

5292

U. S. COAST & GEODETIC SURVEY
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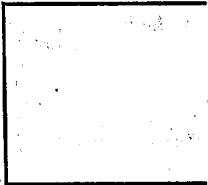
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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton Director



State: T. Hawaii

DESCRIPTIVE REPORT

Topographic
Hydrographic

Sheet No. 26

5292

LOCALITY

Hawaiian Islands

West coast of Lanai Island.

1931-32

CHIEF OF PARTY

O. W. Swainson

5292

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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REG. NO. 5292

Acc. 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.

Field No. 26

REGISTER NO. 5292

State Hawaiian Is.

General locality ~~WEST~~ West Coast of Lanai, H. I.

Locality West Coast of Lanai

Scale 1:20,000 Date of survey December, 1931 to March, 1932, 19

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

Chief of Party O. W. Swainson

Surveyed by O. W. Swainson, and V. M. Gibbens

Protracted by J. R. Jahn

Soundings penciled by J. R. Jahn

Soundings in fathoms ~~feet~~

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated August 19, 1930, 19

Remarks:

DESCRIPTIVE REPORT TO ACCOMPANY
SHEET NO. 26 * PROJECT 69.

HAWAIIAN ISLANDS

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

O. W. Swainson, H. & G. E.,
Chief of Party.

INSTRUCTIONS DATED

Instructions covering this work were dated August 19, 1930.

Field work performed December 16, 1931, January 27, 28, February 5, 16, 17, and March 1, and 7, 1932.

LOCALITY

This sheet covers the area along the west coast of Lanai Id.

SURVEY METHODS

The control used was vical fixes on triangulation and topographic stations, a list of which is made a part of volume one of the records. The ship used the fathometer for sounding with the launch used the handlead. The "no bottom" sounding of the launch were overlapped by the ship to obtain the actual depth.

DISCREPANCIES

None of serious nature.

DANGERS

There are no dangers except a few rocks off the beach.

Two rocks, one bare two feet and one awash at high tide in latitude $20^{\circ} 52.3'$, longitude $157^{\circ} 03'$.

Line of rocks or islets extending 200 meters offshore in latitude $20^{\circ} 52.1'$, longitude $157^{\circ} 02.7'$.

Rock awash at half tide, latitude $20^{\circ} 51.8'$, longitude $157^{\circ} 01.8'$.

Rock awash at half tide, latitude $20^{\circ} 50.5'$, longitude $157^{\circ} 00.2'$.

ANCHORAGES

There are no good anchorages on this coast. Although this is the lee side of Lanai Island, the normal N E wind sweeps down the mountain sides with force. This combined with the steep slope of the bottom make anchoring inshore poor. The PIONEER usually anchored in latitude $20^{\circ} 51.4'$, longitude $157^{\circ} 01.4'$, and at times about $1\frac{1}{2}$ miles northward of Kaumalapau

COMPARISON WITH PREVIOUS SURVEYS

The sheet joins Sheet 3582 at both its N W-limit and its S W limit. The discrepancies at the south end of the sheet are doubtlessly due to the uneven bottom. Tracings of both junctions are forwarded with the sheet.

A tracing of overlapping area of sheet 81 expanded to this scale is forwarded.

TIDES

The auto-portable tide gage at Kaumalapau, Lanai Id., was used to reduce the soundings on all days except February 17, February 29, March 1, and March 7, 1932, on which days the automatic tide gage at Honolulu was used.

STATISTICS

	Statute Miles Sounding Lines	Number of Soundings	Number of P Positions
Ship	187.6	2193	462
Launch	<u>106.3</u>	<u>1750</u>	<u>531</u>
Total for sheet	293.9	3943	993

Area covered by field work - 318 square statute miles.

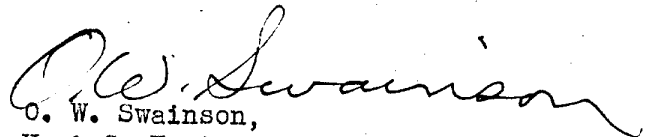


O. W. Swainson,
H. & G. Engineer,
Chief of Party.

REPORT OF INSPECTION BY CHIEF OF PARTY

The sheet was plotted by J. R. Jahn, Civil Engineer, employed temporarily as a draftsman. The sheet was verified by C. J. Wagner, Jr. H. & G. E., in the following manner: The plotting of the positions was checked by comparison with the boat sheet. The plotting of the soundings by the ship was checked by comparison with the boat sheet. The plotting of the soundings by the launch was checked by following through the record book, and checking the plotting of each sounding, but the spacing of the soundings was not checked.

The ship and launch work joined satisfactorily and no additional work is deemed necessary in the area covered by the sheet.



O. W. Swainson,
H. & G. Engineer,
Chief of Party, C. & G. Survey.

200
September 13, 1933

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5292

Locality West Coast of Lanai Island, T. H.

Chief of Party: O. W. Swainson in 1931-1932

Plane of reference is mean lower low water, reading

2.8 ft. on tide staff at Kaunapau

15.6 ft. below B. M. 1

3.5 ft. on tide staff at Honolulu

17.3 ft. below B.M. 2

Height of mean higher high water above plane of reference is 2.0 ft. at
Kaunapau and 1.8 ft. at Honolulu.

Condition of records satisfactory except as noted below:

H. A. Warner
Chief, Division of Tides and Currents

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5292

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

Number of positions on sheet	...993
Number of positions checked	...83
Number of positions revised	...10
Number of soundings recorded	.3943
Number of soundings revised	..138
Number of signals erroneously plotted or transferred0

Date: *Oct. 26, 1933*.....

Cartographer: *VICTOR D. BEHN*.....

Section of Field Records.

Report on H. 5292

Chief of Party - O. W. Swainson

Protracted by - J. R. Sahn

Verified and inked by: V. D. Bahn

Surveyed

Surveyed by - O. W. S. & V. M. Gibbens

Soundings plotted by: J. R. Sahn

- 1) The records conform to the requirements of the general instructions except in the following respects:
 - a) Changes in boat speed were not noted
 - b) The correct abbreviations were not always used in recording the bottom characteristics
 - c) The records refer to a beach but do not completely describe it.
- 2) Except in a few cases the usual depth curves could be drawn
- 3) The field plotting was complete except for the following:
 - a) Several awash rocks shown on the topographic sheet were omitted.
 - b) The name of one signal was not given on the smooth sheet and another was erroneously named.
- 4) The office draftsman had to revise, the depth curves, and several of the notes pertaining to awash rocks.

5) The junction of this sheet with H-5298 is satisfactory. This sheet was not compared to other adjacent sheets due to the fact that all other adjacent sheets were either not verified or they covered surveys which were several years old.

6) The quality of the drafting was good except for the following objections:

- 1) The position numbers and day letters were too large
- 2) Holes were picked into the smooth sheet at the location of each sounding

Respectfully submitted
Victor D. Behm

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5292.

West Coast of Lanai, Hawaiian Is.

Surveyed Dec. 1931 to March 1932.

Instructions dated Aug. 19, 1930 (Pioneer, Proj. No. 69)

Chief of Party - O. W. Swainson.

Surveyed by - O. W. Swainson, V. M. Gibbens.

Protracted and soundings plotted by - J. R. Jahn.

Verified and inked by - V. D. Behn.

1. The records generally conform to the requirements of the Hydrographic Manual. Minor errors occur such as abbreviation of bottom characteristics not all standard, changes of boat speed not always recorded, etc. No recommendation relative to the 10 and 11 fathom soundings in lat. $20^{\circ}50'.5$ long. $157^{\circ}00'.5$ was made in the Descriptive Report or entered in the sounding record though the boat sheet shows that a special investigation of these soundings was made on a subsequent date.

2. The plan and extent of development conform to the regulations and satisfy the specific instructions.

3. Soundings are generally consistent and in good agreement at crossing of lines with the exception of an 18-16 over a 19-20 in lat. $20^{\circ}56'.3$ long. $157^{\circ}02'.1$ but as the vicinity is uneven bottom all soundings were retained on the sheet.

4. Depth curves can be drawn satisfactorily.

5. Junction with contemporary survey sheet H. 5290 is satisfactory. Contemporary sheet H. 5299 has not yet been completed in the office.

6. Comparisons. The overlap with H. 3582 (1914) is adequate at the southern end of this sheet. At the northern end of the sheet, the work was not carried to a complete agreement. The area has very irregular bottom and the combined information will probably be found sufficient for all charting purposes. The overlap with H. 4700 and 4700a (1927) is in good agreement. These sheets are plotted in feet and it was not deemed necessary to plot the soundings of H. 5292 on them. Chart 4130 has no information in conflict with this survey.

7. Field drafting was fair. Position numbers and day letters were too large and prick holes were made for all soundings instead of only at angle positions. Depth curves and notes relating to rocks had to be revised in many instances.

8. Recommendations. This sheet (H. 5292) should supersede all previous information for charting the area covered by it.

* The 10 and 11 fathom soundings mentioned in par. 1 should be retained pending receipt from the field party of a recommendation relative to them.

No further surveys are deemed necessary at this time.

9. Reviewed by R. J. Christman - Nov. 24, 1933.

* Field party recommends that these sdgs be rejected. Letter dated Jan. 3, 1933.

Approved: L. O. DeBolt, Chief Field Records
Chief Div. Pharm.

T. S. Borden, Chief Section Field Lines

R.J.C.
G. H. de, Chief, H & S.

POST-OFFICE ADDRESS:

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1933 JAN - 8 - PM 12:39

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

Seattle, Washington
January 3, 1933

The Director,
U. S. Coast and Geodetic Survey,
Washington, D. C.

From: V. M. Gibbens, Jr. H. & G. E.
U. S. C. & G. S. S. SURVEYOR.

Through: The Commanding Officer,
U. S. C. & G. S. S. SURVEYOR

Subject: Shoal soundings on H. 5292 (Field Number 26),
West Coast of Lanai, H. I.

Reference: 81 - DRM

It is recommended that the two soundings 10 and 11 fathoms on Sheet H. 5292 be rejected.

The shoal soundings were noticed on the boat sheet at the time and the launch returned to investigate them. Several lines were run over the spots with no indication whatever of any shoal soundings. The Pioneer also ran a line over them with no indication of shoal sounding.

Forwarded through:

V. M. Gibbens
V. M. GIBBENS,
Jr. H. & G. E.

A. M. Sobieralski
A. M. SOBIERALSKI, H. & G. E.
Comdg. Str. SURVEYOR

Applied to new chart 4120 - March 8, 1941 - JAW