

4553

Form 501

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Hawaiian Islands

1-5013

DESCRIPTIVE REPORT.

Hydro. Sheet No. 3 & 4 4553

LOCALITY:

Oahu Island - S. Coast
~~South Coast of Oahu Island.~~

Maunalua Bay,

Vicinity of Koko Head

1936

CHIEF OF PARTY:

Clem L. Garner, Lieut. Comdr.

4 Graphs for Sheets 3 and 4 accompany
4552-Vol. 1

4553

September 14, 1926.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4553

Locality: HAWAIIAN ISLANDS

Chief of Party: C. L. Garner in 1926

Plane of reference is M L L W
3.5 ft. on tide staff at Honolulu

For reduction of soundings, 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 each 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.

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEETS NOS. 3 & 4.

South Coast of Oahu, T.H. -- Scale of 1:10,000.
Instructions dated March 6, 1926 - - Clem L. Garner, Chief of Party

GENERAL: The area covered by these sheets is in water of less than 100 fathoms between Honolulu Harbor entrance and Koko Head on the South Coast of Oahu. The general nature of the area covered by each of the sheets is so nearly the same that both are covered by this report.

The coast line is accurately described in the Coast Pilot except for adding that there are many artificial objects in the vicinity of Honolulu, the visibility of which depend largely on the light conditions and weather. As new structures are being constantly built some new ones which are not determined or described may be expected. Those most conspicuous and of most value as navigational aids in entering or departing from Honolulu Harbor are the Aloha Tower, where the Honolulu light is now shown; the two large brick stacks of the Hawaiian Electric Company, just to the north of the entrance to the Harbor; the Moana Hotel; the Royal Hawaiian Hotel, now under construction, and the Elks Club. These are:

Aloha Tower: A tall, square tower of gray concrete, topped with a green pyramidal roof with a tall flagstaff and time ball. The tower is located about the center of pier #10 and forms a very conspicuous object during the day, while during the night the light is visible nineteen miles from Honolulu.

The Stacks of the Hawaiian Electric Company: Two gray, brick smoke stacks about 120 feet in height and in a north-west and southeast line are located at the plant of the company slightly west of north of the entrance to the harbor.

Royal Hawaiian Hotel: A new, red tile structure (out side color or appearance may be changed) of ~~8~~⁷ stories, which is at the seashore about 2/3 of the distance from Honolulu to Diamond Head.

Can not be located with certainty

Moana Hotel: This is a ~~four~~^{six} story, white structure about 1/8 mile southeast of the Royal Hawaiian Hotel and which is easily seen during the day, or by night by the lights.

Elks Club: A four story white frame building on the beach about a half mile west of Diamond Head and very conspicuous during the day. Practically always visible at a reasonable distance from it.

Diamond Head, near the shore and south foot of which is located Diamond Head Light, is the most conspicuous natural object in this area. This is completely described in the Coast Pilot. Diamond Head Light is located on the point of Diamond Head.

DANGERS: No inshore or offshore dangers within the limits of these sheets were discovered during the course of the work under discussion. In fact, the surveys were merely the addition of detail necessary for the making of larger scale anchorage charts and in general all depths and bottom characteristics agree well with the previous survey of the same area.

It will be noticed that at a depth of about 20 fathoms the slope of the bottom falls off quite rapidly and as was to be expected there are several rather large discrepancies in depth between this and former soundings. These are undoubtedly due to the rough character of the bottom at this place. A few differences are also found in the shallow water closer ashore. The bottom is coral and sand with coral heads quite numerous and the depths quite often change by more than a fathom between soundings.

METHOD OF SURVEY: The hydrography was entirely controlled by sextant angles on three well determined objects, most of them being located by checked triangulation points. It is believed that there are very few positions which are not very certain and definite.

About equal amounts of the work were done by the ship and motor launch, the latter working in the very shoal water.

MISCELLANEOUS: On boat sheet #3 the first few sounding lines were erroneously inked in black and the same was followed through the sheet in order to avoid confusion. As a result it has been found necessary to ~~line~~^{erase} the sounding lines with red pencil. In this manner they may be easily followed except in some places where several lines are rather close together.

On boat sheet #4 the 1926 soundings are shown in red in order to identify them from soundings copied from the bromide copies of the 1911 work.

It will be noticed that both boat sheets are plotted in feet as was necessary in comparing with the depths transferred from the bromide sheets. On the smooth sheets the depths are plotted in fathoms as the assumption is that the charts will show all depths in fathoms.

Several stations on both the smooth and boat sheets, but principally on the boat sheets, will be found marked and numbered in pencil. These stations were not used in the work and time has not been available nor was it necessary to ink them in. These numbers correspond to numbers of geographic positions as determined and described by Lieut. E. R. Hand, which are in the Office. The shore line is only roughly shown on the boat sheets in pencil, as the information came from confidential military maps.

The usual statistical sheet is attached hereto.

Respectfully submitted



Clem L. Garner, Lieut. Comdr.,
Commanding Officer,
Str. DISCOVERER.

STATISTICS SHEET TO ACCOMPANY HYDROGRAPHIC
SHEET NUMBER 4.

| (Date) (1926) | (Vol) | (Day) | (Sdgs) | (Positions) | (Miles of Hydro) | (Boat used) |
|------------------|-------|-------|--------|-----------------------|---------------------|-------------------|
| May | 1 | A | 180 | 92 | 17.0 | DISCOVERER |
| 11 | 1 | B | 191 | 51 73 | 32.2 | " |
| 10 | 1 | a | 468 | 122 | 17.2 | Port Motor Sailer |
| 11 | 1 | b | 23 | 8 | 0.5 | " " |
| Totals: | | | 862 | 275 315 | 66.9 | |

Area = 6.0 sq. stat. Mi.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 11-DEM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON September 21, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4553

South Coast Oahu, Hawaiian Islands

Surveyed in 1926

Instructions dated March 6, 1926

Chief of Party, C. L. Garner.

Surveyed by C. L. G., R. W. Knox.

Protracted and soundings plotted by J. C. Partington.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions except that in the work of the motor sailer (R. W. Knox in charge) there was only one bottom characteristic given in 491 soundings taken.
2. The plan and character of the survey conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the requirements of the specific instructions as outlined on bromide sent to the field. This survey was made to supplement the work on H. 3253 surveyed in 1911.
4. The information on this sheet, in conjunction with H. 3253, is sufficient for drawing the usual depth curves. Generally the curves represent a combination of the 2 surveys. There are some instances where the curves on the two sheets disagree on account of the different depth units that were used.
5. The usual field plotting was done by the field party and was well executed.
6. There is a gap between this sheet and H. 4548 on the south, but this is adequately taken care of by the old survey, H. 3253. The lines run on this sheet to fill in gaps in the work on H. 3253 agree very satisfactorily with the older work.

The two 108 ft. soundings from H. 3253 in approximately Lat. 21° 15' 1220 meters, Long. 157° 42' 1650 meters, which appear in error

on the original survey seem to be further disproved by the soundings taken in the vicinity on the later survey (H. 4553). However, since the surrounding soundings are shoaler, there is no cartographic question involved.

The junction with H. 4552 will be taken up in the review for that sheet as well as the junction with H. 4538.

7. No additional work is necessary to meet the requirements of the specific instructions.
8. Character and scope of surveying - excellent.
Field drafting - excellent.
9. Reviewed by A. L. Shalowitz, September, 1926.

Hydrographic Sheet # 4553.
Maunaloa Bay "Oahu"

The survey covered on this sheet appears to have been made to supplement the work shown on Sheet # 3253, Survey of 1910-11. a bronze of which was used as a boat sheet. If the work of this sheet is to be taken separately the work is too sparse for a good development but if it is to be considered in conjunction with sheet # 3253 a good development is had.

The sheet was protracted and plotted by the field party and found practically accurate.

John D. Torrey
9/20/26.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

4553

U. S. Coast and Geodetic Survey.

Register No. ⁴ 4553

State . . . Hawaiian Islands

General locality . . South Coast of Oahu Island

Locality . . ~~Honolulu Bay~~ ^{Maunaloa Bay} . . Vicinity of Koko Head

Koko Head
JWH

Chief of party Glen L. Garner, Lieut. Comdr.

Surveyed by Glen L. Garner & Robert W. Knox

Date of survey ~~April~~ ^{May}, 1926.

Scale 1:10,000

Soundings in Fathoms

Plane of reference MLLW

Protracted by J.C.P Soundings in pencil by J.C.B.

Inked by Verified by

Records accompanying sheet (check those forwarded): 2 Vols. (Separately)

Des. report, Tide books, Marigrams, Boat sheets,

~~2~~ Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks:

Applied to reconstruction 4131 (mostly 2nd current chart 4131) L.A.M. 1949