

8680

Diag. Cht. No. 4116022

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT  
(HYDROGRAPHIC)

Type of Survey ..... Hydrographic  
Field No. .... FF-10-1-62  
Office No. .... H-8680

LOCALITY

State ..... Hawaii  
General Locality ..... Maui  
Locality ..... Vicinity of Maalaea Bay

19 62

CHIEF OF PARTY  
A. L. Wardwell

LIBRARY & ARCHIVES

DATE ..... 8-7-70

8680

HYDROGRAPHIC TITLE SHEET

H-8680

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.

PF-10-1-62

State HAWAII

General locality MAUI ~~ISLAND~~

Locality Vicinity ~~WEST~~ OF MAALAEA BAY

Scale 1:10,000 Date of survey 24 April - 10 May 1962

Instructions dated 25 October 1960 & 9 January 1962 Project No. OPR-419

Vessel PATHFINDER LAUNCHES No. 2 & 3

Chief of party Arthur L. Wardwell

Surveyed by Lavon L. Posey

Soundings taken by echo sounder, hand lead, ~~both~~

Graphic record scaled by Launch Crew

Graphic record checked by Launch Crew

Protracted by Cornelius A. J. Pauw Automated plot by \_\_\_\_\_

Soundings penciled by Clarence R. Lehman

Soundings in fathoms ~~XXXX~~ at ~~XXXX~~ MLLW \_\_\_\_\_

REMARKS: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RWW 2/14/92

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY

H-8680 (PF-10-1-62)

A. PROJECT

This survey is a part of project OPR-419.

Original Instructions are dated 25 Oct. 1960; amended 9 January 1962, and 14 March 1962. ✓

The above instructions serve as the authority for this survey.

B. AREA SURVEYED

The area surveyed lies south of McGregor Point on the southwestern shores of Maui Island and comprise the western half of Maalaea Bay and thence along the south shore of Maui Island westward for a distance of about  $2\frac{1}{4}$  statute miles. The northern latitude is  $20^{\circ}47'00''$ ; the southern latitude is  $20^{\circ}44'45''$ . The eastern longitude is  $156^{\circ}29'05''$  and the western longitude is  $156^{\circ}34'30''$ . ✓

The area surveyed joins H-8582 to the north; H-8687 to the east; and H-8679 & H-8583 to the south; H-8580 to the west.

C. SOUNDING VESSEL

Soundings were accomplished by the Ship PATHFINDER'S launches. Launch No. 2 used violet day letters and numbers; Launch No. 3 used green day letters and numbers. ✓

D. SOUNDING EQUIPMENT

Raytheon Fathometers, Model 723, were used by both launches. Launch No. 2 used Raytheon Fathometer, Serial No. 141 and Launch No. 3 used Serial No. 143. Ninety-five percent of the soundings were recorded on the A scales - the deepest soundings were only about 50 fathoms. ✓

Each sounding corrections were determined by daily use of bar checks to a depth of four fathoms. Velocity corrections were determined from data obtained from the oceanographic station observed on 25 April 1962.

Stylus arm length correcters were measured and added by personnel of the Seattle Processing Office (shown in red in record volumes).

### E. SMOOTH SHEET

The smooth sheet projection was ruled in the Washington Office. All hydrography was plotted by personnel of the Seattle Processing Office. Verification was also accomplished in the Seattle Processing Office.

### F. CONTROL

The hydrographic signals were plotted by ship's personnel and checked (also added to) by Processing Office personnel. The G. P.'s were used for the location of triangulation stations. Photo manuscripts T-11919, 11920, 11921, 11922 and 11923 were used to locate (by transfer) the photo-identified topographic signals (red circles). Hydro-located signals were derived from cuts as recorded in the sounding volumes (blue circles). No unusual or substandard methods of control were used.

### G. SHORELINE

Shorelines were transferred from the photo manuscripts as listed in paragraph "F" above, by personnel of the Ship PATHFINDER. Shoreline details were checked and found to be accurate by Processing Office personnel. The low-water line was not defined, because first: the foreshore is very steep to the beach and second: the range of the tides are very small.

### H. CROSSLINES

About 10% of the hydrographic sounding lines are crosslines. For the most part, the crosslines soundings are in reasonably good agreement with the main scheme of the hydrographic sounding lines. The bottom in Maalaea Bay is very broken and rough, causing most jagged and irregular depth curves. Considerable re-scanning was done to arrive at plausible depth curves, since very few in-between soundings had been recorded by ship's personnel. Re-scanning also improved depth comparisons at crossings. More intensive development would have facilitated the drawing of depth curves with some confidence, especially in the southwestern portion of this survey.

### I. JUNCTIONS

To the north this survey joins H-8582 a contemporary survey processed by ship personnel. The final matching of this junction remains to be done. To the east this survey joins H-8687. A satisfactory junction was accomplished after making extensive corrections on H-8687 in the position plotting. (See report for H-8687). To facilitate the making of this junction additional signals were plotted on the eastern shore of Maalaea Bay on smooth sheet H-8680. To the south this survey joins with H-8679. Rough broken bottom in this area and insufficient development leaves some questionable depth curves in the junction area. But

the ends of the depth curves have been matched and soundings transferred in purple ink to H-8680. To the south and west this survey joins with H-8583. The ends of the depth curves have been matched and soundings transferred in carmine red ink to H-8680. Some rather large "holidays" in the hydrographic survey line coverage plus irregular broken bottom, complicated by scale differences (40,000 to 10,000) of these two surveys caused uncertainties as to the exact location of the 40 fathom depth curves. To the west this survey joins with H-8580. A preliminary comparison of soundings in this junction area appear to be in reasonably good agreement. The print of smooth sheet H-8580 used for comparison was taken prior to verification. Hence this junction remains to be completed.

#### J. COMPARISON WITH PRIOR SURVEYS

Survey H-8680 was compared with three prior surveys namely: No. 2456 dated Feb.-May 1900; No. 5337 dated Jan.-Feb. 1931 and No. 5297 dated Feb.-March 1932.

No. H-2456 the eldest prior survey, compared very favorably with the modern survey. In general, difference in depth of soundings common to both new and old surveys seldom exceeded one fathom. Depth curves indicated very similar configuration of the broken bottom in Maalaea Bay.

There is one glaring exception to the above statement, to wit: the 17 fathom sounding at latitude  $20^{\circ}45' 52''$ , longitude  $156^{\circ} 30' 56''$ . This sounding appears to be a detached position on this old survey (No. 2456 of May 1900). The modern survey H-8680 pretty well disproves this sounding in this locality. We suggest that research of the records of H-2456 be made to verify the validity of this sounding. There are two possible explanations; first a 10 fathom error in depth occurred. Second a horizontal positioning error was made.

H-5337 of 1931 covers only the northeastern portion of H-8680. In the area covered by both old and new surveys identical bottom configurations are evident, only minor displacements of generalized depth curves are noticed.

H-5297 of 1932 compares favorably with the modern survey provided allowance is made for the 40,000 scale of the older survey. The elder survey lacks in sufficient detail to make a really meaningful comparison.

#### K. COMPARISON WITH THE CHART

The modern survey was compared to the largest scale charts. The 1:10,000 scale chart C&GS 4104, 5th Edition, Oct. 17, 1966 compares favorably with this new survey excepting the "17 fathom" sounding mentioned in paragraph "J" of this report.

The western half of this survey was compared to C&GS chart 4130, 5th Ed. May 8, 1967 at the scale 1:80,000 and considering the scale difference

the comparison was good.

No particular dangers or shoals were found in this modern survey.

L. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede all prior surveys for charting.

M. AIDS TO NAVIGATION

McGregor Point Daybeacon is the only aid to navigation. It appears on this smooth sheet as McGregor Point Light 1950. The geographic position as published by the Coast and Geodetic Survey and the location as listed in the 1962 Light List are in agreement. This white tower (the unused lighthouse tower) at McGregor Point serves adequately as a day beacon and was also used extensively as a hydrographic signal.

N. STATISTICS

Hydrography	Pos.	Miles sdg. line	Bottom Samples
Launch 2	1110	149.1	10
Launch 3	502	57.5	--(zero)

The total area surveyed equals { 9-3/4 Nautical square miles  
12.8 Statute " "

O. MISCELLANEOUS

This report was written by the verifier in the Seattle Processing Office. The data originates from rough notes made by the hydrographer, the smooth plotter's report and from related reports and entries in the record volumes of this survey.

The Chief of Party did not furnish an approval sheet when this survey was transferred to the Seattle Processing Office.

Respectfully submitted,

*Cornelius A. J. Pauw*

Cornelius A. J. Pauw  
Cartographer

✓

TIDE NOTE

Project OPR-419

USC&GS Ship PATHFINDER

Hydrographic Survey H-8679  
H-8680

(PF-10-1-62)  
(PF-20-2-62)

Corrections for tides were determined from tides observed with a portable recording tide gage located at Makena, Maui.  
(Lat. 20° 39.4 N Long. 156° 26.7 W) A time correction of zero and a range correction of zero, were applied to all tidal values observed at Makena, Maui. The adjusted tidal values were applied to all soundings. Time meridian used was 150°W.

TIDE CORRECTORS: SHEET PF-20-2-62 H-8679 Reference Station: Makana  
 PF-10-1-62 H-8680 MLLW on Staff:  
 PF-10-2-62 H-8681 April 18-May 27 1.1ft  
 PF-05-3-63 H-8685 Aug. 23-Sept. 20 3.0ft  
 No time or range factors

26 May 1962

0600-0800 -0.1  
 0801-1430 -0.2  
 1431-1500 -0.1

27 May 1962

0600-0829 -0.1  
 0830-1400 -0.2

24 August 1962

0600-0700 0.0  
 0701-0843 -0.1  
 0844-1027 -0.2  
 1028-1432 -0.3  
 1433-1612 -0.2  
 1613-2400 -0.1

25 August 1962

0600-0800 0.0  
 0801-0928 -0.1  
 0929-1100 -0.2  
 1101-1530 -0.3  
 1531-1726 -0.2  
 1727-2400 -0.1

28 August 1962

1401-1600 -0.4  
 1601-1800 -0.3  
 1801-1924 -0.2  
 1925-2100 -0.1  
 2101-2300 0.0  
 2301-2400 -0.1

29 August 1962

0000-0100 -0.1  
 0101-0529 -0.2  
 0530-0700 -0.1  
 0701-1028 0.0  
 1029-1150 -0.1  
 1151-1300 -0.2  
 1301-1435 -0.3  
 1436-1650 -0.4  
 1651-1725 -0.3  
 1726-1955 -0.2

30 August 1962

0600-0730 -0.1  
 0731-1100 0.0  
 1101-1222 -0.1  
 1223-1337 -0.2  
 1338-1505 -0.3

10 September 1962

0600-0740 -0.1  
 0741-0820 0.0  
 0821-0929 -0.1  
 0930-1030 -0.2  
 1031-1133 -0.3  
 1134-1410 -0.4

11 September 1962

0600-0909 0.0  
 0910-1010 -0.1  
 1011-1110 -0.2  
 1111-1212 -0.3  
 1213-1400 -0.4

12 September 1962

0600-0950 0.0  
 0951-1050 -0.1  
 1051-1148 -0.2  
 1149-1242 -0.3  
 1243-1500 -0.4

13 September 1962

0600-0700 -0.1  
 0701-1012 0.0  
 1013-1128 -0.1  
 1129-1229 -0.2  
 1230-1340 -0.3  
 1341-1500 -0.4

20 September 1962

0600-0625 -0.2  
 0626-1222 -0.3  
 1223-1500+ -0.2

Computed: L.L.P.  
 Checked: J.L.B.  
 Typed: L.L.P.  
 Checked. *JLR*



36  
VELOCITY CORRECTIONS  
HAWAIIAN ISLANDS

RANGE FROM - TO (SMS)	CORR. SMS.	RANGE FROM - TO (SMS)	CORR. SMS.
0.0 - 3.0	0.0	<del>30.0 -</del>	
3.1 - 5.2	+ 0.1	79.0 - 83.8	+ 3.5
5.3 - 7.5	+ 0.2	83.9 - 88.7	+ 3.7
7.6 - 9.6	+ 0.3	88.8 - 93.6	+ 3.9
9.7 - 11.8	+ 0.4	93.7 - 98.2	+ 4.1
11.9 - 15.2	+ 0.5	98.3 - 101.6	+ 4.3
15.3 - 19.6	+ 0.7	101.7 - 106.7	+ 4.5
19.7 - 24.0	+ 0.9	106.8 - 112.1	+ 4.7
24.1 - 28.4	+ 1.1	112.2 - 118.1	+ 4.9
28.5 - 32.7	+ 1.3	118.2 - 124.2	+ 5.1
32.8 - 37.3	+ 1.5	124.3 - 130.2	+ 5.3
37.4 - 41.6	+ 1.7	130.3 - 140.0	+ 5.5
41.7 - 46.0	+ 1.9		
46.1 - 50.4	+ 2.1		
50.5 - 55.0	+ 2.3		
55.1 - 59.7	+ 2.5		
59.8 - 64.3	+ 2.7		
64.4 - 69.2	+ 2.9		
69.3 - 74.1	+ 3.1		
74.2 - 78.9	+ 3.3		

Comp. S.M.  
S.R.P.

✓

LIST OF SIGNALS

List of stations used in H-8680 (PF-10-1-62)

<u>Name used in Hydro- graphic survey</u>	<u>T-Sheet Number</u>	<u>Method of location</u>
*ANT		
BAT	T-11921	Radial Plot 1962
BEN	T-11920	Radial Plot 1962 (two cuts)
*CAN 1962		
CAR	T-11920	Located by stadia traverse from 2010A 1962
CAT	T-11921	Located by traverse from Photo Pt. 2101A. 2101 was found destroyed and wrong photo pt. was used to locate same signal in 1961 work.
CUP	T-11921	Photo Pt. 2103
DEN	T-11921	Radial plotted 1962
DOG	T-11920	Located by stadia traverse from 2010B 1962
DRY	T-11920	Radial plotted 1961
GLO	T-11920	Radial plotted 1961
HOL	T-11922	Photo Pt. 2202
JOY	T-11920	Photo Hydro Pt. 1901
*JUD		
*KEY(hydro)		
KID	T-11920	Radial plotted 1961
LIL	T-11920	Radial plotted 1962 (two cuts)
LOW	T-11920	Radial plotted 1961
LUX	T-11920	Transferred by shoreline detail points 1962 - Photo 2347
MAC	T-11921	McGregor Point Light, 1950
MAN	T-11920	Transferred by shoreline detail points-1962 - Photo 2347

LIST OF SIGNALS (CONTINUED)

<u>Name used in Hydro- graphic survey</u>	<u>T-Sheet Number</u>	<u>Method of location</u>
MAY	T-11921	Malay (Temporary)
<sup>MUT</sup> *MUK 1962		
OAK	T-11921	Radial plotted 1962
OFF	T-11920	Transferred by shoreline detail points - 1962 - Photo 2347
*ORE (hydro)		
*PAR 1962		
*PAV		
*POL 1962		
PRO	T-11920	Located by stadia traverse from Photo Pt. 2004- 1962
*RAN 1962		
*RAW (hydro)		
RIM	T-11920	Located by stadia traverse from Photo Pt. 2004- 1962
SAP	T-11920	Radial Plotted 1961
SOK	T-11920	Radial Plotted 1961
STE	T-11922	Photo Pt. 2209
TOW	T-11923	Kihei, Radio Station WWVH, mast, 1950
TOY	T-11921	Located by stadia traverse from Photo Pt. 2161A
*USE 1961		
ZOO	T-11920	Transferred by shoreline detail points 1962- Photo 2347

LIST OF SIGNALS (CONTINUED)

<u>Name used in Hydrographic survey</u>	<u>T-Sheet Number</u>	<u>Method of location</u>
2010A	T-11920	Transferred by photo hydro points - 1962 - Photo 2347
2010B	T-11920	Transferred by photo hydro points - 1962 - Photo 2347
2101A	T-11921	Radial Plotted, 1962


The additional signals "ANT....." through USE 1961 and show asterisks, all located on the ~~western~~ shore of Maalaea Bay, were used to resolve the junction with H-8687. *eastern*

Those signals showing dates were plotted from field computed G. P.'s. Tote signals (red circles) were scaled on H-8687; and hydro signals were plotted from cuts as listed in the record volumes of H-8687.

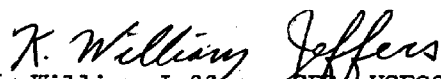
Approval Sheet

The smooth sheet has been inspected and meets the requirements of the Hydrographic Manual. (Note: Exceptions are noted in the verifier's report.)

Examined and Approved

  
William M. Martin  
Supervisory Carto. Tech.

Approved and Forwarded

  
K. William Jeffers, CDR, USESSA  
Chief, Processing Division, PMC

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 16, 1964

Seattle Regional Officer  
~~Nautical Chart Division~~

Plane of reference approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET 8680

Locality: Maalaea Bay  
South Maui Island, Hawaii

Chief of Party: A. L. Wardwell, 1962

Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681): Makena, Maui Island

Height of Mean High Water above Plane of Reference is as follows: 1.7 feet

Remarks

J. M. Symons

Chief, Tides and Currents Branch

GEOGRAPHIC NAMES  
Survey No. H-8680

Name on Survey	Source of Information											
	A	B	C	D	E	F	G	H	K			
✓ Keanapaakai (locality)												1
✓ Kihei (village)												2
✓ Maalaea (community)												3
✓ Maalaea Bay												4
✓ Manuohule Point												5
✓ Maui Island												6
✓ McGregor Point												7
✓ Pacific Ocean												8
✓ Papawai Point												9
✓ Kalepolepo												10
												11
												12
												13
												14
												15
												16
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												24
												25
												26
												27

PREPARED BY

*Frank W. Fickett*  
CARTOGRAPHIC TECHNI

APPROVED BY

*A. J. Wraight*  
CHIEF GEOGRAPHER

HYDROGRAPHIC SURVEY STATISTICS  
HYDROGRAPHIC SURVEY NO. H-8680

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS (Boat sheet)		1	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES	7					
BOXES						
T-SHEET PRINTS (List) <del>T-11919, T-11920, T-11921, T-11922, T-11923</del>						
SPECIAL REPORTS (List)						

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				1612
POSITIONS CHECKED		675	200	
POSITIONS REVISED		12	10	
DEPTH SOUNDINGS REVISED		412	50	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		116	20	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		None		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		1	16	
JUNCTIONS		19	50	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		16	50	
SPECIAL ADJUSTMENTS		4	-	
ALL OTHER WORK		120	77	
TOTALS		160	193	
PRE-VERIFICATION BY	BEGINNING DATE	ENDING DATE		
VERIFICATION BY <i>Cornelius A. J. Pauw</i>	NOV. 5 1968	DEC. 6 1968		
REVIEW BY <i>D. Baumgardner</i>	12-5-72	4-6-73		

Inspect. DR Engle

26 hrs

5-3-76

USCOMM-DC 36271-P68  
5-15-72



H-8680

Information for Future Presurvey Reviews

This survey is located off the southwestern coast of Maui Island, Hawaii, in the vicinity of McGregor Point and includes the southwestern portion of Maalaea Bay. The bottom is considered adequately developed on the present survey.

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
204	1563	1	1	50 years
204	1564	1	1	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8680

FIELD NO. PF-10-1-62

Hawaii, Maui, Vicinity of Maalaea Bay

SURVEYED: April 24 - May 10, 1962

SCALE: 1:10,000

PROJECT NO.: OPR-419

SOUNDINGS: 723 Depth Recorder

CONTROL: Sextant Angles  
on Shore Signals

Chief of Party ..... A. L. Wardwell  
Surveyed by ..... L. L. Posey  
Protracted by ..... C. A. J. Pauw  
Soundings Plotted by ..... C. R. Lehman  
Verified and Inked by ..... C. A. J. Pauw  
Reviewed by ..... S. R. Baumgardner  
Date: February 6, 1973  
Inspected by ..... D. R. Engle

1. Description of the Area

This survey is located off the southwestern coast of Maui, Hawaii, in the vicinity of Papawai Point and includes the southwestern portion of Maalaea Bay. The bottom drops rapidly from the shoreline to the 10-fathom curve and then gradually to maximum depths of 50 fathoms offshore. Numerous irregular shoals and depressions fall within the 10-50 fathom curves.

Predominant bottom characteristic of the area is coral.

2. Control and Shoreline

The source of control is adequately described in part F of the Descriptive Report.

The shoreline originates with reviewed photogrammetric manuscripts T-11920 of 1960-62 and T-11921 of 1960-61.

3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves were adequately delineated except the low water curve which could not be developed because of the nature of the foreshore.

C. The development of the bottom configuration and the investigation of least depths are considered adequate.

#### 4. Condition of the Survey

The sounding records, smooth plotting, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except that in some cases development near the shore was inadequate (as noted in 3B above).

#### 5. Junctions

Adequate junctions were made with H-8580 (1961) on the west, with H-8583 (1961-62) on the southwest, with H-8679 (1962) on the south, with H-8687 (1962) on the east, and with H-8582 (1961) on the northeast.

#### 6. Comparison with Prior Surveys

H-2456	(1900)	1:10,000
H-2459	(1900)	1:60,000
H-4317	(1931-32)	1:10,000
H-5297	(1931-32)	1:40,000
H-5337	(1931)	1:20,000

A comparison of the prior surveys with the present survey reveals, in general, only minor differences of depths within the common area. It was noted that the reviewers of H-5297 and H-5337 of 1931 superseded prior surveys H-2456 and H-2459 by blanket statements in the review reports. However, the development on neither the 1931 surveys nor the present survey is considered adequate to disprove the following questionable soundings and they have been carried forward to the present survey:

A. The 17-fathom sounding charted in latitude 20°45.88', longitude 156°30.93' from H-2459

B. The 5-fathom sounding in latitude 20°46.60', longitude 156°31.86' from H-2456

Numerous soundings have been brought forward from H-2456 to supplement the present survey in the vicinity of McGregor Point. With these additions, the present survey is adequate to supersede the prior surveys in the common area.

#### 7. Comparison with Charts 4130 (latest print date January 30, 1971) 4104 (latest print date August 22, 1970)

A. Hydrography

The charted hydrography originates with the previously discussed surveys which require no further consideration, and is supplemented by information from the partial application of depths from the boat sheet and unverified smooth sheet of the present survey.

Attention is directed to the Radio Tower (landmark) charted in latitude 20°46.06', longitude 156°27.73'. This charted position does not agree with the published geographic position of the tower and should be revised.

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

B. Aids to Navigation

The aid to navigation on the present survey is in substantial agreement with the charted position and adequately marks the feature intended.

8. Compliance with Instructions

The survey adequately complies with the Project Instructions.

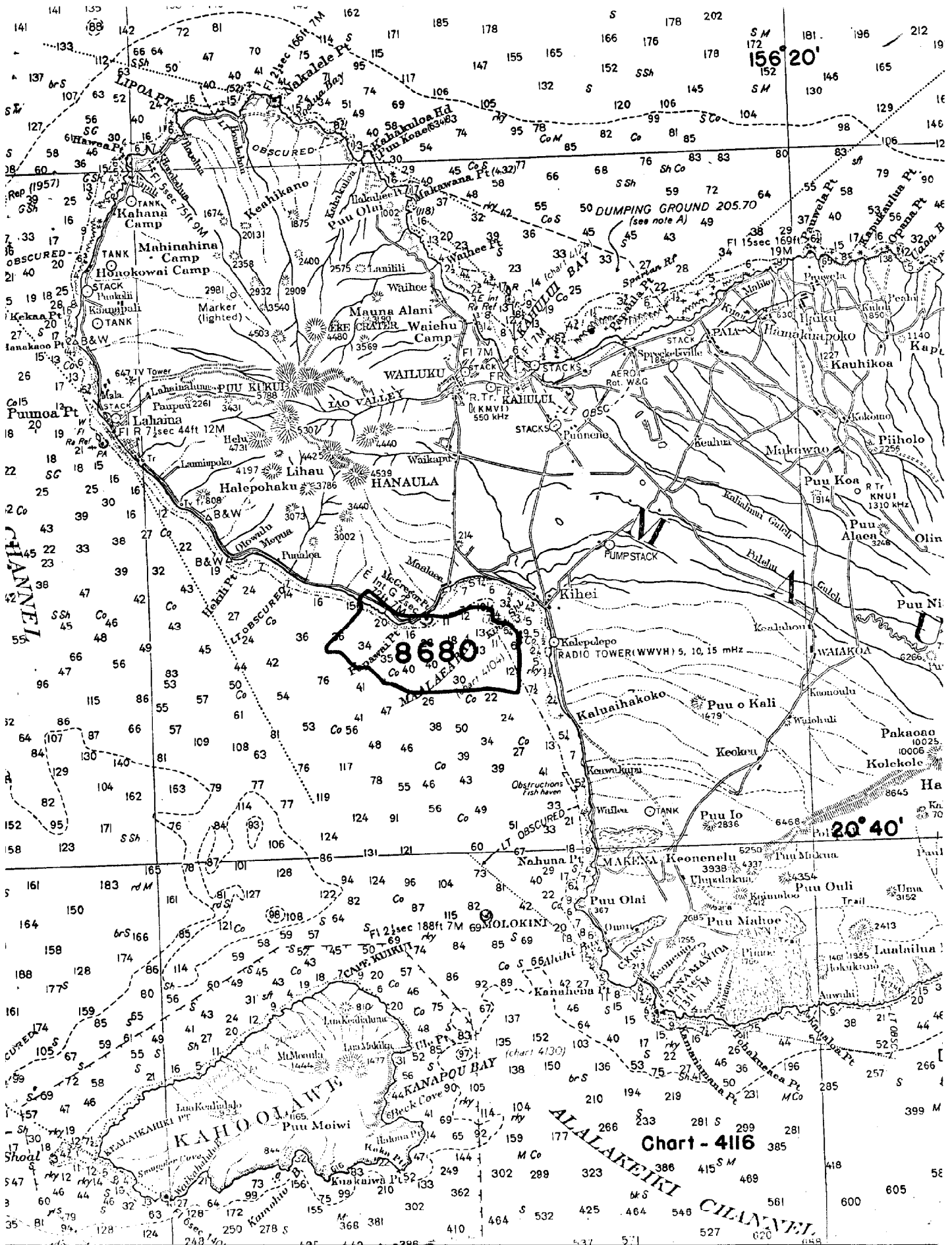
9. Additional Field Work

This is a good basic survey and no additional hydrography is recommended.

Examined and Approved:

a. g. Patrick  
Chief  
Marine Surveys Division

R. H. Hunter  
Associate Director  
Office of Marine Surveys  
and Maps



8680

Chart - 416

CHANNEL

156° 20'

20° 40'

CHANNEL

CURED

Shoal

35

58

605

620

658

688

718

748

778

808

838

868

898

928

958

988

1018

1048

1078

1108

1138

1168

1198

1228

1258

1288

1318

1348

1378

1408

1438

1468

1498

1528

1558

1588

1618

1648

1678

1708

1738

1768

1798

1828

1858

1888

1918

1948

1978

2008

2038

2068

2098

2128

2158

2188

2218

2248

2278

2308

2338

2368

2398

2428

2458

2488

2518

2548

2578

2608

2638

2668

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## RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. **H-8680**

## 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	6 Nov. 70	B. DUGAN	<del>Full Part Before After Verification</del> Review Inspection Signed Via Drawing No. 14 Examined for critical corrections & <i>revised numerous sdgs</i>
4116	4-15-71	<i>J. A. Graham</i>	<del>Full Part Before After Verification</del> Review Inspection Signed Via Drawing No. 16 <i>App'd misc corrections thru</i> <i>cht. 4130 dng #16</i>
4179	5/10/71	<i>J. H. Millan</i>	<del>Full Part Before After Verification</del> Review Inspection Signed Via Drawing No. 9 <i>Examined thru 4116 No critical</i> <i>correction at this time</i>
4102	1/27/72	<i>J. Graham</i>	<del>Full Part Before After Verification</del> Review Inspection Signed Via Drawing No. 28 <i>App'd for critical corr. only</i> <i>thru cht 4116 dng #16</i>
4180	3/15/72	E. Frey	<del>Full Part Before After Verification</del> Review Inspection Signed Via Drawing No. 11 <i>App'd for critical corr's only</i> <i>thru cht 4102 dng # 28</i>
4115	7/20/73	C. S. Forbes	<del>Full Part Before After Verification</del> Review <sup>before</sup> Inspection Signed Via Drawing No. <i>App'd misc corrections thru cht 4116 #16</i>
4130	4/2/75	M. D. Kamin	<del>Full Part Before After Verification</del> Review Inspection Signed Via Drawing No. <b>EXAMINED LEDGE AREAS</b> <b>ONLY</b>
4116	6-12-75	<i>H. J. Borawski</i>	<del>Full Part Before After Verification</del> Review <del>Inspection Signed Via</del> Drawing No. <i>Examined Thru Cht 4130. Called</i> <i>for Green Ink To Be Added To Ledges!</i>
4115	8/9/75	<i>Naitor</i>	<del>Full Part Before After Verification</del> Review Inspection Signed Via Drawing No. <i>NO corr thru 4116</i>
4102	8/11/75	<i>Naitor</i>	<del>Full Part Before After Verification</del> Review <del>Inspection Signed Via</del> Drawing No. <i>NO corr thru 4116</i>
4179	8/29/75	HAUSMAN	PART After Review, No Corr thru 4102
4115	1/26/77	KANIS	Part app after signature
4104	1/12/78	<i>M. J. Frisk</i>	<del>Full</del> <i>Part</i> app after Inspection & Signature
4116	8/28/79	KANIS	Part Applied thru 4115 After signature
<sup>19347</sup> 4130)	6/13/83	<i>Lichman</i>	Fully app'd <del>hydro</del> after signed Mar 20. App'd hydro through chart 19250 Dng 6 in common area! App'd directly to 19347 outside the <small>common area.</small>

