

# 4980a+b

Diag. Cht. No. 5402-2 & 5530-3

4980a+b

Form 504 Ed. June, 1928	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. Patton, Director	
State: California	
DESCRIPTIVE REPORT	
Topographic Hydrographic	10 + 10 <sup>a</sup> Sheet No. 4980a 4980b
LOCALITY	
Approaches to San Francisco Bay Pt. Montara to Pt. Reyes	
1929	
CHIEF OF PARTY	
O. W. Swainson	

C. & G. SURVEY  
L. & P.  
APR 2 1930  
Acc. No.

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 10 & 10A

SHIP HYDROGRAPHY      COAST OF CALIFORNIA

APPROACHES TO SAN FRANCISCO BAY

1929

U.S.C. & G.S.S. PIONEER

O. W. SWAINSON COMMANDING

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET NO.10 & 10a

H49802  
H49802

The hydrography contained on these sheets was done in accordance with instructions dated April 9, 1929.

The scale of sheet No.10 is 1:80,000. It was intended to cover the area from a junction with sheets No.8 & 12 out to the 300 fathom curve, and from Pt.Reyes south to latitude  $37^{\circ}-30'$  N. It is joined on the north by work of the DISCOVERER, F.B.T.Siems Commdg.; on the east by sheet 8 and unsurveyed area, on the west by sheet 11, and on the south by sheet 12. This sheet encloses the Farallons, which area is developed on sheet 7.

SHEET NO.10a

When running over Fanny Shoal and the area to the northward, many doubtful soundings were obtained. In investigating these it was found that a larger scale was required in order to plot all the extra work necessary. As so much of the work was already recorded in sheet No.10 sounding volumes, it was decided to continue recording the work in sheet No.10 records but to plot all the area on a 1:20,000 scale sheet and call it No.10a. This is a better procedure than having several overlays. A list of the positions plotted on sheet 10a is placed on the sheets.

CONTROL

The control was mostly R.A.R.; where possible, visual fixes were obtained. The hydrophone at Pt.Reyes had to be moved once, that at Farallon Islands once, and that at Pt.Montara two times. This required the drawing of seven ~~##~~ sets of R.A.R. circles for the three stations. Distances were obtained also from KVB of the DISCOVERER. Therefore the sheet contains eight sets of cir-

cles. It is somewhat confusing, but could not be avoided.

#### SOUNDING CORRECTIONS

Several comparisons of the fathometer with vertical casts were taken each day the fathometer was used. The position of these comparisons was seldom obtained. The fathometer readings were corrected for salinity, temperature, base line, and index corrections. For a complete description of the correction tables and their derivation see descriptive report for sheet No. 8 or the Season's Report. *H4979*

Slope corrections were made before the circular was received eliminating them under most conditions. Wherever the correction was made, the actual sounding was placed directly under it on the sheet.

#### CHECK LINES

Few cross check lines were run as checks were obtained by the adjacent parallel lines run on a different day under different conditions, and by the many adjacent ends of line.

#### SHOALS

The bottom of the area extending Northwest of Noonday Rock was exceedingly uneven. Consequently, the fathometer was watched closely and every stray recorded and later checked to determine if it was a sounding or only a stray. This resulted in an immense amount of work, but was thought necessary on account of the known steepness and small area of the rocks in this locality as evidenced by the sharp Farallones and Noonday Rock. The shoal soundings shown here on the chart could not be found in all cases but others in their general vicinity were discovered. Owing to the difficulty of obtaining

fixes before R. A. R. was used it is thought the positions of the soundings on the chart are in error.

Several of the strays were apparently checked by others on cross lines but nevertheless a close study of them proved them all to be strays. The 20 fathoms shown on the boat sheet at latitude  $37^{\circ} 49' 30''$  and longitude  $123^{\circ} 15' 15''$  is one case in point. It was apparently checked by soundings between 27 and 28 V, 62 - 63 Y, 67 - 68 X, 29 - 30 BB, and 81 - 82 - DD but not 40 - 41 BB. The shoal soundings 27 - 28 V should be rejected because there were so many more similar flashes along this line from positions 22 to 30. This would indicate an impossible long narrow ridge, as deep water was obtained on either side of the line; 62- 63 X and 67 - 68 X are visual fixes yet each show apparent detached shoals and no indication of each other. There were no indications of a shoal between 40 - 41 BB, 85 - 86 DD, and 66 - 67 W which pass over practically the same area.

Fathometer flashes near positions 36 - 37 - 38 and 42 DD seemed to check those between 17 and 18 V but similar strays were observed in deep water at 39 DD. The echo was very loud as shown by note at position 44 DD; notes on page 14, and 15, Vol. 8 say 'flashing regularly at 20'. The correct depth there was 58 fathoms. Therefore no doubt most of the bothersome strays were caused by double echos.

A submarine kite set at 34 fathoms was towed over the area on DD day and fixes determined by observing an anchored small boat located by visual fixes and R. A. R. Vertical casts were also obtained. Both disproved the existence of any shoal.

VELOCITY TESTS

Many velocity tests were taken by means of simultaneous visual fixes and by distance obtained to three stations. The velocity adopted for the vicinity of Fanny Shoal was 1484 to K V B, and 1486 to K V H and K V E. For the area east and south of the Farallones 1490 was used. A list of the velocity tests is attached to the season's report.

SOUNDINGS AT SHEET JUNCTIONS THAT APPEAR TO BE DOUBTFUL

Soundings from positions	9LL to 12LL
" " "	2W + 39,39,40
" " "	81W + 38,38,38,38
" " "	113E + 40,41
" " "	51KK + 42,42
" " "	65KK + 43,42,42,
" " "	86KK + 39,39,39,39
" " "	5QQ to 6QQ
" " "	2K + 42,42,43,43,42,43
" " "	28T + 32,33
" " "	27G + 261

*above adps should be rejected  
O.W.S.*

*Respectfully submitted  
O.W.S.  
Chief of Party*

STATISTICS - HYDROGRAPHIC  
SHEET NO. X.

	Date	Day	Sndg. Ltr.	Bomb. Vol.	Log Pos.	Visual Pos.	Stat. Miles	F. R.	F. W.	Boat
JULY	11	A	1	18	4	3	43.5	191	9	PIONEER
	16	C	1	31	24		64.0	288	12	"
	17	D	1	50	51		126.0	635	31	"
	18	E	1 & 2	41	49	39	146.0	618		"
	19	F	2	15	14		37.5	164	10	"
	23	G	2	19	14	2	43.5	177	22	"
	24	H	2	15	13	4	43.0	189	18	"
	25	J	2	12	13	4	35.0	159	13	"
	31	K	3	11	7		25.7	90	16	"
AUG.	5	L	3	23	27	8	57.3	155	83	"
	6	M	3	6	7	4	19.0	61	6	"
	7	N	3	20	16		32.5	139		"
	8	P	3	11	9		19.4	131		"
	9	Q	3 & 4	29	10		51.5	524		"
	14	R	4	45	50		112.1	558		"
	15	S	4	40	47		92.0	404		"
	16	T	5	17	12		37.0	182		"
	20	U	5	34	19		42.0	400		"
	21	V	5	34	17		43.4	462		"
	22	W	5	39	38	4	82.2	366		"
	23	X	6	11		71	38.5	346		"
	27	Y	6			33	17.4	199		"
	28	Z	6	57	42		85.4	637		"
	29	AA	6 & 7	72	44		105.0	789		"
	30	BB	7	39	31		57.0	520		"
Sept.	4	CC	7	33	32		38.0	542		"
	5	DD	8	15		93	43.2	534		"
	17	EE	8	54	37		66.3	476	42	"
	18	FF	8	11	4		29.5	161		"
	19	GG	8 & 9	7	6		18.5	83		"
	20	HH	9	25	34		56.5	277	22	"
	23	JJ	9	17	32	1	46.0	128	20	"
	24	KK	9	45	53	2	99.7	512		"
	25	LL	9	17	26		39.1	166		"
	30	MM	10	33	38		70.0	251	48	"
OCT.	2	NN	10	1		65	46.8	204	29	"
	14	PP	10	9		59	45.0	216		"
	24	QQ	10	9	7		31.0	204	3	"
NOV.	21	TT	10	5	5		14.0	83		"
Totals				970	832	392	2099.5	12221	384	

Correction in Fathoms

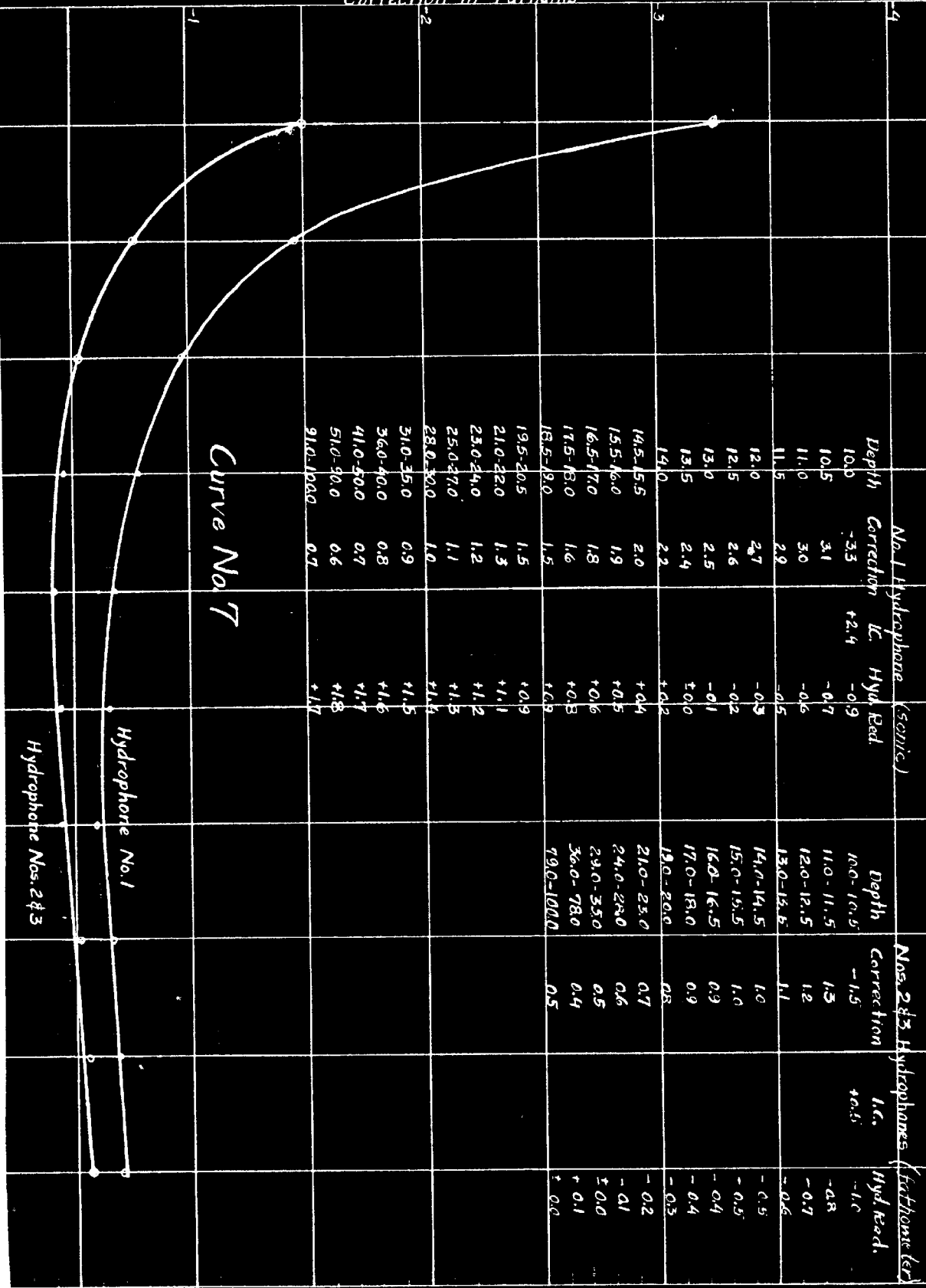
Final Table of Corrections "E"

No. 1 Hydrophone (Sonic)		Nos. 2 & 3 Hydrophones (Fathoms)	
Depth	Correction	Depth	Correction
10.0	-3.3	10.0-10.5	-1.5
10.5	3.1	11.0-11.5	1.3
11.0	3.0	12.0-12.5	1.2
11.5	2.9	13.0-13.5	1.1
12.0	2.7	14.0-14.5	1.0
12.5	2.6	15.0-15.5	1.0
13.0	2.5	16.0-16.5	0.9
13.5	2.4	17.0-18.0	0.9
14.0	2.2	19.0-20.0	0.8
14.5-15.5	2.0	21.0-23.0	0.7
15.5-16.0	1.9	24.0-24.0	0.6
16.5-17.0	1.8	25.0-35.0	0.5
17.5-18.0	1.6	36.0-78.0	0.4
18.5-19.0	1.5	79.0-100.0	0.5
19.5-20.5	1.5		
21.0-22.0	1.3		
23.0-24.0	1.2		
25.0-27.0	1.1		
28.0-30.0	1.0		
31.0-35.0	0.9		
36.0-40.0	0.8		
41.0-50.0	0.7		
51.0-90.0	0.6		
91.0-100.0	0.7		

Curve No. 7

Hydrophone No. 1

Hydrophone Nos. 2 & 3





(FOR FILMS OF FIELD RECORDS SECTION)

April 21, 1930.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in  
10 volumes of sounding records for

HYDROGRAPHIC SHEET 4980 a & b

Locality: California (San Francisco Harbor Entrance)

Chief of Party: O. W. Swainson in 1929  
Plane of reference 3.8 ft. on tide staff at Point Reyes  
mean lower low water, reading  
3.8 ft. below B. M.

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 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.

10. a) The cartographer accepted as correct all corrections to soundings and distances from hydrophone stations as applied in the field.
- b) No difficulty was encountered with the records which were comprehensive and well kept, or with the plotting, which was in the main excellent.

Every R.A.R. position was checked and about 20% of the positions fixed by shore objects with surprisingly few changes necessary because of erroneous plotting.

c) There were two instances of slight disagreement at line crossings (92E - 10KK and 3TT - 9FF) but due to the nature of the bottom, the depth of water and the small difference in depth compared with surrounding soundings, they were accepted as plotted.

d) All of X day and Y day will be found plotted both on this sheet and on 4980b. Since all control for these lines was located on this sheet it was necessary to plot the work on this sheet and transfer it to sheet 4980b where it rightfully belongs. In order to get an accurate and rapid check on the plotting of these days on 4980b by the field party, a photographic enlargement was made of this section on this sheet and a comparison made by transfer.

e) GG day line (17 GG to 31 GG) appears to be slightly in error, being on examination apparently one fathom too shoal. The only way this apparent error can be corrected is by revising the corrections to the soundings as established and applied in the field or by shifting the plotted R.A.R. fixed positions which at present are plotted correctly according to the records. Attention is called to Capt. Borden's note, in the season's report of Capt. Swainson covering this work, concerning the application of an average index correction for the whole season. Capt. Borden observes a marked change in comparisons made before June 20, 1929 as compared with those for the remainder of the season and suggests that two average index corrections should have been used instead of one. There was no comparison made for this particular day's work (GG day, Sept. 19). However, by applying the average index correction as suggested by Capt. Borden for this part of the season's work, which is less than the correction actually used by the field party, the depth of soundings on this line would be uniformly increased.

Because of the slight cartographic value of the change and the responsibility of altering corrections already established, the cartographer did not make this change.

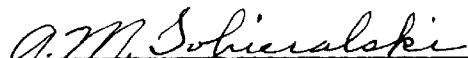
f) At lat. 37° 54'.5, long. 123° 12'.7, chart 5402 shows a 38 fathom sounding. This sheet shows that this depth does not exist in the charted location and it should be expunged from the chart.

g) The single line of soundings on TT day crosses 20 lines done on 7 days. The depths on TT day are 1 to 6 fathoms deeper at all crossings except one where it is one fathom shoaler. The differences are not due to erroneous locations, but are probably due to the fathometer being out of adjustment.

11. Reviewed by H. E. MacEwen, Asst. Carto. Engineer, Dec. 31, 1930.

Inspected: E. P. Ellis.

Approved:

  
Chief, Section of Field Records

  
Chief, Section of Field Work

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

AND REFER TO No. 82-DRM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4980a

Surveyed in 1929

Chief of Party, O. W. Swainson

Surveyed by O. W. Swainson

Plotted and soundings penciled by G. A. Nelson

Verified and inked by H. E. MacEwen

1. The records conform to the requirements of the general instructions.
2. The plan and character of the development fulfill the requirements of the general instructions.
3. The plan and extent of the development satisfy the specific instructions except that at the completion of the season's work a small gap existed between North Farallon Island and Noonday Rock Buoy. This apparently was not covered by sheet No. 5013 completed subsequently.
4. No complete system of cross lines was run. There were, however, sufficient crossings to serve as a good check on the main areas covered.
5. The usual depth curves could be completely drawn.
6. The field plotting was completed to the extent prescribed in the general instructions.
7. None of the drafting done in the field had to be done over in the office.
8. No overlap was applied to this sheet from adjacent surveys, all sheets being at this writing incomplete except 4979. No. 4979, because of its scale, will receive the overlap from this survey.
9. No further surveying is required to develop important areas within the existing limits of this sheet. However, to complete the area contemplated in the specific instructions, the gap mentioned in paragraph 3 (between North Farallon Island and Noonday Rock Buoy) should be surveyed.

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

AND REFER TO No. 82-DRM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4980a<sup>b</sup>

Surveyed in 1929

Chief of Party, O. W. Swainson

Surveyed by O. W. Swainson

Plotted and soundings penciled by G. A. Nelson

Verified and inked by H. E. MacEwen

1. The records conform to the requirements of the general instructions.
2. The plan and character of the surveying fulfill the requirements of the general instructions.
3. The plan and extent of the development satisfy the specific instructions.
4. Cross lines were run only on the shoal development located approximately in lat.  $37^{\circ} 49'$ , long.  $123^{\circ} 15'$ .
5. The usual depth curves can be completely drawn.
6. The field plotting was completed to the extent prescribed in general instructions.
7. It was not necessary to do over any of the drafting done by the field party.
8. The sounding records show that considerable difficulty was experienced with the fathometer due to numerous strays. Many of these were rejected by the Chief of Party and others were OK'd by him. His recommendations were accepted in plotting the sheet.
9. The area included in the survey is well covered, except to the northwestward of Fanny Shoal where there are several shoalings that should have been developed. This is particularly true of the two 20 fathom soundings at  $37^{\circ} 49'$ ,  $123^{\circ} 12'$ . Both of these soundings appear to be authentic. *(See soundings disproved by H 8208 (1954))*

10. On the bank extending 2 1/2 miles northwestward of Fanny Shoal <sup>These shoal edges</sup> are numerous soundings 5 to 18 fathoms shoaler than the ruling <sup>approved by H8208</sup> depths. Owing to faulty operation of the fathometer some of <sup>(1954)</sup> these shoals are dubious, although OK'd by the Chief of Party. In selecting soundings for the chart care should be exercised to avoid misrepresenting the true condition by showing only the shoal soundings to the exclusion of the deeper ones.

11. Overlap with sheet 4980a was omitted since it is part of the same survey, and since parts of many lines appear on both sheets. On 4980a the outside limits of this sheet were plotted to show the extent of overlap.

12. Remarks:

a) Comparison with chart 5402 shows one large shoal area (37° 53', 123° 19' approx.) and two small spots to the southward, developed by the field party which did not exist on the chart. A least depth of 37 fathoms is about 23 fathoms shoaler than the depth indicated on the chart in this area.

b) The following soundings which appear to have been "strays" have been approved in the records by the Chief of Party and are therefore retained. These soundings in each instance show considerably shoaler than surrounding depths:

*Rejected as Strays  
Review, H-8208(1954)  
I.A.D. 9-26-56*

26	fathoms,	lat. 49'.2,	long. 12'.0	10Q	Flash OK'd approved C.of P.
27	"	48'.7	12'.0	20-21 Q	No note in record
25	"	48'.5	12'.0	24Q	Approved by C.of P.
30	"	49'.6	13'.5	44-45X	"
20	"	48'.5	12'.3	48-49X	Flash OK'd. Following sounding OK'd by C.of P.
25	"	49'.2	13'.0	56-57X	Checked and approved by C.of P.
20	"	49'.0	12'.7	56X	"
30	"	49'.4	13'.3	22-23Y	"
46	"	48'.7	15'.3	31-32Y	OK'd by C.of P.

c) All of X day and Y day were transferred to this sheet from 4980a having first been plotted on the "a" sheet. This was necessary since all the control for these days was on 4980a only. The transfer was made in the field and carefully checked in the office by a comparison with an overlay ~~mapping~~ tracing taken from a photographic enlargement of the section of 4980a including this work. All the work except X and Y days is based on RAR control and was plotted directly on the sheet.

13. Reviewed by H. E. MacEwen, Asst. Carto. Engineer, Dec. 31, 1930.

Approved:

A.M. Solieralski  
Chief, Section of Field Records

J.B. Borden  
Chief, Section of Field Work

Inspected - ERE

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 49802

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. 10

REGISTER NO. 49802

State California  
General locality Approaches to San Francisco Bay  
~~Northern California Coast~~  
Locality Pt. Montara to Pt. Reyes Head  
Scale 1:80,000 Date of survey July 11- Nov. 21, 1929  
Vessel PIONEER  
Chief of Party O. J. Swainson  
Surveyed by O. J. Swainson  
Plotted  
Protracted by G. A. H.  
Soundings penciled by G. A. H.  
Soundings in fathoms feet  
Plane of reference MLLW  
Subdivision of wire dragged areas by  
Inked by  
Verified by  
Instructions dated April 9, 1929, 19  
Remarks:

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. 10a

REGISTER NO. **4980b**

State California

General locality Approaches to San Francisco Bay  
~~Northern California Coast~~

Locality SW. of Pt. Reyes  
~~Pt. entrance to Pt. Reyes Head~~

Scale 1:20,000 Date of survey July 11-Nov. 21, 1929

Vessel PIONEER

Chief of Party O. W. Swainson

Surveyed by O. W. Swainson

Plotted  
~~Protracted~~ by G. A. N.

Soundings penciled by G. A. N.

Soundings in fathoms ~~feet~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated April 9, 1929, 19

Remarks:



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

AND REFER TO NO. 82-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4980.<sup>b</sup>

Surveyed in 1929

Chief of Party, O. W. Swainson

Surveyed by O. W. Swainson

Plotted and soundings penciled by G. A. Nelson

Verified and inked by H. E. MacEwen

1. The records conform to the requirements of the general instructions.
2. The plan and character of the surveying fulfill the requirements of the general instructions.
3. The plan and extent of the development satisfy the specific instructions.
4. Cross lines were run only on the shoal development located approximately in lat.  $37^{\circ} 49'$ , long.  $123^{\circ} 15'$ .
5. The usual depth curves can be completely drawn.
6. The field plotting was completed to the extent prescribed in general instructions.
7. It was not necessary to do over any of the drafting done by the field party.
8. The sounding records show that considerable difficulty was experienced with the fathometer due to numerous strays. Many of these were rejected by the Chief of Party and others were OK'd by him. His recommendations were accepted in plotting the sheet.
9. The area included in the survey is well covered, except to the northwestward of Fanny Shoal where there are several shoalings that should have been developed. This is particularly true of the two 20 fathom soundings at  $37^{\circ} 49'$ ,  $123^{\circ} 12'$ . Both of these soundings appear to be authentic.

10. On the bank extending 2 1/2 miles northwestward of Fanny Shoal are numerous soundings 5 to 18 fathoms shoaler than the ruling depths. Owing to faulty operation of the fathometer some of these shoals are dubious, although OK'd by the Chief of Party. In selecting soundings for the chart care should be exercised to avoid misrepresenting the true condition by showing only the shoal soundings to the exclusion of the deeper ones.
11. Overlap with sheet 4980a was omitted since it is part of the same survey, and since parts of many lines appear on both sheets. On 4980a the outside limits of this sheet were plotted to show the extent of overlap.

## 12. Remarks:

a) Comparison with chart 5402 shows one large shoal area (37° 53', 123° 19' approx.) and two small spots to the southward, developed by the field party which did not exist on the chart. A least depth of 37 fathoms is about 23 fathoms shoaler than the depth indicated on the chart in this area.

b) The following soundings which appear to have been "strays" have been approved in the records by the Chief of Party and are therefore retained. These soundings in each instance show considerably shoaler than surrounding depths:

26 fathoms,	lat. 49'.2,	long. 12'.0	10Q	Flash OK'd approved C.of P.
27 "	48'.7	12'.0	20-21 Q	No note in record
25 "	48'.5	12'.0	24Q	Approved by C.of P.
30 "	49'.6	13'.5	44-45X	"
20 "	48'.5	12'.3	48-49X	Flash OK'd. Following sounding OK'd by C.of P.
25 "	49'.2	13'.0	56-57X	Checked and approved by C.of P.
20 "	49'.0	12'.7	56X	"
30 "	49'.4	13'.3	22-23Y	"
46 "	48'.7	15'.3	31-32Y	OK'd by C.of P.

c) All of X day and Y day were transferred to this sheet from 4980a having first been plotted on the "a" sheet. This was necessary since all the control for these days was on 4980a only. The transfer was made in the field and carefully checked in the office by a comparison with an overlay ~~making~~ tracing taken from a photographic enlargement of the section of 4980a including this work. All the work except X and Y days is based on RAR control and was plotted directly on the sheet.

13. Reviewed by H. E. MacEwen, Asst. Carto. Engineer, Dec. 31, 1930.

Approved:

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 Chief, Section of Field Records

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 Chief, Section of Field Work
*Inspected-E.R.E.*

4980<sup>A</sup> applied to Extension of Cht. 5599 July 10, 1941 K.Q.

H. 4980 a&t applied to new chart 5598 Oct. 1956 G.H.E.

H. 4980 a&t comp. app'd to new chart 5072 4-3-64 E. W. Prognje

2700

2700