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

U. S. COAST & GEODETIC SURVEY  
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MAR 4 1931

State: Hawaii

Acc. No.

DESCRIPTIVE REPORT

Topographic } Sheet No. 4831  
Hydrographic } 4832

LOCALITY

East Coast of Oahu

Waimanalo to Alala Pt.

Between Alala Pt. and Makena  
Rock

1927

CHIEF OF PARTY

E. R. Hand

U. S. GOVERNMENT PRINTING OFFICE: 1928  
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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4831

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. 18

REGISTER NO. 4831

State Hawaiian Is.

General locality East Coast of Oahu

Locality Waimanalo

Scale 5,000 Date of survey , 1927

Vessel

Chief of Party E. R. Hand

Surveyed by " " "

Protracted by Army Engineers

Soundings penciled by " "

Soundings in fathoms feet

Plane of reference

Subdivision of wire dragged areas by

Inked by G. H. Streeter

Verified by G. H. S.

Instructions dated , 192

Remarks:

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3.3(a), EXECUTIVE ORDER 12356.







SECTION OF FIELD RECORDS  
Review of Hydrographic Survey No. 4831.  
Waimanalo Military Reservation to - Kailua Bay.  
Surveyed in 1927  
Requested by Hawaiian Dept. U. S. Army

Chief of Party - E. R. Hand.  
Surveyed by - E. R. Hand  
Protracted and soundings plotted by Army Engineers  
Verified and inked by - G. H. Streeter.

1. Records.

The records conform to the requirements of the General Instructions with the exception that no descriptive report was submitted.

2. Specific Instructions.

No copies of the instructions are available. It is understood that the purpose of the survey was to determine feasible landing places. In this respect the character and scope of the survey is adequate. However, from the standpoint of general charting there are several places where it would have been desirable to have carried the detailed survey further seaward. These will be mentioned in succeeding paragraphs.

3. Depth Curves.

The usual depth curves within the area surveyed can be completely drawn.

4. Sounding line crossings.

The sounding line crossings are adequate.

5. Junctions with Contemporary Surveys.

The junctions with H. 4830 on the south and H. 4832 on the north are satisfactory.

6. Comparison with old survey.

A close comparison was made with the survey of 1910 (H. 3287, scale 1-20,000) and it was found that there is an unusually fine agreement in the depths. However, there are several rocks awash shown on the 1910 survey that do not agree exactly in location with similar features in the new survey. In all these cases the records were examined and those rocks were not transferred to the new survey where it appeared that the positions on the old survey may have been slightly in error due to the smallness of the scale and to estimated distances. Only such information has been carried forward where there was a reasonable certainty that the information was supplementary and not in duplication of the new work. Appropriate notes have been added to the old survey in all such cases.

7. Field drafting.

The field plotting was complete with the exception that numerous rocks



No. 4831.

and coral heads as well as delineation of some of the reefs were omitted from the smooth sheet. The verifier supplied all of these using the boat sheet and the notes in the sounding records as a guide. In those cases where the sounding records contained notes of "many sunken rocks and coral heads in this area" and which were indicated as sunken rocks on the boat sheet, the actual rocks were not plotted on the smooth sheet by the verifier, but on the advice of Captain Colbert a general note to the effect was added to the smooth sheet by the verifier,

8. Additional Work.

From the standpoint of general charting the following additional work appears desirable:

a. In the vicinity of lat. 21°23' long. 157°-42', a complete delineation of the coral reef as well as a development of the passages through the reef. The offshore side of this reef has never been determined. There appears to be a good passage through this reef in lat. 21°-23'- 250 meters. This is erroneously shown on the old survey as an unbroken reef.

b. A complete delineation of the reef running northwesterly from the vicinity of  $\Delta$  Mokulua towards  $\Delta$  Flat, with the development of the passage through the reef as well as the passage between the two islands to the southeastward of the reef. The northwestern limits of the reef has not been defined on the new survey nor is it located on the old survey, and it is therefore uncertain as to how much of a passage there is between this reef and the island on which  $\Delta$  Flat is located. It should also be noted that the offshore limits of this reef has been very sketchily determined on the old survey.

9. Note to Compiler.


Since the pertinent information from H. 3287 has been carried forward to the new survey, the latter should, within its limits, supersede the work on H. 3287. This is particularly true of the coral reefs delineated on H. 3287, many of which are highly generalized and sketched in from considerable distances away. In all such cases the new survey should be accepted as authority for the existence or non-existence of such reefs.

10. Reviewed by A. L. Shalowitz. July 1933.

  
L. O. Colbert,  
Chief, Field Records Section.

  
Chief, Field Work Section.

Examined and approved:

  
Chief, Chart Division.

  
Chief, H. & T. Division.



IN REPLY ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 82-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 4832

Alala Point to Mokolea Rock, East coast of Oahu, Hawaii

Surveyed in 1927

For the Hawaiian Department, U. S. ARMY

Chief of Party, E. R. Hand

Surveyed by E.R.H.

Protracted and soundings plotted by Army Engineers.

Verified and inked by G. H. Streeter.

1. No copies of the specific instructions for this survey are available as the work was done under special instructions for the Hawaiian Department of the U. S. Army. In the Descriptive Report for hydrographic sheet 4788 the Chief of Party states that the survey was made for the purpose of determining feasible landing places. Assuming this as the object of the survey the records are satisfactory with the exception of the absence of a detailed Descriptive Report and too few notes in the sounding records to overcome this deficiency.
2. Depth curves: Only a small part at the southern end of the sheet has been completely surveyed. In this area the 6 foot and the 12 foot curves have been drawn satisfactorily. There is an indication of a narrow passage through the offshore reef, but it has not been developed.  
  
The remainder of the surveyed area is incomplete though the depth curves have been sketched in.
3. Field drafting was done by the Army Engineers and is fair though the reefs and rocks awash were not plotted on the smooth sheet. They have been added in the office, using the boat sheet as a guide for details.
4. Adjacent and overlapping surveys: The junction with the contemporary survey at the south (4831) is satisfactory. There is no joining sheet to the north.

On the overlapping survey of 1910, sheet 3287, the depths are in agreement, but the extent and details of the reefs are at variance. The reefs northward of "Flat" do not extend as close inshore as indicated on H. 3287.

Oct. 24, '15

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The new surveys show that no shore reef exists in Kailua Bay. A note in the sounding record states "The bottom over this entire portion of the bay is predominantly sand but there are many small coral stones scattered through it. Close in on the beach it is pure sand with no coral." This is also confirmed by the topographic survey (T. 4380).

An examination of the sounding records of 3287 shows no authority for the indicated reef except the usual statement of "line ends - off the beach" without stating the character of the beach.

In view of the foregoing it is recommended that within the limits of the present survey it supersede the former survey.

5. Additional work: It may be assumed that the object of this special survey has been accomplished. No additional work is recommended. If and when this class of survey is continued to the northward care should be taken to make a good junction with the present survey.
6. Reviewed by R. J. Christman, February 1932.

Sheet inspected by A. L. Shalowitz, February 1932.

Approved:

*A. M. Sobieralski*  
Chief, Section of Field Records

*J. S. Borders*  
Chief, Section of Field Work

*Army blueprint No. 19, dated Apr. 17, 1929 and No. 20, dated Aug. 17, 1929, received Apr. 22, 1933 have been filed with H. 4832 by direction of Chief of F.R. Section.*

*E. P. Rice*

*Apr. 25, 33*



April 24, 1929.

Ear

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4831

Locality: Waimanalo Military Reservation to Kailua Bay, T. H.

Chief of Party: E. R. Hand in 1927

Plane of reference is mean lower low water, reading  
\*3.5 ft. on tide staff at Honolulu  
ft. below B. M.

\*With range allowance for tide at Kailua 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 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.

*E. R. Hand*  
Chief, Division of Tides and Currents.



April 27, 1929.

EAK

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in  
volumes of sounding records for

HYDROGRAPHIC SHEET 4832

Locality: Kailua Bay to Makupuu Pt., Oahu Island, T. H.

Chief of Party: E. R. Hand in 1927.

Plane of reference is mean lower low water, reading  
\*3.6 ft., on tide staff at Honolulu  
~~ft. below B. M.~~

\*With range allowance for tide at Kailua 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 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.

Paul C. Whitney,

Chief, Division of Tides and Currents,



Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *4831*

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

Number of positions on sheet	<i>.1128</i>
Number of positions checked	<i>.565</i>
Number of positions revised	<i>..24.</i>
Number of soundings recorded	<i>.5466</i>
Number of soundings revised	<i>not counted</i>
Number of signals erroneously plotted or transferred	<i>...2...</i>

Date: *Dec. 26, 1930* .....

Cartographer: *G. H. Oyster* .....



Section of Field Work  
Sheet no. H-4831

Report on sheet no. H-4831

Surveyed in 1927

Chief of Party E. R. Hand  
Surveyed by E. R. H.

Projected by Army Engineers

Soundings plotted by Army Engineers

Verified and inked by G. H. Street

Topography inked by Army Engineers

1. The records conform to the requirements of the General Instructions. ✓
2. The plan and character of development fulfill the requirements of the General Instructions. ✓
3. As this is an Army Engineer Survey it is assumed the development satisfied the specific instructions.
4. Sounding line crossings are adequate. ✓
5. The usual depth curves can be drawn. ✓
6. The field plotting is complete with the exception of numerous rocks and coral heads which were merely indicated on the boat sheet. These were transferred from the boat sheet and are indicated in pencil.



7. It was necessary for the office draftsman to move triangulation station "M akulua".  
Topographic station "Post" was also moved slightly.  
Topographic stations were verified from T-4379
8. Junctions with adjacent sheets is satisfactory.
9. This is an Army Engineers work and it is assumed that the survey is fully developed.
10. The projection is considered satisfactory. When a "miss" in the sounding records was recorded it was disregarded when plotting the soundings.  
There are several mistakes in the recorded time especially in duplication.  
There were five execution signals incorrectly recorded.
11. The character and scope of the survey is good.  
The field drafting is fair.

Respectfully submitted,  
Gaylord H. Street

Dec. 26, 1930



Section of Field Records  
Sheet No. H-4832

Report on H-4832

Chief of Party: E. R. Hand

Surveyed by: E. R. H.

Protracted by Army Engineers

Soundings plotted by Army Engineers

Verified and inked by: G. H. Streeten

Topography inked by Army Engineers

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. This survey is the work of Army Engineers and, as no specific Instructions are available, it is assumed the extent of development is satisfactory.
4. There is one sounding line crossing.
5. The usual depth curves can be drawn.
6. The field plotting was completed.
7. It was necessary for the office draftsman to extend the projection to the lower extremity of the sheet where most all the soundings occurred.
8. Junctions with adjacent sheets were not considered.



9. As this is the work of Army Engineers the development is assumed to be sufficient.

10. Since there was no indication that the projection or triangulation had been checked in the field this was done before work was started on the sheet.

The projection is considered satisfactory. One triangulation point, "Mokapeu" (Dahu), was found to be slightly in error and was corrected.

Topographic stations "Mill", "Bok" and "Kai" were moved slightly to conform with positions on sheet T-4379. Remainder of topographic

stations were verified and conform with T-4380.

11. (a) The character and scope of the surveying are considered good, considering conditions.

(b) The field drafting is fair.

Respectfully submitted,

November 22, 1930

Gaylord H. Street



H. 4831 applied to reconstruction 4131 by L.A.M. 1949