8836

Diag. Cht. No. 4116-2.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PF 10-2-64 Office No. H - 8836

LOCALITY

State Hawaii

General locality Lanai Island

Locality ~~West Coast~~ Five Nautical Miles to Kaenapapa 14

1964

CHIEF OF PARTY

L. F. Woodcock, Captain, USC & GS

LIBRARY & ARCHIVES

DATE 24 NOV 1970

USCOMM-DC 5087

8836

Category 1

FORM 537
(8-15-59)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

H- 8836

HYDROGRAPHIC TITLE SHEET

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 - 2 - 64

State Hawaii

General locality Lanai Island

Locality ~~West Coast~~ Five Needles to Kaenapapa Pt.

Scale 1 : 10,000 Date of survey Started 3 - 13 - 64 Completed 8 - 8 - 65

Instructions dated Original: 25 Oct, 1960

Vessel Ship PATHFINDER, Launch # 1, Launch # 2, Launch # 3

Chief of party H. J. Seaborg (1964), L. F. Woodcock (1965)

Surveyed by Various Personnel

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

Fathograms scaled by Various Personnel

Fathograms checked by Various Personnel

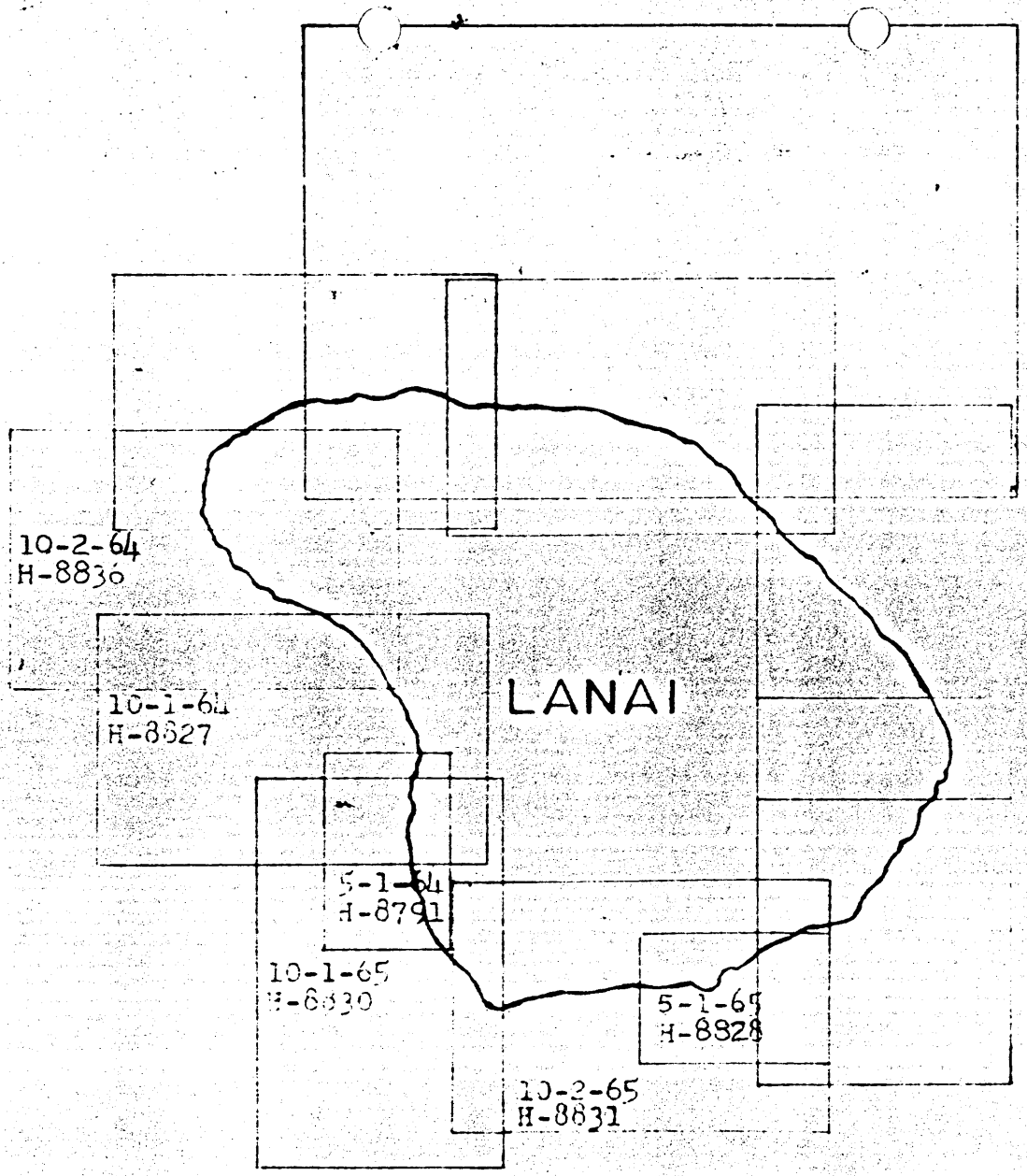
Protracted by O. R. MacIntosh

Soundings penciled by O. R. MacIntosh

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW

REMARKS:

USCOMM-DC 27116-P59



SHEET LAYOUT
PROJECT OPR-419 LANAI

DESCRIPTIVE REPORT
To Accompany Hydrographic Survey H-8836 (PF 10-2-64)
West Coast, Lanai Island, Hawaii

A. PROJECT

This survey is part of Project OPR-419 with original instructions dated 25 October 1960, and supplemental instructions dated 3 January 1963, 17 December 1963, 19 November, 1964 and 6 December 1965.

B. AREA SURVEYED

This survey covers the area on Lanai Island between Five Needles and Kaena Point and is bounded approximately as follows:

On the north by latitude: 20° 54' 30'' N.
On the south by latitude: 20° 50' 00'' N.
On the east by longitude: 157° 00' 00'' W.
On the west by longitude: 157° 07' 30'' W.

The sheet juctions with H-8827 PF 10-1-64 on the south and with two sheets on the north. ~~As these sheets have not yet been started, no field numbers have been assigned them.~~ H-8999 (1968) McArthur and H-8833 (1966)

C. SOUNDING VESSELS

Soundings were made by the Ship PATHFINDER and Launch #3 in 1964, and by the Ship PATHFINDER and Launches # 1,2 & 3 in 1965. The color code is as follows:

1964:	PATHFINDER:	blue upper case letters
	Launch #3 :	green lower case letters
1965:	PATHFINDER:	blue upper case letters
	Launch #1 :	blue lower case letters
	Launch #2 :	purple lower case letters
	Launch #3 :	green lower case letters

D. SOUNDING EQUIPMENT

VESSEL	DAY LETTER	TYPE ECHO SOUNDER	NUMBER
PATHFINDER	A,B,C,	Raytheon DE-723	557
Launch #3	a,b	"	140
Launch #1	a	"	143
Launch #2	a,b	"	552
Launch #3	c,d,e	"	141
PATHFINDER	D	"	557

D. SOUNDING EQUIPMENT (CON'T.)

The velocity corrections were determined graphically from information obtained from standard Nansen Bottle casts using protected and unprotected thermometers. A calibration velocity of 800 fathoms per seconds was assumed.

The initial of the echo sounders on the launches was set at a 0.0 depth, and any fluctuations from this setting were entered in the record volumes as the initial correction.

The fathometer correction was determined from standard bar check data by comparing the actual or measured depth with the depth read on the fathometer. Bar checks were taken either once or twice a day at depths of 1.0, 2.0, and 4.0 fathoms.

E. SMOOTH SHEET

The smooth sheet projection was ruled 3 November 1964 by Ens. O. R. MacIntosh aboard the Pathfinder. The diagonals were checked the same day and were found to check by 1 mm.

F. CONTROL

All photo-hydro signals were pricked on photographs and then radial plotted on either T-11966, T-11972 or T-11973. All photo-hydro signals were pricked through to the smooth sheet from the preceding manuscripts. Triangulation stations NANA, 1927; LOST, 1927; KAA, 1927; KAAPA, 1927; and NOB, 1931 were plotted on the smooth sheet. The control established in 1964 was recovered and used again in 1965. Signal TIE was cut in by sextant cuts from the launch in 1965, and a new signal, ODD, 1965, was located.

G. SHORELINE

The shoreline was transferred to the smooth sheet by the standard method of blue line manuscripts, using T-11966, T-11972, and T-11973. The shoreline was not run by the launches. The system of regular lines was extended as far inshore as safe and/or practical at the time of the survey.

H. CROSSLINES

An adequate number of crosslines were run on the sheet. The soundings on the crosslines were in good comparison with other soundings, agreeing within one fathom at most junctions. Where discrepancies exist, they are caused by irregular bottom topography.

I. COMPARISON WITH PRIOR SURVEYS:

The smooth sheet was compared with H-5292, a 1:20,000 scale sheet completed in 1932. Soundings were all in good agreement. Due to an insufficient number of soundings close to shore on H-5292, many inshore soundings could not be compared.

J. COMPARISON WITH THE CHART:

The smooth sheet was compared with C&GS Chart #4120. Soundings were in good agreement.

K. ADEQUACY OF SURVEY:

The survey is complete and adequate for charting.

L. AIDS TO NAVIGATION:

There were no fixed or floating aids to navigation in the survey area.

M. STATISTICS: 1964 & 1965

YEAR	VESSEL	NO. POS.	MILES SDG. LINE	BOTT. SAM.
1964	PATHFINDER	235	49.0	0
1964	Launch #3	159	22.2	0
1965	PATHFINDER	16	0	16
1965	Launch #1	8	1.6	0
1965	Launch #2	316	40.3	5
1965	Launch #3	104	10.1	21
	TOTALS	838	123.2	42

Two oceanography stations were observed, one in 1964 and one in 1965, for velocity corrections.

O. MISCELLANEOUS:

Photo-hydro signals built in 1964 were used for hydrography during 1964 and 1965 with the following exceptions; Two new signals were added in 1965, TIE and PUS. Signal ODD was relocated in 1965, and appears on the smooth sheet as "ODD, 1965". Signal RAG, built in 1965, 10 meters east of signal RIG. Positions 69c-71c, and 54e, Launch #3, were not plotted due to insufficient data. Positions 14a-16a Launch #2, were also rejected due to insufficient data. Position 95c, Launch #3, should be regarded as doubtful. Positions 2a and 8a, Launch #1, were plotted on one angle and distance from shore, taken from the boat sheet.

Positions 69 & 70 used fix OK (Position 71 rejected); 54e plotted T/C & SJ; Positions 14-16a plotted - no soundings on Pos 14 to 15 - sounding 15-16 shows fix OK; Position 95c — plotted and apparently O.K. Soundings conform O.K.; Positions 2a & 8a as (along shoreline) plotted to fit; minor displacement probable but not considered critically important.

P. REFERENCE TO REPORTS:

1. Seasons Report - 1964 and 1965
2. Fathometer Report - 1964 and 1965
3. Oceanographic Report - 1964 and 1965

Q. TIDE GAUGE:

A portable tide gauge was maintained at Kaumalapau Harbor for tidal reductions during 1964 and 1965.

Respectfully Submitted,

O. R. MacIntosh

O. R. MacIntosh
Lt(jg) USESSA

Approved and Forwarded,

G. L. Short

G. L. Short
Cdr. USESSA

GEOGRAPHIC NAMES

FIVE NEEDLES

KELAEAHOLE POINT

KAENAIKI POINT

KAENAPAPA POINT

LANAI ISLAND

PACIFIC OCEAN

LIST OF STATIONS: H-8836

Name used in Hydrography Survey	Origin of Station
MOO	T-11973
POI	T-11973
NAN	Nana, 1927
ODD	T-11973
TAN	T-11973
BAT	T-11973
IVY	T-11973
FUN	T-11973
HAG	T-11973
BUM	T-11973
OFF	T-11973
LOS	Lost, 1927
ORA	T-11973
ABE	T-11973
POL	T-11973
ROT	T-11973
KAA	Kaa, 1927
SUE	T-11972
BAN	T-11972
APA	KAAPA, 1927
TRI	T-11972
WIT	T-11972
SIS	T-11972
VIM	T-11972
LIP	T-11972
JIM	T-11972
GAS	T-11972
FOR	T-11972
HAM	T-11972
FOX	T-11972
NOB	Nob, 1931
COW	T-11966
BIG	T-11966
TIE	Sextant Cuts
PUS	T-11972

FORM C&GS-712
(3-9-64)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

October 24, 1966

~~Xxxxxxxxxxxxxxxx~~ Pacific Marine Center

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8836

Locality: Kaumalapau Harbor, T. H.

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):

Kaumalapau Harbor

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

1.7 feet

Remarks

J. M. Symons
Chief, Tides and Currents Branch

USCOMM-DC 6680-P64

USC&GSS 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

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.

Correction	To depth		Correction	To depth	
+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	18.5	4.2	98.3	98.3
0.8	20.6	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	198.0	
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	

FORM 257
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8836

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Five Needles										1
Kaenaiki Point										2
Kalaeahole Point										3
Kaenapapa Point										4
Lanai Island										5
Pacific Ocean										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
					PREPARED BY					22
					Frank W. Puckett					23
					CARTOGRAPHIC TECHNICIAN					24
					APPROVED BY					25
					A. Joseph Wright					26
					CHIEF GEOGRAPHER					27

FORM C&GS-946
(REV. 11-65)
(PRESC. BY HYDROGRAPHIC MANUAL 20-2, 6-94, 7-13)

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

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO. H-8836 (PF 10-2-64)

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS	2
DESCRIPTIVE REPORT	1	OVERLAYS	0

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES	9					
BOXES						

T-SHEET PRINTS *(List)* T-11966, T-11972, T-11973

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				1227
POSITIONS CHECKED	0	563		
POSITIONS REVISED		104		
DEPTH SOUNDINGS REVISED		28		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		55		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		7		
JUNCTIONS		12		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		46		
SPECIAL ADJUSTMENTS		34		
ALL OTHER WORK		188		
TOTALS		287		

	BEGINNING DATE	ENDING DATE
PRE-VERIFICATION BY		
VERIFICATION BY Cornelius A.J. Power	NOV 30, 1969	FEB 10, 1970
REVIEW BY		

USCOMM-DC 36271-P65

VERIFIERS REPORT

PF-10-2-64 OPR-419 H-8836

In the northwesterly ¼ of this survey the control was very weak. Approximately 60 positions in this area were replotted by the following method: Two perpendicular bisectors of the bases BIG-NOB and NOB-JIM were drawn. The center of the locus for the left angle of each fix was located along the first perpendicular bisector; then, the centers of the locus for the right angle was located. In each instance both arms of the protractor were first set to read the left angle, the protractor then being placed so that the center fell on the perpendicular and each arm through the signals BIG-NOB or NOB-JIM. After the centers of the locii had been established, arcs were drawn by beam compass to obtain the ships' positions. Although the intersection of the arcs (or locii) were slim these points quite definately lined up for time and course.

The inshore areas were not fully sounded which resulted in the use of very few depth curves below five (5) fathoms.

The fathograms were examined and it was found that a stylus arm correction should be applied which in turn eliminated the phase corrections. These corrections have been applied and properly noted in the record books.

Numerous pencilled soundings had to be erased and

moved due to misplacement and/or illegibility.

Respectfully submitted,

Richard D. Lynn

Richard D. Lynn
Carto. Tech.

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

Richard D. Lynn
Cartograph Technician

Richard D. Lynn

Approved for Forwarding

William M. Martin
Supervisory Cartograph Tech.

Approved and Forwarded

Larry W. Mordock, LT, NOAA
Acting Chief, Processing Division
Pacific Marine Center

FORM C&GS-946A
(REV. 2-1-64)
(PRES. BY HYDROGRAPHIC MANUAL, 6-94)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H 8836 (1964)

INSTRUCTIONS - This form serves to identify items of a check list 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
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	✓	
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	✓	
3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None	✓	
Part II - SHORELINE AND SIGNALS		
4. Source of shoreline signals	ok	
Remarks Required: -- List all surveys	✓	
a. Give earliest and latest dates of photographs		
b. Field inspection date		
c. Field Edit date		
d. Reviewed-Unreviewed		
5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.	✓	
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	✓	
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.	None ✓	
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	only (H-8827)	
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	✓ ✓	

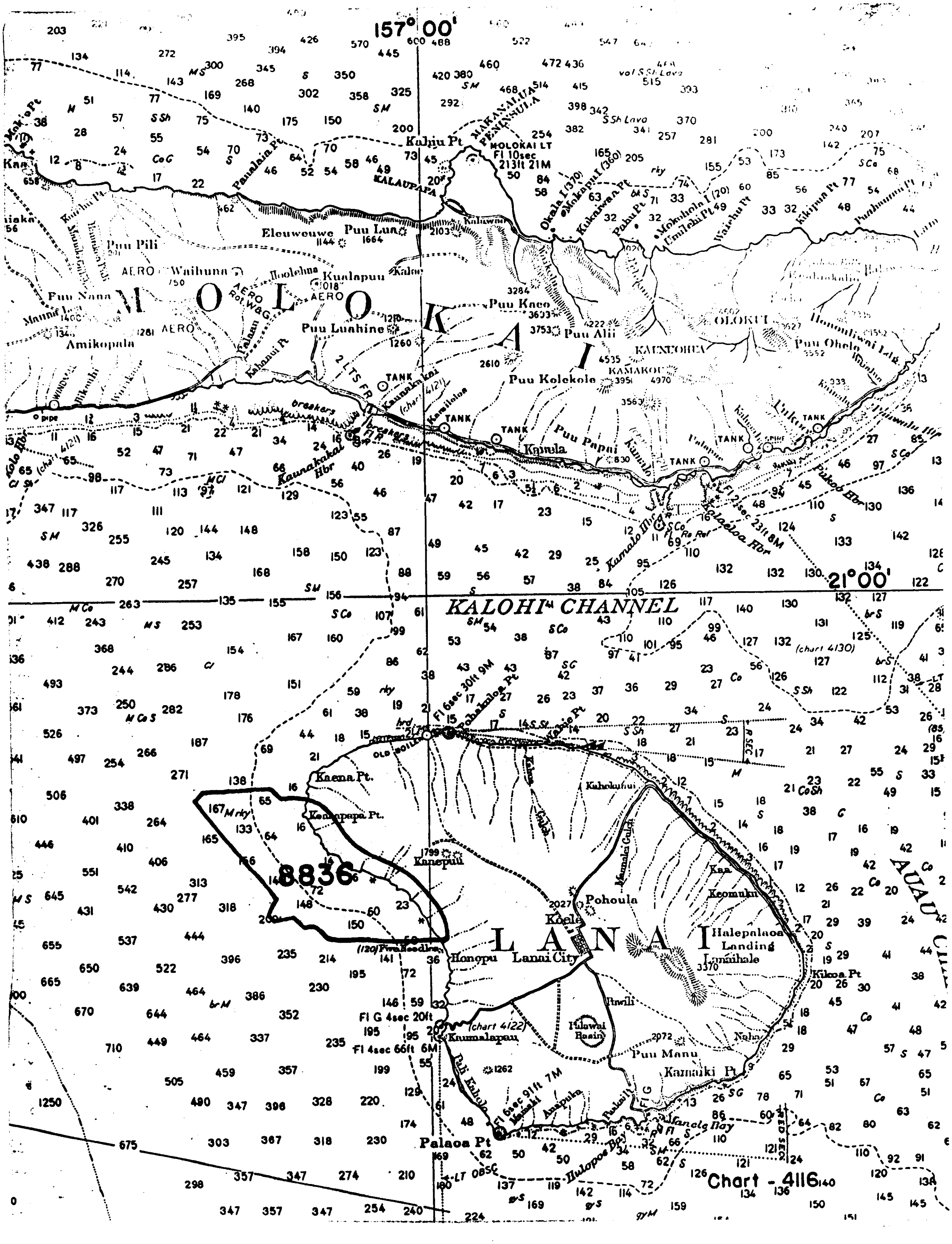
Part III - JUNCTIONS (Continued)	CL	R
10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of **Butt** junctions and areas which are **SUPERSEDED.**	Satisfactory on H-8827	
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	✓	
12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following:	OK ✓	
(a) rocks	some mylars	
(b) line turns	few	
(c) position values of beginning and ending of lines	No	
(d) bar check or velocity correctors	✓ok	
(e) time recording	✓ok	
(f) notes or markings on fathograms	✓	
(g) was reduction of soundings accurately done? see note	X	
(h) was scanning accurate?	fair	
(i) were peaks at uneven intervals missed?	Some	
(j) were stamps completed?	✓	
(k) references to adjacent features	none	
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	✓	
14. The protracting and plotting of all unsatisfactory crossings were verified. 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	✓	

Part V - PROTRACTING (Continued)	CL	R
16. The protracting was satisfactory except as follows: See note Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.	X ✓	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number. Coast Dec 1, 1969	✓	
Part VI - SOUNDINGS		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	✓	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.	Satisfactory	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None	✓	
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	✓	
22. The smooth plotting of soundings was satisfactory except as follows: See Note Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.	X ✓	
Part VII - CURVES		
23. The depth curves have been inspected **before** inking. Remarks Required: -- By whom was the penciled curves inspected. Clarence Lehman	✓	
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	No low water line not Surveyed	
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.	Ok except 3, 2, 1 and 0 curves	

Part VIII - AIDS TO NAVIGATION	CL	R
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.	None	
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	None	
Part IX - BOATSHEET		
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	✓	
29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.	✓	
Part X - GENERAL		
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	✓	
31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None	✓	
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	✓	
33. The bottom characteristics are adequately shown. Remarks Required: -- None	✓	
Part XI - NOTES TO THE REVIEWER	None	
34. Unresolved discrepancies and questionable soundings.	✓	
35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.	✓	
36. Supplemental information.	None	

Verified by Cornelius A. J. Sauer

Date Feb 10, 1970


157° 00'
21° 00'
MOLOKAI
KALOHI CHANNEL
LANAI
8836
Chart - 4116
MOLOKAI LT Fl 10sec 213ft 21M
Kalaupapa
Makanalua Peninsula
Kahiu Pt
Puu Pili
Eleuweuwe
Puu Luahine
Puu Kaeo
Puu Alii
Puu Kolekole
Kaunakakai Hbr
Kamalo Hbr
Kaena Pt.
Kaumalapau
Lanai City
Koele
Pohoula
Halepalaoa Landing
Palaoa Pt
Honopu
Hulopoe Bay
Manele Bay
Palawai Basin
Puu Manu
Kamaiki Pt
Kikoa Pt
Fl G 4sec 20ft
Fl 4sec 66ft 6M
Fl 6sec 91ft 7M
Fl 6sec 30ft 9M

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8836

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	1-8-71	E. Frey	~~Full~~ Part ~~Before~~ before After Verification Review Inspection Signed Via Drawing No. No critical corrections
4116	4-15-71	J.A. Graham	~~Full~~ Part ~~Before~~ Before After Verification Review Inspection Signed Via Drawing No. 16 ~~App'd for misc Corrections~~ No critical corrections - See Chart 4130 dwg. #14 & Chart 4120
4120	4-15-71	J.A. Graham	~~Full~~ Part ~~Before~~ Before After Verification Review Inspection Signed Via Drawing No. 9 ~~App'd for misc Corrections~~ No critical corrections See Chart 4130 dwg. #14 & this dwg
4179	5/10/71	S. McMillan	~~Full~~ Part ~~Before~~ before After Verification Review Inspection Signed Via Drawing No. 9 Examined thru 4116 #16 Critical corrections only
4102	1/27/72	J. Graham	~~Full~~ Part Before After Verification ~~Review Inspection Signed~~ Via Drawing No. 28 App'd for misc critical corr. only thru Chart 4116 dwg. #16
4180	3/15/72	E. Frey	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed~~ Via Drawing No. 11 App'd for critical corrections only thru cht 4102 dwg # 28
19004	11-5-90	R. A. Lillis	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 36 Category 1
19013	4-25-91	K.R. Foster	Adequately Applied ~~Full Part Before~~ After Verification Review Inspection Signed Via Drawing No. 18 Cat I
19010	8-13-91	John Pierce	Adequately Applied ~~Full Part Before~~ After Verification Review Inspection Signed Via Drawing No. 17 Cat I
19351	3-11-94	William J. Otis	Adequately ~~Full Part Before~~ After Verification Review Inspection Signed Via Drawing No. 14 Cat I
19340	5/25/94	J Kulp	Adequately Applied CAT. 1 Dwg # 26 thru 19351