

8827

Diag. Cht. No. 4116-6.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PF 10-1-64 Office No. H-8827

LOCALITY

State HAWAII

General locality LANAI ISLAND

Locality SOUTHWESTERN COAST

1965-65

CHIEF OF PARTY

L.F. WOODCOCK, CAPTAIN, USESSA

LIBRARY & ARCHIVES

DATE Nov. 22, 1965 **22 OCT 1965**

USCOMM-DC 5087

8827.

HYDROGRAPHIC TITLE SHEET

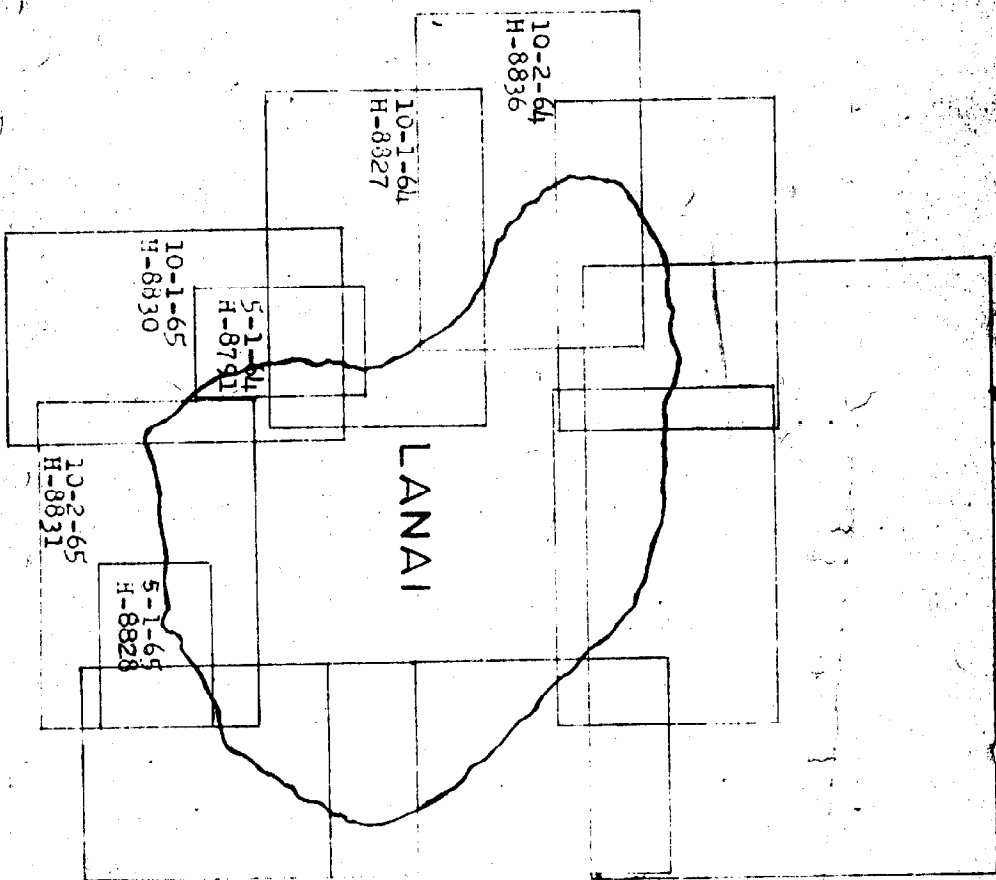
H-8827

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-10-1-64State HawaiiGeneral locality Lanai IslandLocality Southwestern CoastScale 1:10,000Date of survey Mar. 11-15 1964,
Feb. 20, 21, 24, 25, 1965
Mar. 21, 22, 1965Instructions dated 25 Oct. 1960, Supplemental Instructions Jan. 9, 1962, Dec. 17, 1963,
Revised Nov. 9, 1964, Amended Instructions Feb. 15, 1965.Vessel USC&GS Ship PathfinderChief of party H.J. Seaborg, L.F. WoodcockSurveyed by H.J. Seaborg, S.L. Hollis, C. Nixon, R.V. O'Connell, W. Simmons, P. SchidrichSoundings taken by echo sounder, ~~XXXXXX~~ XXXXXXFathograms scaled by ship's personnelFathograms checked by ship's personnelProtracted by G.E. Rorvig, F.T. SmithSoundings penciled by G.E. Rorvig, F.T. SmithSoundings in fathoms XXXX at XXXX MLLW

REMARKS:

SHEET LAYOUT
PROJECT OPR-419 LANAI



DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-8827 (PF 10-1-64) 1964
SOUTHWESTERN COAST, LANAI ISLAND, HAWAII

SCALE: 1:10,000
1964-1965

L.F. WOODCOCK
CAPTAIN, USC&GS
CHIEF OF PARTY

A. PROJECT

This survey is part of Project OPR-419 with original instructions dated the 25 October, 1960, amended March 14, 1960 and supplemented on March 16, 1961, January 9, 1962, and December 17, 1963 and further revised on November 9, 1964 and amended again on February 15, 1965.

B. AREA SURVEYED

Sheet PF ^{H-8827} 10-1-64 is located on the southwest coast of Lanai Island and covers the area north of Kaunapali Harbor. The area covered lies between 20-47-30 N to 20-50-30 N latitude and 156-59-00 W to 157-04-30 W longitude. The work started on March 13, 1964 and was stopped on March 15, 1964. The work was started again on February 20, 1965 and continued until February 25, 1965 when it was completed, except for some development on March 21 and 22.

This sheet junctions with PF ^{H-8830} 10-1-65 and PF ^{H-8791 (1967)} 05-1-64 on the south and PF ^{H-8836} 10-2-64 on the north. Sheet PF ^{H-8791 (67)} 05-1-64 is a 1:5,000 scale survey of Kaunapali Harbor which is in the lower right boundary of sheet PF ^{H-8827} 10-1-64. The 1964 survey of H-8791 was re-run by the Ship M^S ARTHUR in 1967

C. SOUNDING VESSEL

	color	
Ship Pathfinder	blue	upper case letters
Motor Launch #1	blue	lower case letters
Motor Launch #2	violet	lower case letters
Motor Launch #3	green	lower case letters

D. SOUNDING EQUIPMENT

All depths were obtained using the Raytheon type DE-723 echo sounder in all launches and in conjunction with the Pathfinder.

Vessel	day letter	fathometer no.
Pathfinder	A-C	557
Pathfinder	D	551
ML#1	a-d	141
ML#1	e,f	143
ML#2	a,b	557
ML#3	a,b	141

The soundings were corrected for velocity, initial and draft and instrument corrections. The draft and instrument corrections were combined under the heading of echo corrections. For an explanation of the use of this term see the 1965 Fathometer Report for the ship Pathfinder. The data for the velocity corrections and the echo corrections are listed in the back of this report in tabular form. They were obtained from the 1964 and 1965 Fathometer Reports for the ship Pathfinder. *Stylus arm length corrections were determined and added by processing office personnel*

D. SOUNDING EQUIPMENT (cont.)

The initial reading was set at 0.0 depth for the launches. Any change was so recorded in the record volumes as the initial correction. ✓

The draft correction and instrument correction ~~was~~ was determined from a standard bar check by comparing the measured depth with the depth indicated by the fathometer. Two bar checks were taken each day if the weather permitted.

E. SMOOTH SHEET

The projection was computed by G.E. Rorvig and checked by R.P. Williamson. The projection was drafted by G.E. Rorvig and checked by R.V. O'Connell on November 2, 1964. The size of the sheet is 36"x54".

F. CONTROL

Visual control was used throughout the survey. Photo-hydro stations were taken from a 1:10,000 manuscript, T-11973, by pricking through to the smooth sheet. Those photo-hydro stations taken from T-11974, which is a 1:5,000, were scaled and replotted on the smooth sheet. All the signals were plotted by mistake but only those used were labeled. ^{✓ Signals not used have been erased.} The triangulation control was plotted by G.E. Rorvig on November 3, 1964 and checked the same day by R.V. O'Connell. ✓

The list and source of the stations is given in the back of the report. ✓

G. SHORELINE

Shoreline was taken from manuscripts T-11974 and T-11973. T-11973 is a 1:10,000 advanced manuscripts and T-11974 is a 1:5,000 advanced manuscript reduced to 1:10,000 for transfer of shoreline.

Blue offshore features were verified on March 21, 1965. No discrepancies were noted in the shoreline verification. Rocks awash were transferred from the advanced manuscripts or plotted from detached positions noted in the sounding records. Rocks noted in sounding volumes as being passed while doing hydrography were used to verify rocks located by photogrammetry and was used also to establish location of shoreline verification run.

H. CROSSLINES

The percentage of crosslines was about 13% of the total amount of hydrography done. Good agreement was established in all cases. Differences were resolved by rescanning the fathograms.

There were several cases of areas becoming congested with overlapping lines and soundings. It was necessary in some cases to delete some of the lines and soundings. In these cases preferences was given to shoaler soundings. Positions and soundings that were not plotted were so noted in the sounding volumes.

I. JUNCTIONS

PF 10-1-64 forms junctions with PF 10-2-64, PF 10-1-65 and PF 5-1-64. PF 10-2-64 and PF 10-1-65 were not smooth plotted as of completion of this sheet. However, close

Satisfactory junctions have been made with H-8791(1967) and H-8830 on smooth sheet by verifier.

I. JUNCTIONS (cont.)

agreement was indicated by the respective boat sheets. PF 5-1-64 was partially smooth plotted at the completion of this sheet and the soundings agreed with the maximum difference of 1 fathom.

J. COMPARISONS WITH PRIOR SURVEYS

Comparison made with Hydrographic Survey No. 5292 which is dated December 1931-March 1932 and has a scale of 1:20,000. The survey PF 10-1-64 was in general 1 to 2 fathoms shallower than H 5292 in the 40 fathoms or less regions. Differences of 4 fathoms were indicated in some regions where depths were greater than 40 fathoms. The differences were consistent through the surveys. The ~~contour lines~~ ^{depth curves} of PF 10-1-64 fell ^{H-8827} inshore to those of H5292. There were no large differences noted in shoal regions. ✓

K. COMPARISON WITH THE CHART

This sheet was compared with C&GS Chart 4120 which is a 1:80,000 scale chart. Good agreement was indicated and the soundings checked within 2 fathoms. There ~~was~~ ^{were} approximately 40 soundings in the area of the survey. ✓

L. ADEQUACY OF SURVEY

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

M. AIDS TO NAVIGATION

There was one floating aid to navigation located and shown at $20^{\circ} 47' 35.0''$ N. Lat. and $156^{\circ} 59' 46.7''$ W. Long.. ✓
This is a mooring bouy in 18 fathoms of water. *This is a mooring buoy.*

N. STATISTICS

The following statistics are for 1964 and 1965 combined.

<u>Vessel</u>	<u>No. of Pos.</u>	<u>Miles of Sdg. Line</u>	<u>BTM S.</u>
Pathfinder	148	33.4	5
Launch #1	499	67.0	
Launch #2	93	9.3	13
Launch #3	<u>64</u>	<u>8.2</u>	<u> </u>
totals	804	117.9	18

O. MISCELLANEOUS

The area around 20°49'40" N. Lat. and 156°59'50" W. Long. was developed to show a shoal. However, the scale of the sheet prevents clear plotting of most of the data. It could be shown much better on a larger scale and definite bottom contours could be selected. *Overlays made by verifier and included in this report.*

P. RECOMMENDATIONS

That this survey be accepted and supersede all prior surveys of this area. ✓

R. REFERENCES TO REPORTS

Seasons Reports

Forwarded

Respectfully Submitted

Fidel T. Smith
Fidel T. Smith
Ens. USESSA

TIDE NOTE

Corrections for tides were obtained from a portable automatic gage installed at Kaumalapau Harbor (20-27.4 N. Lat. , 156-59.7 W. Long.). No corrections were made for range or time. Mean lower low water in 1964 was at 1.6 feet on the tide staff and in 1965 it was at 1.9 feet. Both gages were installed at the same location and taken up at the end of the field season. Tide corrections were taken from abstracts of the tide gage marigrams except for the tides for March 20 and 21 of 1965 which were furnished by the Washington Office.

Geographic Names Penciled on H-8827

ANAPUKA COVE

FIVE NEEDLES

HONOPU BAY

KAUMALAPAU HARBOR

KEONE BAY

LANAI ISLAND

NAUPAKA POINT

PACIFIC OCEAN

TIDE CORRECTORS: Sheet PF 10-1-64 H-8827

Reference stations: Fixed gage at Kaunapali
Harbor, Lanai

<u>3/13/64</u>		A-DAY	SHIP	
from	to	0-31	31-101	101-151
0800	0935	-0.1	-0.2	*
0935	1130	0.0	0.0	*
1130	1312	-0.1	-0.2	*
1312	1438	-0.2	-0.2	*
1438	1800	-0.3	-0.4	*

<u>3/14/64</u>		B-DAY	SHIP	
0722	0826	-0.2	-0.2	*
0826	0945	-0.1	-0.2	*
0945	1205	0.0	0.0	*
1205	1345	-0.1	-0.2	*
1345	1500	-0.2	-0.2	*
1500	1900	-0.3	-0.4	*

<u>3/15/64</u>		C-DAY	SHIP	
0230	0600	*	-0.4	*
0600	0738	-0.3	-0.4	*
0738	1028	-0.1	-0.2	*
1028	1230	0.0	0.0	*
1230	1400	-0.1	-0.2	*
1400	1508	-0.2	-0.2	*
1508	1630	-0.3	-0.4	*
1630	1845	-0.4	-0.4	*

<u>2/24/65</u>		D-DAY	SHIP	
0600	1500	-0.1	-0.2	0.0
1500	1750	0.0	0.0	0.0
1750	1900	-0.1	-0.2	0.0

<u>3/11/64</u>		a-DAY	ML #1	
0700	1220	-0.1	-0.2	*
1220	1800	-0.2	-0.2	*

<u>3/12/64</u>		b-DAY	ML #1	
0750	1245	-0.1	-0.2	*
1245	1500	-0.2	-0.2	*
1500	1700	-0.3	-0.4	*

3/14/64		c-DAY	ML #1	
from	to	0-31	31-101	101-151
0722	0826	-0.2	-0.2	*
0826	0945	-0.1	-0.2	*
0945	1205	0.0	0.0	*
1205	1345	-0.1	-0.2	*
1345	1500	-0.2	-0.2	*

3/15/64		d-DAY	ML #1	
0738	0848	-0.2	-0.2	*
0848	1028	-0.1	-0.2	*
1028	1230	0.0	0.0	*
1230	1400	-0.1	-0.2	*
1400	1508	-0.2	-0.2	*
1508	1630	-0.3	-0.2	*

2/20/65		e-DAY	ML #1	
0600	0950	-0.2	-0.2	-0.5
0950	1010	-0.1	-0.2	-0.5
1010	1115	-0.1	-0.2	0.0
1115	1520	0.0	0.0	0.0
1520	1645	-0.1	-0.2	0.0
1645	1715	-0.1	-0.2	-0.5

2/21/65		f-DAY	ML #1	
0600	1000	-0.2	-0.2	-0.5
1000	1050	-0.1	-0.2	-0.5
1050	1225	-0.1	-0.2	0.0
1225	1530	0.0	0.0	0.0
1530	1715	-0.1	-0.2	0.0
1715	1755	-0.1	-0.2	-0.5

2/24/65		a-DAY	ML #2	
0600	1500	-0.1	-0.2	0.0
1500	1750	0.0	0.0	0.0
1750	1900	-0.1	-0.2	0.0

2/25/65		b-DAY	ML #2	
0600	0800	-0.1	-0.2	0.0
0800	1000	0.0	0.0	0.0
1000	1515	-0.1	-0.2	0.0
1515	1900	0.0	0.0	0.0

3/21/65		a-DAY	ML #3	
from	to	0-31	31-101	101-151
0800	0845	-0.2	-0.2	-0.5
0845	0910	-0.1	-0.2	-0.5
0910	1045	-0.1	-0.2	0.0
1045	1415	0.0	0.0	0.0
1415	1525	-0.1	-0.2	0.0
1525	1555	-0.1	-0.2	-0.5
1555	1715	-0.2	-0.2	-0.5
1715	2000	-0.3	-0.4	-0.5
3/22/65		b-DAY	ML #3	
0600	0800	-0.2	-0.2	-0.5
0800	0915	-0.1	-0.2	-0.5
0915	1145	-0.1	-0.2	0.0
1145	1435	0.0	0.0	0.0
1435	1615	-0.1	-0.2	0.0
1615	1635	-0.1	-0.2	-0.5
1635	1830	-0.2	-0.2	-0.5
1830	2000	-0.3	-0.4	-0.5

All correctors are in fathoms.

Note: All tide correctors were applied
according to the hydro manual
Sec. 5-100.

ECHO CORRECTIONS

PF 10-1-64

H-8827

Compiled from Fathometer Reports for 1964 and 1965

(SHIP) PATHFINDER DRAFT CORRECTIONS

day letter	date	correction fathoms	fathometer no.
A	3/13/64	+ 0.4	557
B	3/14/64	0.4	557
C	3/15/64	0.4	557
D	2/24/65	0.2	551

MOTOR LAUNCH FATHOMETER CORRECTIONS

day letter	date	correction fathoms	fathometer no.
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ML#1

a	3/11/64	+ 0.3	141
b	3/12/64	0.3	141
c	3/14/64	0.3	141
d	3/15/64	0.3	141
e	2/20/65	0.3 (0-31 fms)	143
		0.2 (31-101fms)	
f	2/22/65	0.3 (0-31 fms)	143
		0.2 (31-101fms)	

ML#2

a	2/24/65	+ 0.2	557
b	2/25/65	0.3 (0-31 fms)	557
		0.2 (31-101fms)	

ML#3

a	3/21/65	+ 0.4	141
b	3/22/65	0.4	141

H-8827

SPACING IN METERS

DEPTH OF AREA

50	Narrow channels, anchorages, bays and small boat harbors.
50 - 100	Less than 20 fathoms off rocky points and spits.
100	Less than 20 fathoms along general coastline.
200	20 to 30 fathoms.
400	30 to 100 fathoms.
800	100 to 200 fathoms.
1600	Over 200 fathoms.

Depth, fms.	Fathometer Read to nearest, fms.	Corrections applied to nearest, fms.	Correction Interval
0-11	0.1	0.1	$\frac{1}{2}$ above to
11-31	0.2	0.1	$\frac{1}{2}$ below
31-101	0.5	0.2	$\frac{1}{4}$ to $\frac{3}{4}$ rule
101-150	1.0	0.5	See Hydro Manual,
150-600	2.0	1.0	
600-1800	5.0	2.0	Sec. 5-100, 101, 102.

CHANGE SIGNAL OFF (20°-48' / 156°-59'-30") to OAF

LIST OF STATIONS ON H-8827(PF-10-1-64)

NAME USED IN HYDROGRAPHIC SURVEY	ORIGIN OF STATION
ABE	T-11973
ANA	NANA, 1927
ART	T-11973
BAT	T-11973
BUB	T-11973
BUM	T-11973
BUT	T-11973
CAW	T-11974
CRY	T-11973
DIM	T-11973
EEL	T-11973
FAT	T-11974
FOG	T-11973
FUN	T-11973
GAS	T-11973
HAG	T-11973
HER	T-11973
IVY	T-11973
JAG	T-11974
JIM	T-11973
JOE	T-11974
KAU	KAU, 1927
KEN	T-11974
LEO	T-11973
LIG	KAUMALAPAU HAR- BOR BREAKWATER LIGHT, 1927
LOG	T-11974
MAL	KAUMALAPAU LIGHT, 1962
MAN	MANUI, 1927
MAR	T-11974
MOO	T-11973
NIT	T-11974
NOD	T-11974
OAF	T-11974
ODD	T-11973
OFF	T-11973
ORA	T-11973
PIC	T-11974

LIST OF STATIONS (CONT.)

NAME USED IN
HYDROGRAPHIC SURVEY

ORIGIN OF STATION

PLY	T-11974
POI	T-11973
POL	T-11973
PRO	T-11974
RIM	T-11974
SUB	T-11974
TAN	T-11973
TAT	T-11973
TER	T-11973
TIT	T-11973
TOY	T-11974
VET	T-11974
WEE	T-11974

USC&GSS PATHFINDER
Capt. L. F. Woodcock, Comdg.

Velocity Corrections

Hawaiian Islands - 1965

Corrections to be applied to Sheet Nos. PF 10-1-64,
PF 10-1-65, PF 10-2-65, and PF 10-2-64.

<u>Correction</u>	<u>To depth</u>	<u>Correction</u>	<u>To depth</u>
+0.1 fathoms	3.4-5.5 fathoms	+3.0 fathoms	71.0 fathoms
0.2	7.6	3.2	75.4
0.3	9.6	3.4	80.0
0.4	12.0	3.6	84.6
0.5	14.2	3.8	89.0
0.6	16.4	4.0	93.7
0.7	18.5	4.2	98.3
0.8	20.6	4.4	103.3
0.9	22.8	4.6	111.5
1.0	25.0	5.0	124.0
1.1	27.3	5.5	140.0
1.2	31.5	6.0	156.0
1.4	35.7	6.5	175.0
1.6	40.5	7.0	193.0
1.8	44.9	7.5	228.0
2.0	49.1	8.0	267.0
2.2	53.5	8.5	309.0
2.4	57.9	9.0	355.0
2.6	62.2	9.5	410.0
2.8	66.7	10.0	450.0

USCGC PATHFINDER
OSS-30
H.J. Seaborg, Comdg.

VELOCITY CORRECTIONS
Hawaiian Islands
Maui and Lanai Islands

To be applied to all hydrography accomplished in February and March 1964.

Correction to Depth

+0.0 fm	3.0 fm
0.1	5.5
0.2	7.5
0.3	10.0
0.4	12.0
0.5	14.4
0.6	16.4
0.7	19.0
0.8	21.0
0.9	23.2
1.0	25.4
1.1	27.6
1.2	30.0
1.3	32.0
1.4	36.5
1.6	41.0
1.8	45.5
2.0	50.0
2.2	54.5

Correction to Depth

+2.4 fm	58.5 fm
2.6	63.0
2.8	67.5
3.0	72.0
3.2	76.5
3.4	81.0
3.6	85.5
3.8	90.5
4.0	96.0
4.2	100.0
4.4	104.0
4.5	111.0
5.0	122.0
5.5	144.0
6.0	190.0
7.0	310.0
8.0	366.0
9.0	400.0

APPROVAL SHEET

REGISTRY NO. 8827 (PF 10-1-64)

The field work on this sheet was inspected where conditions permitted. The records and smooth sheet have been examined and approved.

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

G.L. Short

Cdr., ESSA

Comdg. Ship Pathfinder

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 10, 1966

~~Navy Hydrographic Division:~~ Pacific Marine Center

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 8827

Locality: Lanai Island (West side), Hawaii

Chief of Party: H. J. Seaborg, 1964
L. F. Woodcock, 1965

Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681):

Kaunalapau Harbor, Lanai Island, Hawaii

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

1.7 feet

Remarks


Chief, Tides and Currents Branch

GEOGRAPHIC NAMES

Survey No. H-8827

GEOGRAPHIC NAMES									
Survey No. H-8827									
Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K
Anapuka Cove									1
Anapuka Point									2
Five Needles									3
Honopu Bay									4
Kaumalapuu Harbor									5
Keone Bay									6
Kiei Bay									7
Lanai Island									8
Naupaka Point									9
Pacific Ocean									10
									11
									12
									13
									14
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									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

PREPARED BY
Frank W. Liden
CARTOGRAPHIC TECHNICIAN

APPROVED BY
A. Joseph Wright
CHIEF GEOGRAPHER

○ IVY

157° 00' 00"

+

59' 30'

20° 50' 00"

+

○ BUB

○ POI

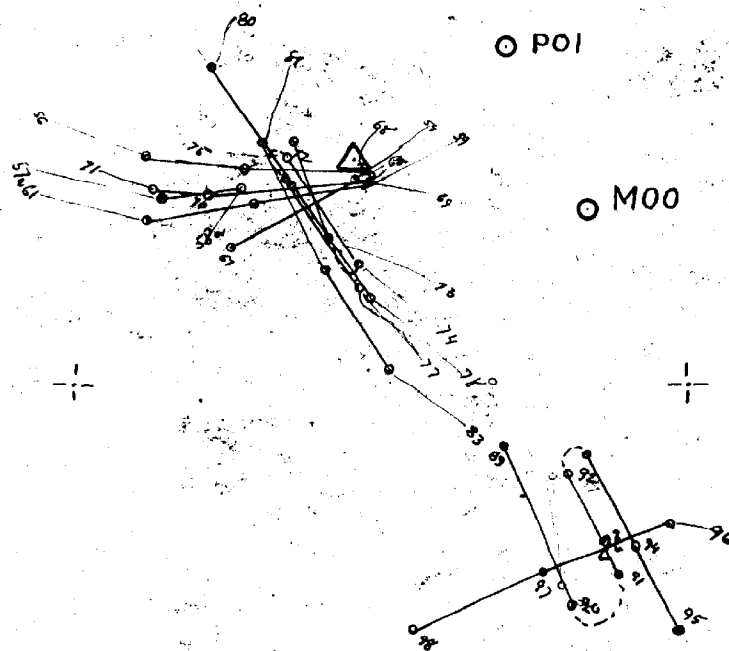
○ MOO

49' 30"

+

○ JIM

○ HER



Overlay to accompany

H-8827

+

+

○ IVY

157° 00' 00"

59' 30"

20° 50' 00"

○ BUB

○ P01

○ M00

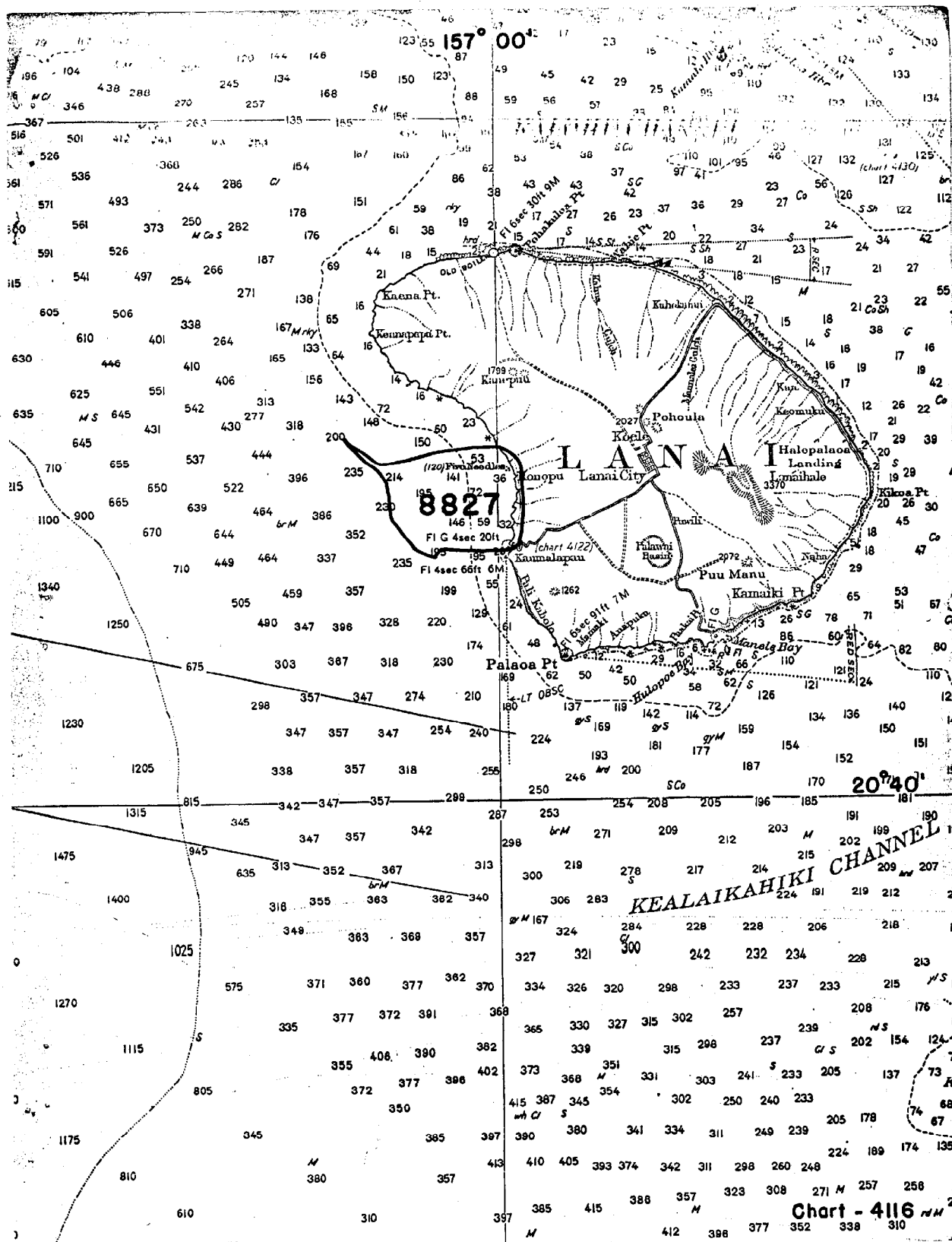
49 30"

○ JIM

○ HER

overlay to accompany

H-8827



HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-8827 (PF 10-1-64)

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

RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1		BOAT SHEETS		2 ^{12 pages} _{1 mylar}	
DESCRIPTIVE REPORT		1		OVERLAYS		2 in Report	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS	
ENVELOPES							
CAHIERS	1						
VOLUMES	VII						
BOXES							

T-SHEET PRINTS (List)

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				823
POSITIONS CHECKED		417		
POSITIONS REVISED		25		
DEPTH SOUNDINGS REVISED		(about) 45		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		(about) 60		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		2		
JUNCTIONS		10		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		18		
SPECIAL ADJUSTMENTS (Overlay)		5		
ALL OTHER WORK		97		
TOTALS		132		
PRE-VERIFICATION BY		BEGINNING DATE	ENDING DATE	
VERIFICATION BY		BEGINNING DATE	ENDING DATE	
REVIEW BY		BEGINNING DATE	ENDING DATE	

Arnelius A. J. Paul

Nov. 16 1969

Jan 23, 1970

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H 8827 (PF-10-1-64)

INSTRUCTIONS - This form serves to identify items of a checklist in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed in the Descriptive Report until the survey is reviewed.

CL - Check List Items: should be checked as having been completed during the verification processes.

R - Report Item: This column refers to those items reported to the reviewer and is used to indicate the items discussed.

Part I - DESCRIPTIVE REPORT	CL	R	Part III - JUNCTIONS (Continued)	CL	R
Note: The verifier should first read the Descriptive Report for general information and problems. 1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None	✓		10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of Butt junctions and areas which are SUPERSEDED .	Satisfactory	
2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: -- None	✓		Part IV - VOLUMES 11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None	✓	
3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None	✓		12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following: (a) rocks (b) line turns (c) position values of beginning and ending of lines (d) bar check or velocity correctors (e) time recording (f) notes or markings on fathograms (g) was reduction of soundings accurately done? (h) was scanning accurate? (i) were peaks at uneven intervals missed? (j) were stamps completed? (k) references to adjacent features	✓ ok ✓ few ✓ ✓ ✓ ✓ fair ✓ few ✓ yes ✓ none	
Part II - SHORELINE AND SIGNALS 4. Source of shoreline signals Remarks Required: -- List all surveys a. Give earliest and latest dates of photographs b. Field inspection date c. Field Edit date d. Reviewed-Unreviewed Not known	✓		Part V - PROTRACTING 13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None	✓	
5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.	ok ✓		14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None	✓	
6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None	✓		15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None	✓	
7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.	✓				
Part III - JUNCTIONS Note: Make a cursory comparison preliminary to inking soundings in area of overlap. 8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None	✓				
9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None	✓				

Part V - PROTRACTING (Continued)		CL	R	Part VIII - AIDS TO NAVIGATION		CL	R
16. The protracting was satisfactory except as follows: Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.		✓		26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. Remarks Required: -- Conflicts of any nature listed.		✓	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number. <i>Courts #1205 Nov 16, 1969</i>		✓		27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification. Remarks Required: -- None		✓	
Part VI - SOUNDINGS				Part IX - BOAT SHEET			
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None		✓		28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information. Remarks Required: -- None		✓	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.		✓		29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.		✓	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None		✓		Part X - GENERAL			
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None		✓		30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2). Remarks Required: -- None		✓	
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.		✓		31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None		✓	
Part VII - CURVES				32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: -- None		✓	
23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected. <i>G.R. Lehman</i>		✓		33. The bottom characteristics are adequately shown. Remarks Required: -- None		✓	
24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following: a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed Remarks Required: -- None		Not Reasonable See Reports		Part XI - NOTES TO THE REVIEWER			
25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn). Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.		✓		34. Unresolved discrepancies and questionable soundings. <i>are there Hydro V. L. W. line and other data</i>		None	
		✓		35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.		Unknown	
				36. Supplemental information.		None	
Verified by <i>Cornelius A. J. Pauer</i>						Date <i>Jan 23, 1970</i>	

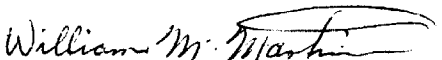
Approval Sheet

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


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

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8827 (Category I)

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.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.