

5291

U. S. COAST & GEODETIC SURVEY
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5291

Form 504
Ed. June, 1928

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

State: T. H.

DESCRIPTIVE REPORT
5291

~~TOPOGRAPHIC~~ } Sheet No. 51
Hydrographic }

LOCALITY

Makana Bay,

Maui Id.

T. H.

19 31

CHIEF OF PARTY

O. W. Swainson,

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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REG. NO.

5291

HYDROGRAPHIC TITLE SHEET

Acc. No. _____

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. 51

REGISTER NO. **5291**

State Hawaiian Is. Hawaii.

General locality Maui Maui Id.

Locality Makena Bay

Scale 1:5,000 Date of survey January 14, 15, 16, 19 31

February 17, 18, 19, 1931

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 C. J. Wagner

Soundings penciled by E. K. Burdick (Draftsman)

Soundings in fathoms ~~feet~~

Plane of reference Mean Lower Low Water.

Subdivision of wire dragged areas by None

Inked by R. E. DeMent

Verified by R. E. DeMent

Instructions dated August 19, 1930., 19

Remarks: _____

DESCRIPTIVE REPORT
TO ACCOMPANY SHEET NO. 51,
PROJECT 69, HAWAIIAN ISLANDS

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

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

INSTRUCTIONS DATED

The date of Instructions under which this work was done is August 19, 1930.

LOCALITY

This sheet is a detail survey of Makena Bay, Maui Id., on a scale of 1:5,000.

SURVEY METHODS

The inshore work was done by a rowing party in the whaleboat using the handlead. The intermediate depth was sounded by the launch using the handlead. The ship ran one line to fill in a small gap using the fathometer and handlead simultaneously, the handlead soundings being plotted on the sheet. The control was visual fixes on triangulation and topographic stations. The depths under six fathoms were developed with a spacing of line from 15 to 30 meters; to 10 fathoms, spacing about 40 meters; over 10 fathoms, spacing about 60 meters.

DISCREPANCIES

No discrepancies were noted when the smooth sheet was plotted.

DANGERS

Rock awash at low tide 180 meters N W of Δ Stone. Reef containing rocks and rocks awash at high tide, extends 150 meters W x $\frac{1}{2}$ N of Δ Stone. Shoal area containing sunken rocks and rocks awash at low tide 100 meters W x S of \odot Ban. Reef 130 meters NW of \odot La is awash in spots at low tide. (Note: Area enclosed in black dots to show extent of foul area).

NOTE: All of these dangers are inside the three fathoms curve, except the rock N W of Δ Stone. Rocks awash shown on topographic sheet are not labeled at what stage of tide on this sheet. Only rocks located by hydrographic party are so labeled.

CHANNELS

No channels in area covered by survey.

ANCHORAGES

The sheet covers Makena Bay used as anchorage for small boats and to ship cattle from beach just north of Wag. The cattle are made to swim to the freighter anchored southwest of Gil and Lik.

COMPARISON WITH PREVIOUS SURVEYS

The survey compares very well with the old survey, Sheet H-2730. There are a few soundings that do not check exactly but the error is from $\frac{1}{2}$ to 1 fathom, the new survey being the shoaler of the two. The great majority of the old soundings are check almost exactly. A tracing of the old sheet, expanded to 1:5,000, is enclosed with the sheet, with the soundings that do not check circled. The small red arrows mean that a small movement the way indicated would be sufficient to make a check.

GEOGRAPHIC

No new geographic names were assigned on the sheet.

LANDMARKS

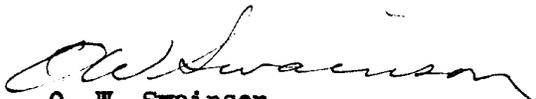
Refer to Descriptive Report of Topographic Sheet A (T-51), Project 69.

TIDES

A plain tide staff was erected in the landing and read every 15 minutes or 30 minutes during the time hydrography was in progress, on January 14, 15, and 16, and until Noon, February 17, at which time an auto-portable gage was put in operation near the staff. The auto-portable gage was kept in operation until February 19, Noon, for a simultaneous comparison with the standard gage at Honolulu.

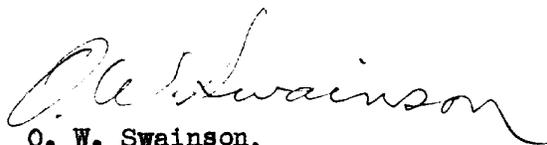
STATISTICS

	Statute miles Sounding lines	Number of Soundings	Number of Positions
Whaleboat	25.0	2116	444
Launch	18.0	544	159
Ship	0.7	25	5
TOTAL	43.7	2685	608


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

CHIEF OF PARTY'S REPORT ON SMOOTH SHEET.

The sheet was protracted by G. J. Wagner, Jr. H. & G. Engr.,
The soundings were penciled by E. K. Burdick, Draftsman. The
plotting of the soundings was verified from the record book by
J. R. Jahn, Draftsman, and any errors found were checked and cor-
rected by E. K. Burdick. The protracting was not checked. ✓



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

Rae.

September 12, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5291

Locality Makena Bay, Maui I., T. H.

Chief of Party: O. W. Swainson in 1931

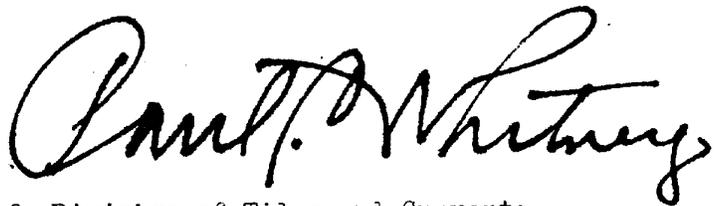
Plane of reference is mean lower low water, reading

2.2 ft. on tide staff at Makena

4.5 ft. below B. M. 1 (1931)

Height of mean higher high water above plane of reference is 2.0 ft

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents

Sept 27, 1933

Section of Field Records

Report on Hydrographic Sheet No 5291

Makua Bay, Maui Id. I. H.

Surveyed in Jan. 1931

Instructions dated Aug. 19, 1930

Chief of Party - O. W. Swainson

Surveyed by - O. W. Swainson & U. M. Gibbens

Protracted by - C. J. Wagner

Soundings Plotted by - E. K. Burdick

Verified & Labeled by R. E. DeMent.

- 1 The records conform to the requirements of the Hydrographic manual. ✓
- 2 The Plan & Character of development fulfill the requirements of the Hydrographic Manual. ✓
- 3 Sounding line crossings are adequate and in general agreement. ✓

4

The 1, 2, 3, 5, & 10 fathom can be drawn. The 1, 2, & 3, fathom curves are broken where the inshore development is not sufficient to warrant the continuation of those curves.

5

The field Protracting & Plotting was satisfactory, with the following exceptions:

- (a) Position 120 blue 'a' day, the left angle reads (in the record) Was-stone 26-94. This was changed to read Was-stone 26-34, and the position placed on the smooth sheet with that angle.
- (b) The depth curves, (as drawn by the field party) were in most cases, wrong & had to be redrawn.
- (c) Degree and minute symbols were added to the longitude &

Latitude figures

6. No drafting, (with the exception of the detail curves had to be redrawn.
7. No adjacent sheets are available so junctions with H. 5291 cannot be made.
8. Comparison with the old Survey Sheet H 2730 was made by the field party, and an enlarged drawing is included with H 5291 - A written explanation of this appears in the Descriptive Report.
9. Remarks.
 - (a) No stray or impossible soundings were found.
 - (b) Irregularities of soundings were found within the 3 fathoms

IV

curve, but these were confined to
shoal areas, and areas in which
coral reefs & heads were apparent.

10

Respectfully Submitted,

Ralph E. DeWent.

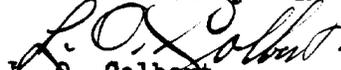
SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5291.
Makena Bay, Maul, Hawaiian Islands.
Surveyed January 1931
Instructions dated August 19, 1930 (Pioneer)

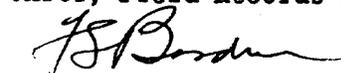
Chief of Party - O. W. Swainson.
Surveyed by - O. W. Swainson, V. M. Gibbens.
Protracted by - C. J. Wagner.
Soundings penciled by - E. K. Burdick.
Verified and inked by - R. E. De Ment.

1. The records conform to the requirements of the Hydrographic Manual. The index in the sounding record books was not accomplished.
2. The plan and extent of development conform to the regulations and satisfy the specific instructions.
3. Soundings are generally consistent and depths at crossings of lines are in good agreement. The dotted lines denoting the limit of foul areas have been changed to the coral symbol. See Descriptive Report under "Dangers". The record does not show clearly the depth of water between the rock awash 160 meters N. W. of Nahuna Pt. (Δ Stone) and the sunken reef extending off shore. The 3 fathom curve (broken) has been extended around this rock.
4. The usual depth curve can be drawn satisfactorily, the lesser curves being necessarily incomplete.
5. No contemporaneous surveys join this sheet.
6. Comparisons. The agreement with H. 2730 (1904-5) is very good. The discrepancies noted in the Descriptive Report are only such as may be expected in bottom of a coral nature. Chart 4130, the largest scale published at present, shows nothing in conflict with this survey of Makena Bay.
7. The field drafting generally was good. The depth curves were redrawn in the office and degree and minute signs added to the latitude and longitude figures. Several small corrections were made to notes lettered on the sheet by the field party.
8. Recommendation. This sheet (H. 5291) supplements H. 2730 on a larger scale and with more detail inshore. It is believed adequate for charting on a scale suitable for an anchorage chart of this bay.

No further surveys are deemed necessary at this time.

9. Reviewed by - R. J. Christman, Nov. 17, 1933.


H. S. Colbert,
Chief, Field Records Section.


Chief, Field Work Section.

Examined and approved:


Chief, Division of Charts.


Chief, Division of H. & T.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5291

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

Number of positions on sheet	608
Number of positions checked	90
Number of positions revised	5
Number of soundings recorded	2685
Number of soundings revised	10
Number of signals erroneously plotted or transferred	0

Date: *September 27, 1933*

Cartographer: *Ralph E. DeWent*