Diag. Cht. 5101-2

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: California

DESCRIPTIVE REPORT.

Hyd. Sheet No. 4265 a+b

LOCALITY:

San Diego - Offshore

(a) Off Los Coronados A Pt. Loma

(b) South of Cortez Bank

. 1923

CHIEF OF PARTY:

H.A.Seran -- RRLukens

DESCRIPTIVE REPORT.

To Accompany Sheets to 1 and No 2 .

Off Shore Hydrography Southern California.

Mexican Boundary North.

The work of both the PIONER and DISCOVERER is shown on these sheets, the PIONEER'S work being shown in blue position numbers while that of the DISCOVERER is shown in red, excepting some work in blue near 117-21 and 32-27. The survey includes the off shore hydrography from the Mexican Boundary to La Jolla Cove.

CONTROL

Liountain peaks were used to control positions as far as possible, it being considered that even a weak fix is better than dead reckoning when it is impossible to anchor to observe currents. Shore fixes were carried to Long. 118-00, and beyond that the work was controlled by astronomical observations.

One bank with a least depth of 48 fathoms was found in Lat. 32-40 and Long. 117-57. This sank is of small area and was developed on a fine clear day. The chart shows a sounding marked "Reported" of 75 fathoms in this vicinity which no doubt was taken on this bank. A search for a 68 fathom sounding was made by the DISCOVERER in Lat. 32-07 and Long. 118-17, but no signs of any such bank was found. The weather was cloudy and overcast at this time which made the control poor, but the final plotting shows the ship to have been within a half mile of the position given by the DISCOVERER. If this bank exists it is certainly of, a very small area. A long narrow ridge in Lat. 32-30 and Long. 117-40 was developed by this vessel. The least depth found however was 312 rathoms. These positions were all by the 3 point fix on shore objects.

All soundings were made with the new electrical sounding machine and are all up and down casts. The wire out is measured by a registering sheave, so there are no connections to be applied. Special care was taken to record the character of the bottom. Many bottom specimens and other information were collected for the scripps Institute at as Jolla which is making research studies in marine biology and oceanography.

RR Lukens.

PLOTTING

Positions were plotted and off shore lines were adjusted by Lieut. O.S.Reading.

Respectfully Submitted

Lieut. C.& G. Survey

Comm'dg. U.J.J.Pioneer

To the Director

U.S.Coast & Geodetic Survey

Washington, D.C.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in volumes of sounding records for

HYDROGRAPHIC SHEET 4265a and b

Locality: Off So. Calif. Mexican Border, San Clemente

Chief of Party: H. A. Seran - R. B. Lukens, in 1922-1923 Plane of reference is ft. on tide staff at auto-gauge

For reduction of soundings, condition of records satisfactory except as checked below:

- 1. Locality and sublocabity of survey omitted:
- 2. Month and day of month smitted.
- 3. Time meridian not given at beginning of day's work.
- 4. Tame (whether A.M. or P.M.) not given at beginning of day's work.
- 5. Soundings (whether in feet or fathoms) not clearly shown in record.
- 6. Leadline correction entered in wrong column.
- 7. Field reductions embered in "Office" column.
- 8. Location of tide gauge not given at beginning of each day's work.
- 9. Leadline corrections not clearly stated.
- 1D. Kind of sounding tube used not stated.
- 11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
- 12. Legibility of record could be improved.
- 1B. Remarks.

Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY. A A MPR 24 100 State: California DESCRIPTIVE REPORT. Hyd Sheet No. 4265 2+6 LOCALITY: San Diego-Offshore (a) Off Los Coronados & Pt. Loma (b) South of Cortes Bank 1923

HASeran - R.R.Lukens

OI

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEETS NOS. 1 and 2 CALIFORNIA.

Mexican Boundry to Del Mar.

1922 -- 1923.

Surveyed by the parties of the

U.S.S. Discoverer, H. A. Seran, Commanding

and

U.S.S. Pioneer, R. R. Lukens, Commanding.

The hydrographic work on these two sheets was done in accordance with instructions dated October 18th, 1922. As the work in continuous from the offshore limits of the inshore sheets of the Discoverer and Pioneer and the 1000 fathom curve only one descriptive report will be submitted for both sheets.

The work of both the Discoverer and Pioneer is plotted on the same sheets. The work of the Discoverer is plotted in red and the work of the Pioneer in blue.

The inshore ends of the lines are controlled by fixed positions and the balance of the work west of a line joining positions 3B (Discoverer) and 14C (Pioneer) is dead reckoning controlled by astronomic fixes.

The soundings are all vertical soundings with wire made while the ship was stopped.

As the smooth sheets show, the bottom in this section is exceedingly irregular. There is a succession of banks and valleys parallel to the coast. Each of these features was developed as far as possible under existing conditions.

The development in the vicinity of Latitude 32 05 and Longitude 118 15 would tend to show that the 68 fathom sounding is the peak of the ridge extending northwest and southeast to the southward.

No extremely shoal soundings were obtained in the vicinity of the bank shown on chart 5102 in Latitude 31 50 to 32 00 and Longitude 119 00 to 119 10. The bottom is lumpy in this section however and until further work is done I would hesitate to say the bank was not there.

H. A. Seran.

sotolo tro 500 2/

STATISTICS - SHE MS 1 & 2.

Date	Day	Vol.	Soundings	Stat.Miles	Vessel
11/13/22	A	1	47	287	Discoverer
14					
15					
11/15/22	В	1,2	71	3 31	"
16					
17					
11/17/22	C	2	12	18	11
11/21/22	D	2	13	25	11
1/29/23	E	2	44	299	18
30					
31					
2/5/23	F	2,3	31	128	11
				Man-Warehau made mantus man	
		Total	s 213	1088	

STATISTICS TABLE--SMOOTH SHEATS 1 & 2.

Date	<u>Vol</u> .	Letter	Soundings	Stat.Miles	<u>Vescel</u>
11/24/22	1	A	80	259	Pioneer
1/2/23	11	В	23	20	11
1/3/23	• •	C	25	53	11
1/30/23		Ð	23	ö0	11
2/5/23	11	8	16	15	11
			172	391	

Hyd. 4265 & + b

The office work on these sheets has been considerably expedited by the fact that the work of both parties has been combined on the same sheets. Red position numbers were used for the Discoverer's work and blue position numbers for the Pioneers.

The plotting of the dead reckoning lines was given a general verification, but only such differences as were obvious errors were corrected. It being considered that the field officer, was in a position to use better judgement than the draftsman.

In the Discoverer's work, the line from pos. 28 A to pos. 43A and all of E day was replotted, owing to errors in laying down a log. distance. This changes the position of the sixty seven fathom spot about four tenths of a mile. The plotting of the Pioneer's work was not changed.

N.L. Johnston

No bottom characteristics were recorded for the Discoverer's work.

AND REFER TO NO. 4-DRM

DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY

July 9, 1923. WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheets 4265 and \underline{b}

San Diego - Offshore

Surveyed in 1922 - 23.

Instructions dated Oct. 18, 1922.

Chiefs of Parties, H. A. Seran and R. R. Lukens.

Surveyed by parties of Steamers Discoverer and Pioneer.

Protracted by J. F. Downey and O. S. Reading.

Soundings plotted by J. F. Downey and R. W. Woodworth.

Verified and inked by R. L. Johnston.

- The records conform to the requirements of the General Instructions except that no bottom characteristics were recorded for any of the Discoverer's work. The printed sounding record (Form 376) is defective in that it fails to provide for entry of bottom characteristics.
- 2. The plan and character of development fulfill the requirements of the General Instructions.
- 3. The plan and extent of development satisfy the specific instructions, except that, as stated in the descriptive report, the development in the vicinity of Lat. 31° 50', Long. 119°05' is insufficient to disprove the existence of the charted bank. The survey does not extend far enough northward to include the bank at Lat. 32° 05', Long. 119° 45'.
- 4. The sounding line crossings are adequate.
- 5. The information is sufficient for drawing the usual depth curves.
- 6. The field plotting was completed to the extent prescribed in the General Instructions. In so far as it was possible to check the plotting from the records it was good, except on two days of the Discoverer's the bulk of the work had to be replotted owing to an error in laying down a log distance on each day.

- 7. The junction with the adjacent sheet is satisfactory.
- 8. No further surveying is required in the area covered by the sheets except on the two banks noted in paragraph 3. Attention is called
- to the fact that there is no assurance that the 67-fathom sounding is the least depth in the locality. In view of the distance from land and the difficulty of subsequently recovering the exact spot it would appear best to have developed the spot at the time it was discovered, rather than to have continued the line as was done.
- 9. With the exception of the defects noted the character and scope of the surveying and field drafting may be considered excellent.
- 10. Reviewed by E. P. Ellis, July, 1923.

* Additional Work (1928)

* Capita Borden directed that Aday (1922-3 work) between astronomical fixes at positions 27 and 43 be adjusted so that the soundings of 67 and 618 will coincide with corresponding depths on the 1928 work.

| J. M. Man Yab. Nov 17, 1928.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Sheets 1 & 2.

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4265 4 b

State CALIFORNIA
General locality SOUTHERN SOAST. 4265 Off Los Coronados + Pr. Loma 4265 South of Cortes Bank
Locality . MEXICAN. BOUNDRY TO DEL WAR
Chief of party .H. A. SERAN
Surveyed by H.A. SERAN R.R. LUKENS
Date of survey November 1922 February 1923
Scale 1: 120,000
Soundings in . Fathoms
Plane of reference
Inked by Verified by
Records accompanying sheet (check those forwarded):
Des. report, Tide books, Marigrams, 2 Boat sheets, Disc
.3 Sounding books, Disc. Wire-drag books, Photographs. 1 "Pion.
Data from other sources affecting sheet

Remarks:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
E. Lester Jones , Director
C. & G. SURVEY
L & '
APR 27 1928
Acc. Iso.
State: California
Deute.
DECORPTIVE DEDOCT
DESCRIPTIVE REPORT
** A 2050 A dd'I Mk
Hydrographic Sheet No. 4265a Add'l.Wk.
LOCALITY
Southern Calif.
South of San Clemente Island
192 8
MAX
CHIEF OF PARTY
F. G. Engle, H.& G.E.
1

3251 XX 100 Y

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 4265a - - - - SCALE 1:120,000

COAST OF SOUTHERN CALIFORNIA, - - - - SOUTH OF SAN CLEMENTE ID.

DEVELOPMENT BY DISCOVERER IN 1928.

The work was done in accordance with Par., 2 and 3 of Director's Instructions of Dec., 16, 1927. All soundings are by the Fathometer. For the derivation of Fathometer corrections see graph and tables accompanying Sheet No. 4560.

The compass swing of Jan., 26, 1928 was used for deviations and three sun azimuths were obtained on the line which agreed well with the above swing. No position sights were taken due to poor horizon. A log factor of .997 the mean of log test and test runs was used.

The ends of the line are fixed by three point fixes. The line out to position 15 was plotted by using the log distances and mean of bearings on Nos., 12, 13 and 14. Likewise the line from position 46 to 58 was plotted by log distance from position 58 and the bearings on positions 47 to 52. The bearing 334 degrees on position 46 was disregarded as it happened to be in error.

Between positions 15 and 46 a straight line adjustment was made which resulted in good crossings on the cross line Pos. 38 - 40 with the development lines on the shoal.

Respectfully submitted,

F. G. Engle,

H. & G. Engineer, Chief of Party.

STATISTICS FOR SHEET NO. 4265a

COAST OF SOUTHERN CALIFORNIA - - - SOUTH OF SAN CLEMENTE ID.

Date	1928	<u>:</u>	Letter	:	Volume:	Posit	ion:	Soundings	;	Miles(st.)	:	Vessel
		:	•	:	:		:		:		:	
Feb.	. 29	:	A :	:	1 :	58	:	281	:	113.6	:	Ship

Adjustment of Dead Reckoning line on Sheet 4265a

Line plotted to pos. 15 using mean of bearings on Positions 12, 13 and 14 and log run using log factor .997.

Line back plotted from 58 to 46 using mean of bearings on positions 47 to 52. The bearing of 334° on position 46 was disregarded as it appeared to be too far to the eastward.

The line was adjusted proportionally between Pos. 15 and 46.

This adjustment made the soundings on cross line between 38 and 40 check better than any other. This throws most of the easterly set of 4 1/2 mi. over the shoal. Time 6 hours. Set 0.75 knots 71° true. Deviation from ship swing of Jan. 26th used. Log factor .997 used.

JOH.

Copy for Section of Field Records files.

May 26, 1928.

Division of Hydrography and Popography:

Division of Charts:

Tide reducers are approved in volumes of sounding records for

HYDROGRAPHIC SHEET 4265a add 1.

Locality:

SOUTHERN CALIFORNIA.

Chief of Party: F. G. Engle, 1928.

Plane of reference is M.L.L.W

3.5 ft. cn tide staff at Los Angeles Harbor

Condition of records satisfactory except as checked below:

- 1. Locality and sublocality of survey omitted.
- 2. Month and day of month omitted.
- 3. Time meridian not given at beginning of day's work.
- 4. Time (whether A.M. or P.M.) not given at beginning of day's work.
- 5. Soundings (whether in feet or fathoms) not clearly shown in record.
- 6. Leadline correction entered in wrong column.
- 7. Field reductions entered in "Office" column.
- 8. Location of tide gauge not given at beginning of each day's work.
- 9. Leadline corrections not clearly stated.
- 10. Kind of sounding tube used not stated.
- 11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
- 12. Legibility of record could be improved.
- 13. Remarks.

Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE

AND REFER TO NO. 11-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

Report on Hydrographic Sheet No. 4265 (Additional Work)

The additional work was required to develop a 67 fathom sounding in latitude 32° 07', longitude 118° 18'. This new work was accomplished with the Fathometer and gives a very good development of the locality.

Captain Borden considered that the 1928 work was better fixed than the old work done in 1922-23 and directed that the verifier make the following changes in the old work:

- 1. The A-day having the 67 fathom sounding be adjusted between astronomical fixes at position 27 and 43 so that the soundings of 67 and 618 fathoms respectively will coincide with corresponding depths on the 1928 work.
- 2. B day (1922-23 work) between the positions 3 and 41 be adjusted so that the group of soundings on positions 13 to 31 will agree with corresponding depths on the 1928 work.

These changes were made by the verifier.

The additional work satisfies the general instructions and the specific instructions.

The overlap with H. 4783 agrees very well.

The overlap with H. 4366 will be taken up when the additional work on that sheet has been verified.

Verified and inked by J. C. MacNab, Nov. 20, 1928.

Inspected and found adequate.

E. P. Ellis. December, 1928.

REG. NO

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. REGISTER NO. 4265a Add'I.WK. on orig. Sheet State California General locality Southern Coast. Locality South of San Clemente Island Scale 1-120,000 Date of survey February 29 ,192 8 Vessel DI SCOVERER Chief of Party F. G. Engle Surveyed by F. G. E. Protracted by T. B. Reed Soundings penciled by T. B. R. Soundings in fathoms XXXXXX Plane of reference MLLW Subdivision of wire dragged areas by Inked by..... Verified by Instructions dated December 16 ,192 7 Remarks:



March 16, 1928.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in volumes of sounding records for

HYDROGRAPHIC SHEET 4259a (W.D.)

Locality: SAN DIEGO HARBOR, JAMIFUNGIA.

Chief of Party: F. G. Ungle, 1928.

Plane of reference is NLL NW

2.0 ft. on tide staff at San Diego (C.& J.N. Staff)

Condition of records satisfactory except as checked below:

- 1. Locality and sublocality of survey omitted.
- 2. Month and day of month omitted.
- 3. Time meridian not given at beginning of day's work.
- 4. Time (whether A.M. or P.M.) not given at beginning of day's work.
- 5. Soundings (whether in feet or fathoms) not clearly shown in record.
- 6. Leadline correction entered in wrong column.
- 7. Field reductions entered in "Office" column.
- 6. Location of tide gauge not given at beginning of each day's work.
- 9. Leadline corrections not clearly stated.
- 10. Kind of sounding tube used not stated.
- 11. Sounding tube No. entered in column of "Soundings" instead of "Remarks'.
- 12. Legibility of record could be improved.
- 13. Remarks.

Chief, Division of Pides and Carrents.



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ector
C. & G. SURVEY L & A APR 27 1928 Acc. No.
7100.
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REPORT 4265b Add I WK
4265b Add1 WK

192 8

CHIEF OF PART

F. G. Engle, H.& G.E.

GOVERNMENT PRINTING OFFIC

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 4265b - - - - SCALE 1:120,000

COAST OF SOUTHERN CALIFORNIA - - - - SOUTH OF CORTES BANK.

DEVELOPMENT BY DISCOVERER IN 1928.

The work was done in accordance with Par., 4 of Director's Instructions of Dec., 16, 1927.

All soundings are by fathometer. For the derivation of fathometer corrections see graph and tables accompanying Sheet No. 4560.

The compass swing of Jan., 26, 1928 was used for deviations. Cloudy and rough weather prevented observations. One sun azimuth was observed on A day and one sun sight on B.day.

Departure and closing of both lines run were made on Cortes Bank whistle buoy using the location given on H 4267. A log factor of .997 the mean of a log test and test runs was used.

The adjustment of the line on Aday was as follows: A straight time adjustment of the dead reckoning of the entire line was first made. Position 38 was then arbitrarily moved 1.4 meters as shown to provide better crossings and with position 10 fixed the lines 10 - 38 and 10 - 48 were readjusted for this movement.

On B day a straight time adjustment of the dead reckoning was made.

Respectfully submitted,

F. G. Engle, H. & G. Engineer,

Chief of Party.

Dead Reckoning plotting A day Sheet 4265b

Line first plotted by dead reckoning and adjusted through entire length Pos 1 - 48.

Position 10 was then taken as fixed as it checks the 500 fathom curve. Position 38 was then moved 1.4 mi. as shown and an additional adjustment made between 10 and 38 to make crossings check. This makes soundings on cross lines and soundings on sheet check better than a straight adjustment throughout.

(Using log factor .997 on smooth sheet, pos. 10 D.R. does not check the 500 fathom curve as it did on the boat sheet where a log factor of 985 was used. However, pos. 10 checks fine if the line is adjusted throughout the entire length.)

STATISTICS FOR SHEET NO. H4265b

COAST OF SOUTHERN CALIFORNIA - - - - SOUTH OF CORTES BANK.

Date	1928	3 :	Lette	er:	Volum	θ;	Positio	n:	Soundin	gs:	Miles(s	<u>t.):</u>	:_	Vessel
Mar.	2	:	A	:	1	:	48	:	173	:	110.0		:	Ship
••	13	:	В	: :	1	:	32	:	124	:	84.0	:	; ;	11
			ı	rot	als		- 80	:	297	:	194.0			

Copy for Section of Field Records files.

May 26, 1928.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in 1 volumes of sounding records for

> HYDROGRAPHIC SHEET 4265b ada 1.

Locality: SOUTHERN CALIFORNIA.

Chief of Party: F. G. Engle, 1928. Plane of reference is MILLW

3.5 ft. on tide staff at Los Angeles Harbor.

Condition of records satisfactory except as checked below:

- 1. Locality and sublocality of survey omitted.
- 2. Month and day of month omitted.
- 3. Time meridian not given at beginning of day's work.
- 4. Time (whether A.M. or P.M.) not given at beginning of day's work.
- 5. Soundings (whether in feet or fathoms) not clearly shown in record.
- 6. Leadline correction entered in wrong column.
- 7. Field reductions entered in "Office" column.
- 8. Location of tide gauge not given at beginning of each day's work.
- 9. Leadline corrections not clearly stated.
- 10. Kind of sounding tube used not stated.
- 11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
- 12. Legibility of record could be improved.
- 13. Remarks.

Chief, Division of Tides and Currents.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

DEPARTMENT OF COMMERCE

AND REFER TO NO. 11-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

December 3, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4265b (Additional Work)

- 1. The plotting of the positions by the field party of this additional work has been accepted by the office and the verifier merely checked the time between soundings and inked them. It was found that the spacing had been carefully adhered to.
- 2. The drafting conformed to the requirements of the General Instructions. As the additional work was all done with the fathometer no bottom characteristics were obtained.
- 3. The development satisfies the specific instructions. Referring to these instructions:
 - (a) The area referred to between Lat. 31° 50' and 32° 00' and Long. 119° 00' and 119° 10' where soundings of 28, 50 and 60 fathoms had been reported (28 from H. O. Notice to Mariners No. 32 in 1920; 50 and 60 from H. O. Notice to Mariners No. 1 in 1913) was investigated resulting in a munimum depth of 456 in the approximate locality of the 28, soundings of between 507 and 926 about 2 1/4 miles to the north and south respectively of the 50 fathom sounding, and a sounding of 887 about 3/4 mile south of the 60 fathom sounding. The existence of the 28 and the 60 fathom soundings is most improbable but the 50 fathom sounding is not absolutely disproved as no sounding line comes nearer than 2 1/4 miles from this sounding. These three soundings (28, 50 and 60) have been taken off the chart.
 - (b) The 30 and 50 fathom soundings were investigated and although the area was not thoroughly felt out with the fathometer, it is believed that these depths (sonic soundings) must have been erroneous and they have been removed from the chart.

H. 4265^b (Addl. Work) - 2

- (c) The ridge mentioned has been investigated and the northern limit well determined. The least sounding at the north is 416 fathoms which is also the least on the bank. The southern limit of the bank was not so well developed and as the 28 fathom sounding of paragraph (a) falls on this end of the bank, perhaps further development of this locality should be made.
- 4. The various overlaps with adjoining sheets are satisfactory.
- 5. Reviewed by J. C. MacNab, December, 1928.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE

AND REFER TO NO. 11-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

Inspection of H. 4265b (Additional Work)

Referring to the specific instructions dated December 16, 1927:

- . Par. 4 a and c:- The development indicates the non-existence of the 28 and 60 soundings in their reported locations. The new work did not cover the locations of the 50 and "heavy breakers" but passed within two miles of them and their existence in the reported locations is improbable.
 - Par. 4 b:- The work covered the 30 and 50 soundings and the least water found was in excess of 900 fathoms and their existence in reported locations is improbable.

The soundings noted above have been indicated on the sheet in pencil for future reference. None of them is now shown on the chart and, in the opinion of A. M. Sobieralski and F. S. Borden, the new work does not indicate the need of replacing them on the chart.

Attention is called to the fact that there are open spaces of 4 and 5 miles in the general locality of the reported soundings, and additional work appears necessary to completely disprove their existence in other localities than those reported.

4265b Add'I,Wk.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No.

REGISTER NO. H4265b Add'I, Wk.

State Californ	11a
	Southern Coast.
South of Locality Cortes	Bank
Scale 1-120,000	Date of survey March 2- 13 ,1928
Vessel DISCOVERER	
Chief of Party	F. G. Engle
Surveyed by	F. G. E.
Protracted by	T. B. Reed
Soundings penciled	by T. B. R.
Soundings in fathor	us kaak x
Plane of reference	MLLW
Subdivision of wire	e dragged areas by
Inked by	
Verified by	
Instructions dated	December 16 ,1927
Remarks:	