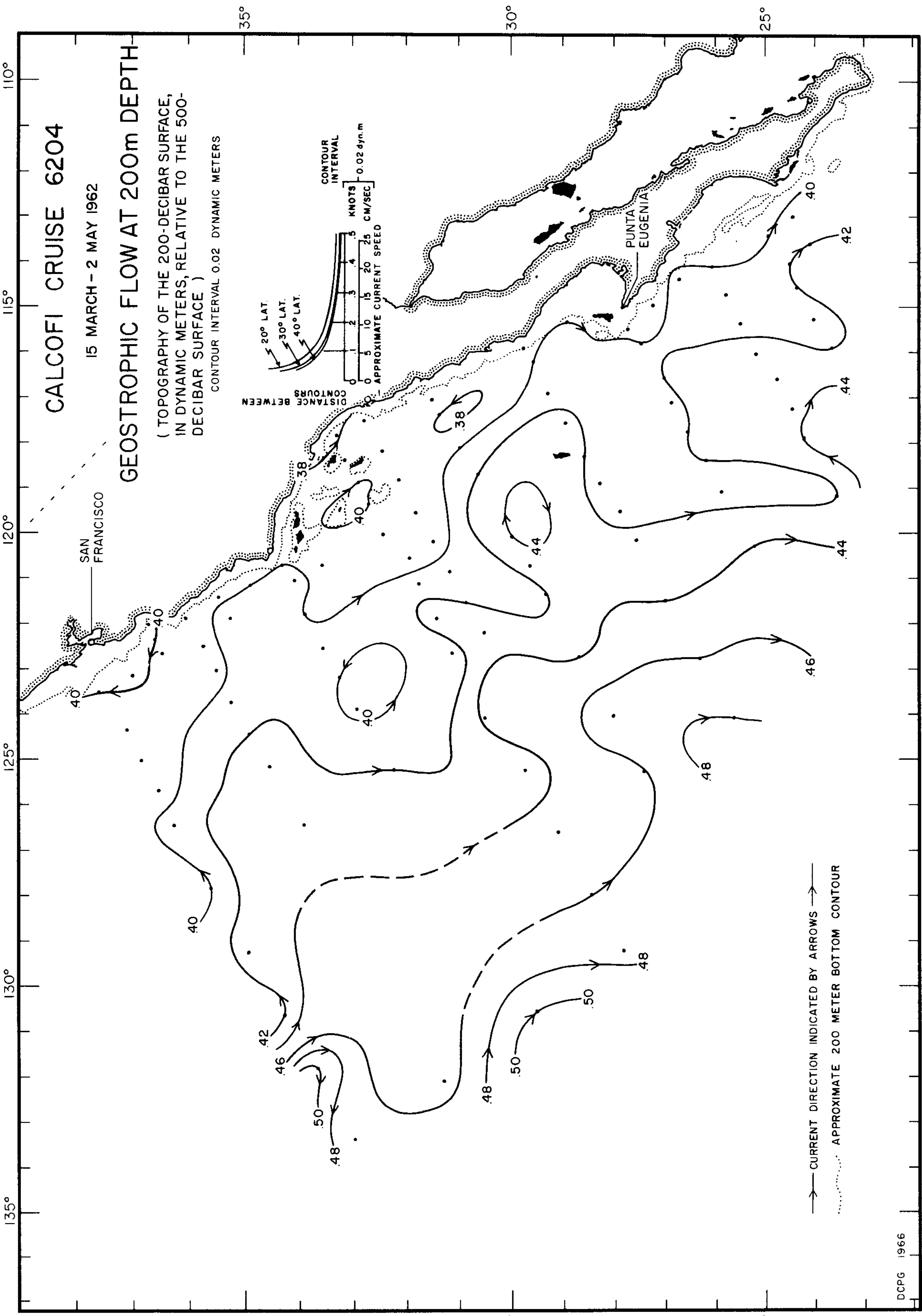

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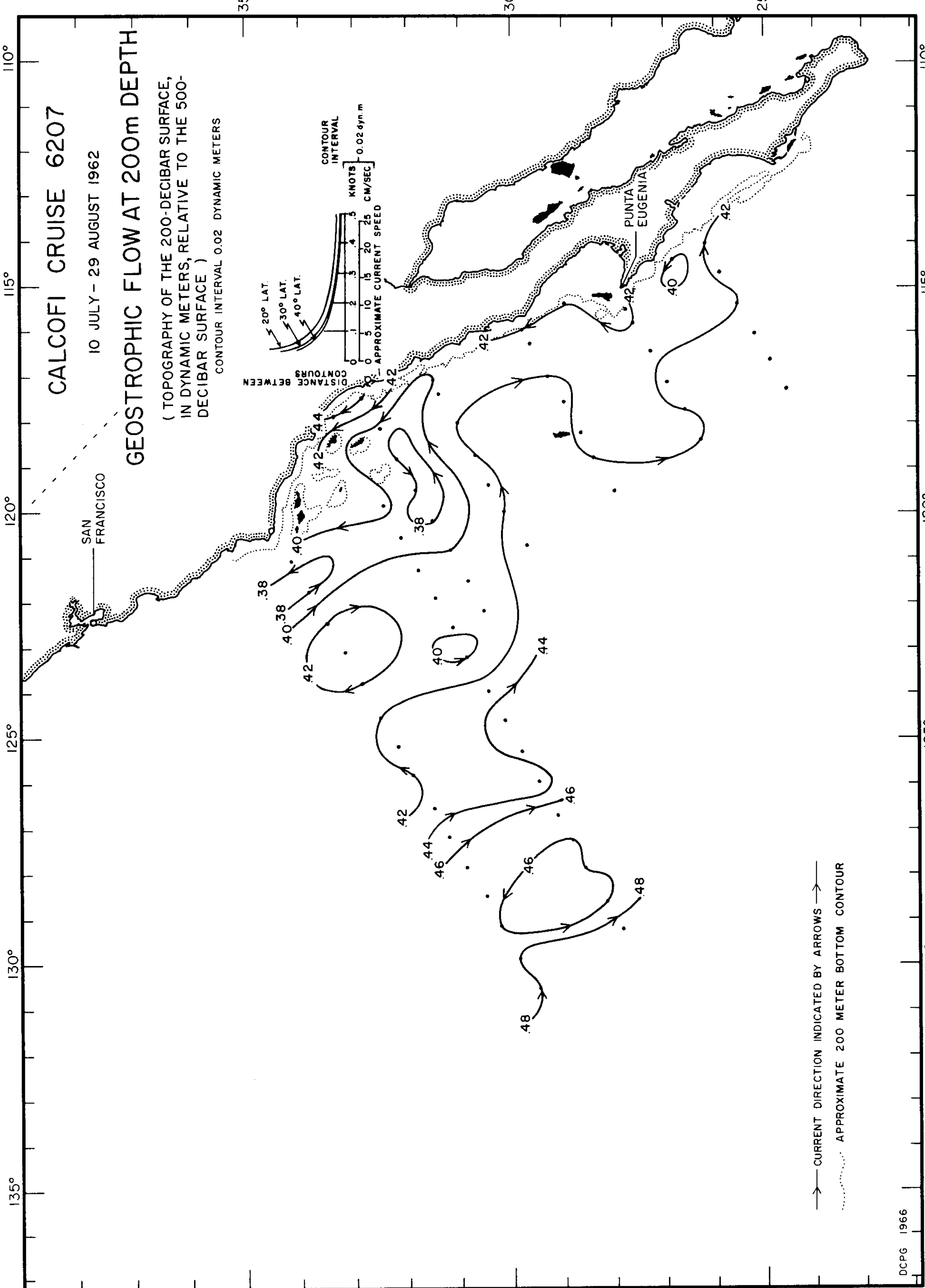

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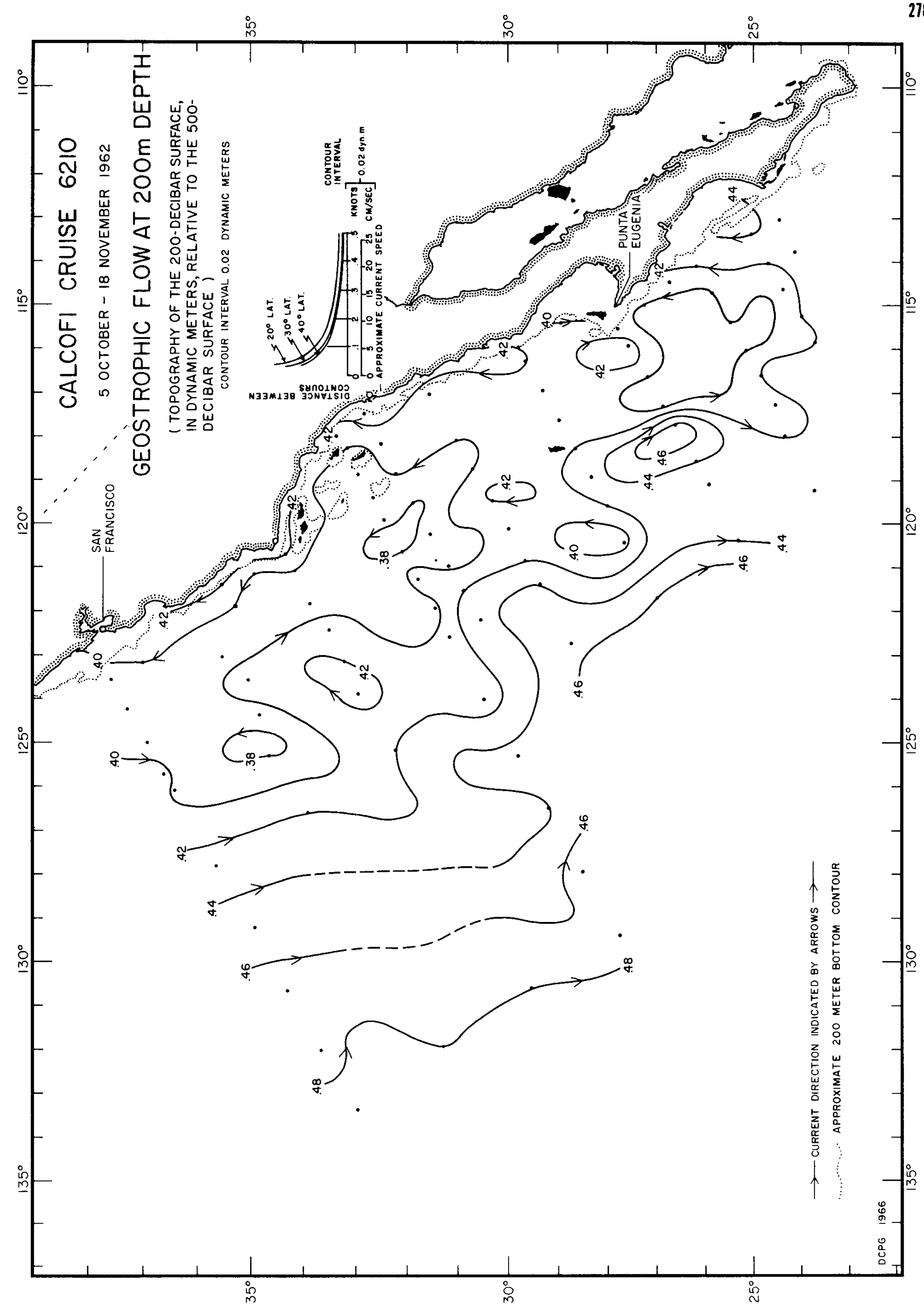

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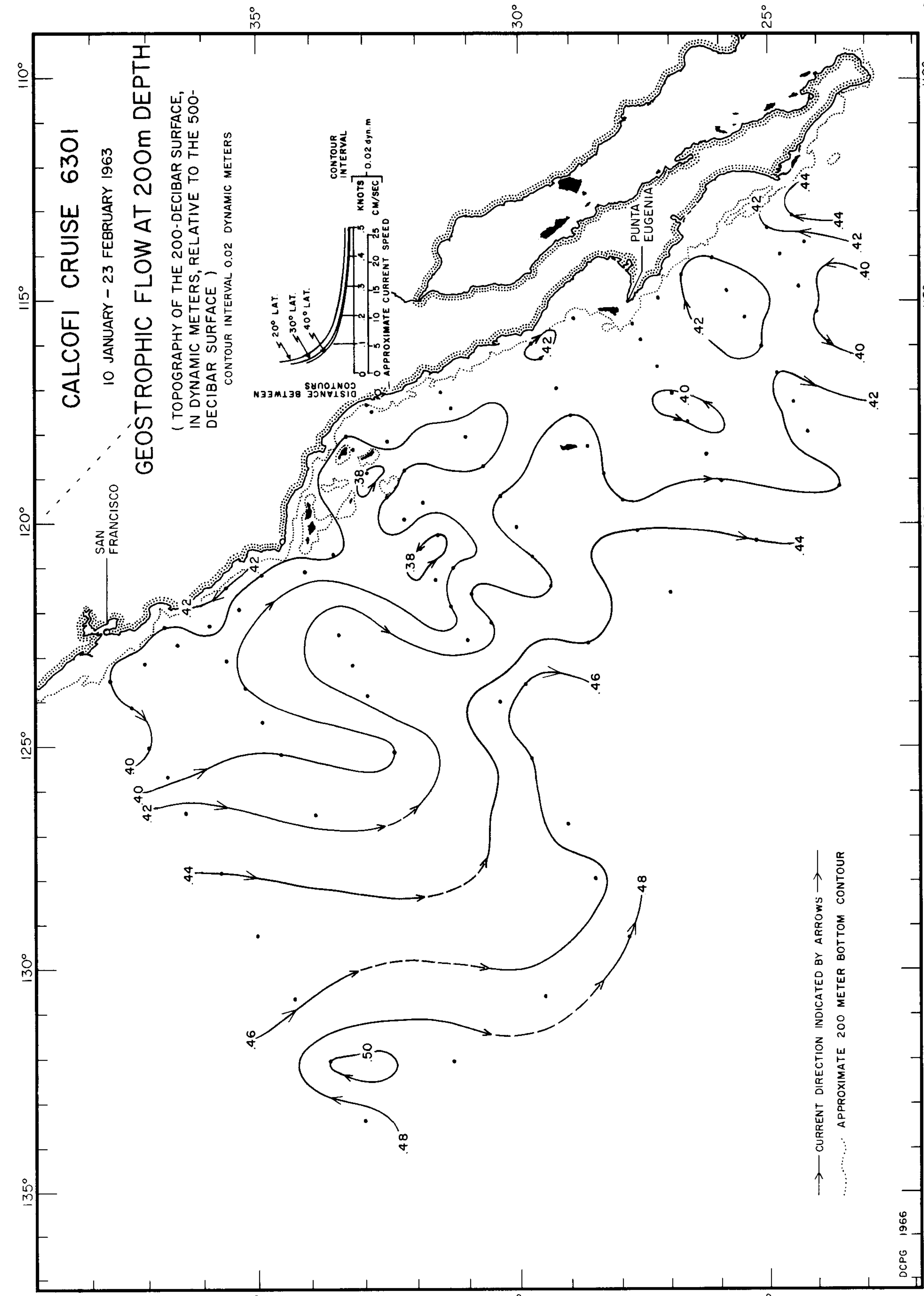

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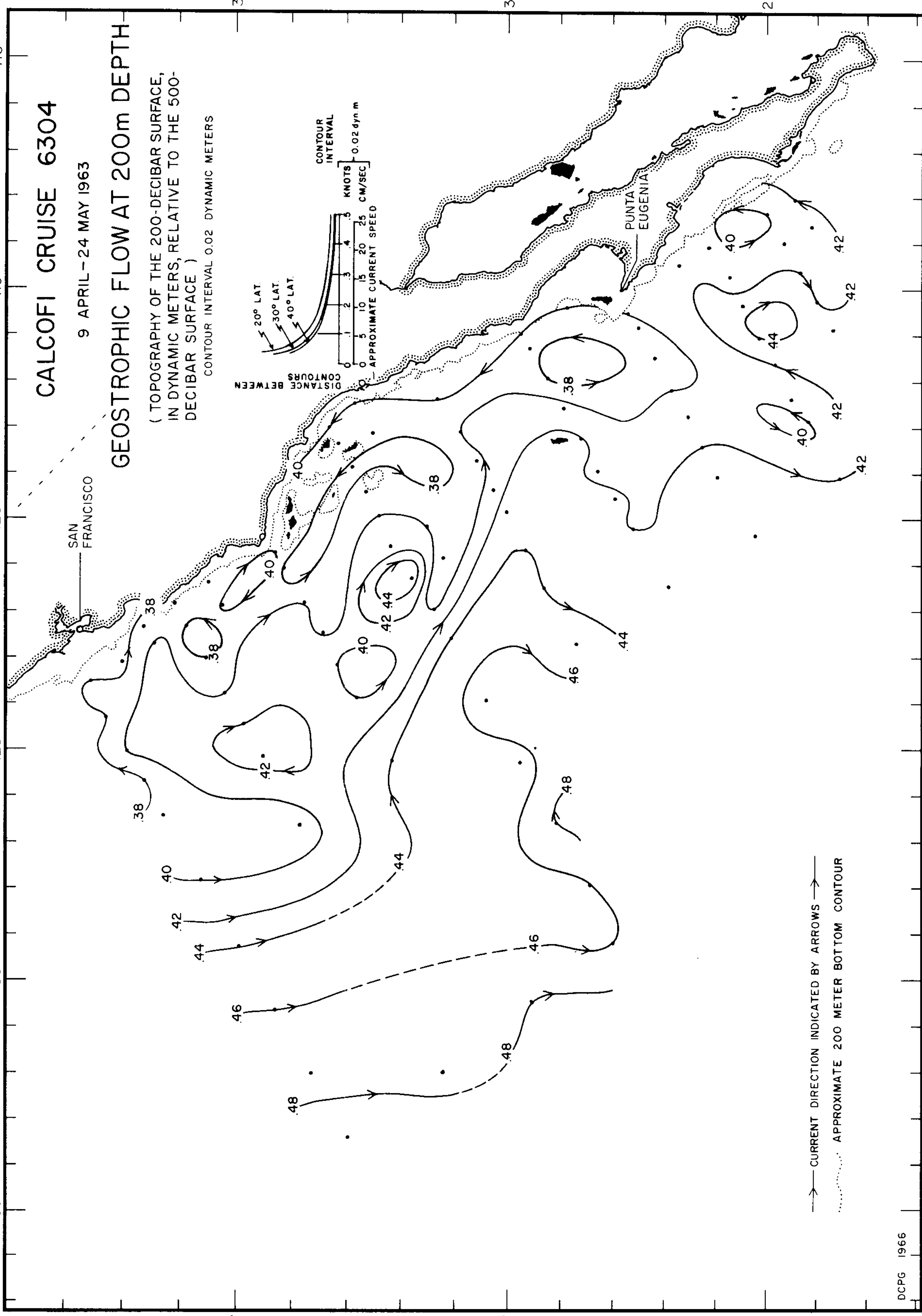

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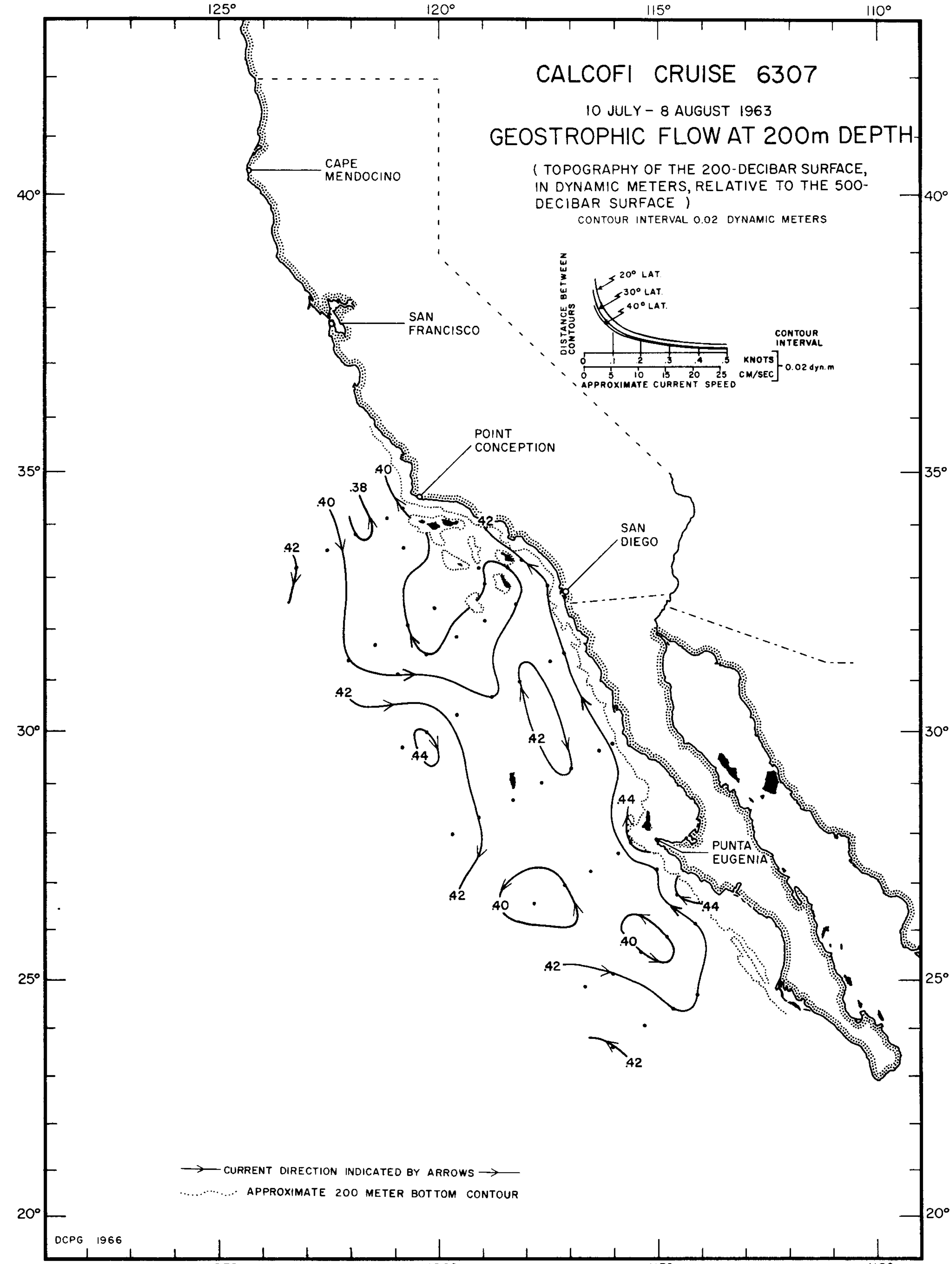

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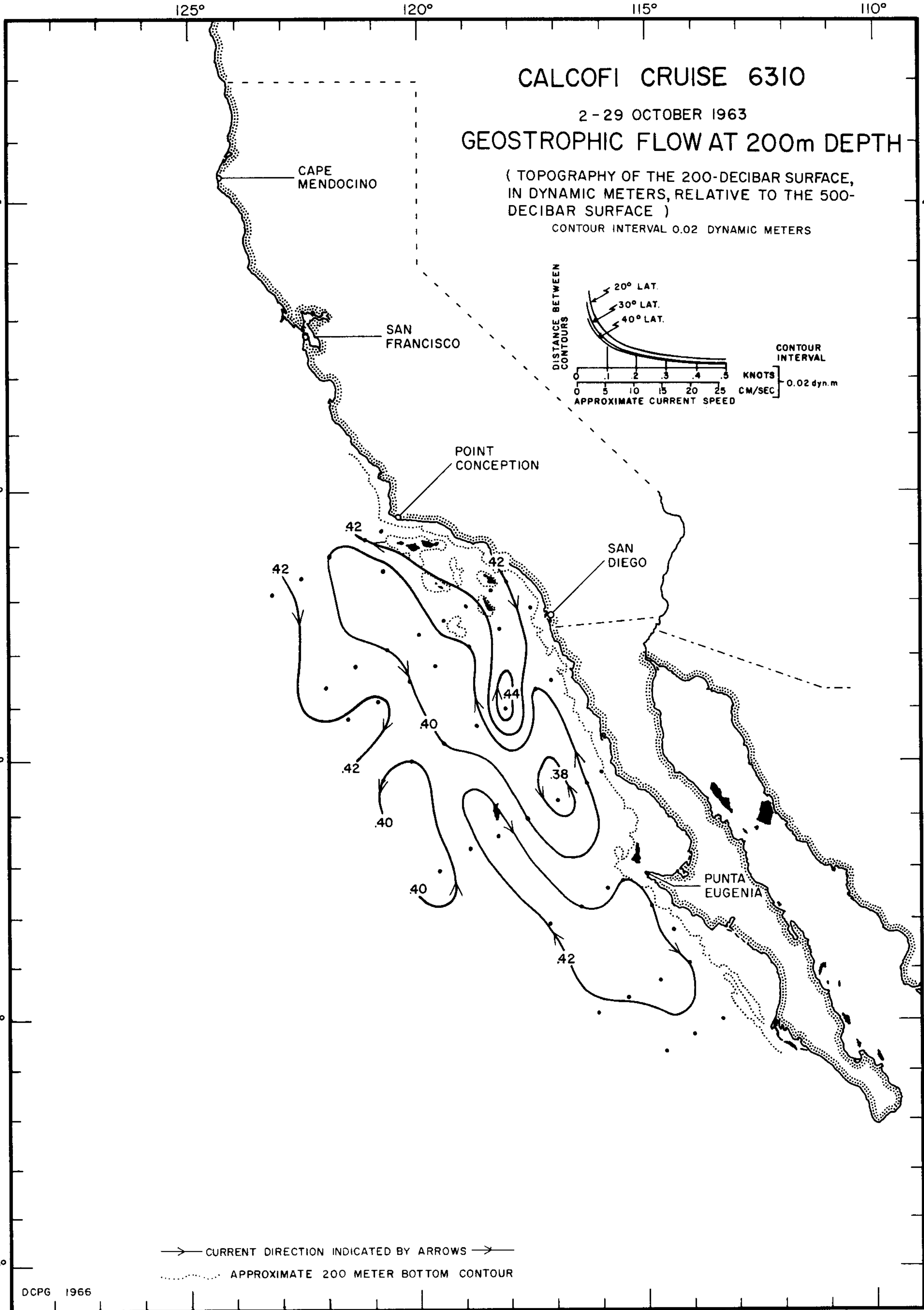

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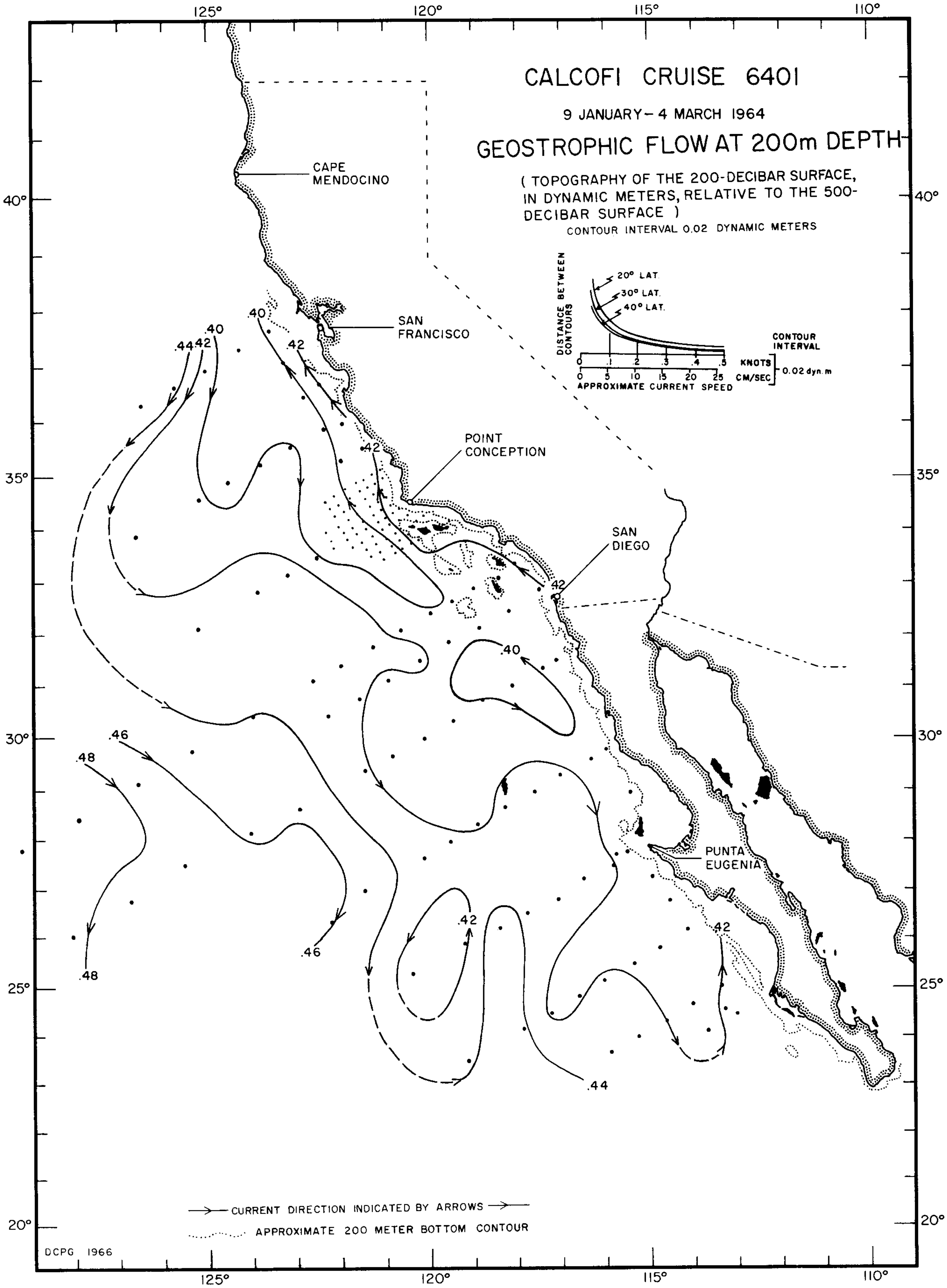

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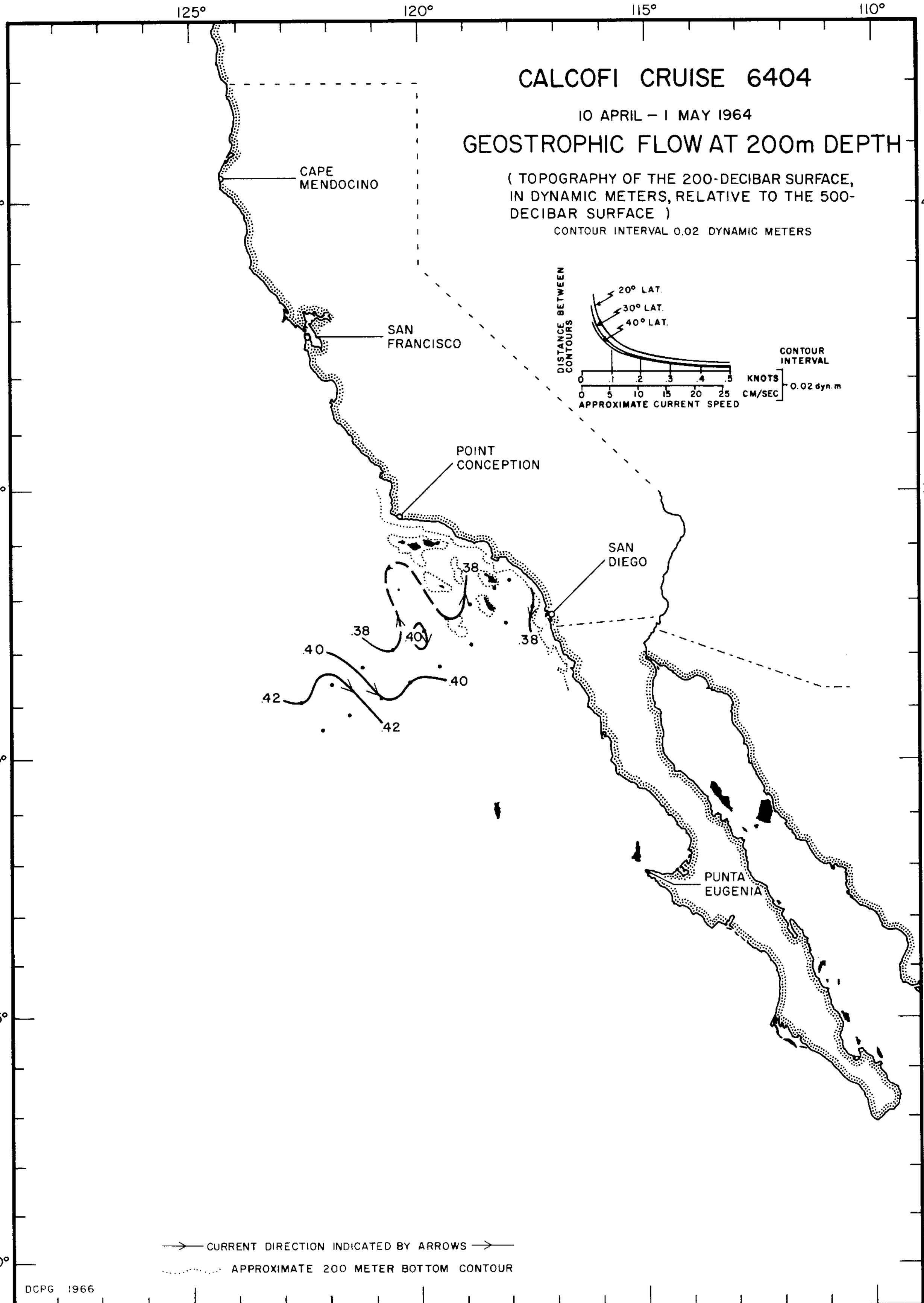

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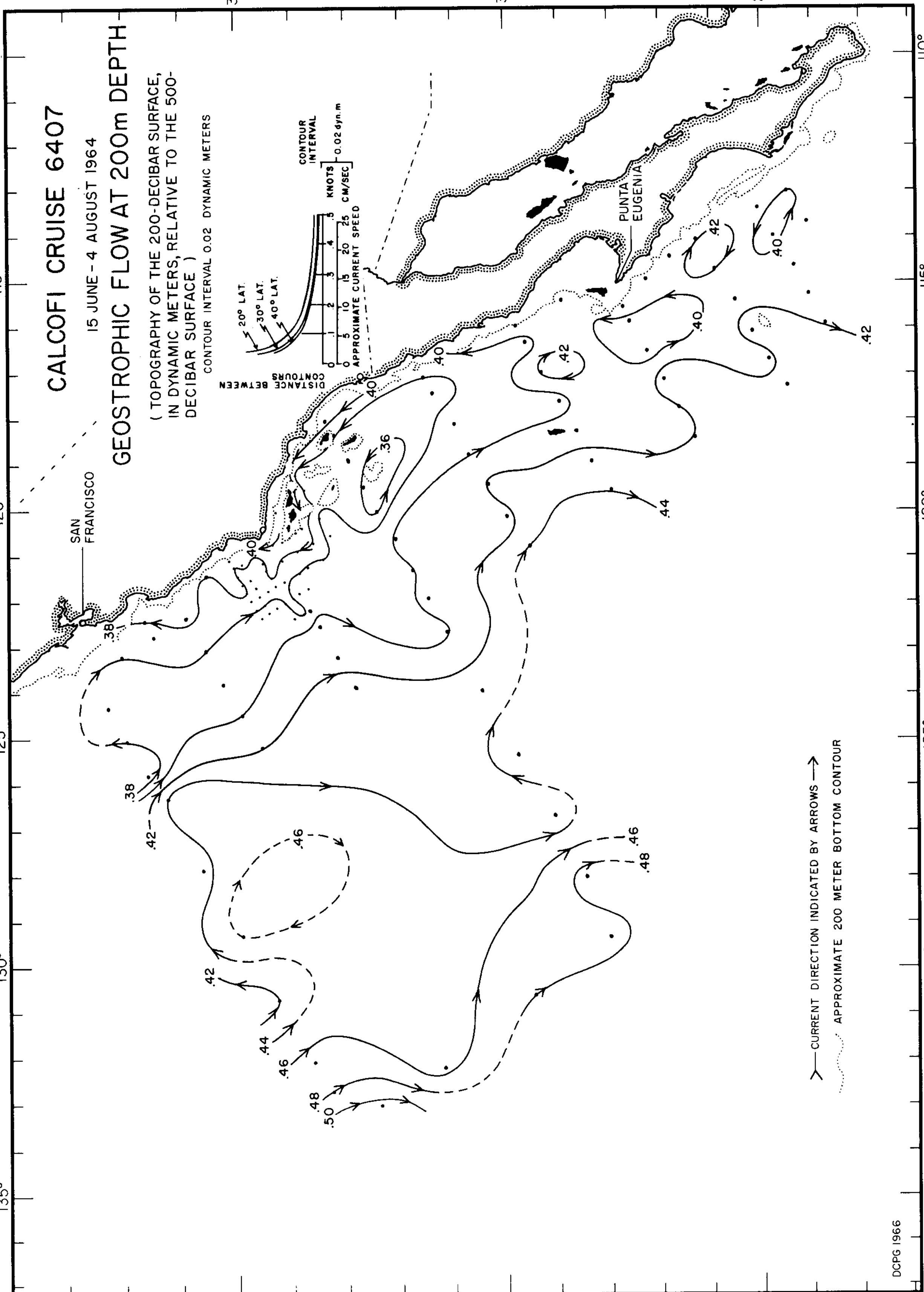

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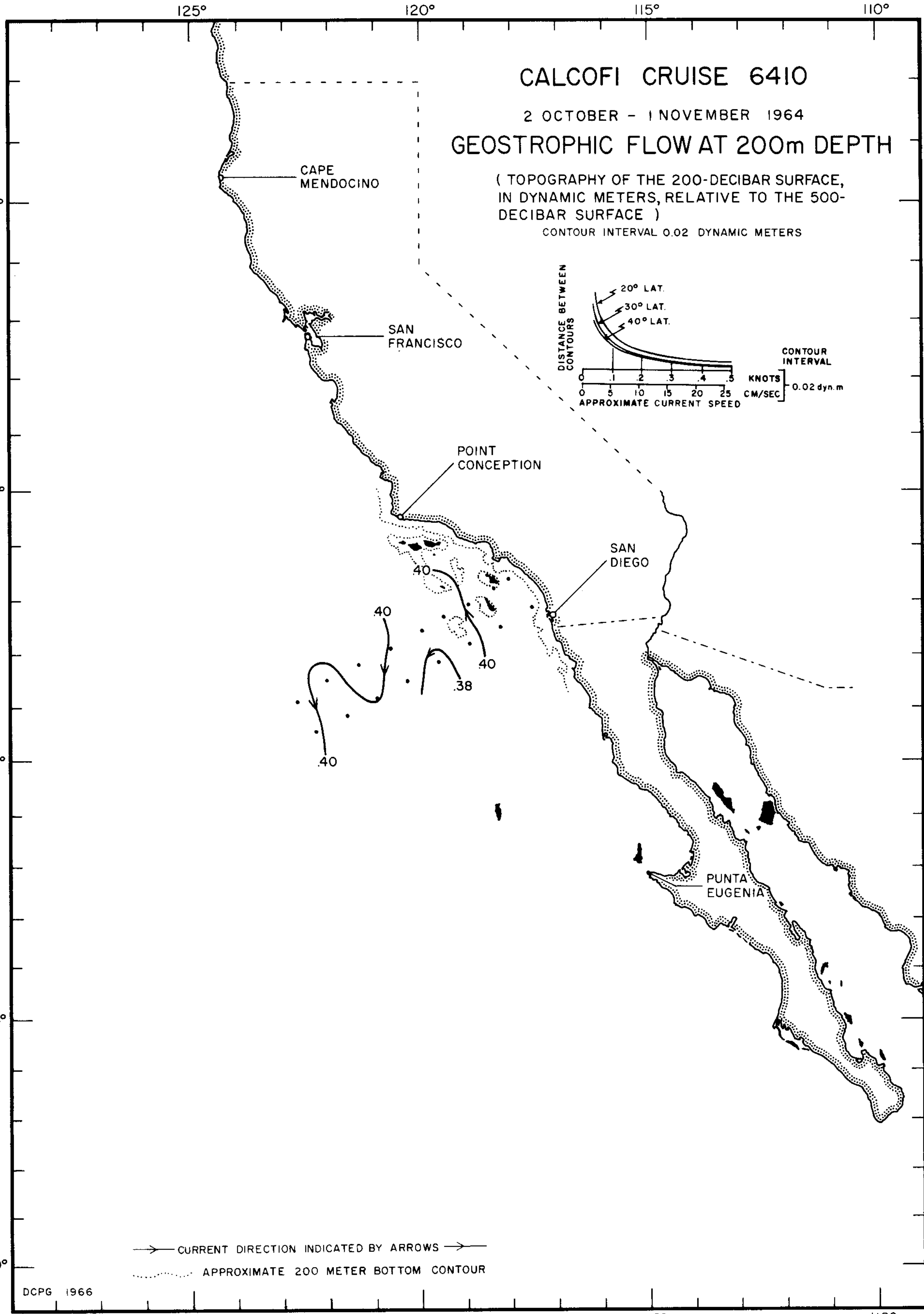

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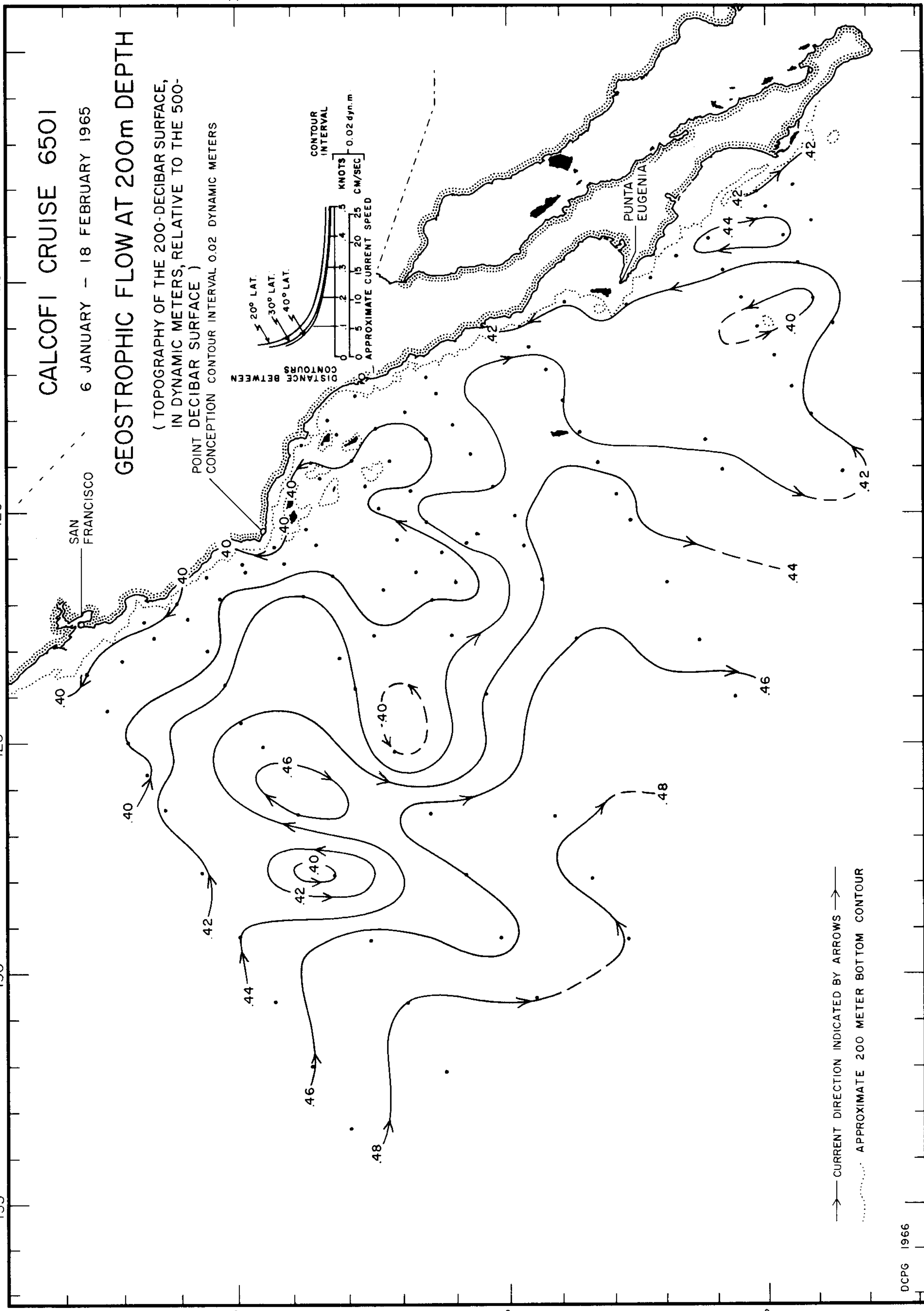

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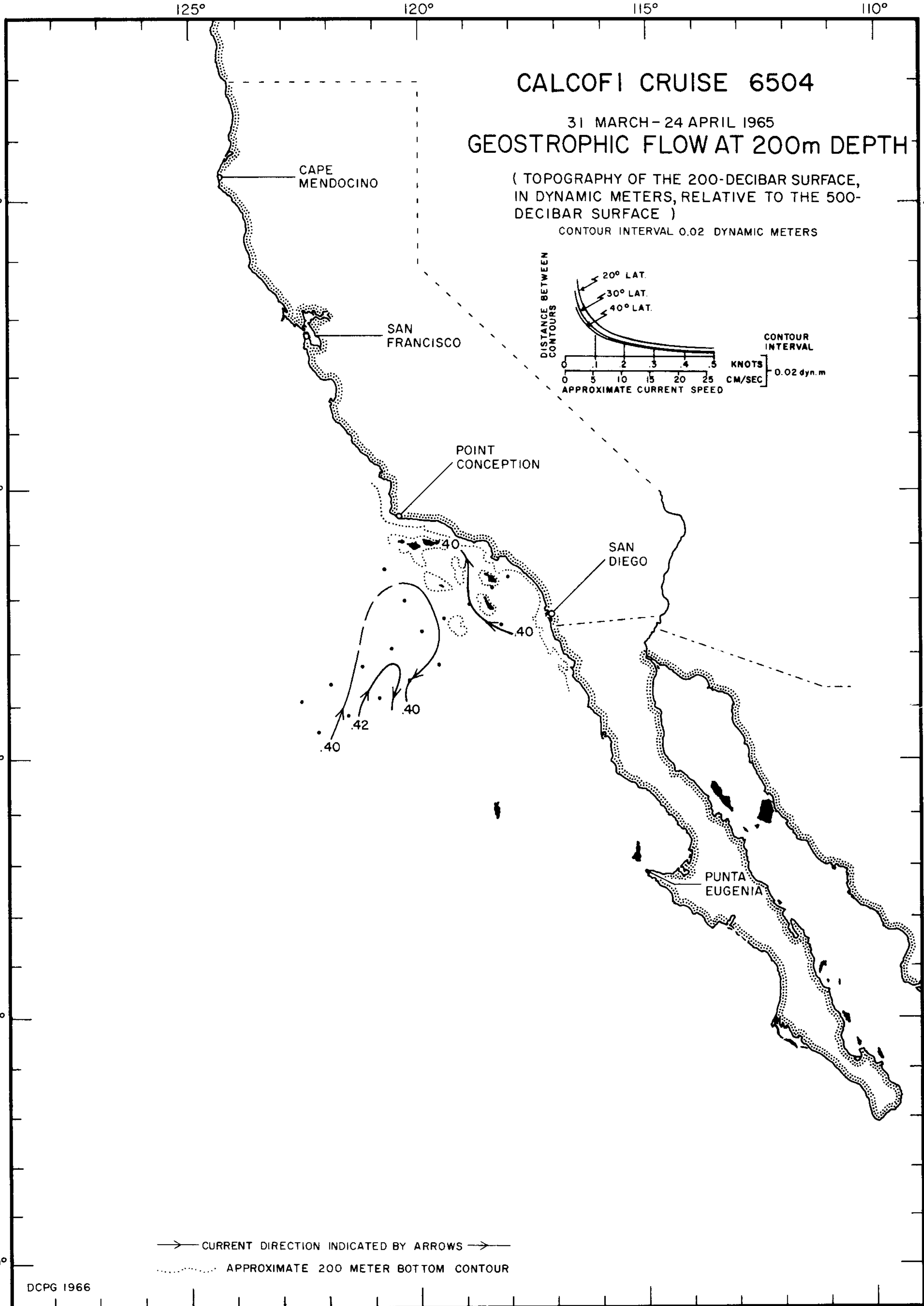

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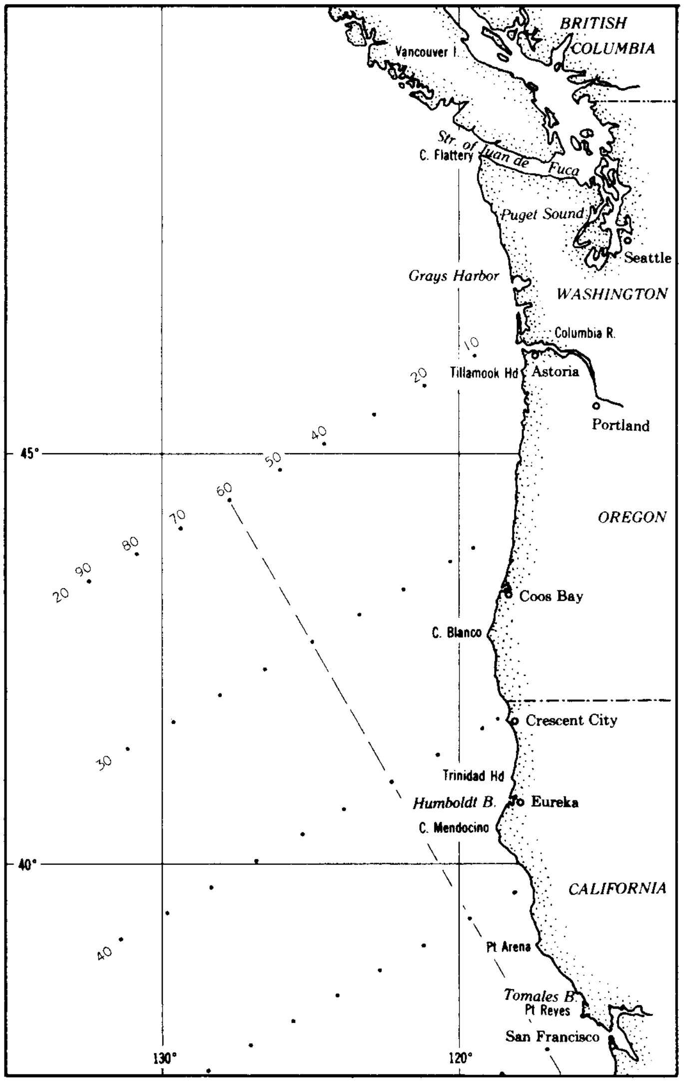

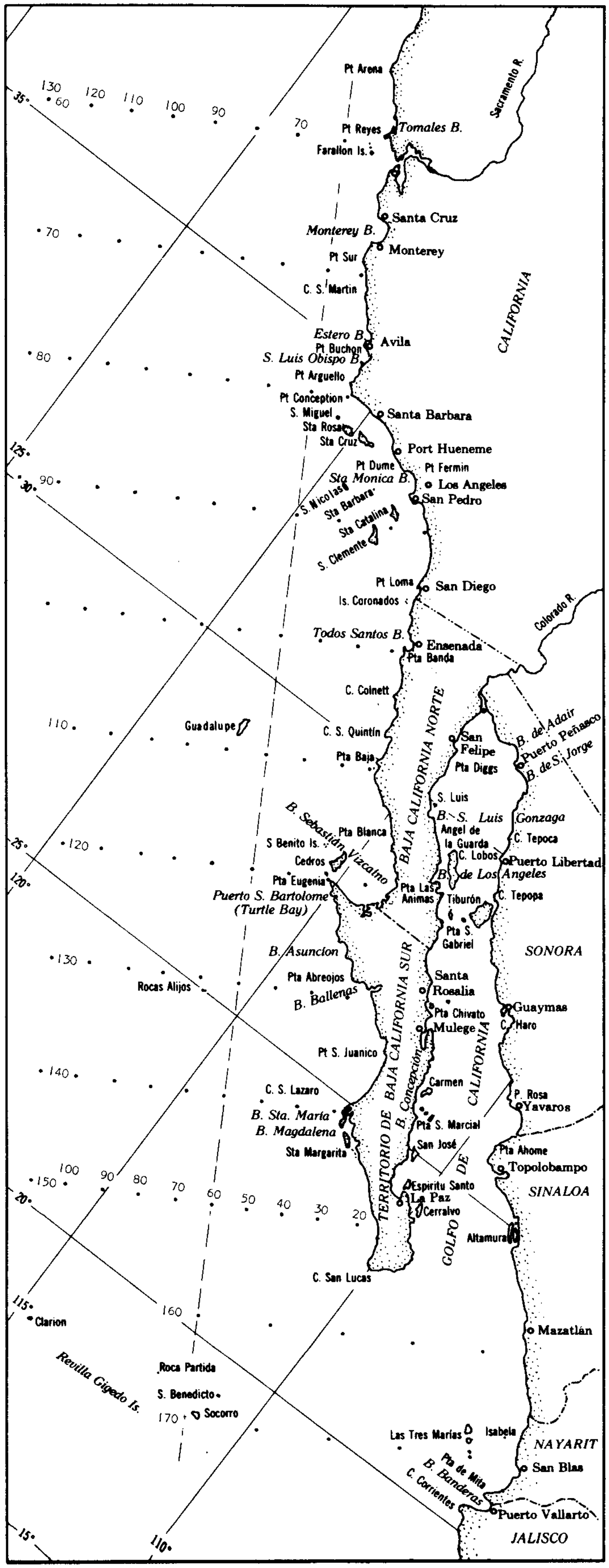

These maps are designed to show essential details of the area most intensively studied by the California Cooperative Oceanic Fisheries Investigations. This is approximately the same area as is shown in color on the front cover. Geographical place names are those most commonly used in the various publications 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.

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