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Diag. Cht. No. 9000-4.

FORM C&GS-504

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

DESCRIPTIVE REPORT

Type of Survey Ocean Survey

Field No. OPR-454 Office No. H-8857A, H-8858A,
H-8863A, H-8864A,
"C" & "D" Day H-8867A & H-8869A.

LOCALITY

State California

General locality Pacific Ocean

Locality California Coast

1966

CHIEF OF PARTY

V. R. Sobieralski

LIBRARY & ARCHIVES

DATE June 17, 1966

USCOMM-DC 37022-P66

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U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

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.

OPR - 454
See Note 1

State California

General locality Pacific Ocean

Locality California Coast

Scale 1° Longitude = 8 inches Date of survey See Note 1

Instructions dated 17 January 1966

Vessel Ship SURVEYOR

Chief of party V. Ralph Sobieralski

Surveyed by Ship SURVEYOR

Soundings taken by echo sounder ~~Standard~~ Narrow Beam Transducer/PDR and DE-723

Fathograms scaled by Ship's Personnel

Fathograms checked by Ship's Personnel

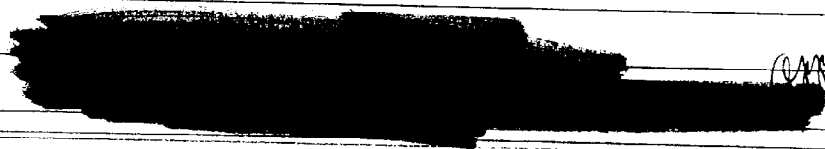
Protracted by Ship's Officers

Soundings penciled by Ship's Officers

Soundings in fathoms ~~feet~~ MLLW No tide corrections required
See Note 2

REMARKS: 1. This report covers C and D days only.

2. No tide corrections were applied in depths less than 100 fathoms or in depths over 100 fathoms. Tide corrections for depths less than 100 fathoms are to be supplied by the Washington Science Center; tide corrections for depths over 100 fathoms are not required.



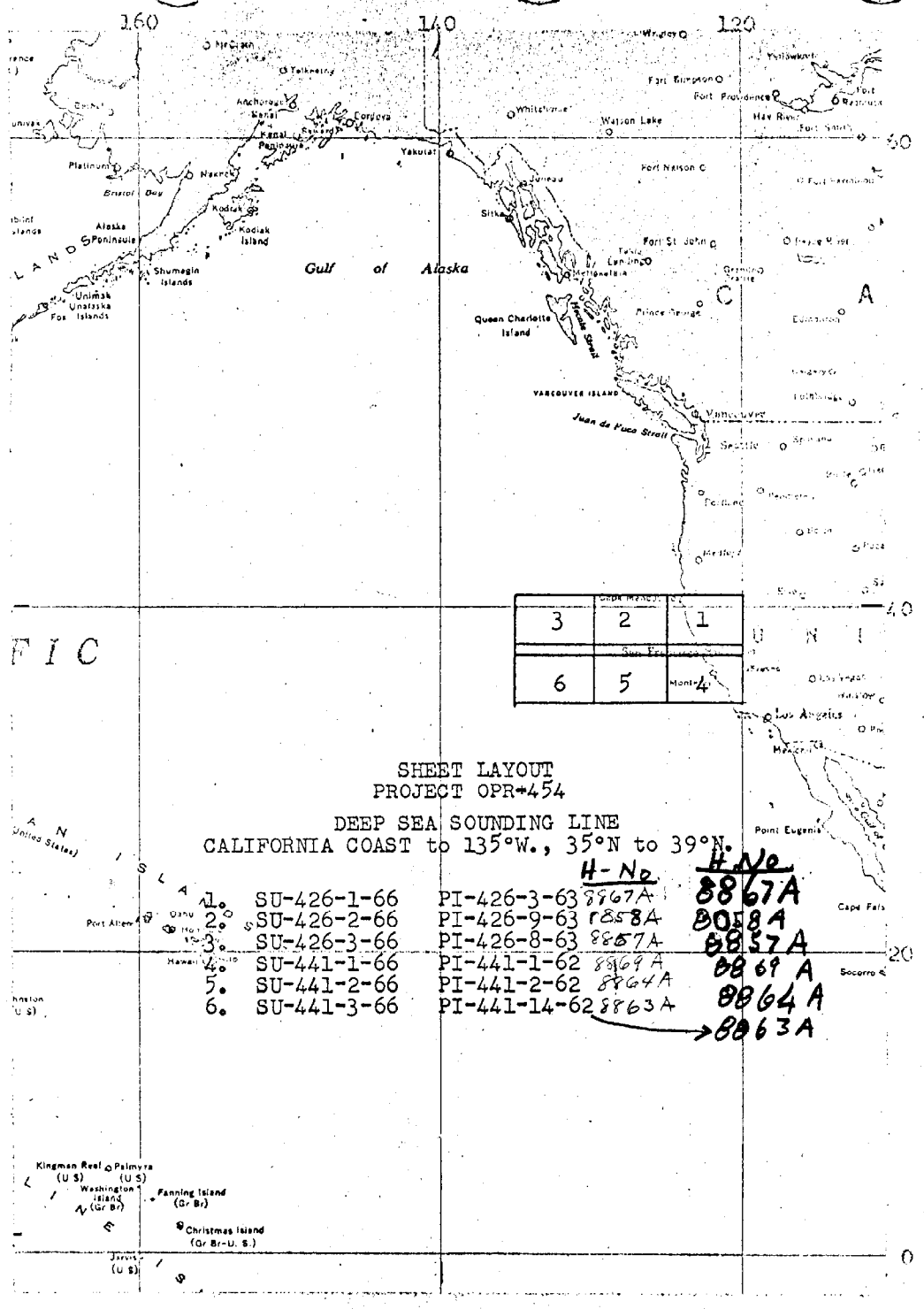
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SHEET LAYOUT
PROJECT OPR-454

DEEP SEA SOUNDING LINE
CALIFORNIA COAST to 135°W., 35°N to 39°N.

- | | | | | | |
|----|-------------|--------------|-------|-------------|-------------|
| 1. | SU-426-1-66 | PI-426-3-63 | 8867A | <i>H-No</i> | <i>H-No</i> |
| 2. | SU-426-2-66 | PI-426-9-63 | 8858A | | 8867A |
| 3. | SU-426-3-66 | PI-426-8-63 | 8857A | | 8058A |
| 4. | SU-441-1-66 | PI-441-1-62 | 8869A | | 8837A |
| 5. | SU-441-2-66 | PI-441-2-62 | 8864A | | 8869A |
| 6. | SU-441-3-66 | PI-441-14-62 | 8863A | | 8864A |
| | | | | | → 8863A |

- Kingman Reef (U.S.)
- Palmyra (U.S.)
- Washington Island (Gr. Br.)
- Fanning Island (Gr. Br.)
- Christmas Island (Gr. Br.-U.S.)
- Jervis (U.S.)

DESCRIPTIVE REPORT

TO ACCOMPANY

DEEP SEA SOUNDING LINE - PROJECT OPR-454

USC&GSS SURVEYOR, V. RALPH SOBIERALSKI, COMDG.

SCALE OF OCEAN SURVEY SHEETS: 1° LONG. = 8 IN.

APRIL - MAY 1966

A. PROJECT

Instructions for this project are contained in Instructions for OPR-454 dated 17 January 1966, as amended by radio messages of the 14th and 25th of March and by Memorandum RF24-20k-109 dated 11 March 1966, by Amended Instructions, Project OPR-454, dated 25 March 1966, and by a telegram dated 7 April 1966 to the Pacific Marine Center.

B. AREA SURVEYED

The area surveyed was between 35°N and 38° 50'N, from the California coast to about 450 miles offshore. The survey work covered by this report was begun on 7 April and ended on 7 May 1966. Days "C" and "D" covered by this report include the GEP towing phase except for a negligible amount accomplished on "A" day. A report covering the "A" day GEP work and "B" day heat flow/coring operation was submitted previously.

C. SOUNDING VESSEL

All work was done by the Ship SURVEYOR.

D. SOUNDING EQUIPMENT

Precision Depth Recorders No. 309 and 323, in conjunction with the narrow beam transducer, were used in depths greater than 250 fathoms. Raytheon Fathometer DE-723 No. 138 was used exclusively for all depths shoaler than 250 fathoms.

E. SMOOTH SHEETS

The smooth sheets consisted of three OSS No. 12 sheets and three OSS No. 13 sheets. The project was begun by assigning SURVEYOR numbers to all the OS Sheets, but after the close of operations, we were instructed to assign numbers consistent with Pacific Marine Center Memorandum 4060/03.1 CF22 dated 5 May 1966. A copy of this memorandum is enclosed as part of this report. For ease of comparing results from "C" and "D" days with those on "A" and "B" days, both sheet numbers will be shown where practicable.

SURVEYOR NUMBERS A, B, C and D days	PACIFIC MARINE CENTER NUMBERS C and D days only
SU-426-1-66	PI-426-3-63
SU-426-2-66	PI-426-9-63
SU-426-3-66	PI-426-8-63
SU-441-1-66	PI-441-1-62
SU-441-2-66	PI-441-2-62
SU-441-3-66	PI-441-14-62

Smooth sheets for "A" and "B" days were transmitted to the Pacific Marine Center about 1 April on transmittal letter SU-20-66, and were received by Paul M. Fisher on 12 April 1966.

The bathymetry for positions 80-100 "D" day was obtained but not plotted because the GEP equipment was inoperative. Positions 101-119 "D" day are a rerun of positions 80-100 "D" day with the GEP operating. Bathymetry was plotted only on the rerun positions.

Only the finally accepted positions and reduced soundings appear on the smooth sheets. Field and smooth plots were done on the OS Sheets and on C&GS Charts No. 5302, 5602, 5403, 5402 and on two 5502. Smooth plotted positions were transferred from the boat sheets to smooth sheets by pricking through on a light table and transferred from the charts by latitude and longitude.

F. CONTROL

Control for the survey consisted of the Navy Satellite Navigation System supplemented by Loran-A, sun lines, and radar bearings and distances when within range.

The Navy Satellite Navigation System was assumed to be correct when the pass angle was normal. Abnormally low and high satellite passes were adjusted to conform with time and course and previous satellite fixes. The adjusted satellite positions are indicated by a dashed triangle on the boat sheet. The satellite fix was recomputed for errors in data entry, print out errors of satellite constants, and when the speed made good differed by more than 1 knot. This new position data was used as the final accepted satellite position.

Due to the fact that only two satellites were available during part of the operation, fixes were obtained at irregular intervals, averaging about one every two hours.

Loran-A readings were made every half hour using the best rates available for the particular area, but, in general, it was found that these rates were not only inconsistent with position data obtained from the Satellite but were inconsistent within themselves.

Where positioning data was questionable, the Satellite position in all cases was used for the smooth plot. In compliance with Navy instructions no comparison of relative position has been retained on either boat or smooth sheets, and no record made on any single copy of the survey record comparing Satellite Navigation fixes with any other positioning method.

G. SHORE LINE

Not applicable to this project.

H. CROSSLINES

The crossings on this portion of the survey were all checked prior to application of soundings to the smooth sheets.

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All crossings were within one percent and in many cases were zero percent. In areas of extremely rough bottom, around Monterey Bay, this one percent figure was not obtained, but the crossings are adequate for the type of bottom encountered.

I. JUNCTIONS

Not applicable to this area.

J. COMPARISON WITH PRIOR SURVEYS

There was no prior survey available in the area covered. Agreement with a contemporary survey accomplished by the PIONEER in 1965 was excellent at all crossings.

K. COMPARISON WITH THE CHART

Reduced smooth sheet soundings were compared with C&GS Chart No. 5002. Only a few comparisons could be made due to lack of sounding density on Chart 5002, but agreement was generally good.

L. ADEQUACY OF SURVEY

The portion of the project area covered by this survey is considered to be adequately controlled and satisfactory to be used in conjunction with contemporary surveys for charting purposes.

M. AIDS TO NAVIGATION

Not applicable to this survey.

N. STATISTICS, "C" AND "D" DAYS

The bathymetry completed on this portion of the project is basically a by-product of geological echo profiling and several "dead head" lines run to and from San Francisco. It was not felt advisable to tow the magnetometer when the GEP array was streamed, therefore magnetometer operations are confined to a few hours when the GEP was inoperative.

No square mileage was generated, the lines being somewhat random.

Number of Positions	1358
Miles Bathymetry	3833
Miles GEP	2780
Miles Gravity	2910
Miles Magnetics	181

O. MISCELLANEOUS

Gravity observations were attempted along all lines on "C" and "D" days, but, due to adverse weather conditions, it was not possible to obtain complete gravity coverage. Sections where gravity was not observed are listed in enclosure No. 1. Because of equipment malfunction and daily maintenance, all GEP lines were not continuous. Sections of lines where G^{EP} coverage is missing are listed in enclosures No. 2 and No. 3. Loran rates were not computed for all LOP's because Loran curves for the nearer stations had been plotted on the mylar boat sheets.

O. REFERENCE TO REPORTS

A Descriptive Report to accompany records and smooth sheets for "A" and "B" days, GEP and heat flow/coring operations has been submitted previously. GEP graphic records, positions 70 through 96 "C" day and pertinent records were forwarded to the Pacific Marine Center on 22 April 1966. The transmittal letter for these records is submitted with this report as Enclosure No. 4.

Respectfully Submitted

Michael G. Kenny
 Michael G. Kenny
 Lt. (j.g.) USESSA
 Ship SURVEYOR

Approved and Forwarded JUN 3 1966

V. Ralph Sobieralski
 V. Ralph Sobieralski
 CAPT. USESSA

TIDE NOTE

Reduced soundings, to which no tide corrections were applied, are penciled on the smooth sheets only in areas deeper than 100 fathoms. No soundings have been penciled in depths less than 100 fathoms. Tide corrections are to be applied to these soundings by the Washington Science Center in accordance with paragraph 7 of the Instructions, dated 17 January 1966 .

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

Velocity Corrections

The velocity corrections for this survey were obtained from Tables I and III of the standard historical data supplied by the Pacific Marine Center. Copies of these tables are included in this report.

Initial Corrections

When using PDR No. 323 with the Narrow Beam Transducer System, the instrumental initial coincided with the ship's mean draft, thus requiring no initial correction. The initial of the DE-723 was set at 2.5 fathoms. This produced an instrumental initial which coincided with the ship's mean draft of 16 to 16.5 feet at the transducer.

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APPROVAL SHEET

The hydrographic procedures were observed and the plot examined daily during the execution of this survey.

The survey is complete and adequate for charting. The smooth sheets and all accompanying records have been inspected by me and are approved.

V. RALPH SOBIERALSKI
V. Ralph Sobieralski
CAPT., USESSA
Comdg. Ship SURVEYOR

LIST OF RECORDS

1 Descriptive Report, "C" and "D" days
6 Smooth Sheets, 3 OSS No. 12, 3 OSS No. 13
6 Boat Sheets, 3 OSS No. 12, 3 OSS No. 13
5 C&GS Charts, 1 #5602, 1 #5402, 1 #5302, 2 #5502
2 cahier D.R. Abstracts, Form 722
2 cahier Astronomic Sight Computations
2 cahier Loran-A Computation Forms
2 cahier Navigational Data Forms
12 Sounding Records
2 bundles PDR Fathograms
9 DE-723 Fathograms
2 cahier Sea and Swell Observation Forms
22 rolls Magnetometer and Gravity Punch Tape
1 bundle Magnetometer Analog Record
1 roll Magnetometer Digital Record
2 cahier Satellite Computation Forms
232 Satellite Digital Printout Tapes
9 rolls Geological Echo Profiler Graphic Records
141 reels GEP Magnetic Tapes
2 cahier Geological Echo Profiler Logs
1 cahier Gravity Land Tie Computations

MISCELLANEOUS INFORMATION TO ACCOMPANY DESCRIPTIVE REPORT
OPR - 454 C and D Day

GRAVITY OPERATIONS

<u>MONTH</u>	<u>DAY</u>	<u>GMT</u>	<u>POSITION</u>	<u>REMARKS</u>
4	7	0815	1C	Line Begins, Gravity operating
4	15	2248	494C	Gravity Secured
4	15	2320	496C	Gravity Resumed
4	17	0557	572C	Gravity Secured
4	19	0230	674C	Gravity Resumed
4	21	0400	783C	Gravity Secured to end of day at position 802C, 211215Z.
4	26	2040	1D	Line Begins, Gravity operating
4	26	2303-15	12-13D	Gravity Secured
4	27	0105	15D	Gravity Resumed
4	27	1551	75D	Gravity Secured
4	28	1930	120D	Gravity Resumed
4	29	0625	157D	Gravity Secured
4	30	0554	175D	Gravity Resumed
4	30	0824	182D	Gravity Secured
5	1	0930	235D	Gravity Resumed
5	4	0730	389D	Gravity Secured
5	4	2301	407D	Gravity Resumed
5	7	1345	552D	Line Ends, Gravity Secured

Enclosure No. 1

MISCELLANEOUS INFORMATION TO ACCOMPANY DESCRIPTIVE REPORT

OPR - 454 C and D Day

G.E.P. OPERATIONS

<u>MONTH</u>	<u>DAY</u>	<u>APPROXIMATE POSITION</u>	<u>TIME GMT</u>	<u>REMARKS</u>
April	7	1C	0815	Line Begins
		27-30C	1421-1441	GEP Inoperative
		39-41C	1800-1900	" "
	8	55-58C	0147-0228	" "
		96-97C	1915-1955	" "
	9	148-149C	1700-1719	" "
		163-165C	2357-0030	" "
	10	170-171C	0242-0307	" "
	11	264-266C	1130-1204	" "
		277-279C	1655-1745	" "
	11-14	282-362C	1901-0630	" "
		364-365C	0747-0800	" "
		372-380C	1020-1359	" "
		400-401C	2245-2300	" "
	14-15	473-480C	1800-1945	" "
	16	533-534C	1348-1410	" "
		541-542	1700-1725	" "
	17	590-591C	1343-1353	" "
		597-600C	1630-1730	" "
		606C	2005	Inoperative less than 5 minutes
		612-614	2250-2335	GEP Inoperative
	18	630-632C	0702-0813	" "
		635-636C	0923-0925	" "
		653-654C	1730-1751	" "
	19	699-708C	1257-1650	" "
		720-727C	2120-0052	" "
	20	737-738C	0430-0622	" "
		740C	0642	C Day ends

Enclosure No. 2

MISCELLANEOUS INFORMATION TO ACCOMPANY DESCRIPTIVE REPORT

OPR - 454 C and D Day

G.E.P. OPERATIONS

(CONTINUED)

<u>MONTH</u>	<u>DAY</u>	<u>APPROXIMATE POSITION</u>	<u>TIME GMT</u>	<u>REMARKS</u>
April	26	3-14D	2109- 2040 ⁰⁰⁵⁵	GEP Inoperative
	27	21D	0233-0236	" "
		75-76D	1600-1618	" "
	27-28	80-101D	1806-1030	" "
	28-29	119-136D	1900-0030	" "
	29	154-155D	0530-0550	" "
	29 -30	173-175D	1235-0545	" "
	30	198-199D	1600-1735	" "
May	1	249-250D	1600-1640	" "
	2	276D	0350-0400	" "
		303-304D	1600-1630	" "
	3	355-357D	1600-1650	" "
	3-4	372-376D	2354-0141	" "
	4	378-385D	0231-0610	" "
		393-403D	0925-1306	" "
		404-405D	1336-2200	" "
		426-428D	0700-0800	" "
	5	435D	1053-1103	" "
		461D	2235-2243	" "
		462D	2308-2314	" "
	6	511-512D	2030-2050	" "
		515-516D	2200-2245	" "
	7	532-534D	0540-0620	" "
		552D	1345	Line Ends

Enclosure No. 3

FORM C&GS-413
(12-8-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REFERENCE NO.

SU-23-66

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check):

ORDINARY MAIL AIR MAIL

REGISTERED MAIL EXPRESS

OBL (Give number) _____

TO:

Director, Pacific Marine Center
1801 Fairview Avenue, East
Seattle, Washington 98102

DATE FORWARDED

22 April 1966

NUMBER OF PACKAGES

2

cc: Mr. R. J. Malloy N-233

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

OPR - 454 C Day

(Special GEP line to support interpretation of anomalous
heat flow measurements made by PIONEER in 1965)

- Pkg. 1. 1 Smooth sheet-Overlay of SU-426-2-66
- Pkg. 2. 4 D.R. Abstract, Xerox copies of original
 - 1 Form 719a, Cel. Nav., Xerox copy of original
 - 4 Computation form for AN/SRN-9, Satellite Nav. System. Xerox copy of original
 - 1 Sounding volume, Form 275, copied from original for positions 70 thru 96C day
 - 1 PDR Fathogram, Position 70 thru 96C day
 - 1 GEP Graphic Record, Position 70 thru 96C day
 - 1 GEP log, Xerox copy of original

FROM: (Signature)

V. Ralph Sobieralski
V. Ralph Sobieralski CAPT.

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Commanding Officer
USC&GSS SURVEYOR
1801 Fairview Avenue, East
Seattle, Washington 98102

ENCLOSURE No. 4.

USCOMM-DC 2609-P62

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U.S. GOVERNMENT
PRINTING OFFICE
A.O. 204-10

UNITED STATES GOVERNMENT

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Memorandum

TO : COMMANDING OFFICERS
USC&GSS PATHFINDER
USC&GSS SURVEYOR ✓

FROM : Director, Pacific Marine Center

DATE: 5 May 1966

In reply refer to: 4060/03.1
CF22

SUBJECT: Numbering of OSS Sheets

Effective this date all OSS sheets on all projects will be numbered in accordance with paragraph 1-13, p 5, of the Hydrographic Manual (Publication 20-2) with the following exceptions:

(A) When a vessel starts work on sheets previously unnumbered, the OSS sheets are to be serially numbered through the calendar year without regard to scale differences of sheets at different latitudes.

(B) Previously numbered OSS sheets are to retain the original field number assigned regardless of the vessel accomplishing present calendar year work and regardless of differences between present and past project name and number.

An example of a field OSS sheet number is: PI-365-16-62. The ship PIONEER started the sheet. The mid-latitude scale is approximately 17365,000. This was the 16th OSS sheet started by the PIONEER in the calendar year 1962.

A master index of OSS sheet numbers at the scale of C&GS Chart 9000 is maintained at PMC. This index will be revised as sheet numbers are received. Revised indexes will be forwarded to you from time to time. Regardless of any differences from the real mid-latitude scale, the scales listed on the index are the accepted values for purposes of sheet numbering.

When an OSS sheet is given a field number in accordance with above instructions, the number and date will be noted in the Remarks column of Form C&GS 20a, Monthly Report & Journal. A convenient method of identifying OSS sheets by area is used by PMC and is called the MEROSS system. The MEROSS number consists of four or five digits and refers to the MERidian and OSS number of the southeast (lower-right) corner of the sheet. MEROSS 165-7 means the OSS sheet series number 7 between 165° and 170° West longitude. MEROSS 175E-12 means the OSS sheet series number 12 between 170° and 175° East longitude. MEROSS 090E-3S means the OSS sheet series number 3 for South latitudes between 085° and 090° East longitude.



BUY U.S. SAVINGS BONDS REGULARLY ON THE PAYROLL SAVINGS PLAN

If other C&GS vessels are known to be operating in the same general area, forward information required in above paragraph to Director, PMC, via radiotelegraph for retransmission to other vessels so that duplicate numbering can be avoided.

The following OSS sheet numbers are assigned to cover work accomplished earlier this spring. You will adjust your records accordingly.

<u>OSS Series No.</u>	<u>Meridional Boundaries</u>	<u>Assigned Field No.</u>	<u>MEROSS</u>
17	125°W - 130°W	SU-365-1-66	125-17
16	125°W - 130°W	SU-380-2-66	125-16
15	125°W - 130°W	SU-395-3-66	125-15
15	130°W - 135°W	PF-395-1-66	130-15
11	140°W - 145°W	PF-456-2-66	140-11
11	145°W - 150°W	PF-456-3-66	145-11
10	145°W - 150°W	PF-471-4-66	145-10

Copies of the master index of OSS sheets, complete through March 4, 1966, except for sheets listed above, are being forwarded.

Harold J. Seaborg
Harold J. Seaborg

CC: C3
AMC

COPY OF THIS LETTER FILED IN DESCRIPTIVE REPORTS

OPR-394 SOUTHERLY LINE 1966 10-12 FEBRUARY
PMC/SA-3-66 MENDOCINO SEASCARA
OPR-454 A & B DAY
OPR-454 C & D DAY

VESSEL: USC&GSS SURVEYOR

LOCATLITY: West Coast Upper Mantle Project

DATES: April 7 - May 7, 1966

DAY LETTERS: C and D

FATHOGRAMS (PDR)
and
SMOOTH SHEETS

<u>Survey No.</u>	<u>B.C. Index No.</u>	<u>Day Letters</u>	<u>Approx. Position Numbers</u>	<u>Dates</u>
✓H-8857A	1407 N-B	D	352-406	May 3-4
H-8858A	1307 N-A	C	47-157	Apr 7-9
		D	407-507	May 4-6
H-8863A	1407 N-C	D	284-352	May 2-3
H-8864A	1307 N-D	C	293-320	Apr 11-12
		C	565-663	Apr 17-18
		C	725-783	Apr 20-21
		D	208-284	Apr 30-May 2
H-8867A	1307 N-B	C	1-31*	Apr 7
		C	31-47	Apr 7
		C	157-180	Apr 9-10
		C	180-227*	Apr 10
		G	798-802*	Apr 21
H-8869A	1307 N-C	C	228-253*	Apr 11
		C	254-293	Apr 11
		C	320-333	Apr 12
		C	334-338*	Apr 12
		C	339-443	Apr 13-15
		C	444-448*	Apr 15

Table I
 Sound velocity corrections for Costal Water
 (East of 130°W Longitude)

<u>CORRECTION</u>	<u>TO DEPTH</u>	<u>CORRECTION</u>	<u>TO DEPTH</u>
+ 0.0 fm	12.0 fm	+ 30.0 fm	1805
0.2	24.5	32.0	1865
0.4	37.5	34.0	1920
0.6	49.5	36.0	1975
0.8	62.0	38.0	2030
1.0	74.5	40.0	2085
1.2	87.5	42.0	2140
1.5	128	44.0	2200
2.0	173	46.0	2255
3.0	330	48.0	2310
4.0	430	50.0	2365
5.0	530	52.0	2420
6.0	620	54.0	2475
8.0	850	56.0	2530
10.0	990	58.0	2580
12.0	1105	60.0	2630
14.0	1205	62.0	2685
16.0	1295	64.0	2735
18.0	1385	66.0	2790
20.0	1465	68.0	2845
22.0	1540	70.0	2895
24.0	1610	72.0	2945
26.0	1675	74.0	2995
28.0	1740		

TABLE III

Sound velocity corrections for sub-tropic
water (South of 38° 50'N, West of 130°W)

<u>CORRECTION</u>	<u>TO DEPTH</u>	<u>CORRECTION</u>	<u>TO DEPTH</u>
+ 0.2 fm	10 fm	+ 28.0 fm	1580 fm
0.4	14	30.0	1645
0.6	20	32.0	1695
0.8	24	34.0	1740
1.0	30	36.0	1785
1.2	35	38.0	1835
1.4	40	40.0	1885
1.6	46	42.0	1930
1.8	51	44.0	1980
2.0	56	46.0	2025
2.2	62	48.0	2075
2.4	68	50.0	2125
2.6	73	52.0	2170
2.8	79	54.0	2215
3.0	84	56.0	2260
3.2	90	58.0	2305
3.4	96	60.0	2345
3.6	105	62.0	2385
4.0	125	64.0	2425
4.5	145	66.0	2465
5.0	165	68.0	2505
6.0	235	70.0	2545
7.0	310	72.0	2585
8.0	394	74.0	2620
9.0	490	76.0	2655
10.0	575	78.0	2695
11.0	665	80.0	2730
12.0	800	82.0	2765
14.0	930	84.0	2800
16.0	1055	86.0	2840
18.0	1160	88.0	2875
20.0	1255	90.0	2910
22.0	1345	92.0	2945
24.0	1430	94.0	2980
26.0	1510	96.0	3015

H-8857 A - App 1 school sdg.

-8858 A - " 1 " "

-8863 A - " 1 " "

-8864 A - " 3 critical sdgs

-8867 A - No corr

-8869 A - No corr

} Applied before
verif & review
7/8/66 OS

Oct. 5602 - Exam No corr before VPR 10/11/67 (Part of app)

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8857A

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

RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET				BOAT SHEETS			
DESCRIPTIVE REPORT				OVERLAYS			
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS	
ENVELOPES	/						
CAHIERS							
VOLUMES	/						
BOXES							
T-SHEET PRINTS (<i>List</i>)							
SPECIAL REPORTS (<i>List</i>)							

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				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				
PRE-VERIFICATION BY		BEGINNING DATE		ENDING DATE
VERIFICATION BY		BEGINNING DATE		ENDING DATE
REVIEW BY		BEGINNING DATE		ENDING DATE

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8858A

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET		BOAT SHEETS	
DESCRIPTIVE REPORT		OVERLAYS	

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	1					
CAHIERS						
VOLUMES	2					
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				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8863A

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET		BOAT SHEETS	
DESCRIPTIVE REPORT		OVERLAYS	

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	/					
CAHIERS						
VOLUMES	/					
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				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				

PROCESSING ACTIVITY	TIME (MANHOURS)			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				

PRE-VERIFICATION BY	BEGINNING DATE	ENDING DATE
VERIFICATION BY	BEGINNING DATE	ENDING DATE
REVIEW BY	BEGINNING DATE	ENDING DATE

HYDROGRAPHIC SURVEY STATISTICS
 HYDROGRAPHIC SURVEY NO. 8864A

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET			BOAT SHEETS			
DESCRIPTIVE REPORT			OVERLAYS			
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	2					
CAHIERS						
VOLUMES	2					
BOXES						
T-SHEET PRINTS (<i>List</i>)						
SPECIAL REPORTS (<i>List</i>)						

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				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8867A

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET			BOAT SHEETS			
DESCRIPTIVE REPORT			OVERLAYS			
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	1					
CAHIERS						
VOLUMES	1					
BOXES						
T-SHEET PRINTS (<i>List</i>)						
SPECIAL REPORTS (<i>List</i>)						

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				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8869A

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET		BOAT SHEETS	
DESCRIPTIVE REPORT		OVERLAYS	

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	3					
CAHIERS						
VOLUMES	5					
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				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				

PROCESSING ACTIVITY	TIME (MANHOURS)			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				

PRE-VERIFICATION BY	BEGINNING DATE	ENDING DATE
VERIFICATION BY	BEGINNING DATE	ENDING DATE
REVIEW BY	BEGINNING DATE	ENDING DATE

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-8857A

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>Note: 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 Butt junctions and areas which are SUPERSEDED.</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>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</p>		
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</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 (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>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</p>					
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</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>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>			<p>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</p>		
<p>Part III - JUNCTIONS Note: Make a cursory comparison preliminary to inking soundings in area of overlap.</p>			<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</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>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
<p>16. The protracting was satisfactory except as follows:</p> <p>Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.</p>			<p>26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey.</p> <p>Remarks Required: -- Conflicts of any nature listed.</p>		
<p>17. The protractor has been checked within the last three months.</p> <p>Remarks Required: -- Date of check, type of protractor and number.</p>			<p>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.</p> <p>Remarks Required: -- None</p>		
<p>Part VI - SOUNDINGS</p> <p>18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings.</p> <p>Remarks Required: -- None</p>			<p>Part IX - BOATSHEET</p> <p>28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information.</p> <p>Remarks Required: -- None</p>		
<p>19. Sounding line crossings were satisfactory except as follows:</p> <p>Remarks Required: -- Discuss adjustments.</p>			<p>29. Heights of rocks awash were correctly reduced and compared with topographic information.</p> <p>Remarks Required: -- Note excessive conflicts with topographic information.</p>		
<p>20. The spacing of soundings as recorded in the records was closely followed;</p> <p>Remarks Required: -- None</p>			<p>Part X - GENERAL</p> <p>30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2).</p> <p>Remarks Required: -- None</p>		
<p>21. The scanning, reduction, spacing, plotting of questionable soundings have been verified.</p> <p>Remarks Required: -- None</p>			<p>31. Unnecessary pencil notes have been removed from the sheet.</p> <p>Remarks Required: -- None</p>		
<p>22. The smooth plotting of soundings was satisfactory except as follows:</p> <p>Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.</p>			<p>32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet.</p> <p>Remarks Required: -- None</p>		
<p>Part VII - CURVES</p> <p>23. The depth curves have been inspected before inking.</p> <p>Remarks Required: -- By whom was the penciled curves inspected.</p>			<p>33. The bottom characteristics are adequately shown.</p> <p>Remarks Required: -- None</p>		
<p>24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following:</p> <ul style="list-style-type: none"> 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 <p>Remarks Required: -- None</p>			<p>Part XI - NOTES TO THE REVIEWER</p> <p>34. Unresolved discrepancies and questionable soundings.</p>		
<p>25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn).</p> <p>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.</p>			<p>35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.</p>		
<p>Verified by</p>			<p>36. Supplemental information.</p>		
			<p>Date</p>		

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H -8858A

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>Note: 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 Butt junctions and areas which are SUPERSEDED.</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>Part IV - VOLUMES</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>12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following:</p> <p>(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</p>		
<p>Part II - SHORELINE AND SIGNALS</p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys</p> <p>a. 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>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>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>			<p>Part V - PROTRACTING</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>Part III - JUNCTIONS</p> <p>Note: 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.		
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		
Part VI - SOUNDINGS 18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- 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		
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 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		
Part VII - CURVES 23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected. 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			33. The bottom characteristics are adequately shown. Remarks Required: -- None		
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.			Part XI - NOTES TO THE REVIEWER 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.		
Verified by			Date		

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-8863A

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>Note: 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 Butt junctions and areas which are SUPERSEDED.</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>Part IV - VOLUMES</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>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</p>		
<p>Part II - SHORELINE AND SIGNALS</p> <p>4. Source of shoreline signals Remarks Required: -- List all surveys</p> <p>a. Give earliest and latest dates of photographs b. Field inspection date c. Field Edit date d. Reviewed-Unreviewed</p>			<p>Part V - PROTRACTING</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>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>				<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</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>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>		
<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>						
<p>Part III - JUNCTIONS</p> <p>Note: 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>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>						

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.			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 18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None			Part IX - BOAT SHEET 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 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		
Part VII - CURVES 23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected.			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		
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			33. The bottom characteristics are adequately shown. Remarks Required: -- None		
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.			Part XI - NOTES TO THE REVIEWER 34. Unresolved discrepancies and questionable soundings.		
Verified by			35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.		
			36. Supplemental information.		
			Date		

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-8864A

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>Note: 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 Butt junctions and areas which are SUPERSEDED.</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>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</p>		
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</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 (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>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</p>					
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</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>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>			<p>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</p>		
<p>Part III - JUNCTIONS Note: 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.		
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		
Part VI - SOUNDINGS 18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- 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		
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 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		
Part VII - CURVES 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			Part XI - NOTES TO THE REVIEWER 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.		
Verified by _____			36. Supplemental information.		
			Date _____		

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-8867A

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>Note: 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 Butt junctions and areas which are SUPERSEDED.</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>Part IV - VOLUMES</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>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</p>			
<p>Part II - SHORELINE AND SIGNALS</p> <p>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</p>			<p>Part V - PROTRACTING</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>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>					<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</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>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>	
<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>							
<p>Part III - JUNCTIONS</p> <p>Note: 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>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>							

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	CL	R
<p>16. The protracting was satisfactory except as follows:</p> <p>Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.</p>			<p>26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey.</p> <p>Remarks Required: -- Conflicts of any nature listed.</p>		
<p>17. The protractor has been checked within the last three months.</p> <p>Remarks Required: -- Date of check, type of protractor and number.</p>			<p>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.</p> <p>Remarks Required: -- None</p>		
<p>Part VI - SOUNDINGS</p> <p>18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings.</p> <p>Remarks Required: -- None</p>			<p>Part IX - BOATSHEET</p> <p>28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information.</p> <p>Remarks Required: -- None</p>		
<p>19. Sounding line crossings were satisfactory except as follows:</p> <p>Remarks Required: -- Discuss adjustments.</p>			<p>29. Heights of rocks awash were correctly reduced and compared with topographic information.</p> <p>Remarks Required: -- Note excessive conflicts with topographic information.</p>		
<p>20. The spacing of soundings as recorded in the records was closely followed;</p> <p>Remarks Required: -- None</p>			<p>Part X - GENERAL</p> <p>30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2).</p> <p>Remarks Required: -- None</p>		
<p>21. The scanning, reduction, spacing, plotting of questionable soundings have been verified.</p> <p>Remarks Required: -- None</p>			<p>31. Unnecessary pencil notes have been removed from the sheet.</p> <p>Remarks Required: -- None</p>		
<p>22. The smooth plotting of soundings was satisfactory except as follows:</p> <p>Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.</p>			<p>32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet.</p> <p>Remarks Required: -- None</p>		
<p>Part VII - CURVES</p> <p>23. The depth curves have been inspected before inking.</p> <p>Remarks Required: -- By whom was the penciled curves inspected.</p>			<p>33. The bottom characteristics are adequately shown.</p> <p>Remarks Required: -- None</p>		
<p>24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following:</p> <ul style="list-style-type: none"> 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 <p>Remarks Required: -- None</p>			<p>Part XI - NOTES TO THE REVIEWER</p> <p>34. Unresolved discrepancies and questionable soundings.</p>		
<p>25. Depth curves were satisfactory except as follows:</p> <p>(This statement should not refer to the manner in which the curves were drawn).</p> <p>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.</p>			<p>35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.</p>		
<p>Verified by</p>			<p>36. Supplemental information.</p>		
			<p>Date</p>		

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H - 8869A

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
<p>Note: 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 Butt junctions and areas which are SUPERSEDED.</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>Part IV - VOLUMES</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>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</p>		
<p>Part II - SHORELINE AND SIGNALS</p> <p>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</p>					
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>			<p>Part V - PROTRACTING</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>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>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>			<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>		
<p>Part III - JUNCTIONS</p> <p>Note: 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>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>		
<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>					

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	CL	R
<p>16. The protracting was satisfactory except as follows:</p> <p>Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.</p>			<p>26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey.</p> <p>Remarks Required: -- Conflicts of any nature listed.</p>		
<p>17. The protractor has been checked within the last three months.</p> <p>Remarks Required: -- Date of check, type of protractor and number.</p>			<p>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.</p> <p>Remarks Required: -- None</p>		
Part VI - SOUNDINGS			Part IX - BOAT SHEET		
<p>18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings.</p> <p>Remarks Required: -- None</p>			<p>28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information.</p> <p>Remarks Required: -- None</p>		
<p>19. Sounding line crossings were satisfactory except as follows:</p> <p>Remarks Required: -- Discuss adjustments.</p>			<p>29. Heights of rocks awash were correctly reduced and compared with topographic information.</p> <p>Remarks Required: -- Note excessive conflicts with topographic information.</p>		
<p>20. The spacing of soundings as recorded in the records was closely followed;</p> <p>Remarks Required: -- None</p>			Part X - GENERAL		
<p>21. The scanning, reduction, spacing, plotting of questionable soundings have been verified.</p> <p>Remarks Required: -- None</p>			<p>30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2).</p> <p>Remarks Required: -- None</p>		
<p>22. The smooth plotting of soundings was satisfactory except as follows:</p> <p>Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.</p>			<p>31. Unnecessary pencil notes have been removed from the sheet.</p> <p>Remarks Required: -- None</p>		
Part VII - CURVES			<p>32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet.</p> <p>Remarks Required: -- None</p>		
<p>23. The depth curves have been inspected before inking.</p> <p>Remarks Required: -- By whom was the penciled curves inspected.</p>			<p>33. The bottom characteristics are adequately shown.</p> <p>Remarks Required: -- None</p>		
<p>24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following:</p> <ul style="list-style-type: none"> 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 <p>Remarks Required: -- None</p>			Part XI - NOTES TO THE REVIEWER		
<p>25. Depth curves were satisfactory except as follows:</p> <p>(This statement should not refer to the manner in which the curves were drawn).</p> <p>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.</p>			<p>34. Unresolved discrepancies and questionable soundings.</p>		
			<p>35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.</p>		
			<p>36. Supplemental information.</p>		
Verified by				Date	

8858A

See Descriptive Report H-8857A

8863A

See Descriptive Report H-8857A

8864A

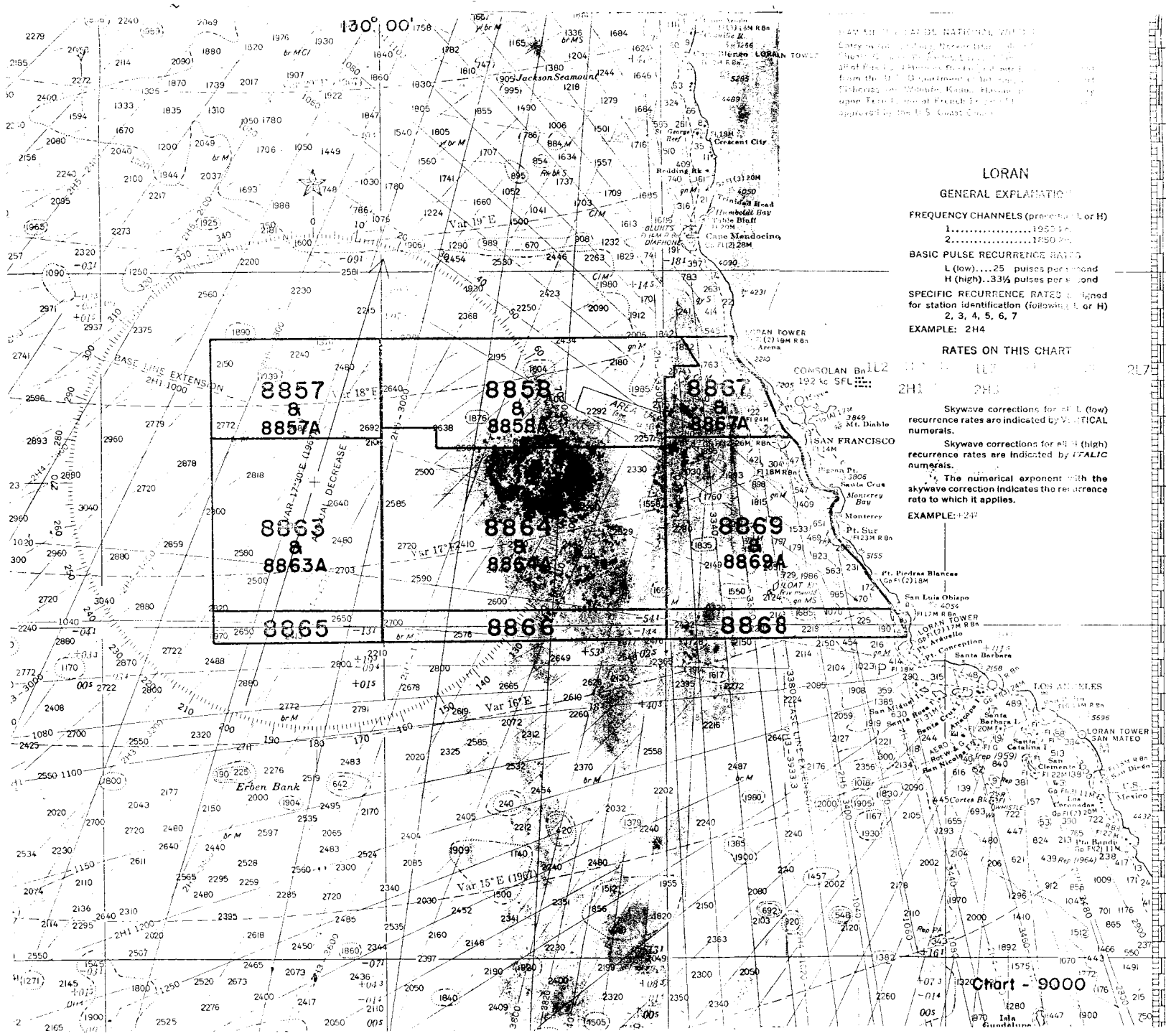
See Descriptive Report H-8857A

8867A

See Descriptive Report H-8857A

8869A

See Descriptive Report H-8857A



NAVY AND U.S. COAST AND GEODETIC SURVEY
 Chart No. 9000, San Francisco Bay, California
 This chart is published under authority of the Secretary of the Navy and is the property of the U.S. Government. It is loaned to you for your information and use only. It is not to be distributed, copied, or otherwise used in any way without the express written permission of the U.S. Coast and Geodetic Survey.

LORAN

GENERAL EXPLANATION

FREQUENCY CHANNELS (preferred L or H)
 1.....1950 kHz
 2.....1960 kHz

BASIC PULSE RECURRENCE RATES
 L (low).....25 pulses per second
 H (high).....33 1/3 pulses per second

SPECIFIC RECURRENCE RATES assigned for station identification (following L or H)
 2, 3, 4, 5, 6, 7

EXAMPLE: 2H4

RATES ON THIS CHART

2H1 2H2 2H3 2H4 2H5 2H6 2H7 2H8 2H9 2H0

Skywave corrections for 2H1 (low) recurrence rates are indicated by VERTICAL numerals.

Skywave corrections for 2H4 (high) recurrence rates are indicated by ITALIC numerals.

The numerical exponent with the skywave correction indicates the recurrence rate to which it applies.

EXAMPLE: +2H4

Chart - 9000