

4705
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Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
....., Director

U. S. SURVEY
L. & A.

Acc. No.

State: Hawaiian Is.

DESCRIPTIVE REPORT

Topographic } Sheet No. ⁵ 4705
Hydrographic }

LOCALITY

Kauai - E. Coast

Lehuawehe Bay to

Kilauea Bay

1927

CHIEF OF PARTY

F.G. Engle

GOVERNMENT PRINTING OFFICE

4705

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY
L. & A.
JAN 5 1928
Acc. No.

State: Hawaiian Islands

11-5613

DESCRIPTIVE REPORT.

Hydro. Sheet No. 5 ^{47 to 5} 4705

LOCALITY:

Kauai Island, E. Coast

~~Lehuawehe Bay~~
Ahuini to Kilauea Point

East coast of Kauai.

19²⁷

CHIEF OF PARTY:

F. G. Engle

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET NO. 5
AHUKINI TO KILAUEA POINT KAUAI, T. H.
Commanding Officer's Instructions dated Nov., 23, 1926.

LIMITS: This sheet covers the inshore hydrography between Lehuawehe Bay and Kilauea Bay with the exception of Anahola Bay and approaches which was surveyed on a 1:5,000 scale. This sheet joins on the south with sheet No. 2, 1:20,000 and on the north with sheet No. 9, Kilauea Bay 1:5,000. The sounding lines were carried off shore to approximately the 10 fathom curve.

SURVEY METHODS & CONTROL: Control for this survey consisted of triangulation stations established by the field party and of a series of topographic signals established on topographic sheet D, 1:20,000.

This survey was made in accordance with the usual methods of launch hydrography using a 30 ft., motor sailer and a copper centered handlead 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.


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

GENERAL DESCRIPTION OF THE COAST: This subject is covered in the descriptive report accompanying Topographic Sheet D Kapaa to Hanalei.

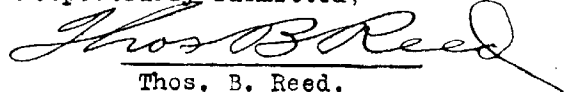
LANDMARKS: Gray Chimney, Kapaa is a high prominent stack at the sugar mill in Kapaa. Black Chimney Kealia is the higher and more prominent of two chimneys close together. The group of houses at the inner end of Moloaa Bay show to seaward and will serve to identify the bay from that direction.

INSHORE DANGERS: Between signals POLO and WASH is a coral reef which breaks almost continually. There is an opening in this reef off the village of Kapaa with a small harbor in behind in which small boats can find shelter in moderately rough weather. The limits of this reef and the channel through the reef at Kapaa were sketched on the boat sheet by the hydrographic party. There is a rocky ledge awash as shown off signals WASH and one off signal LIA. The breaker line off the sand beach was sketched from signal LIA to FIT. Off signal FIT there is a stone jetty as shown. Between signals LOT and PILL there are breakers ^{There is a rock break} as shown 180 meters N.E., of signal RAFT. There is a coral reef as shown from signal AND to PAPAA and rocks off signal SIGN. There are rocks awash off signals GOT and LAM. To the northward from signal PINE is a coral reef awash at low water which was sketched on the boat sheet by the hydrographic party.

Approved and Forwarded:


F.G. Engle, Comdg. Str. DISCOVERER.

Respectfully submitted,


Thos. B. Reed.

STATISTICS SHEET NO. 5

EAST COAST KAUAI, SCALE: 1:20,000 - - - - AHUKINI TO KILAUEA PT. 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 14	:	a	:	1	:	178	:	627	:	30.6	:	Stbd. Motorsailer
	:		:		:		:		:		:	
20	:	b	:	1& 2	:	134	:	521	:	23.5	:	" "
	:		:		:		:		:		:	
21	:	c	:	2	:	237	:	792	:	37.1	:	" "
	:		:		:		:		:		:	
22	:	d	:	2	:	16	:	98	:	4.5	:	Port "
	:		:		:		:		:		:	
Totals -----						565		2038		95.7		

Field Record Section
Report on A. 4785
Kauai E. Coast H. I.
Surveyed in 1927

Chief of Party J. G. Angle - Surveyed by T. B. Reed
Plotting and soundings by G. R. Shelton
verified and inked J. Fleming

- ①. The records conform to the requirements of G. D.
- ②. The plan and character of the development fulfill the requirements of G. D.
- ③. There are some inconsistencies in the sounding line crossings particularly in the area between 175-2 178-2 (line parallel to shore Lat 04')
A. recheck of positions and soundings in that vicinity did not result in the discovery of any error.
- ④. The extension of the deep close inshore in places such as 203-c (Lat. 13')
127-c (bet. Lat 12'-13') 38-b (Lat. 07')
was closely investigated by checking all lines upon which these curves were based.
No irregularity was discovered and it is believed that the irregularities in the depth curves are a result of the peculiar coral formations characteristic of these islands.
- ⑤. The plotting of positions was very good.
The fixing of soundings was 'good'.
Four signals were erroneously plotted, but only one of these affected the Hydrography.
There were two signals called 'MAT'.

Report on H. 4705

△ East Stack Kapa'a on the Hydrographic sheet is shown
as West stack Kapa'a on the Topo. sheet

(6) Six positions and 57 soundings were corrected

(7) In transferring the overlap to 4704
and 4706 it was observed that there ~~some~~ ^{were some}
soundings which did not agree with those already on
the sheet

The 8 ft sounding in red on 4706 is worthy
of notice.

The entire work is considered 'Very Good'

Respectfully Submitted

J. Fleming

Copy for Records Section.

January 27, 1928.

J.H.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4705

Locality: **KAUAI ISLAND, T.H.**

Chief of Party: **P. G. Eagle, 1927.**
Plane of reference is **X L L W**
2.5 ft. on tide staff at **Hanalei Bay.**

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.

Wade

Chief, Division of Tides and Currents.

Section of Field Records 1.
Sheet No 4705

Surveyed in 1927.

Report on sheet No. 4705

Chief of Party - A. G. Eagle

Surveyed by - J. B. Reed

Protracted by - G. R. Shelton

Soundings plotted by - G. R. Shelton

verified & inked by - J. Fleming

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Inst.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate, but in two places the agreement is rather poor.

Between 175a and 177 a on line parallel to shore Lat $22^{\circ} 04'$ the discrepancy.

between this line and the lines normal ³ to the shore is about $\frac{1}{6}$ of the depth. This was noted by the verifier, but no errors were discovered when positions and soundings were checked by him.

Between 1a + 3a on June 22 on line parallel to shore Lat. $22^{\circ}-08'$ the discrepancy between this and the normal lines is about $\frac{1}{6}$ of the depth.

5. The usual depth curves can be drawn.

6. The field plotting was completed as prescribed in the General Instructions.

7. The office draftsmen did not have to do over any part of the drafting, except for corrections noted by the verifier.

8. The following adjacent sheets have not been completed, so the junctions have not been compared. These sheets are 4703, 4717 and 4718.

The junction with 4706 was good, but the junction with 4704 should be corrected as follows:

On sheet 4704 replot 104 b and ³
105 b ^(lat 22°10') and replot soundings between
104 and 106. Make correction on
sounding between 99 b and 100 b and
change depth curves to conform with
soundings taken from 4705.

9 Further surveying is not required
for full development.

10. Signal marked East on hydrographic
sheet and in sounding records is listed
in geographic positions as Kapa
West time stack, 1927.

There is no information on this
sheet regarding what men plotted
and checked the signals.

The position of (157 a) ^(lat 22°-05') should be
changed and soundings between 156 a and
158 a should be replotted.

The timing between 34 c and
35 c should be corrected.

done in grade 8/6

- 11. (a) The character of the surveying is good and fully covers the area.
- (b) The field drafting is good.

verified by E. O. Heaton, June 28, 1929

E. O. Heaton
 Dr. H. G. Cuyler

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4705

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

Number of positions on sheet . . . 565
Number of positions checked . . . 1.87
Number of positions revised . . . 4
Number of soundings recorded . . . 2,038
Number of soundings revised . . . 57
Number of signals erroneously
plotted or transferred 4

Date: -- January 15th 1929 --
Cartographer: -- John Fleming --

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4705

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. 5

REGISTER NO. 4705

State Hawaiian Islands

General locality Kauai Island E. Coast

Locality Lehuawehe Bay to Kilauea Bay
~~anukini to Kilauea Point, East coast of Kauai~~

Scale 1:20,000 Date of survey June 14-22, 1927

Vessel DISCOVERER

Chief of Party F. G. Engle

Surveyed by Thos. B. Reed

Protracted by G. R. Shelton

Soundings penciled by G. R. Shelton

Soundings in fathoms -feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated Nov. 23, 1926

Remarks: Tidal reducers obtained from gauge at Hanalei Bay.

M.L.W. on tide staff 2.2 ft.

Applied to chart 4100 Wittmann 11/2/58