

5224

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Form 504  
Ed. June, 1928

**DEPARTMENT OF COMMERCE**  
U. S. COAST AND GEODETIC SURVEY  
R. S. Patten., Director

**DESCRIPTIVE REPORT**

*Topographic* } Sheet No. 5224  
*Hydrographic* } Field # 54

LOCALITY

North Coast of Hawaii

Paaunau Id., and Approaches

1932

CHIEF OF PARTY

O. W. Swainson

**U. S. COAST & GEODETIC SURVEY**  
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JAN 5 1933

State: Hawaiian Is.      Ass. No. \_\_\_\_\_

## DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 54.

Paauhau Landing, Hawaii, T.H.

### INSTRUCTIONS

This work was done in accordance with instructions of September 19, 1931, to the Commanding Officer of the Ship PIONEER in connection with Project No. 69.

### LIMITS

The sheet is a 1:5000 scale survey of Paauhau Landing on the northeast side of the island of Hawaii, T. H. It extends eastward from the work executed by the Ship GUIDE in 1929 of Honakaa Landing to a point about one mile beyond Paauhau Landing, and from the breakers offshore to beyond the 100 fathom curve.

### CONTROL

The control was obtained from the topographic sheet executed a few days previously by a shore party from the PIONEER. Some of the signals built and located in 1929 by the Honakaa survey were recovered and used.

### METHODS

The inshore area was done by the ship's launches and whaleboat; the offshore portion by the PIONEER. The small boat soundings were vertical casts. The ship used the fathometer.

### TIDES

The tidal reductions were obtained from the tide gage at Hilo, T. H.

### FATHOMETER CORRECTIONS

The fathometer corrections were the same as computed for the rest of the 1931 project 69. These and the description of the method of computing them are contained in the 1931, Project No. 69, Season's Report.

DANGERS

No particular dangers were found.

LANDMARKS

See descriptive report for the Topographic Sheet.

A handwritten signature in cursive script, reading "O. W. Swainson".

O. W. Swainson,  
H. & G. Engineer,  
Commanding PIONEER.

STATISTICS FOR SHEET

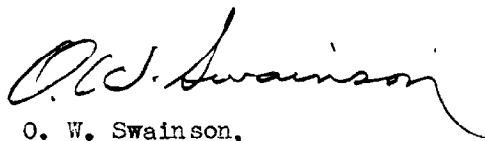
FIELD NO. 54.

1932

Date	Day	Vol.	Pos.	Soundings		Miles	Remarks
				F.R.	Vert.		
Feb. 18	a	1	158		653	15	Launch
19	b	1	90		245	8	Launch
18	a	2	113		502	8	Whaleboat
19	b	2	91		268	6	Whaleboat
18	A	3	167	1023		28	PIONEER
19	B	3	101	484		33	PIONEER
TOTALS			720	1507	1668	98	
					<u>1507</u>		
					3175		

COMMANDING OFFICER'S REPORT  
of INSPECTION of RECORDS, FIELD SHEET NO. 54.

I closely inspected the soundings on the smooth sheet for shoal or doubtful soundings. The positions were not checked other than placing over the boat sheet the tracing paper used in plotting the smooth sheet. The plotter had strict instructions to carefully compare his plotting with the boat sheet. The sounding records were inspected for doubtful or ambiguous data.



O. W. Swainson,  
Chief of Party.

## Section of Field Records

Report on H5224

Chief of Party O. W. Swainson

Protracted by J. R. John

Verified & Inked by J. Walker

Surveyed in Feb., 1932

Surveyed by O. W. Swainson

Soundings plotted by J. R. John

The sounding records were neat, complete and legible.

The protracting was good and very few positions were revised.

Some soundings were spaced erroneously and a few wrong fractions were used. The crossings were mostly good.

Sheet H4913 (1929) joins on the west and the overlap was transferred to it. The overlap was more than sufficient and the agreement was good.

There is no large scale chart of the area of H5224 and the only old survey is H3652 (Recon) (1914) which was not examined.

Respectfully submitted  
J. Walker  
1/13/33

Section of Field Records.  
Review of Hydrographic Sheet No. 5224.  
Paauhau Landing and approaches, North coast of  
Hawaii, T. H.  
Surveyed February, 1932.  
Instructions dated Sept. 19, 1931, Project 69  
(Pioneer).

Chief of Party - O. W. Swainson.  
Surveyed by - O. W. Swainson.  
Protracted and soundings plotted by - J. R. Jahn.  
Verified and inked by - J. T. Walker.

1. The records generally conform to the requirements of the Hydrographic Manual except that the reduced soundings were entered in the "Office" column instead of the Field column. More bottom characteristics should have been recorded. Some of the notes in the Remark column are inadequate.
2. The plan and extent of development satisfy the specific instructions.
3. Soundings in the deeper area (fathometer) are generally consistent and the depths at crossings are in good agreement. A single sounding of 66 on a line showing a depth of 61 fathoms (39B to 40B) was rejected as a probable error in reading or recording. Inshore the bottom is very irregular and there are a number of apparent discrepancies in the work when the soundings are plotted strictly according to time. Several of the crossings do not agree by about 2 fathoms and the result is a rather irregular 5 fathom curve. A 14 following 9b whaleboat was rejected as it plots between a  $9\frac{1}{2}$  and a 10 on another line. Position 25b motor sailer was rejected, the boat was trying to get back on the range and the notes are not clear enough to plot this position.

The Descriptive Report gives the line of breakers as the inshore limit of the hydrography but the line is not defined by the sounding records or boat sheet. The words "breakers" were added by the office.

4. Depth curves. The development is sufficient to draw the usual curves except close inshore where the breakers prevented complete development and a small area in lat.  $20^{\circ} 06'$  long.  $155^{\circ} 26'.8$  where the 20 fathom curve should have had more development.
5. Junction with H 4913 to westward was satisfactory after replotting position 31c whaleboat of H 4913 using time and left angle on course, or reducing the right angle  $1^{\circ}$ . There are no other contemporary surveys in the vicinity. In the overlap the fathometer soundings of H 5224 show a mean increase of 1.2 fathoms over the leadline and fathometer soundings of H 4913.
6. Comparisons.- Reconnaissance sheet H 3652 shows a single line of soundings in a depth of between 50 and 60 fathoms across the area represented on H 5224.

Chart 4115 is small scale and does not show anything inconsistent with the present survey.

7. This survey (H 5224) should supersede all previous information for charting purposes of the area covered by it.

No further surveys are deemed necessary.

8. Reviewed by R. J. Christman, January 18, 1933.

Inspected: E. P. Ellis.

Approved: A. M. Sobieralski. (*signed*)



EG-34

January 5, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5224

Locality Vicinity of Paauhau, Island of Hawaii, T. H.

Chief of Party: O. W. Swainson in 1932  
Plane of reference is mean lower low water reading  
3.3 ft. on tide staff at Hilo  
9.0 ft. below B. M. F<sub>2</sub>

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.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5224

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

Number of positions on sheet	.720
Number of positions checked	.132
Number of positions revised	....8.
Number of soundings recorded	3175
Number of soundings revised	±100
Number of signals erroneously plotted or transferred	....0.

Date: .... Jan 13, 1933 .....

Cartographer: .... J. T. Walker .....

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REG. NO. 5224

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. 54

REGISTER NO. 5224

State ~~ISLANDS OF HAWAII~~ Hawaiian Is. HAWAIIAN ISLANDS

General locality ~~ISLAND OF HAWAII~~ North Coast of Hawaii

Locality Paauhau Landing and Approaches

Scale 1:5000 Date of survey February, 1932

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

Chief of Party O. W. Swainson

Surveyed by O. W. Swainson

Protracted by J. R. Jahn

Soundings penciled by J. R. Jahn

Soundings in fathoms ~~feet~~

Plane of reference M L L W

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated September 19, 1931, 1932

Remarks: