

Oct. 4 1933

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5316

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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.**

Form 504  
Ed. June, 1928

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

State: Ter. of Hawaii

DESCRIPTIVE REPORT

*Topographic* } Sheet No. 33 5316  
*Hydrographic* }

LOCALITY

Northwest Coast of Oahu  
Kawaiapai to Kaena Point

1932 & 1933

CHIEF OF PARTY

Lieut. Hubert A. Paton

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U. S. COAST AND GEODETIC SURVEY

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HYDROGRAPHIC TIDE SHEET  
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The Hydrographic Sheet should be completed by this form, filled in as completely as possible when the sheet is forwarded to the Office.

Field No. 33

REGISTER NO. 5316

State Hawaiian Islands

General locality North W. Coast of Oahu

Locality ~~Waipahoehoe~~ Kaena Point to Kawaihapai

July 1933

Scale 1:5000 Date of survey September 1932 - , 1932

Party Vessel Inshore Hydrographic Survey of Oahu

Chief of Party Hubert A. Paton, Lieut.

Surveyed by H. A. P.

Protracted by H. A. P.

Soundings penciled by H. A. P.

Soundings in ~~fathoms~~ feet

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by

Inked by *W. H. Bamford and E. Pierce*

Verified by *W. H. Bamford*

Instructions dated July 14th, 1931

Remarks: Surveyed in cooperation with the U. S. Army

U. S. GOVERNMENT PRINTING OFFICE

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DESCRIPTIVE REPORT

to accompany

Hydrographic Sheet #33

Northwest Coast of Oahu  
Kawaiapai to Kaena Point  
September 1932 and July 1933.

INSTRUCTIONS:

The work on this sheet was done in accordance with instructions dated July 14, 1931. The field work was done in cooperation with the U. S. Army, all members of the crew being detailed from Third Engineers, Schofield Barracks.

METHODS:

The lines in the deeper area were run with Launch #14, a small cabin cruiser. This was done in September 1932. Before the shoaler areas could be surveyed, the weather became so unfavorable that operations were transferred to the other side of the island.

In July 1933, the party moved back to this vicinity. Most of the original signals were recovered, it being necessary to establish only seven additional signals. These were located with a sextant, occupying the signal itself. All soundings were taken with the hand lead, using a ten pound lead.

For the work in the shoaler waters, a twenty foot dinghy was used, a nine horse power out-board-motor, furnishing the motive power. This outfit proved to be very efficient and sea worthy. The motor was reverseable, so the boat could be backed in close to shore before starting the lines.

JUNCTIONS:

On the east, this work joins Sheet #32. Many of the lines transferred from one area to the other without stopping, the common fix and sounding being recorded in both sets of sounding volumes.

On the west, the work joins Sheet #4779. The bottom here is very uneven, but the depths agree quite satisfactory. The sunken rock shown on Sheet #4779 in Lat.  $21^{\circ} 34.5$ , Long  $158^{\circ} 16.95$  was not seen, nor were breakers ever noticed even in rough weather.

Some of the surveys of 1910, see Sheet #3291, overlap into the area covered by the present survey. The agreement here was also satisfactory.

CONTROL:

The control on the extreme western end of the area is weak. Kaena Point makes out in a narrow neck so that signals on shore could not give very large angles. The party had no facilities to plant buoys. However, for the purposes of this survey, the location of the soundings were considered sufficiently accurate. The control over the remainder of the area was very strong.

DANGERS:

No new dangers were found. Chart #4110 shows a small island about  $\frac{1}{4}$  mile west of Kaena Point. This does not exist and should be removed from the chart. Moderate tide rips in this vicinity do present a danger to small craft and the point should be given a berth of at least  $\frac{1}{4}$  mile.

RESPECTFULLY submitted,

*Hubert A. Paton*  
Hubert A. Paton,  
Lieut., U.S.C. & G. S.



STATISTICS

to accompany

Sheet #33

Total number of positions	598
" " " soundings	3033
Statute miles of sounding lines	49
Area in square statute miles	1.4



APPROVAL OF RECORDS

to accompany

Sheet #33

The above sheet and records have been inspected and are approved.

Hubert A. Paton  
Lieut., U.S.C. &G.S.  
Chief of Party



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October 30, 1933

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 5316

Locality ~~Kona~~ Pt. to Kawaihapai, Northwest Coast of Oahu, Hawaii

Chief of Party: Ha. A. Paton 1932-1933

Plane of reference is mean lower low water, reading

2.6 ft. on tide staff at Haleiwa in 1932

10.8 ft. below B. M. 2

2.5 ft. on tide staff at Haleiwa in 1933

10.8 ft. below B.M. 2

Height of mean higher high water above plane of reference is 1.6 feet.

Condition of records satisfactory except as noted below:

It is noted that many of the tide reducers have been entered to the nearest whole foot, while according Hydrographic Manual, page 16, where depths are less than 10 fathoms they should be entered to the nearest half foot.

*Hammar*

Acting Chief, Division of Tides and Currents



# SECTION OF FIELD RECORDS

REPORT ON H-5316

DEC. 22, 1933.

SURVEYED IN SEPT. 1932 - JULY 1933

CHIEF OF PARTY - HUBERT A. PATON

SURVEYED BY - H. A. P.

PROTRACTED BY - H. A. P.

SDGS. PLOTTED BY - H. A. P.

VERIFIED & INKED BY - W. H. BAMFORD & E. PIERCE.

- 1./ The sounding records were found to be neat, legible, complete and to conform to the requirements of the Hydrographic Manual.
- 2./ The protracting was found to have been well done - only four positions were found to have been erroneously plotted. The position numbers were small, neat and legible.
- 3./ The soundings were well penciled and the correct size. They were very well spaced except where the time interval was irregular - whenever this occurred the soundings were found to have been spaced without regard for the irregularity.
- 4./ In several instances the sounding line crossings were not in good

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agreement but when the "lumpy" character of the bottom is realized, this is not considered unusual.

5./ The sheet was clean and the work was legible.

6./ The field plotting was completed to the extent prescribed in the Hydrographic Manual.

7./ It was possible to draw the usual depth curves except portions of the six foot curve.

8./ The junction with H 5317 at the eastern limit of the sheet was found to be satisfactory.

The junction with H 4779 in the vicinity of Kaena Point was found to be satisfactory.

9./ The datum of this sheet was not indicated on the sheet as is required, and was added.

H 5316

PAGE 3

10. / The 7 ft shoal in approx. Lat  $21^{\circ}34'30''$  and Long  $158^{\circ}-17'-00$  from H 4799 - 1926 survey by E.R. Hand is shown in the overlap on this sheet. Although a note on the boat sheet and in the descriptive report for H 5316 say that no indication of this number rock was noted at the time of this survey - there were no sounding lines run over the shoal nor did the field party feel around for it. It is therefore recommended that the 7 ft shoal be retained.

Respectfully Submitted  
Warren H. Bamford.



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SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5316 - Confidential.  
Kaena Point to Kawaihapai, Northwest coast of Oahu, Hawaiian Is.  
Surveyed Sept. 1932 and July 1933.  
Instructions dated July 14, 1931

Chief of Party - H. A. Paton.  
Surveyed by - H. A. Paton.  
Protracted and soundings plotted by - H. A. Paton.  
Verified and inked by - W. H. Bamford and E. Pierce.

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1. Records conform to the requirements of the Hydrographic Manual except that tide reducers were entered to the whole foot in most cases instead of to  $\frac{1}{2}$  foot where depths were less than 10 fathoms.
2. The plan and extent of development conform to the regulations. The specific instructions provided for consulting the U. S. Army authorities relative to details desired and assistance to be furnished by them.
3. Soundings appear to be consistent. The sheet was inspected by the Chief of Party after verification and inking in the office. The 7 foot spot from H. 4779 near the junction with this sheet was not examined although the Descriptive Report says this "sunken rock was not seen, nor were breakers ever noticed even in rough weather."
4. Depth curves can be drawn satisfactorily.
5. Junction with H. 5317 on the east and with H. 4779 on the west are satisfactory.
6. Comparisons:- This sheet is the basic survey for inshore detail in this area. Depths are in good agreement in the overlap with the offshore sheet (H. 3291). The small island shown on Chart 4110 about  $\frac{1}{4}$  mile west of Kaena Point does not exist and should be removed from the chart. See Descriptive Report under "Dangers".
7. Field drafting was completed to the extent prescribed by the regulations and was satisfactory except that  $\odot$  Ros was out of position. Sounding positions affecting the junction with H. 5317 that depended on this signal were replotted by the verifier.
8. Recommendations. This sheet (H. 5316) should supersede all previous information for charting purposes of the area represented by it.

No further surveys are deemed necessary at this time.

9. Reviewed by - R. J. Christman, January 12, 1934.

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

*J. B. Borden*  
Chief, Section of Field Work.

Examined and approved:

*L. O. Colbert*  
Chief, Division of Charts.

*G. H. Hilde*  
Chief, Division of H. & T.

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