

4460

Form 804
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: HAWAIIAN ISLANDS

11-5413

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 4460

LOCALITY:

Molokai

Kolo Harbor

1925

CHIEF OF PARTY:

R.W. Woodworth

4460



DESCRIPTIVE _ _ REPORT

to accompany

HYDROGRAPHIC SHEET #4.

of

KOLO HARBOR

Molokai Island , Terr. of Hawaii

Scale = 1 : 5000

R. W. Woodworth , JR. H&G. E.

Chief of Party.

PROJECT : Surveys of Anchorages.

INSTRUCTIONS : November 26-24

March 31-25.

DESCRIPTIVE REPORT - SH.4.

KOLO, Molokai I.

DESCRIPTION of LOCALITY : From offshore, Kolo shows only the wooden wharf making out from the sand beach, the buildings of the construction camp being hidden by the dense algeroba growth.

The barren hills sloping back from the shore are deeply cut by gulches, up which the green of the algeroba trees extends for a distance.

BOTTOM : The bottom contours along the outer edge of the reef are decidedly irregular. This fact is also shown on the blueprint of the Libby-McNeill-Libby survey which was made prior to harbor development at this place.

ENTRANCE & CHANNEL : A natural channel thru the coral reef was blown and dredged to give a minimum depth of nine feet with two hundred feet width. Spar buoys mark the outer and inner ends of this channel.

HARBOR : Within the reefs a heavy swell is quite common, but without any accompanying surf, as the protective reef breaks the full force of the outer seas.

Dredging, which is complete except for a small area on the west side of the harbor pocket, was done so as to allow barges and towboats of seven foot draft to operate freely. The bottom is of a good holding quality.

BUOYAGE : Besides the four channel, ^{now} located, others will be placed to mark the harbor limits which are now shown by pipes driven in the bottom.

A lighted sea-buoy will be established shortly.

WHARF : This is built over wooden pilings, with a heavy, independent fender bulkhead ranging along its west face as a protection from the massive 130' steel barges in use.

WEATHER : The prevailing wind parallels the coast from the east, usually increasing in force from morning, to late afternoon.

In a Kona, or southerly storm common to the winter season, this harbor will not be safe to vessels.

SURVEY METHODS : The outer area was sounded from the gas-launch 'McLib' of Libby-McNeill-Libby Co. The lead was used from a chair built over the bow, and angles taken within two meters of the leadsman as the leadline was up & down.


The shoal areas were sounded from the whale-boat in a similar manner.

Control was by sextant fix on shore signals located by triangulation or plane table traverse.

Soundings were plotted to even feet in the outside waters, to half-feet within the harbor. The soundings were taken under such conditions of swell as to render quarter-foot plotting unfeasible.

UNSOUNDED AREAS : As a part of the harbor is still being dredged, no attempt was made to sound in the vicinity. A tracing of the smooth-sheet, together with the locations of all C&GS signals used, was furnished Fred Orth, Engineer-in-Charge for Libby-McNeill-Libby Co. at Kolo. He has agreed to supply all additional sounding data obtained by him upon completion of the dredging program now underway, which should be complete by July first of this year.

Respectfully submitted,


R.W. Woodworth, Jr. H&G. E. U.
Chief of Party
1925.

STATISTICS SHEET # 4 .

<u>Date</u>	<u>Day</u>	<u>Vol.</u>	<u>Positions</u>	<u>Soundings</u>	<u>Miles Stat.</u>	<u>Boat</u>
March 23rd.	a	1	49	108	2.5	Whaleboat
May 20th	A	2	87	216	5.5	McLib
" 21st.	B	"	70	161	5.0	"
" 22nd.	b	1	105	545	4.5	Whaleboat
" 23rd.	c	"	57	192	2.5	"
" 26th.	C	2	35	51	4.5	McLib
" 29th.	d	1	<u>66</u>	<u>384</u>	<u>2.5</u>	Whaleboat
			469	1657	27.0	

Unit for soundings = feet.

Location of tide gauge : made fast to Kolo wharf.
 Lat. 21 - 06 ; Long. 157 - 12.

Plane of reference (MLLW), reading on gauge = 2.5 ft.
 Lowest tide observed - - , " " = 2.6 ft.
 Highest " " - - , " " = 4.7 ft

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

August 13, 1925.

REPORT ON HYD. SHEET 4460

The sounding records are complete and well kept.

The protracting and plotting of the soundings were very good.

The triangulation is not based on the Hawaiian standard datum.

The drafting conforms to the requirements of the general instructions.

The buoys given ~~in~~ the harbor limits are shown by small circles.

This sheet was plotted in feet due to the fact that a large scale chart will be made from it for the commercial firm that made the request for the work.

The coast pilot is to be notified in regard to the buoys shown on this sheet.



H. R. Edmonston.

field records

July 20, 1925.

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4460

Locality: **Molokai Island, Territory of Hawaii**

Chief of Party: **R. W. Woodworth in 1925.**

Plane of reference is **mean lower low water and is
2.6 ft. on tide staff at Kala Wharf, Molokai Island, T.H.**

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 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.

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ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 4-VEG

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

September 15, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4460

Kolo Harbor, T. Hawaii

Surveyed in 1925

Instructions dated Nov. 26, 1924 and March 31, 1925

Chief of Party, R. W. Woodworth.

Surveyed by, R. W. Woodworth.

Protracted and soundings plotted by W. F. Malnate.

Verified and inked by H. R. Edmonston.

1. The records conform to the requirements of the General Instructions with the exception that the boats head by compass was entirely omitted.
2. The plan and character of development are in accordance with the requirements of the General Instructions except that no cross lines were run.
3. The plan and extent of development satisfy the specific instructions with the following exceptions:
 - a. Additional lines should have been run in the channel close to the coral reefs.
 - b. The 11 foot shoal about 60 meters E x S of buoy S 2 should have been developed. *Substantiated by R. W. W.*
 - c. Owing to the irregular character of the bottom just off the channel entrance a closer development should have been made for possible coral heads.

4. No cross lines were run, but a comparison of adjacent sounding lines where the bottom is fairly regular, gives an adequate check on the work.
5. The information is sufficient for drawing the usual depth curves except in the inner harbor close to the reef.
6. The usual field drafting was done by the field party and was found to be accurate and complete.
7. There are no surveys that overlap this one.
8. Additional work is required in the inner harbor. This was left incomplete by the field party on account of the dredging operations that was being carried on at the time. (See Chief of Party's Descriptive Report, this sheet).

(Surveying - excellent
9. {
(Field drafting - excellent
10. Reviewed by A. L. Shalowitz, September, 1925.

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.

U. S. Coast and Geodetic Survey.

Register No. ⁽⁴⁾ 4460

State . . . Territory of Hawaii

General locality . . . Molokai ~~Island~~

Locality . . . Kolo Harbor

Chief of party . . . R. W. Woodworth

Surveyed by . . . R. W. Woodworth

Date of survey . . . March & May 1925:

Scale . . . 1 : 5000

Soundings in feet

Plane of reference . . . MLLW

Protracted by W. F. Adams . . . Soundings in pencil by W. F. Adams

Inked by Verified by

Records accompanying sheet (check those forwarded):

*Des. report, 1 Tide books, Marigrams, 1 Boat sheets,

 Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks: The harbor area is not completely sounded.
Fred Orth, Engineer-in-Charge of Kolo harbor development,
will furnish additional sounding data upon the completion of a
small area of dredging in the NW corner of the harbor pocket.

R. W.