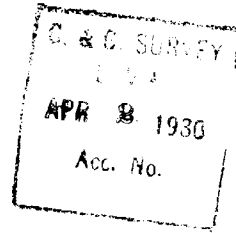


4974

Diag. Cht. No. 5402-2

| | | |
|--|--|---|
| Form 504 Ed. June, 1928 | | |
| DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. Patton Director | | |
| State: California | <table border="1"><tr><td>S. & G. SURVEY L. & A. APR 2 - 1929 Acc. No.</td></tr></table> | S. & G. SURVEY L. & A. APR 2 - 1929 Acc. No. |
| S. & G. SURVEY L. & A. APR 2 - 1929 Acc. No. | | |
| DESCRIPTIVE REPORT | | |
| Topographic Hydrographic | } Sheet No. 4974 | |
| LOCALITY | | |
| Drakes Bay | | |
| Double Pt. to Pt. Reyes Head | | |
| 1929 | | |
| CHIEF OF PARTY | | |
| O.W. Swainson | | |

4974



DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 1

4974

INSHORE HYDROGRAPHY

COAST OF CALIFORNIA.

VICINITY OF DRAKE'S BAY

1929

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

O. W. SWAINSON COMMANDING

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 1.

INSHORE HYDROGRAPHY COAST OF CALIFORNIA

VICINITY OF DRAKE'S BAY.

AUTHORITY

Director's orders dated April 9, 1929.

SCALE

The scale of this sheet is 1:20,000.

SURVEY METHODS

Soundings were taken by hand lead only. The speed of the launch was regulated so that all casts gave reliable vertical soundings. Bottom specimens were taken at intervals.

All fixes consisted of sextant angles observed on definite objects which had previously been located by triangulation and topography.

LIMITS

The western limit of the sheet is Point Reyes Light House and the eastern limit joins hydrographic sheet No. 2 at Double Point. It develops an area from the shoreline to the nineteen fathom curve.

DANGERS

The dangers on this sheet are the same as those listed on chart #5599.

GENERAL CHARACTERISTICS

The water along Point Reyes Head close in to shore is foul, there are numerous rocks which show above high water and also a number awash. There are two rocks awash 295 meters 99° true from Point Reyes East. There are breakers over the rocks.

In Drake's Bay the bottom drops off gradually from the shore to the limit of the work on this sheet.

The entrance to Drake's Estuary is very shoal and the breakers are heavy when there is a little sea running.

Off Triangulation Station Gen there are three large rocks and rocks awash.

Southwest of Double Point are two offlying rocks, one large and one small. There are also a number of rocks awash close into shore, and also kelp.

ANCHORAGES

Drake's Bay is a good anchorage for ships and boats when the wind is from the North and West.

COMPARISONS WITH PREVIOUS SURVEY

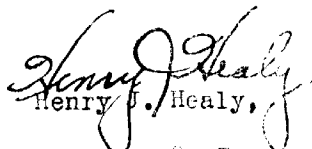
The new survey was compared with chart #5599 and the soundings agree very well. The bottom characteristics also agree.

BUOY

Point Reyes East light was found to check the position shown on the chart within 15 meters.

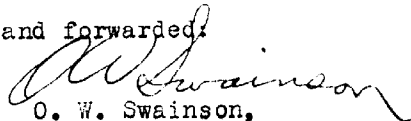
TIDES

The tide observed at the Drake's Bay gauge were used to reduce all soundings on the sheet.


Henry J. Healy,

Jr. H. & C. Engineer.
C. & G. Survey.

Approved and forwarded:


O. W. Swainson,

H. & C. Engineer,
Chief of Party.

STATISTICS

Hydrographic Sheet, No. 1 ~~8-12~~.

Sheet No. 1.

| Date 1929 | Day Letter | Volume | Visual Positions | Statute Miles | Leadline Soundings | Boat |
|-------------------------|---------------|--------|---------------------|------------------|-----------------------|--------|
| June 18 | a | 1 | 103 | 27.0 | 496 | LIANUS |
| 19 | b | 1 | 91 | 23.3 | 409 | " |
| 20 | c | 1 | 95 | 22.8 | 403 | " |
| 21 | d | 2 | 51 | 11.4 | 227 | " |
| 24 | e | 2 | 12 | 2.0 | 38 | " |
| July 1 | f | 2 | 57 | 13.5 | 245 | " |
| 2 | g | 2 | 92 | 22.7 | 380 | " |
| 3 | h | 2 | 45 | 11.0 | 170 | " |
| 8 | j | 3 | 48 | 10.6 | 208 | " |
| 9 | k | 3 | 65 | 25.3 | 403 | " |
| 10 | l | 3 | 69 | 18.6 | 329 | " |
| 11 | m | 3 | 67 | 19.0 | 306 | " |
| 12 | n | 3 & 4 | 66 | 16.1 | 294 | " |
| 17 | p | 4 | 48 | 8.5 | 212 | " |
| 18 | q | 4 | 98 | 23.9 | 405 | " |
| 19 | r | 4 | 29 | 6.3 | 112 | " |
| Nov. 15 | s | 4 | 41 | 9.3 | 250 | " |
| Totals | | | 1077 | 271.3 | 4987 | |
| Sheet No. 1. | | | | | | |
| June 14 | a | 1 | 63 | 10.5 | 293 | Motor- |
| 21 | b | 1 | 109 | 21.0 | 446 | sailer |
| Total s | | | 172 | 31.5 | 741 | |
| Grand Totals | | | 1249 | 302.8 | 5728 | |

FOR THE FILES OF FIELD RECORDS SECTION)

lcm

April 18, 1930

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4974

Locality: California (Drakes Bay)

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

SECTION OF FIELD RECORDS

REPORT ON SHEET No. H-4974

SHEET COMPLETED OCT. 4, 1930.

SURVEYED IN 1929

CHIEF OF PARTY - O. W. SWAINSON

SURVEYED BY - K. G. CROSBY, H. J. HEALY, E. O. HEATON

PROTRACTED BY - G. R. FISH.

SOUNDINGS PLOTTED BY - J. C. ELLERBE, JR.

VERIFIED & INDEXED BY W. H. BAMFORD.

- 1.) The records were found to conform to the requirements of the General Instructions for Field Work.
- 2.) The protracting was good - only 0.714 % of the positions checked were found in error.
- 3.) The spacing of soundings was fairly good, although a number of errors were found where the time interval was irregular.

4.) The sounding line crossings were found to be adequate.

5.) The development is considered to be sufficient except offshore from "Chimney Rock" (THIS WILL BE REFERRED TO IN FOLLOWING PARAGRAPH)

6.) The usual depth curves could be drawn, but in the vicinity of "Chimney Rock" LONGITUDE $122^{\circ}-57'$ 730 METERS and LATITUDE $37^{\circ}-59'$ 300 METERS (APPROXIMATELY) the development was not sufficient to accurately draw the five fathom curve. A shoal makes out from the land at this point and its extent was not accurately determined.

7.) The sheet was fairly clean and the work found to be legible.

8.) Quite a number of the rocks were not transferred from the Topographic sheets to this sheet by the field party and the low water line was not inked by the field party. The wreck symbol for the wreck of the Hartwood in Latitude $37^{\circ}59'98''$ and Longitude $122^{\circ}58'874$ meters (approx.) was added to the hydrographic sheet.

9.) The entire sheet was very poorly penciled. The soundings were spaced very poorly and the fractions were seldom plotted correctly. No regard was paid to the rules for plotting fractions in the Hydrographic Manual - at all.

10.) No adjacent sheets had been verified and inked at the time this sheet was completed.

Respectfully Submitted
Warren W. Bamford

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

AND REFER TO No. 11-WSW

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

March 12, 1931.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4974

Drakes Bay, California

Surveyed in 1929

Hand lead soundings.

Instructions dated April 9, 1929 (Pioneer)

Chief of Party, O. W. Swainson

Surveyed by K.G. Crosby, H.J. Healy, E.O. Heaton

Protracted by G. R. Fish

Soundings plotted by J. C. Ellerbe Jr.

Verified and inked by W. H. Bainford

1. The records conform to the requirements.
2. The plan, character and extent of the survey satisfy the requirements of the general and specific instructions.
3. The sounding line crossings are satisfactory.
4. The information is sufficient for drawing the usual depth curves.
5. There are several places along the southern limits where the work should have been carried further out in order to form a better junction with the offshore sheet, H. 4979. In these little blank areas there is no indication of any shoaling however. The fathometer

soundings on H. 4979 check well with the hand lead soundings on this sheet.

The junction with H. 4975, which is uncompleted, will be reported in the review of that sheet.

The old surveys H. 435, H. 720 and H. 721 agree fairly well with this sheet. While there are no serious discrepancies between this survey and the old sheets, all of which were surveyed prior to 1860, it is recommended that the recent survey, H. 4974 shall supersede them. The word "Breakers" as shown on Chart 5599, southeast of Point Reyes, probably extends too far in a southeasterly direction as no breakers are noted on the sounding lines of this sheet.

6. The usual amount of field plotting was done by the field party. The protracting was well done but the soundings were not well spaced and fractions were not correctly expressed.

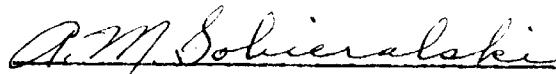
7. Character and scope of surveying - good.

The ground is uniformly covered except in a few spots where the junction with H. 4979 is poor and the development is considered sufficient except on the shoaling southeast of Pt. Reyes, which should have been more closely developed.

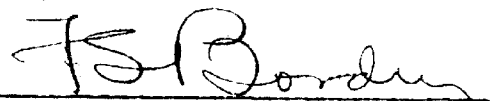
8. No additional work is recommended.

9. Reviewed by R. L. Johnston - October 13, 1930.

Approved:



Chief, Section of Field Records (CHARTS)



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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4974

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. 1

REGISTER NO. 4974

State California

General locality Northern California Coast Drakes Bay

Locality Double Pt. to Pt. Reyes Head.

Scale 1:20,000 Date of survey June 18 - Nov. 15, 1929

Vessel MIANUS & Motorsailer

Chief of Party O. W. Swainson,

Surveyed by K. G. Crosby, H. J. Healy, & E. O. Heaton

Protracted by G. R. Fish

Soundings penciled by J. C. Ellerbe Jr.

Soundings in fathoms feet

Plane of reference Mean Lower Low Water.

Subdivision of wire dragged areas by

Inked by Warren H. Bamford

Verified by W. H. B.

Instructions dated April 9, 1929. 192

Remarks:



Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4974

The following statistics will be submitted with the cartographer's report on the sheet:

| | |
|--|------|
| Number of positions on sheet | 1249 |
| Number of positions checked | 252 |
| Number of positions revised | 18 |
| Number of soundings recorded | 5728 |
| Number of soundings revised | 682 |
| Number of signals erroneously plotted or transferred | NONE |

Date: October 4 - 1930

Cartographer: Waverly H. Bamford

4974 (1929)

appd 5601 Helmer 11/21/63
Copy appd to Nav Chart 5072 time alt 5599 Carlisle Boggs 4-20-64