

4707

4707

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

....., Director

O. & G. SURVEY
L. & A.
Acc. No.

State: Hawaiian Is.

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. ¹⁰ 4707
~~Hydrographic~~ }

LOCALITY

Kauai - N. Coast

Kalihiwai Bay

1927

CHIEF OF PARTY

F.G. Engle

GOVERNMENT PRINTING OFFICE

86625 3v

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: ~~Hawaiian~~ Islands

17-5613

DESCRIPTIVE REPORT.

Hydro. Sheet No. 10 4707

LOCALITY:

Kauai Island

Kalihiwai Bay, North coast of Kauai

19~~2~~7

CHIEF OF PARTY:

F. G. Engle

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET #10 KALIHIWAI BAY, KAUAI, T. H.
Commanding Officer's Instructions dated, November 23, 1926.

LIMITS: This sheet covers the hydrography of Kalihiwai Bay and approaches and joins the hydrography of field sheet No. 8 on both the eastern and western ends. Sounding lines were carried offshore to slightly beyond the 10 fathom curve.

SURVEY METHODS AND CONTROL: Control for this survey consisted of a series of topographic signals established on Topographic Sheet G, Kalihiwai Bay, scale 1:5,000 completed just previous to the hydrography.

This survey was made in accordance with the usual methods of launch hydrography using a 30 ft., motor sailer and a copper centered hand lead line with a 10 lb., lead. The sounding lines were carried as close to the beach as safety would permit. The outer limit of reefs and breakers was sketched in from the sounding launch while at the inner ends of the sounding lines.

The bottom in this vicinity is rock and coral and is very irregular in depth.

Tidal reducers for this sheet were obtained from a portable automatic gauge operated at Hanalei Bay.

GENERAL DESCRIPTION OF THE COAST: This subject is fully covered in the descriptive report accompanying Topographic Sheet G., Kalihiwai Bay.

LANDMARKS: Signal SPIRE, the steeple of a white church, is fairly prominent at a reasonable distance from shore, also signal ROCK which is a large rock crusher. The group of houses at the head of the bay, in Kalihiwai village are fairly prominent and will enable the bay to be identified when approaching from the northward.

INSHORE DANGERS: About 175 meters north of signal TON is a rock awash at high tide. From signal COW to the western limits of the sheet is coral reef entirely submerged at high water, the outer limits of which were sketched while at the inner ends of the sounding lines by the hydrographic party. From signal COW to KAW the reef is bare in spots at low water and from signal KAW to the western limit of the sheet the reef is almost entirely bare at low water. The outer limits of this reef are plainly outlined at all times by a row of breakers.

ANCHORAGES ETC: Anchorage in this bay affords shelter only from southerly winds. Small craft can find a good anchorage and protection from the North East trades by anchoring close in shore off signal IN. In northerly weather a heavy swell sets into this bay.

This bay at present has no commercial use.

Approved & Forwarded:

F. G. Engle
F. G. Engle, Comdg. Str. Discoverer.

Respectfully submitted,

Thos B Reed
Thos. B. Reed.

STATISTICS SHEET NO. 10

NORTH COAST KAUAI, SCALE, 1:5,000 - - - - - KALIHIWAI BAY, KAUAI.

<u>Date, 1927</u>	<u>:</u>	<u>Letter</u>	<u>:</u>	<u>Volume</u>	<u>:</u>	<u>Positions</u>	<u>:</u>	<u>Soundings</u>	<u>:</u>	<u>Miles Stat</u>	<u>:</u>	<u>Vessels</u>
June 23	:	a	:	1	:	101	:	308	:	9.2	:	:Stbd.Motorsailer
July 15	:	a	:	1	:	178	:	550	:	13.8	:	:Port "
Aug. 4	:	b	:	1& 2	:	183	:	514	:	11.8	:	: " "
5	:	b	:	2	:	91	:	333	:	10.8	:	:Stbd. "
6	:	c	:	2	:	22	:	79	:	2.0	:	: " "
Sept. 2	:	d	:	2& 3	:	78	:	266	:	5.5	:	: " "
Totals -----					653	2050	53.1					

January 25, 1928.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 4707

Locality: **Kanai Island, F.H.**

Chief of Party: **F. G. Engle, 1927.**

Plane of reference is **H L L W**
2.2 ft. on tide staff at **Hanalei**

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.

G. Wade

Chief, Division of Tides and Currents.

U.S. Coast and Geodetic Survey
Field Section
July 2, 1928.


Sheet No. 4707, Kalihinai Bay, Kauai.

In March, 1928, the projection and the signals on the field smooth sheet were found to be plotted with not a sufficient degree of accuracy. For this reason an order was issued to make a new smooth sheet. This was begun on 3/8/28.

The soundings on the field sheet are plotted to the nearest quarter of a foot, although there were no specific instructions given to plot them so. Solely because there is no ~~any~~ evidence necessitating a departure from the general usage of plotting soundings to the nearest ~~one~~ foot on the new smooth sheet these have been plotted to the nearest ~~one~~ foot.

~~The~~ Attention is called to the fact

that at the boat position fifty-seven, blue, ~~1150~~^{two} soundings with a large difference in depth coincide at a point (page thirty-four of the first volume and page fifty-seven of the second volume, between eleventh and twelfth d, green). To plot the larger of the two soundings is forbidden by instructions, but if the smaller is plotted doubtful appearance would result; therefore neither of the two has been plotted. In other cases of coincidence the smaller of the two were plotted.

- Notes:
1. Two soundings are shown as taken at one time (p. 39, vol. 2) 448. green;
 2. A rock awash about 175 meters north of signal Ton on the field sheet is shown thus ; should be *;
 3. a) Some of the bottom characteristics in the field books are posted in a manner leaving uncertainty as to what particular sounding a certain characteristic is referred (pp. 43, 41, 37, vol. 2)
b) Similar characteristics are posted

in a consecutive order on one page
or consecutively at the middle of
the pages following (pp. 47, 57, 58, etc. vol. 2).
This suggests that bottom characteristics
were not taken at the boat positions
opposite which they are not shown in
the field books; for it is understood
that the ~~soundings~~^{sections} are to remain
unchanged until a different bottom
is recorded.

Respectfully submitted,
J. T. Stessin.
J. T. Stessin.

Hydrographic Sheet 4707. Kalihiwai Bay, Kauai, Hawaiian Is.
verified and inked by C. A. Bowman

On a part of the sheet, quite a number of positions had to be replotted indicating careless plotting or a protractor out of adjustment.

Nearly all intermediate soundings were placed at equal intervals and had to be replotted where the time indicated irregular spacing.

The sounding (29) at 57a (blue) looks bad in connection with other depths in the vicinity, was questioned by the field party and has not been inked (see vol. 1 - page 34)

Sounding (20) between 109a and 110a (blue) looks suspicious but has been inked and indicated by a pencil leader. (see vol. 1 p. 42)

The same note applies to sounding (48) between 1120 and 1130 (blue) (see vol. 2, p. 16).

A part of the sheet had been inked, showing fractions of a foot depths. These fractions have been erased and the sounding changed to the proper even foot.

The limit of reef has been shown on the smooth sheet as indicated by distances from the ends of sounding lines or, in the absence of these, as sketched on the boat sheet.

Sept. 27, 1940

C. A. Bowman

AND REFER TO No. 11-DFM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

February 14, 1929.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4707

Kalihiwai Bay, Kauai, Hawaiian Islands

Surveyed in 1927

Instructions dated Nov. 23, 1926 (DISCOVERER)

Chief of Party, F. G. Engle.

Surveyed by T. B. Reed and L. S. Hubbard.

Protracted and soundings plotted by J. T. Stessin.

Verified and inked by C. A. Bowman.

1. The records conform to the requirements of the General Instructions.
2. The plan and extent of development satisfy the specific instructions. However, additional work might have been of value over some of the shoals discovered in the bay.
3. A comparison of adjacent sounding lines shows a generally good agreement considering the irregularity of the bottom.
4. The usual depth curves could be completely drawn except where these approached too close to the coral reef.
5. This sheet was entirely plotted in the office by an office draftsman. The sheet turned in by the field party contained so many inaccuracies as to necessitate the rejection of the entire sheet.
6. The junction with H. 4708 is satisfactory. The junction with H. 4718 will be taken up when that sheet is reviewed.
7. No additional work is required here, except on the 40 foot sounding (pos. 109-110 a, blue) in lat. $22^{\circ} 14' 420$ m., long. $159^{\circ} 26' 30'' 80$ m. This sounding should have been examined by the field party.

If practicable a wire drag should be carried over the shoals within the bay proper as well as over the 31 foot shoal to the northwest of Pukamoe Pt.

8. Attention is called to the following:

a. The 29 foot sounding in lat. $22^{\circ} 14' 55$ m., long. $159^{\circ} 26' 30''$ 150 m. (pos. 57a, Vol. 1, p. 34) has been omitted from the sheet pursuant to note by field party and upon advice of the Chief of Field Records.

b. Many of the boats positions at the northwest corner of the sheet, that used weak fixes, will not be found to check the present plotting of these positions. These should not be considered as errors, as they are due to the distortion the sheet has undergone. It requires but a very small displacement of the signals to shift the boats positions at the outer end of the lines a considerable amount.

9. Reviewed by A. L. Shalowitz, October, 1928.

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.

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.

C. & G. SURVEY
L. & A.
DEC 30 1927
Acc. No.

Field No. 10

REGISTER NO. 4707

State Hawaiian Islands

General locality Kauai Island - N. Coast

Locality Kalihiwai Bay, North coast of Kauai

Scale 1:5,000 Date of survey June to September, 1927

Vessel DISCOVERER

Chief of Party F. G. Engle

Surveyed by Thos. B. Reed and L. S. Hubbard

Protracted by G. A. Nelson J.T. Stessin

Soundings penciled by G. A. Nelson J.T.S.

Soundings in fathoms - feet

Plane of reference M.L.L.W., reading 2.2 feet on tide staff at Hanalei

Subdivision of wire dragged areas by

Inked by C.A. Bowman

Verified by C.A.B.

Instructions dated Nov. 23, 1927

Remarks *owing to inaccuracy of projection and signal locations on the Field Sm. Sh., a new sheet was made at the office.*

Applied to chart 4100 thru chart 4118 Williamson 11, 7 58