

8685

Diag. Cht. No. 4116-2.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. FF-5-2-62 Office No. H-8685

LOCALITY

State Hawaii

General locality Maui Island

Locality Alaeloa Pt. to Lipoa Pt.

1962

CHIEF OF PARTY

A.L. Wardwell

LIBRARY & ARCHIVES

DATE 7-8-63

USCOMM-DC 37022-P66

8685

HYDROGRAPHIC TITLE SHEET

H-8685

INSTRUCTIONS - 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.

PT-5-2-62

State HAWAII

General locality MAUI ISLAND

Locality ALAELOA POINT
~~HAHEE POINT LIGHT TO LIPOA POINT~~

Scale 1:5,000 Date of survey 29 JULY - 28 SEPT 1962

Instructions dated 25 OCTOBER 1960, 9 JANUARY 1962

Vessel PATHFINDER LAUNCHES #1 & #2

Chief of party ARTHUR L. WARDWELL, CAPT., USC&GSS

Surveyed by LTJG. ROBERT A. TRAUSCHKE & ENS. SEYMOUR R. KOTLER, L.L. POSEY

Soundings taken by echo sounder, ~~XXXXXXXXXX~~

Fathograms scaled by LAUNCH CREW

Fathograms checked by LAUNCH CREW

Protracted by ENS. V.L. NEWTON

Soundings penciled by ENS. V.L. NEWTON

Soundings in fathoms ~~50~~ at ~~XXXX~~ MLLW

REMARKS:

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY H - 8685 (PF 5-2-62)
NORTHWEST MAUI ISLAND
HAWAIIAN ISLANDS

Scale: 1:5,000

Arthur L. Wardwell
Captain, USC&GS
Comdg. , Ship Pathfinder

29, July - 28 September 1962

A. Project OPR-419, instructions dated 25 October 1960, and 9 January 1962. ✓
Amended instructions dated 14 March 1962.

B. Area Surveyed: The area junctions on the West with sheet SU 40-1-61,
H- 9130 ; On the North with sheet PF 10-4-62, H- 8683 ; And on the ✓
South with sheet SU 10-3-61, H-8578. Surveying operations were begun
on 29 July 1962, and completed on 28 September 1962.

C. Sounding Vessels: Soundings were taken from PATHFINDER Launches # 1
(blue lower case letters), and # 2 (purple lower case letters). ✓

D. Sounding Equipment: All launches were equipped with Raytheon survey
fathometers, model DE-723. ✓

Launch # 1- serial # 140

Launch # 2- serial # 141

Echo sounding corrections were determined by bar checks to a depth of
four fathoms. (see page 7/8). Velocity corrections were obtained from
an Oceanographic station observed off the western side of Maui Island
on 25 April 1962. (see page 6).

E. Smooth Sheet: The smooth sheet was constructed by a projection reeling ✓
machine in the office at Washington, DC.

F. Control: All control for the sheet was by photo identification, traverse, ✓
triangulation or sextant cuts. No unusual or substandard methods of
control were used. Difficulty was experienced in locating signal TEL.
Cuts were taken from triangulation station HAWEA 1882 using a Wild T-2,
and numerous sextant cuts were taken from the launches. A good inter-
section of three sextant cuts (Vol.5, page 6) was finally obtained,
although this position did not agree with any of the other cuts to the
signal. As a consequence, signal TEL was not used for more than a few
fixes, although no apparent jump in position was experienced when using
this signal. Photo manuscripts T-11894 (incomplete), T-11895 (incomplete),
and T-11913 (advanced) were used for photo identified signals and for
application of shoreline. Volume 5 cuts to signal SIT did not give a
good intersection. When compared with the location of that signal on
the boat sheet, it was found that more strength was given to cuts # 2
and # 3 by the hydrographer. As a result this same emphasis was used
in locating the signal on the smooth sheet.

Volume 5 cuts to signal BUL also did not give a good intersection.
The center of the triangle formed by the cuts was used as the location
of the signal.

Cuts for all three Hydrographic Signals from the launches seemed to be ok. T-2 cuts not available -

- G. Shoreline: All shoreline detail was transferred from the manuscripts listed in "F" before the soundings were plotted. After completion of the sheet, however, the advance manuscripts T-11894 and T-11895 were obtained. As a result, the true shoreline, foul areas, and reefs are indicated in pencil. *Inked on 55* ✓
- H. Crosslines: Crosslines were run in about 10%, and no discrepancies were encountered at the crossings. ✓
- I. Junctions: Junctions were made on the West with SU 40-1-62, H-9130; on the North with PF 10-4-62, H-8683; and on the South with SU 10-3-61, H-8578. No discrepancies were observed.
- J. Comparison with prior surveys: One prior survey was available: Kekaa Point to Kahakuloa Point, Maui; Register No. 3513; scale: 1:20,000; date surveyed: 1913. It compared well with all areas of the smooth sheet. ✓
- ✓K. Comparison with the chart: The Coast Survey publishes three charts (4102, 4116, 4130) covering this area. Chart 4130 (3rd Ed, 12/30/36; revised 4/23/62; scale: 1:80,000) is the largest scaled chart and compares well with the smooth sheet except at Lat. 21° 01' 01" N., Long. 156° 40' 04" W. At this position the charted depth is 22 fathoms while the smooth sheet shows a depth of 27 fathoms. *steep slope* ✓
- L. Adequacy of the survey: This survey is complete and adequate to supersede prior surveys. ✓
- M. Aids to navigation: Only one aid to navigation is present on this smooth sheet: Hawea Point Light. The geographic position as published by the Coast and Geodetic Survey and the location as listed in the Light List (1963) are in agreement. ✓
- N. Statistics: PF 5-2-62

date	day	letter	miles sndg.	total miles	# of pos.	vessel
29 July		a	9.5	15.0	113	Launch 1
9 Aug.		a	2.6	15.8	28	" 2
10 "		b	9.9	22.4	126	" 2
11 "		c	7.3	15.8	115	" 2
26 "		b	5.5	12.0	113	" 1
27 "		c	6.5	10.4	110	" 1
28 "		d	5.1	9.1	89	" 1

Statistics: PF 5-2-62

date	day letter	Miles sndg.	total miles	# of positions	vessel
7 Sept.	d	5.6	11.6	84	Launch 2
8 "	e	12.4	20.9	168	" 2
9 "	f	11.4	17.9	171	" 2
14 "	e	2.4	5.3	39	" 1
28 "	f	<u>3.9</u>	<u>14.1</u>	<u>55</u>	" 1
Totals		82.1	170.3	1211	

0. Recommendations: ^{As} No bottom samples were obtained for this smooth sheet, it is recommended that the Washington Office transfer bottom samples from ~~H- 8678~~, H- 8578, and H- 8683 which fall within the limits of this sheet.

Respectfully submitted,

William L. Newton

William L. Newton
Ensign, C&GS

TIDE NOTE

PROJECT OPR-419 USC&GSS PATHFINDER Hydrographic Survey H-8685
(PF 5-2-62)

Corrections for tides were determined from tides observed with a portable recording tide gage located at Mala Wharf, Lahaina, Maui. Lat. $20^{\circ} 53.4'$ N., Long. $156^{\circ} 41.4'$ W. A time correction of minus 30 minutes and a range correction of 0.0 were applied to all tidal values observed at Lahaina. The adjusted tidal values were applied to all soundings. *Not in limits of sheet*

USC&GSS PATHFINDER, OSS-30
A. L. Wardwell, Cmdg

VELOCITY CORRECTIONS
Hawaiian Islands
OPR-719
Maui Island

To be applied to all Hydrography accomplished during the
1962 Season.

RANGE		CORR. (Fms)	RANGE		CORR. (Fms)
FROM (Fms)	TO (Fms)		FROM (Fms)	TO (Fms)	
0.0	3.0	+ 0.0	98.3	101.6	+ 4.3
3.1	5.2	+ 0.1	101.7	106.7	+ 4.5
5.3	7.5	+ 0.2	106.8	112.1	+ 4.7
7.6	9.6	+ 0.3	112.2	118.1	+ 4.9
9.7	11.8	+ 0.4	118.2	124.2	+ 5.1
11.9	15.2	+ 0.5	124.3	130.2	+ 5.3
15.3	19.6	+ 0.7	130.3	137.0	+ 5.5
19.7	24.0	+ 0.9	137.1	143.5	+ 5.7
24.1	28.4	+ 1.1	143.6	151.5	+ 5.9
28.5	32.7	+ 1.3	151.6	161.5	+ 6.1
32.8	37.3	+ 1.5	161.6	185.0	+ 6.5
37.4	41.6	+ 1.7	185.1	211.8	+ 7.0
41.7	46.0	+ 1.9	211.9	241.8	+ 7.5
46.1	50.4	+ 2.1	241.9	276.0	+ 8.0
50.5	55.0	+ 2.3	276.1	316.0	+ 8.5
55.1	59.7	+ 2.5	316.1	364.0	+ 9.0
59.8	64.3	+ 2.7			
64.4	69.2	+ 2.9			
69.3	74.1	+ 3.1			
74.2	78.9	+ 3.3			
79.0	83.8	+ 3.5			
83.9	88.7	+ 3.7			
88.8	93.6	+ 3.9			
93.7	98.2	+ 4.1			

Comp: SRK
Chkd: SRP
Typed: JLB
Chkd: LLP

LAUNCH # 1
 PT 5-2-62 DE-723 #140
 1962

DEPTH	FATH. RDG.	CORR.
1	0.7	+ 0.3
1	0.7	0.3
1	0.6	0.4
1	0.7	0.3
1	0.7	0.3
1	0.6	0.4
1	0.6	0.4
1	0.6	0.4
1	0.6	0.4
1	0.7	0.3
1	0.6	0.4
1	0.6	0.4

Mean = 0.358

DEPTH	FATH. RDG.	CORR.
2	1.7	+ 0.3
2	1.7	0.3
2	1.6	0.4
2	1.6	0.4
2	1.6	0.4
2	1.6	0.4
2	1.6	0.4
2	1.5	0.5
2	1.5	0.5
2	1.6	0.4
2	1.6	0.4
2	1.6	0.4
2	1.6	0.4

Mean = + 0.600

DEPTH	PATH. RDG.	CORR.
4	3.7	+ 0.3
4	3.5	0.5
4	3.6	0.4
4	3.5	0.5
4	3.6	0.4
4	3.5	0.5

Mean of means = + 0.364
 = + 0.4

Mean = 0.433 - 0.1 (vel corr) = +0.333

All readings and corrections in fathoms.

LAUNCH # 2
 PT 5-2-62 DE-723 #141
 1962

DEPTH	FATH. RDG.	CORR.
1	0.7	+ 0.3
1	0.6	0.4
1	0.8	0.2
1	0.7	0.3
1	0.7	0.3
1	0.8	0.2
1	0.6	0.4
1	0.7	0.3
1	0.8	0.2
1	0.7	0.3
1	0.7	0.3
1	0.7	0.3

Mean = - 0.292

DEPTH	FATH. RDG.	CORR.
2	1.6	+ 0.4
2	1.6	0.4
2	1.7	0.3
2	1.7	0.3
2	1.7	0.3
2	1.7	0.3
2	1.7	0.3
2	1.7	0.3
2	1.7	0.3
2	1.7	0.3
2	1.7	0.3
2	1.6	0.4
2	1.6	0.4

Mean = + 0.333

DEPTH	FATH. RDG.	CORR.
4	3.5	+ 0.513
4	3.6	0.4
4	3.6	0.4
4	3.6	0.4
4	3.6	0.4
4	3.6	0.4
4	3.5	0.5

Mean of means = + 0.319
 = + 0.3

Mean = + 0.433 - 0.1 (val corr) = + 0.333

All readings and corrections in fathoms.

TIDE REDUCERS, SHEET PF-5-2-62

Reference Station: Lahaina Portable Tide Gage
 MLLW on Staff 0.4
 Minus 30! time Corr.

29 July 1962

0530-0854 -0.1
 0855-1000 -0.2
 1001-1107 -0.3
 1108-1213 -0.4
 1214-1430 -0.5

10 August 1962

0530-0630 -0.1
 0631-0815 -0.2
 0816-1009 -0.3
 1010-1330 -0.4

26 August 1962

0530-0844 -0.1
 0845-0958 -0.2
 0959-1117 -0.3
 1118-1330 -0.4

28 August 1962

0530-0956 -0.1
 0957-1106 -0.2
 1107-1217 -0.3
 1218-1330+ -0.4

8 September 1962

0430-0645 -0.2
 0646-0830 -0.3
 0831-1330 -0.4

14 September 1962

0430-0541 -0.3
 0542-0703 -0.2
 0704-0730 -0.1

9 August 1962

0530-0730 -0.2
 0731-1300 -0.3

11 August 1962

0530-0730 -0.1
 0731-0903 -0.2
 0904-1029 -0.3
 1030-1230 -0.4

27 August 1962

0430-0630 -0.1
 0631-0730 0.0
 0731-0917 -0.1
 0918-1030 -0.2
 1031-1145 -0.3
 1146-2230 -0.4

7 September 1962

0630-0830 -0.3
 0831-1230 -0.4
 1231-1330 -0.3

9 September 1962

0530-0743 -0.2
 0744-0930 -0.3
 0931-1130 -0.4
 1131-1312 -0.5
 1313-1430 -0.4

LIST OF SIGNALS

list of stations used in PF 5-2-62 H- 8685

Name used in Hydro- Survey	T- Sheet number	Method of location
ANT	11913	Photo point # 1305
BIP	11913	" " # 1303
BUL	11894	Sextant cuts
DOG	11895	Photo point
FED	11913	" " # 1304
GAB	11895	" " # 9501
HAW	11894	" " # 0110
JOE	11895	" "
JOY	11894	" "
KAK	11913	" "
LAM	11894	" "
LIP	11895	" "
NIN	11913	" "
NOB	11894	" " # 0703
PAL	11895	" "
PLA	11895	" " # 9502
PUT	11913	" "
QUO	11895	" "
ROC	11895	" "
SIT	11894	Sextant cuts
SOW	11894	Photo point # 9401
STE	11894	" " # 9402
TAT	11895	" "
TEL	11913	Sextant cuts
VAL	11895	Photo point
MAL	11895	" "


APPROVAL SHEET

PROJECT OPR - 419 USC&GSS PATHFINDER Hydrographic Survey H - 8685 (PF 5-2-62)

All field work on the above area was accomplished during the 1962 field season under the supervision of Captain A.L.Wardwell.

The smooth sheet was plotted during the 1963 field season under my command and has been examined and approved.

This survey area is considered complete and adequate for charting purposes and no additional field work is recommended.


H. J. Seaborg
Captain, USC&GS
Comdg., Ship PATHFINDER

GEOGRAPHIC NAMES
Survey No. H-8585

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On Chart No. 430</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On previous survey No.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On U. S. Quadrangle Maps</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">From local information</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On local Maps</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">P. O. Guide or Map</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Rand McNally Atlas</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">U. S. Light List</div> </div>										K	BGN
	A	B	C	D	E	F	G	H				
Fleming Beach				x								1
Haweia Point	x										x	2
Honokahua Bay				x								3
Honolua Bay	x											4
Lipoa Point	x										x	5
Makaluapuna Point				x								6
Makuleia Bay				x								7
Maui Island	x										x	8
Namalu Bay				x								9
Napili Bay	x										x	10
Oneloa Bay				x								11
Pailolo Channel	x										x	12
Alaeloa Point				x								13
Honokeana Bay				x								14
Kaelekii Point				x								15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

George S. Bee
Geographic Names
11 Oct. 1963

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

October 23, 1963

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 8685

Locality Honolua Bay, N.W. Maui Island, Hawaii

Chief of Party: A. L. Wardwell, 1962

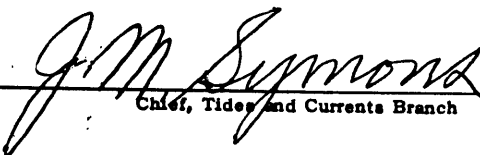
Plane of reference is mean lower low water, reading

0.4 ft. on tide staff at Lahaina, Maui

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

Height of mean high water above plane of reference is
1.8 feet.

Condition of records satisfactory except as noted below:


Chief, Tides and Currents Branch

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8685.....

Records accompanying survey: Smooth sheets ..1.;
 boat sheets .1...; sounding vols. .7...; wire drag vols.;
 Descriptive Reports .1...; graphic recorder envelopes .4...;
 2-Advance Manuscripts T-11894 & 11895;
 special reports, etc. Blue Line Advance Manuscripts T-11894 (3
 copies); T-11895 (2 copies) and T-11913.

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

Number of positions on sheet	.....	1211
Number of positions checked	.....	38
Number of positions revised	.....	7
Number of soundings revised (refers to depth only)	.....
Number of soundings erroneously spaced	.....
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	.....
Junctions	Time	..... 30hrs (review)
Verification of soundings from graphic record	Time	..... 6 hrs.
Special adjustments	Time	.....

Verification by *Allan K. Schugeld* Total time 87 Hrs Date 3/24/66

Reviewed by *Robert W. DeLazaris* Time 120 Date 5/9/73
Sup. Carsten 19 6/4/73

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8685

FIELD NO. PF-5-2-62

Hawaii, Maui Island, Alaeloa Pt. to Lipoa Pt.

SURVEYED: July 29 through September 28, 1962

SCALE: 1:5,000

PROJECT NO.: OPR-419

SOUNDINGS: DE-723 depths

CONTROL: Visual fixes on
shore signals

Chief of Party	A. L. Wardwell
Surveyed by	R. A. Trauschke
.....	S. R. Kotler
.....	L. L. Posey
Protracted by	W. L. Newton
Soundings plotted by	W. L. Newton
Verified and inked by	A. K. Schugeld
Reviewed by	R. W. DerKazarian
.....	Date: May 9, 1973
Inspected by	R. H. Carstens

1. Description of the Area

This survey is along the northwest coast of Maui. It is bounded on the north by lat. $21^{\circ}01'45''N.$, on the west by long. $156^{\circ}41'30''$ and on the south by lat. $21^{\circ}00'15''N.$, with an inset of an area inshore that extends southward to lat. $20^{\circ}59'30''$ at Alaeloa Point.

The bottom is irregular in the inshore areas where there are numerous coral reefs and bare rocks. In depths greater than 10 fathoms, the bottom generally slopes evenly to the maximum depth of about 50 fathoms.

The predominant characteristics of the bottom are sand and coral.

2. Shoreline and Control

The origin of control is adequately covered in part F of the Descriptive Report.

The shoreline originates with reviewed photogrammetric manuscripts T-11894 and T-11895 of 1960-62, and T-11913 of 1960-61. Several sunken rocks and foul areas were retained from the boatsheet.

3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves are adequately delineated except in some inshore areas where the sounding lines are too widely spaced or do not approach shore close enough to accurately delineate the bottom. Brown curves were added to define important shoal features. The low water line was not developed because of the small range of tide and the foul nature of inshore areas.

C. The development of the bottom configuration and the investigation of least depths were not adequate in some inshore areas. Additional development would have been desirable on the following features which were not adequately developed:

Depth	Lat.	Long.
5.2	21°00.39'	156°40.33'
5	21°00.66'	156°40.20'
3.5	21°00.57'	156°39.90'
3.7	21°00.77'	156°39.63'

D. Bottom samples were not obtained for this survey but were transferred from H-8683 (1962) and from a prior survey H-3513 (1913).

4. Condition of the Survey

The field work, sounding records, smooth plotting, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except for the items discussed in Paragraph 3. In some instances it was necessary for the verifier to rescan the fathograms where the sounding intervals were spaced too far apart for adequate portrayal of the bottom. Survey notes were incomplete with respect to conditions of wind and sea and conditions at the inshore ends of lines.

5. Junctions

Adequate junctions were effected with H-8683 (1963) to the north, H-9130 (1961-62) to the west, and H-8578 (1961) to the south.

6. Comparison with Prior Surveys

H-3518 (1913) 1:60,000

H-3513 (1913) 1:20,000

These prior surveys cover most of the area of the present survey. Prior depths in much of the area are 1 to 3 fathoms deeper than present depths. These differences are attributed largely to the differences in survey methods and survey scales.

Several shoal soundings from the prior survey were not adequately developed on the present survey and have been carried forward to supplement present depths.

With these additions the present survey is adequate to supersede the prior surveys in the common area.

7. Comparison with Chart 4130 (latest print date January 20, 1973)

A. Hydrography

The charted hydrography on Chart 4130 originates largely with the previously discussed surveys which require no further consideration, supplemented by the partial application of the present survey before verification and junctional soundings from survey H-9130 (1961-62).

Attention is directed to the following:

1. The rock awash charted in lat. $21^{\circ}01.0'$, long. $156^{\circ}38.5'$ from T-11895 (1960-62) has been considered erroneous by the Division of Coastal Mapping. The rock awash has been removed from T-11895 and should be disregarded.

2. The four sunken rocks charted inshore between Lipoa Point to Honolulu originate with the USGS quadrangle Honolulu, on which they represent a submerged reef from H-3513 (1913). The reef is adequately delineated by soundings on the present survey and the sunken rock symbols can be disregarded.

The present survey is adequate to supersede the charted hydrography in the common area.

B. Aids to Navigation

There are no floating aids to navigation within the limits of this survey. The fixed aid on the present survey is in agreement with the charted position and adequately serves the purpose.

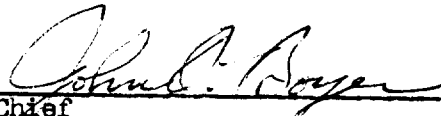
8. Compliance with Instructions

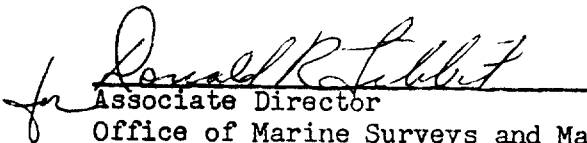
This survey adequately complies with project instructions except as noted in Paragraphs 3 and 4. Specific development was made of Honolulu and Napili Bays.

9. Additional Field Work

This survey is considered to be an adequate basic survey and no additional field work is recommended.

Examined and Approved:


Chief
Marine Chart Division


Associate Director
Office of Marine Surveys and Maps

H-8685

Items for Future Presurvey Review

Future surveys should include determination of least depths on the following features:

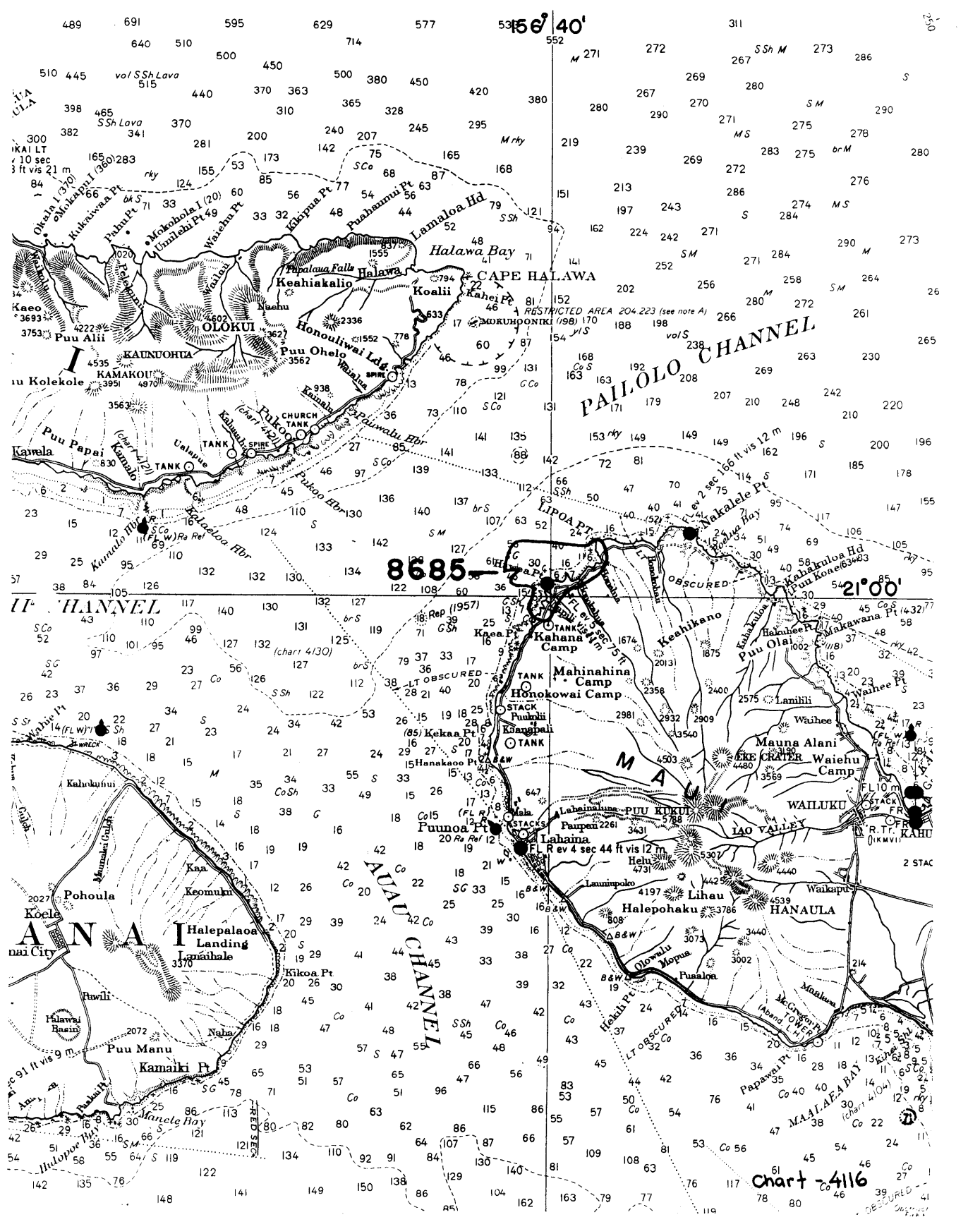
Depths	Lat.	Long.
5.2	21°00.39'	156°40.33'
5	21°00.66'	156°40.20'
3.5	21°00.57'	156°39.90'
3.7	21°00.77'	156°39.63'

The bottom is apparently rather stable although some shifting of sand probably occurs.

Position index - lat. 205, long. 1565
Bottom change index - 2
Use index - 1
Resurvey cycle - 50 yrs.

Position index - lat. 210, long. 1565
Bottom change index - 2
Use index - 1
Resurvey cycle - 50 yrs.

Position index - lat. 210, long. 1564
Bottom change index - 2
Use index - 1
Resurvey cycle - 50 yrs.



8685

Chart 4116

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8685

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
4130	3/31/64	G.R. Johnson	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>No Correction</i>
4116	3/31/64	G.R. Johnson	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>11, cht 4130. No Correction</i>
4130	10/29/74 <i>Reviewed</i>	E. Frey <i>11/8/74 OIK</i>	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>Exam'd review for critical corr's only. No corr's made pt. 32 & bkr. Added one sdg. at Makalapuna</i>
4116	6-9-75	<i>A.J. Borowski</i>	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>Examined for Critical Corr. Thru Cht. 4130. Added 3 1/2 fm Snding. Adjusted 10 fm Curve!</i>
4180	4/15/76	<i>M.D. Kamin</i>	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>EXAMINED Des. Report For critical Corrections - no corrections, Added 32 Snding Thru 4116</i>
19347	2-20-90	<i>Ed Martin</i>	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>22, Considered Adequately applied no further processing required</i>
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