

8832

Original

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. PF 10-4-65 Office No. H-8832

#### LOCALITY

State Hawaii

General locality Molokai Island

Locality S. E. Coast, Waialua to

Cape Halawa

1965

CHIEF OF PARTY

Capt. L. F. Woodcock

LIBRARY & ARCHIVES

DATE 25 SEP 1970

8832

**HYDROGRAPHIC TITLE SHEET**

H-8832

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 10-4-65

State Hawaii

General locality Molokai Island

Locality S. E. Coast, Waialua to Cape Halawa

Scale 1:10,000 Date of survey 27-29 March, 12 April, 1965

Instructions dated \_\_\_\_\_ Project No. \_\_\_\_\_

Vessel USC&GS Pathfinder, Motor Launch 3, Motor Launch 4

Chief of party L. F. Woodcock, Capt. USC&GS

Surveyed by S. L. Hollis, J. M. Wintermyre, W. S. Simmons

Soundings taken by echo sounder, hand lead, pole

Graphic record scaled by ships personnel

Graphic record checked by ships personnel

Protracted by ships personnel Automated plot by \_\_\_\_\_

Soundings penciled by ships personnel

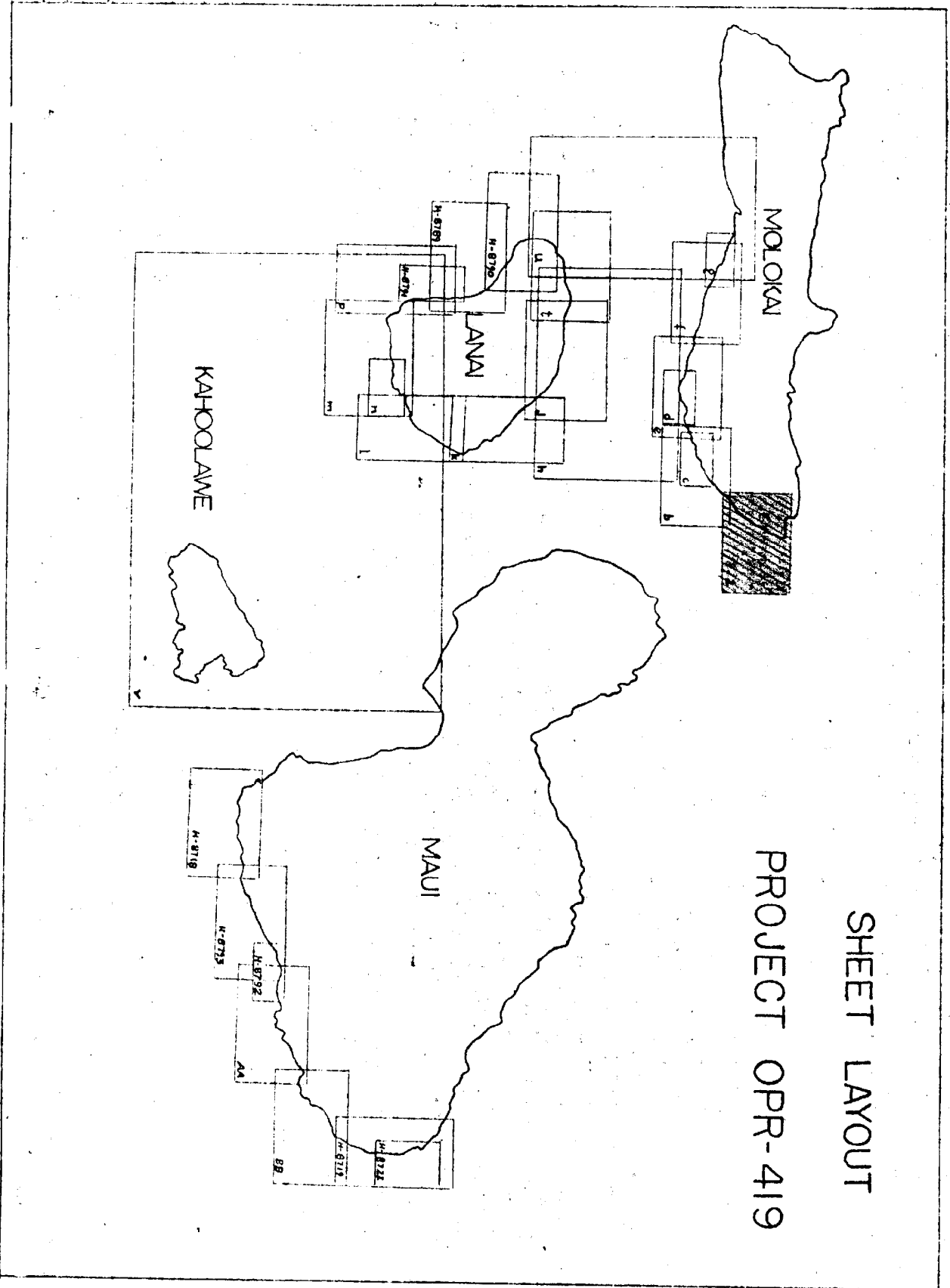
Soundings in fathoms      at      MLLW \_\_\_\_\_

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

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

# SHEET LAYOUT

## PROJECT OPR-419



DESCRIPTIVE REPORT TO ACCOMPANY  
HYDROGRAPHIC SURVEY H-8832 PF 10-4-65

Waialua to Cape Halawa, Molokai Island, Hawaii

Scale 1:10,000

March-April, 1965

L.F. Woodcock  
Captain, USC&GS  
Comdg. Ship Pathfinder

A PROJECT

Hydrographic Survey H-8832(PF 10-4-65) was accomplished under OPR-419, according to instructions dated 9 November 1964.

B AREA SURVEYED

This survey is on the South East coast of Molokai Island from Waialua to Cape Halawa. The western limit is Molokai Island and the Eastern limit is 156 degrees 37.6 minutes West; the Northern limit is 21 degrees 10.0 minutes North, and the Southern limit is 21 degrees 06.0 minutes North. The survey was accomplished from 27 thru 29 March 1965, and on 12 April 1965.

This survey junctions with the following.

<u>AREA</u>	<u>REG. NO.</u>	<u>SCALE</u>	<u>DATE</u>
S	H-8835 ( PF 10-3-65)	1:10,000	1965
S	H-9031 (SU-40-1-61)	1:40,000	1961
S	H-5311	1:20,000	1931

Check for most recent prior survey by Pathfinder and Surveyor.

C SOUNDING EQUIPMENT

The Raytheon Survey Fathometer Model 723 was used throughout the survey. The units used were ship no. 551; Launch#3, no. 141; Launch#4, no. 145. The PDR was run as a backup unit on the ship and for a check on scale changes on the 723 fathometer. The fathogram for ML#4 has many small skips due to the failure of the electrical

system to supply a full 120 volts and due to the excessive roll of this boat. The effect of roll may be verified by observing fathograms at D.P.'s when the launch was stopped. ✓

#### D SOUNDING VESSELS

The sounding vessels, day letters, and colors are as follows:

Vessel	Day	Color
Pathfinder	A,B,C	Blue
ML#3	a,b	Green
ML#4	a,b,c	<del>Brown</del> Red ✓

#### E SMOOTH SHEET

(by Smooth Plotter) *See Verifier's Notes*

#### F CONTROL

All positions on H-8832 are visually controlled by sextant fixes. Sources of control are as follows:

- a) Triangulation
- b) Photogrammetric compilations

T-11828	Advance Manuscript	1:10,000
T-11965	" "	1:10,000

All photo-hydro signals were field identified, pricked on office photos, and plotted on the manuscripts. They were then applied to the boat sheets by direct transfer. The horizontal control was plotted on the boat sheets by G.P.'s. There was no photo coverage of Mokuhooniki Island and the terrain of the island made signal location by other means impractical; therefore the inshore ends of lines on the eastern side of the island were controlled by using tangents of the island in conjunction with other signals. This resulted in adequate control with no jumps in the lines. ✓

#### G SHORELINE

Shoreline details were transferred to the boat sheets by blue-line copies of the manuscripts. The shoreline has been inspected and verified by the hydrographer with the following exceptions:

- a) The eastern side of Mokukooniki Island is foul with rocks that bare in the trough of heavy swells.
- b) At the tip of Cape Halawa the limits of the foul area have been revised.

#### H CROSSLINES

Crosslines represent about 10% of the total sounding mileage. Crossings were within 1 fathom on the boat sheet and are considered satisfactory.

#### I JUNCTIONS

*(H-8835)*  
PF 10-3-65 Soundings were in satisfactory agreement.

#### J COMPARISON WITH PRIOR SURVEYS

Soundings were compared with prior survey H-5311; 1:20,000; 1931. Soundings below eleven fathoms checked with the prior survey, but in general soundings greater than eleven fathoms were 2 to 4 fathoms shoaler than the prior survey.

#### K COMPARISON WITH CHART

*See Verifier's Notes*

#### L ADEQUACY OF SURVEY

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

#### M AIDS TO NAVIGATION

None

N STATISTICS

Vessel	# Days	# Positions	Nautical Miles Sdg. Line	# Bottom Samples
Ship Pathfinder	A, B, C	248	69.9	15
Launch#3	a, b	384	52.0	
Launch#4	a, b, c	<u>445</u>	<u>62.3</u>	<u>14</u>
Totals		1074	184.2	29

Total Area of Survey approx 19 sq. nautical miles

O MISCELLANEOUS

None

P RECOMMENDATIONS

see L

May 1965

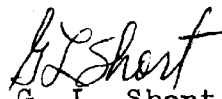
Ens. USESSA WALTER S. SIMMONS

Transmittal Sheet

H-8832

PF 10-4-65

The field work, completion and examination of records and plotting of smooth sheet were completed under previous commanding officers. The assembling of data in this descriptive report and transmittal of records to the Pacific Marine Center have been effected by this command.

  
G. L. Short  
Cdr. USESSA  
Comdg. Pathfinder



TIDE NOTE FOR HYDROGRAPHIC SHEET

November 10, 1966

~~HYDROGRAPHIC SHEET~~ Pacific Marine Center

Plane of reference approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET 8832

Locality: Southeast of Molokai Island, Hawaii

Chief of Party: L. F. Woodcock, 1965

Plane of reference is mean lower low water

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

Kamalo Harbor

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

1.6 feet

Remarks

*J. M. Symons*  
Chief, Tides, and Currents Branch

#### TIDE NOTE

The Kamalo tide station used for this survey is the portable gage located on the warf in Kamalo Harbor, Molokai Island at Latitude  $21^{\circ}02.9'$  N and Longitude  $156^{\circ}52.6'$  W. In 1965, the height on the tide staff at MLLW is 0.00 feet and at MHW 1.60 feet.

The plane of reference was checked and approved by the Division of Tides and Currents on 11/9/66.

It is assumed that: no corrections for time or height were applied to the observed tides.

The time meridian used is  $150^{\circ}$ W.

H-8832

GEOGRAPHIC NAMES

Penciled on Smooth Sheet

CAPE HALAWA

HALAWA BAY

HONOULIMALOO BAY

HONOULIWAI BAY

KANAHA ROCK

MOKUHOONIKI ISLAND

MOLOKAI ISLAND

PAILOLO CHANNEL

PUALANALANA POINT

VELOCITY

# Velocity Corrections

4/9/65

## IN FATHOMS

MOLOKAI

Velocity corrections to be applied to PF-10-3-65, and PF-10-4-65, and PF-20-1-65, OPR-419, PF-10-5-65

VELOCITY

### Corrections to Depth:

0.0	2.5
0.1	5.0
0.2	7.7
0.3	10.0
0.4	12.0
0.5	14.2
0.6	16.6
0.7	18.8
0.8	21.2
0.9	23.3
1.0	25.5
1.1	27.7
1.2	29.9
1.3	32.2
1.4	36.6
1.6	41.3
1.8	46.1
2.0	50.7
2.2	55.2
2.4	59.8
2.6	64.6
2.8	69.4
3.0	74.2
3.2	78.8
3.4	83.8
3.6	88.8
3.8	93.8
4.0	98.8
4.2	103.8
4.4	108.8
4.5	115
5.0	128
5.5	141
6.0	153
6.5	166
7.0	179
7.5	191

FILE COPY

USC&GS Pathfinder  
Capt. L.F. Woodcock, Comdg.

Echo Corrections

PF 10-4-65

Vessel	Date	Day	Correction	
			0-31 fms	31-101 fms
Pathfinder	3-27	A	+0.2 fm	+0.2 fm
	3-28	B	0.2	0.2
	4-12	C	0.2	0.2
ML # 3	3-27	a	+0.3 fm	0.2fm
	3-28	b	0.3	0.2
ML # 4	3-27	a	+0.4 fm	+0.4 fm
	3-28	b	0.4	0.4
	3-29	c	0.3	0.2

LIST OF SIGNALS ON H-8832 (PF-10-4-65)

<u>Name used in Hydrographic Survey</u>	<u>Origin of Station</u>
ACE	T-11858
BAT	T-11858
BIL	T-11858
COR	T-11965
COW	T-11858
DID	T-11858
DOG	T-11858
DUN	T-11858
EGG	T-11858
FOX	T-11858
FRY	T-11858
GUS	T-11965
JIM	T-11965
KAPU, Kapuupoi 2, 1962	T-11858
KID	T-11965
MIMI, Kumimi 2 1962,	T-11965
LAM	T-11858
MAD	T-11965
MOKU, Mokuhooniki 2, 1962	T-11858
NUT	T-11965
PIP	T-11965

RAG	T-11858
ROC	T-11858
SAY	T-11965
TER	T-11858
TIP	T-11965

GEOGRAPHIC NAMES

Survey No. H-8832

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Cape Halawa											1
Halawa Bay											2
Honouliuloo Bay											3
Honouliuli Bay											4
Kanaha Rock											5
Mokuhaoniki											6
Malakoi Island?											7
Pailolo Channel											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

PREPARED BY

*Frank M. Fickett*  
CARTOGRAPHIC TECHNICIAN

APPROVED BY

*A. J. Wright*  
CHIEF GEOGRAPHER



HYDROGRAPHIC SURVEY STATISTICS  
HYDROGRAPHIC SURVEY NO. H-8832 (PF-10-4-65)

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS		3	
DESCRIPTIVE REPORT		1	OVERLAYS			
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>11181A</del> ; T-11965						
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				1074
POSITIONS CHECKED		395		
POSITIONS REVISED		49		
DEPTH SOUNDINGS REVISED		70		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		115		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		12		
JUNCTIONS		2		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		130		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		44		
TOTALS		188		
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>Vincent F. Flor</i>	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

VERIFIER'S NOTES

E. SMOOTH SHEET

The polyconic projection was prepared in Washington D.C. All hydrographic positions were plotted and all soundings penciled by ship's personnel. This survey was verified by the Seattle Processing Office. About 37% of the positions were checked (i.e. plotted by protractor) and about 5% were revised.

In the seven sounding volumes, 61 fixes did not show the signals used at the beginning of the pages. The appropriate signal names have been entered by Seattle Processing Personnel.

K. COMPARISON WITH CHART

This survey was compared with chart 4116, 14 Ed of July 7, 1969. Rock awash at Latitude 21°9.65'N and Longitude 156°42.6'W was transferred from the Boat Sheet; on boat sheet is a note that hydrographer verified this rock on 28 March 1965. Reference to this rock also appears in Volume 3 page 20, positions 49 and 50a (red). This rock is shown on Chart 4116. This rock is not shown on T-11828. A high water rock at Latitude 21°08.95' Longitude 156°42.97' originates with T-11828 and is thereon shown as

6 ft. above MHW. The boat sheet shows this rock awash with a note that this rock was verified on 28 March 1965. No mention of this rock in Sounding Volumes. The 17 fathom sounding on Chart 4116 at Latitude  $21^{\circ}08.25'N$  and Longitude  $156^{\circ}30.00'W$  shows as 12 fathoms on the Smooth Sheet.

I. JUNCTIONS

This survey joins H-8995 (1968) 1:20,000 scale to the north; H-9130 (1961) 1:40,000 scale to the south and southeast; H-8835 (1965) 1:10,000 scale to the south. Junction with H-8835 has been completed and appears to be very satisfactory. The junction soundings were transferred to H-8835 in red ink.

Junctions with the other two surveys H-8995 and H-9130 remain to be done. Neither of these two surveys has been processed to date; they are scheduled for automation.

*H-8995 junction  
O.K. 12/5/83*

Respectfully submitted,

Vincent F. Flor



Approval Sheet

H-8832 (PF-10-4-65)

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

*Cornelius A. J. Pauw*  
Cornelius A. J. Pauw  
Cartograph Technician

Approved for Forwarding

*William M. Martin*  
William M. Martin  
Superv. Cartograph Tech.

Approved and Forwarded

*K. William Jeffers*  
K. William Jeffers, CTR, NSESSA  
Chief, Processing Division, PMC

VERIFIER'S REPORT  
HYDROGRAPHIC SURVEY, H-882

**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	Part III - JUNCTIONS (Continued)	CL	R
<p><b>Note:</b> The verifier should first read the Descriptive Report for general information and problems.</p> <p>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</p>	✓		<p>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 <b>Burr</b> junctions and areas which are <b>SUPERSEDED</b>.</p>	✓	
<p>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</p>	✓		<p><b>Part IV - VOLUMES</b></p> <p>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</p>	✓	
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</p>	✓				
<p><b>Part II - SHORELINE AND SIGNALS</b></p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys T-11828 &amp; 11965 completed 3/26/64 d. Give earliest and latest dates of photographs b. Field inspection date c. Field Edit date d. Reviewed-Unreviewed</p>	✓				
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>	✓		<p>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 <i>see notes</i> (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</p>	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
<p>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</p>	✓		<p><b>Part V - PROTRACTING</b></p> <p>13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None</p>	✓	
<p>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.</p>	None				
<p><b>Part III - JUNCTIONS</b></p> <p><b>Note:</b> Make a cursory comparison preliminary to inking soundings in area of overlap.</p> <p>8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None</p>	✓		<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>	✓	
<p>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</p>	✓		<p>15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None</p>	✓	

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. <i>None</i>		
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.	✓		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 <i>None</i>		
<b>Part VI - SOUNDINGS</b> 18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	✓		<b>Part IX - BOATSHEET</b> 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	✓		<b>Part X - GENERAL</b> 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	✓	
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	✓		31. Unnecessary pencil notes have been removed from the sheet. 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.	✓		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	✓	
<b>Part VII - CURVES</b> 23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected.	✓		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	✓		<b>Part XI - NOTES TO THE REVIEWER</b> 34. Unresolved discrepancies and questionable soundings.		
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.	✓		35. Notation of discrepancies with photogrammetric survey, inserted in report of unreviewed photogrammetric survey or on copy.		
36. Supplemental information.					
Verified by <i>VINCENT F. FLOR</i>			Date <i>FEB. 24, 1978</i>		



## RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8832

## 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	11/20/70	B Dugan	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. 14 <i>Minor revision only.</i>
4116	4-15-71	<i>J. R. Graham</i>	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. 16 <i>App'd misc corrections thru cht. 4130 dng. #14 before</i>
4179	5/10/71	J. H. Hillan	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. 9 <i>No critical corr. this time Examined thru 4116 #16</i>
4006	8/25/71	C.S. Forbes	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. <i>Examined thru cht 4130 dng #14; no critical corrections.</i>
4102	1/27/72	<i>J. Graham</i>	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. 28 <i>App'd misc critical corr. only thru cht. 4116 dng. #16</i>
4180	3/15/72	E. Frey	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. 11 <i>App'd misc critical corr. only thru cht 4102 dng #28</i>
4001	8/29/72	C.S. Forbes	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. <i>Examined thru chart 4102 for critical corrections only.</i>
4130	3/28/75	M. D. Kane	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. <i>EXAMINED for reefs + ledges only</i>
4000	9/1/77	M. Sager	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. 15 <i>Examined thru Chart 402 DNG #31 CONSIDER FULLY APPLIED Revised one sdg. CLASS I SURVEY</i>
4102	10/31/77	C.S. Forbes	<del>Full Part Before</del> After Verification <del>Review</del> Inspection Signed Via Drawing No. <i>Consider application as final. <del>As</del> additional corrections, added one sdg at 21°09' - 156°42' 12" 28 fm.</i>
4179	12/05/77	C.S. Forbes	<i>Full application after verification. Consider application as final. Added one sdg at 21°09' - 156°42' 12" - thru chart 4102</i>
4116	12/21/77	<i>M. Sager (CAT I survey)</i>	<i>Examined survey - application adequate at this scale. Consider final application. (AFTER VERIFICATION)</i>
19007	3-23-83	Simmons	<i>Considered Fully App'd thru 19010 #12. Exam. No Corr</i>