8774

Diag. Cht. No. 526

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. HFP 12-3-63 Office No. H-8774

LOCALITY

State NEVADA

General locality SOUTHERN HALF of OVERTON ARM

Locality LAKE MEAD, NEVADA

1964

CHIEF OF PARTY

LIBRARY & ARCHIVES

DATE

USCOMM-DC 5087

8774

FORM C&GS-537 (8-15-59)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

H 8774

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.

HFP 12-3-63

State NEVADA

General locality SOUTHERN half of Overton Arm

Locality LAKE MEAD, NEVADA

Scale 1:12,000 Date of survey 19 Aug. 63 to 5 Oct.64

Instructions dated 2100-pt, s-2-219 10 May 1963 Project No. OPR 443

Vessel Launch C.S. 1177 and Launch C.S. 183

Chief of party P.A. STARK CDR., USC&GS and H.E. McCALL LT., USC&GS

Surveyed by G.F. TREFETHEN, R.A. LEWIS, R.H. ALLBRITTEN LT.(jg), J.B. JONES LT.(jg)

Soundings taken by echo sounder, hand lead, pole

Graphic record scaled by PARTY PERSONNEL

Graphic record checked by PARTY PERSONNEL

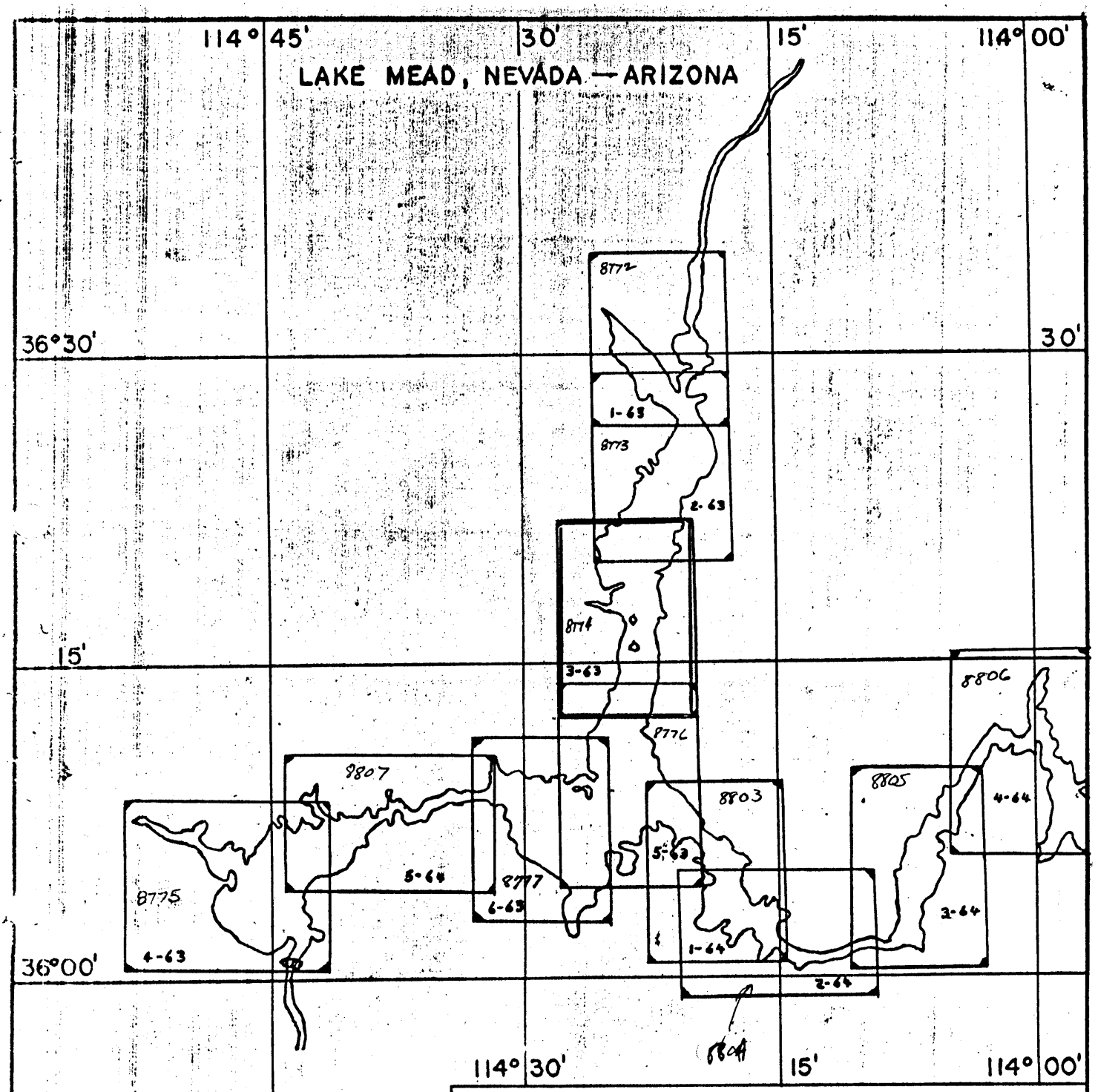
Protracted by

Soundings penciled by

Soundings in ~~fathoms~~ feet at MLW MLLW. Elev. above Mean Sea Level

REMARKS: All echo soundings are in feet and tenths of feet. All reduced soundings are converted to elev. of feet above M.S.L. Soundings on the boat sheet are elev. above M.S.L.. Only three digits were used. The first digit in 1,000, 1,100 , 1,200 were left off to make the boat sheet less congested.

Example: Elevation 1,126 on the boat sheet will read 126.



COAST & GEODETIC SURVEY

H. ARNOLD KARO — DIRECTOR

SHEET LAYOUT SKETCH

HYDROGRAPHIC FIELD PARTY 242

SCALE — 1:500,000

DESCRIPTIVE REPORT
TO ACCOMPANY HYDROGRAPHIC SURVEY H-8774
(Field No. HFP-242 12-3-63)
Project OPR-443

SCALE: 1:12,000 HFP 219

CHIEF OF PARTY P.A.STARK,CDR.USC&GS
H.E.McCALL,LT.USC&GS

A.PROJECT

Project OPR-443 was completed in accordance with instructions 2100B-pt, S-2-219 Dated 10 May 1963 Lake Mead, Nevada.

B.AREA SURVEYED

The geographic limits of this sheet are from Lat. 36°13'N. to Lat. 36°22'N. and from Long. 114°21'W. to 114°27'W.

This sheet covers the Southern half of Overton Arm, Lake Mead, Nevada.

Hydrography began on 19 Aug. 1963 and was completed on 5 Oct. 1964.

This survey junctions with contemporary survey H-8773 (HFP 12-2-63) on the North, Scale 1:12,000 and contemporary survey H-8776 (HFP 12-5-63) on the South, Scale 1:12,000.

This survey also makes junction with prior Navy survey sheet No.6 on the North and Navy survey sheet No.4 on the South. Both sheets are dated 1948-1949, Scale 1:12,000. This survey is covered by prior Navy survey sheet No.5 dated 1948-1949, Scale 1:12,000.

C.SOUNDING VESSELS

The vessels used for Hydrography were Launch C.S. 1177 identified by Blue day letters and Launch C.S. 183 identified by Violet day letters.

D.SOUNDING EQUIPMENT

Raytheon Fathometers, Type D.E. 723 were used on Launchs C.S. 1177 and C.S. 183. Fathometer # 549 and #265 are 200 KC units and were used to obtain the basic sounding. Fathometer # 263 is a 20 KC unit and was used on crosslines.

Daily bar checks were taken to determine the corrections to be applied for the 200 KC unit, and Bathythermography observations were made to determine velocity corrections beyond the range of the bar check.

For tabulation of corrections and Fathometer Report see Appendix C.

E.SMOOTH SHEET

Smooth sheet projections will be furnished on request from the Washington office. Smooth sheets to be accomplished later by the processing office.

F.CONTROL

The hydrography was controlled by standard visual three point fix methods.

Appendix B of this report contains a complete list of control used and their sources.

In coves where hydrography was accomplished but no control was available , hydrographic lines were run by dead reckoning.

G.SHORELINE

The shoreline was transferred from a film positive of Navy sheet # 5. Dated 1948-1949 showing the 1,200 foot and 1,150 foot contours.

The 1,200 foot contour is shown in Black on the boat sheet (12-3-63). The 1,150 foot contour is shown in Red.

Photogrammetry Division took photographs when the lake level was at 1,150 feet to provide revised shoreline.

H.CROSSLINES

Crosslines were run to the extent of 6% of the regular system of sounding lines. Favorable crossings were found.

Two fathometers, 200 KC and 20 KC, were run on the foot scale for crosslines to show sedimentation.

I.JUNCTIONS

Depths at the junctions with contemporary survey H-8773 (12-2-63) and H-8776 (12-5-63) are in agreement. Contour curves can be adequately drawn at the junction.

J.COMPARISION WITH PRIOR SURVEY

A Comparision was made with prior survey, Navy sheet # 5 Dated 1948-1949 Scale 1:12,000.

The prior Navy survey was of a reconnaissance nature and no shoals or rocks were investigated. An adequate comparision can not be made.

K.COMPARISION WITH THE CHART

A comparision was made with chart No. C&GS 5458A 2nd. edition Oct. 17,1955, Revised Sept. 4,1961 Scale 1:48,000.

All reefs and rocks indicated on the chart were plotted on a overlay of the boat sheet with their respective elevations indicated in Red.

The following is a list of rocks and reefs that were investigated:

1.ROCK

Charted pos.	Lat.	36°13.88′
	Long.	114°24.92′
Charted elev.		1130
New elev.		1130
Located on		38 da-day CS 1177

It is recommended that the charted elevation be retained. Appd

2.ROCK

Charted pos.	Lat.	36°13.90′
	Long.	114°24.59′
Charted elev.		1125
New elev.		1117
Located on		34 da-day CS 1177

It is recommended that the new elevation be charted . This rock is also the pos. of hydro signal REE. Appd

3.ROCK

Charted pos.	Lat.	36°14.08′
	Long.	114°24.61′
Charted elev.		1115

This rock does not exist. The area was visually investigated at a lake level of 1093. Deleted

K.COMPARISION WITH CHART (cont.)

4.ROCK

Charted pos.	Lat.	36°13.91′
	Long.	114°24.15′
Charted elev.		1109
New elev.		1107
Located on		37 da-day CS 1177

It is recommended that the new elevation be charted. Appd

5.ROCK

Charted pos.	Lat.	36°14.00′
	Long.	114°23.97′
Charted elev.		1145
New elev.		1140
Located on		35 da-day CS 1177

It is recommended that the new elevation be charted. Appd

6.ROCK

Charted pos.	Lat.	36°14.56′
	Long.	114°24.38′
Charted elev.		1095 — Deleted

This area ~~rock~~ was visually investigated at a lake level of 1093. No rock exists at this pos. A rock was located on 2"ka" day Launch CS 1177 at Lat. 36°14.54 Long. 114°24.46 This rock is 120 meters W.S.W. of charted elev.

New rock elev. 1101 ——— Appd

It is recommended that the new rock be charted.

7.ROCK

Charted pos.	Lat.	36°15.56′
	Long.	114°24.42′
Charted elev.		1121
New elev.		1147
Located on		9 z-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART (cont.)

8.ROCK

Charted pos.	Lat.	36°15.58′
	Long.	114°24.08′
Charted elev.		1121

This rock does not exist. ~~It~~ the area was visually inspected at a lake level of 1117. Deleted

9.ROCK

Charted pos.	Lat.	36°15.48′
	Long.	114°23.24′
Charted elev.		1120
New elev.		1150
Located on		14 z-day CS 1177

It is recommended that the new elevation be charted. Appd

10.ROCK

Charted pos.	Lat.	36°14.93′
	Long.	114°22.88′
Charted elev.		1145

This is not a rock, but a point of land jutting out from the shore. No Corr.

11.ROCK

Charted pos.	Lat.	36°14.95′
	Long.	114°23.03′
Charted elev.		1100
New elev.		1095
Located on		19 ka-day CS 1177

This is not a rock but a point of land jutting out from the shore. Appd

K.COMPARISION WITH CHART(cont.)

12.ROCK

Charted pos.	Lat.	36°15.88′
	Long.	114°24.62′
Charted elev.		1108
New elev.		1099
Located on		28 ha-day CS 1177

It is recommended that the new elevation be charted. Included in LNM

13.ROCK

Charted pos.	Lat.	36°16.08′
	Long.	114°24.39′
Charted elev.		1121

This rock was visually ~~inspected~~ searched for at a lake level of 1177 and no evidence of this rock was found to exist. Deleted

14.ROCK

Charted pos.	Lat.	36°16.00′
	Long.	114°24.35′
Charted elev.		1130
New elev.		1121
Located on		6 z-day CS 1177

It is recommended that the new elevation be charted. Appd

15.ROCK

Charted pos.	Lat.	36°16.64′
	Long.	114°23.28′
Charted elev.		1100
New elev.		1104
Located on		26 ga-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

16.ROCK

Charted pos.	Lat.	36°16.72′
	Long.	114°23.39′
Charted elev.		1115
New elev.		1106
Located on		27 ga-day CS 1177

It is recommended that the new elevation be charted. Appd

17.ROCK

Charted pos.	Lat.	36°16.74′
	Long.	114°23.31′
Charted elev.		1115

This ~~rock~~ area was visually inspected at a lake level of 1094 and no evidence of the rock was found to exist. Deleted

18.ROCK

Charted pos.	Lat.	36°16.78′
	Long.	114°23.27′
Charted elev.		1115

This rock was visually ~~inspected~~ searched for at a lake level of 1094 and no evidence of the rock was found to exist. 1098' sdg in this spot. Shown as #.

19.ROCK

Charted pos.	Lat.	36°16.95′
	Long.	114°23.19′
Charted elev.		1135
New elev.		1124&1129
Located on		14 w-day & 15 W-day CS 1177

This is not a rock but a point of land jutting out from the shore. shown as (31) see B.S.

K.COMPARISION WITH CHART(cont.)

20.ROCK

Charted pos.	Lat.	36°16.49′
	Long.	114°24.39′
Charted elev.		1132
New elev.		1130
Located on		18 x-day CS 1177

It is recommended that the new elevation be charted. Appd

21.ROCK

Charted pos.	Lat.	36°16.82′
	Long.	114°24.18′
Charted elev.		1132
New elev.		1135
Located on		3 z-day CS 1177

It is recommended that the new elevation be charted. Appd

22.ROCK

Charted pos.	Lat.	36°17.10′
	Long.	114°22.89′
Charted elev.		1141
New elev.		1155
Located on		9 w-day CS 1177

It is recommended that the new elevation be charted. Appd
This rock is also signal RAT.

23.ROCK

Charted pos.	Lat.	36°17.08′
	Long.	114°22.82′
Charted elev.		1141
Located on		10 w-day CS 1177

It is recommended that the charted elevation be retained . Retained
Recorder failed to record new elevation.

K.COMPARISION WITH CHART(cont.)

24.ROCK

Charted pos.	Lat.	36°17.31′
	Long.	114°22.96′
Charted elev.		1143
New elev.		1152
Location on		7 w-day CS 1177

It is recommended that the new elevation be charted. Appd
This rock is also signal NOT.

25.ROCK

Charted pos.	Lat.	36°17.49′
	Long.	114°22.88′
Charted elev.		1147
New elev.		1148
Located on sounding line last out of 58 b-day CS 1177		

It is recommended that the new elevation be charted. Appd

26.ROCK

Charted pos.	Lat.	36°17.95′
	Long.	114°22.79′
Charted elev.		1100
New elev.		1106
Located on sounding line 61 to 62 b-day CS 1177′		

It is recommended that the new elevation be charted. Appd

27.ROCK

Charted pos.	Lat.	36°17.88′
	Long.	114°23.05′
Charted elev.		1105
New elev.		1091
Located on		8 fa-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

28.ROCK

Charted pos.	Lat.	36°18.29′
	Long.	114°22.78′
Charted elev.		1095
New elev.		1099
Located on		7 fa-day CS 1177

It is recommended that the new elevation be charted. Shown as #

29.ROCK

Charted pos.	Lat.	36°19.64′
	Long.	114°22.99′
Charted elev.		1128
New elev.		1122
Located on		9 v-day CS 1177

It is recommended that the new elevation be charted. Appd

30.ROCK

Charted pos.	Lat.	36°19.68′
	Long.	114°22.90′
Charted elev.		1137
New elevation		1142
Located on		15 v-day CS 1177

It is recommended that the new elevation be charted. Appd

31.ROCK

Charted pos.	Lat.	36°20.04′
	Long.	114°22.76′
Charted elev.		1115
New elev.		1142
Located on		23 v-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

32.ROCK

Charted pos.	Lat.	36°20.08′
	Long.	114°22.70′
Charted elev.		1115
New elev.		1146
Located on		24 V-day CS 1177

It is recommended that the new elevation be charted. Appd

33.ROCK

Charted pos.	Lat.	36°20.56′
	Long.	114°24.39′
Charted elev.		1118
New elev.		1117
Located on		24 ca-day CS 1177

It is recommended that the new elevation be charted. Appd

34.ROCK

Charted pos.	Lat.	36°20.35′
	Long.	114°24.64′
Charted elev.		1140
New elev.		1120
Located on		16 u-day CS 1177

It is recommended that the new elevation be charted. Appd

35.ROCK

Charted pos.	Lat.	36°20.44′
	Long.	114°24.85′
Charted elev.		1145
New elev.		1141
Located on		15 u-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

36.ROCK

Charted pos.	Lat.	36°20.38′
	Long.	114°24.87′
Charted elev.		1108
New elev.		1109
Located on sounding line 98 to 99 d-day CS 1177		

It is recommended that the new elevation be charted. Appd

37.ROCK

Charted pos.	Lat.	36°20.01′
	Long.	114°24.57′
Charted elev.		1120
New elev.		1116
Located on		26 ca-day CS 1177

It is recommended that the new elevation be charted. Appd

38.ROCK

Charted pos.	Lat.	36°20.02′
	Long.	114°24.60′
Charted elev.		1120
New elev.		1119
Located on		5 u-day CS 1177

It is recommended that the new elevation be charted. No Corr

39.ROCK

Charted pos.	Lat.	36°20.08′
	Long.	114°24.62′
Charted elev.		1120
New elev.		1123
Located on		28 ca-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

40.ROCK

Charted pos.	Lat.	36°19.54′
	Long.	114°24.41′
Charted elev.		1100
New elev.		1121
Located on		9 t-day CS 1177

It is recommended that the new elevation be charted. Appd

41.ROCK

Charted pos.	Lat.	36°19.54′
	Long.	114°24.48′
Charted elev.		1140
New elev.		1144
Located on		10 t-day CS 1177

It is recommended that the new elevation be charted. Appd

42.ROCK

Charted pos.	Lat.	36°19.38′
	Long.	114°24.20′
Charted elev.		1120
New elev.		1117
Located on		8 t-day CS 1177

It is recommended that the new elevation be charted. Appd

43.ROCK

Charted pos.	Lat.	36°19.60′
	Long.	114°24.58′
Charted elev.		1140?
New elev.		1119
Located on		13 t-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

44.ROCK

Charted pos.	Lat.	36°19.15′
	Long.	114°24.28′
Charted elev.		1123
New elev.		1124
Located on		13 s-day CS 1177

It is recommended that the new elevation be charted. Appd

45.ROCK

Charted pos.	Lat.	36°19.23′
	Long.	114°24.32′
Charted elev.		1128
New elev.		1134
Located on		4 fa-day CS 1177

It is recommended that the new elevation be charted. Appd

46.ROCK

Charted pos.	Lat.	36°19.29′
	Long.	114°24.54′
Charted elev.		1125
New elev.		1123
Located on		7 T-day CS 1177

It is recommended that the new elevation be charted. Appd

47.ROCK

Charted pos.	Lat.	36°19.65′
	Long.	114°24.90′
Charted elev.		1100?
New elev.		1120
Located on		3 u-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

48.ROCK

Charted pos.	Lat.	36°19.81′
	Long.	114°25.09′
Charted elev.		1140
New elev.		1123
Located on		20 tday CS 1177

It is recommended that the new elevation be charted. Appd

49.ROCK

Charted pos.	Lat.	36°19.72′
	Long.	114°25.03′
Charted elev.		1134
New elev.		1124
Located on		19 t day CS 1177

It is recommended that the new elevation be charted. Appd

50.ROCK

Charted pos.	Lat.	36°19.76′
	Long.	114°25.16′
Charted elev.		1145
New elev.		1131
Located on		24 t-day CS 1177

It is recommended that the new elevation be charted.

51.ROCK

Charted pos	Lat,	36°19.75′
	Long.	114°25.21′
Charted elev.		1145
New elev.		1134
Located on		25 t-day CS 1177

It is recommended that the new elevation be charted.

K.COMPARISION WITH CHART(cont.)

52.ROCK

Charted pos.	Lat.	36°19.82′
	Long.	114°25.18′
Charted elev.		1139
New elev.		1132
Located on		22 t-day CS 1177

It is recommended that the new elevation be charted. App'd

53.ROCK

Charted pos.	Lat.	36°18.76′
	Long.	114°24.46′
Charted elev.		1150
New elev.		1157
Located on		20 r-day CS 1177

It is recommended that the new elevation be charted. App'd

54.ROCK

Charted pos.	Lat.	36°18.68′
	Long.	114°24.63′
Charted elev.		1143
New elev.		1158
Located on		23 r-day CS 1177

It is recommended that the new elevation be charted. Appd

55.ROCK

Charted pos.	Lat.	36°17.93′
	Long.	114°24.11′
Charted elev.		1150
New elev.		1135
Located on		5 y-day CS 1177

It is recommended that the new elevation be charted. Appd

K.COMPARISION WITH CHART(cont.)

56.ROCK

Charted pos.	Lat.	36°17.94′
	Long.	114°24.25′
Charted elev.		1150
New elev.		1146
Located on		4 y-day CS 1177

It is recommended that the new elevation be charted. Appd

57.ROCK

Charted pos.	Lat.	36°16.96′
	Long.	114°22.68′
Charted elev.		1145
New elev.		1148
Located on		12 w-day CS 1177

Appd

It is recommended that the new elevation be charted.

Rocks that were not investigated:

Reefs,rocks,or ledges above 1150 feet above MSL were not investigated, except that all National Park Service Reef Markers were located.

L.ADEQUACY OF SURVEY

This survey is considered adequate to supercede prior surveys for charting purposes up to the 1,150 foot contour. Above the 1,150 foot contour this survey is not adequate for charting.

M.AIDS TO NAVIGATION

There are no fixed lighted aids to navigation within the limits of this sheet.

There are reef markers on some of the numerous reefs. All reef markers were located. The reef markers are placed at the hightest part of the reef, by the National Park Service.

M.AIDS TO NAVIGATION(cont.)

The standard National Park Service reef marker is a hard, black, rubber cylinder which is between 4.0 feet and 4.5 feet in length with an outside diameter of 6 inches. It is bolted to a pipe which is embedded in concrete at the top of the reef. None of the reef markers are lighted. The top two feet of the reef markers are flexable so that if struck by a boat, it would bend and probable not inflict any serious damage.

N.STATISTICS

LAUNCH	NO.OF POSITIONS	NAUTICAL MILES OF SOUNDING LINES
C.S. 1177	2,551	326.0
C.S. 183	121	15.8

TOTAL AREA OF SURVEY	TOTAL NO. OF BOTTOM SAMPLES
12.4 Nautical sq. miles	18

Tide gages located at the Virgin River entrance and Boulder Wash, provided lake level control for this sheet H-8774(12-3-63). For additional information concerning tides and tide gages see Appendix A of this report.

O.MISCELLANEOUS

A hand level was used to run levels to paints above the existing lake level.

The elevation shown in the sounding volumes and on the boat sheet of reefs marked by the National Park Service reef markers are to the top of the reef and not to the top of the reef markers.

The term shoreline as used in this report and in the sounding volumes is the shoreline of the lake at the time of hydrography, which for this sheet varies from a lake level of 1157 to a lake level of 1093.

The following color scheme was used for drawing contours on the boat sheet.

A contour sheet, (HFP 12 ~~X~~-3-63) has been made of this sheet with contours drawn at 10 foot intervels. The original has been sent to the Bureau of Reclamation at Boulder City, Nevada and a copy has been sent to the Washington office.

O. MISCELLANEOUS

Contour feet above MSL	Color
1200	black
1150	red
1100	orange
1050	green
1000	red
950	blue
900	red
850	orange

Respectfully submitted,

Guy F. Trefethen

Guy F. Trefethen
Surveying Tech.

Gage Location: Overton Arm, Lake Mead, Nevada
Lat. 36° 28.73'
Long. 114° 20.28'

Gage Type: Portable Automatic

Staffs Zeros:

Staff Number	Date Established	Elevation
1	16 July 1963	1168.765
2	15 August 1963	1158.720

Staffs Number 1 and 2 — Vitrified scale - no time or height corrections were applied to the results obtained from the gage in reducing soundings

Gage was used to control sheets 12-1-63, 12-2-63, and 12-3-63. Boulder Wash heights were used after 11September 1963 for the completion of the above sheets with no corrections applied to the results obtained from the gage.

105th meridian time was used at this station.

APPENDIX B

The basic control on H-8774 (12-3-63) was USGS third order triangulation stations.

The majority of the signals were located as intersection stations. The computations and field data will be submitted with the control sheets. The computations are in loose leaf binders and are divided into sections by boat sheet.

The order of material in a section, designated by a boat sheet field number, is as follows:

1. Abstract of directions (Form 470)

2. List of preliminary grid azimuths (Form 758)
   Reference to the proper field volume and page (Form 251 Observations of Horizontal Directions is made on the form.

3. Position of intersected station (Form 157) the signals are arranged in alphabetical order in this subsection.

The source of this list of (topo.& hydro.) signals is Master Control Sheet 12-3-63 except as noted.

LIST OF SIGNALS

Hydrographic survey H-8774 (12-3-63)

Triangulation stations

COW	N-55A, 1948
DON	N-59 , 1948
GAS	N-43 , 1948
HAT	N-48 , 1948
ICE	N-49 , 1948
LAD	N-37A, 1948
LAX	N-63 , 1948
NOT	N-41 , 1948
ORB	N-54 , 1948
SOP	N-39 , 1948
ZIG	N-46 , 1948

APPENDIX B (cont.)

Topographic signals

ACE	HOP	PIG
ADD	HUB	PRO
AIM	ITS	QUO
ANT	IVY Master Control	RAM
BOA	JAY 12-2-63	RAT
BOX	JOB	ROT
CON	JUG	ROY
COT	KIM	RUB
CRY	LIP	RUM
DOT	LIZ	SIC
ELF	LOP	SIR
ERG	MAG Master Control	SUB
FED	MAN 12-5-63	TAN
FEW	MIK	TAP
FEZ	NIP	TUB
FIG	NIX	WED
FOX	NUT	WEE
GOB	OFF	WHO
GUN	PAW	YEA
GUY	PEP	YET
HEX	PET	

Hydrographic signals

AND	Vol. 7	page 5	JAX	Vol. 8	page 3
BAT	Vol. 11	page 6	JIM	Vol. 8	page 20
BON	Vol. 7	page 6	LYN	Vol. 7	page 6
BUT	Vol. 7	page 5	MIS	Vol. 1	page 4,6,7
CAT	Vol. 7	page 5	POT	Vol. 8	page 3
DIC	Vol. 8	page 3	RAY	Vol. 8	page 20
DOG	Vol. 7	page 6	REE	Vol. 12	page 49
FAT	Vol. 10	page 66	SUP	Vol. 12	page 49
HOW	Vol. 7	page 5			

FATHOMETER CORRECTIONS
HYDROGRAPHIC SURVEY H-8774 - (12-3-63)
Lake Mead, Nevada - Arizona

Vessel: Launch CS 183
Day Letters: a
Fath. No: DE-723 - #549

A SCALE

6.0 to 14.0	+0.8
14.0 to 21.0	+1.0
21.0 to 25.0	+1.2
25.0 to 30.0	+1.4
30.0 to 34.0	+1.6
34.0 to 37.0	+1.8
37.0 to 40.0	+2.0
40.0 to 44.0	+2.2
44.0 to 46.0	+2.4
46.0 to 48.0	+2.6

B SCALE

48.0 to 53.0	+1.2
53.0 to 64.0	+1.4
64.0 to 72.0	+1.6
72.0 to 78.0	+1.8
78.0 to 82.0	+2.0
82.0 to 90.0	+2.2

C SCALE	+2.2
D SCALE	+1.2
E SCALE	+1.2
F SCALE	+0.7
G SCALE	-0.5
H SCALE	-0.8
I SCALE	-1.1

Vessel : Launch CS 183
Day Letters: b,c
Fath. No: DE-723 - #265

A SCALE

4.0 to 12.0	+1.0
12.1 to 18.0	+1.2
18.1 to 22.0	+1.4
22.1 to 26.5	+1.6
26.6 to 31.5	+1.8
31.6 to 36.0	+2.0
36.1 to 42.0	+2.2
42.1 to 48.0	+2.4

B SCALE

48.0 to 51.0	+2.2
51.1 to 57.0	+2.4
57.1 to 62.5	+2.6
62.6 to 90.0	+2.8

C SCALE	+2.9
D SCALE	+2.7
E SCALE	+2.4
F SCALE	+2.0
G SCALE	+1.5
H SCALE	+1.4

FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H-8774 - (12-3-63)
Lake Mead, Nevada - Arizona

Vessel: Launch CS 1177
Day Letters: a,b
Fath. No: DE-723 - #549

A SCALE

0.0 to 7.0	0.0
7.1 to 12.0	+0.2
12.1 to 21.4	+0.4
21.5 to 26.0	+0.6
26.1 to 30.0	+0.8
30.1 to 38.6	+1.0
38.7 to 42.0	+1.2
42.1 to end of scale	+1.4

B SCALE

42.0 to 48.0	+1.0
48.1 to 63.4	+1.2
63.5 to 72.0	+1.4
72.1 to 80.0	+1.6
80.1 to end of scale	+1.8

C SCALE	+1.4
D SCALE	+1.1
E SCALE	+0.9
F SCALE	+1.2

Vessel: Launch CS 1177
Day Letters: c,d,e,f,g,h,j,k,l
Fath. No: DE-723 - #549

A SCALE

0.0 to 9.0	+0.2
9.1 to 15.0	+0.4
15.1 to 21.0	+0.6
21.1 to 26.0	+0.8
26.1 to 30.0	+1.0
30.1 to 36.0	+1.2
36.1 to 39.0	+1.4
39.1 to 42.0	+1.6
42.1 to 46.0	+1.8
46.1 to end of scale	+2.0

B SCALE

42.0 to 44.4	+1.2
44.5 to 54.0	+1.4
54.1 to 63.4	+1.6
63.5 to 78.0	+1.8
78.1 to end of scale	+2.0

C SCALE	+1.7
D SCALE	+1.3
E SCALE	+1.2
F SCALE	+1.2

FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H-8774 - (12-3-63)
Lake Mead, Nevada - Arizona

Vessel: Launch CS-1177
Day Letters: e,f
Fath. No: DE-723 - #549

A SCALE

0.0 to 3.0	-0.4
3.0 to 4.3	-0.2
4.3 to 5.0	0.0

B SCALE

4.0 to 7.9	0.0
7.9 to 8.8	+0.2
8.8 to 9.0	+0.4

C thru K SCALE

9.0 to 18.0	+0.4
18.0 to 26.5	0.0
26.5 to 32.5	-0.5
32.5 to 39.0	-1.0
39.0 to 46.0	-1.5
46.0 to end	-2.0

Vessel: Launch CS-1177
Day Letters: m,n,p,q
Fath. No: DE-723 -#549

A SCALE

0.0 to 8.0	+0.2
8.1 to 12.0	+0.4
12.1 to 13.6	+0.6
13.7 to 18.0	+0.8
18.1 to 27.4	+1.0
27.5 to 33.0	+1.2
33.1 to 38.0	+1.4
38.1 to 42.0	+1.6
42.1 to 46.0	+1.8
46.1 to end of scale	+2.0

B SCALE

42.0 to 51.0	+1.4
51.1 to 57.0	+1.6
57.1 to 66.0	+1.8
66.1 to 72.0	+2.0
72.1 to 84.0	+2.2
84.1 to end of scale	+2.4

C SCALE	+2.0
D SCALE	+1.8
E SCALE	+1.5
F SCALE	+1.2
G SCALE	+1.0
H SCALE	+1.0

FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H-8774 - (12-3-63)
Lake Mead, Nevada - Arizona

Vessel: Launch CS-1177
Day Letters: z,aa,ba,da
Fath. No: DE-723 - #265

A SCALE

0.0 to 6.0	0.0
6.0 to 15.0	+0.2
15.0 to 26.0	+0.4
26.0 to 38.0	+0.6
38.0 to 48.0	+1.0

B SCALE

4.8 to 6.6	+1.0
6.6 to 7.2	+1.2
7.2 to 9.0	+1.4

C SCALE	+1.0
D SCALE	+0.1
E SCALE	-0.2
F SCALE	-0.6
G SCALE	-0.9
H SCALE	-1.2

Vessel: Launch CS-1177
Day Letters: ca
Fath. No: DE-723 - #265

A SCALE

0.0 to 6.4	0.0
6.5 to 9.0	+0.2
9.1 to 20.8	+0.4
20.9 to 26.8	+0.6
26.9 to 33.0	+0.8
33.1 to 39.0	+1.0
39.1 to 48.0	+1.2

B SCALE

48.0 to 50.0	+1.0
50.1 to 61.4	+1.2
61.5 to 65.0	+1.4
65.1 to 76.0	+1.6
76.1 to 84.0	+1.8

C SCALE	+1.2
D SCALE	+0.9
E SCALE	+0.6
F SCALE	+0.5
G SCALE	+0.1
H SCALE	+0.1
I SCALE	-0.5
J SCALE	-0.9

FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H-877# - (12-3-63)
Lake Mead, Nevada - Arizona

Vessel: Launch CS-1177
Day Letters: da,ea
Fath. No: DE- 723 - #265

A SCALE

0.0 to 15.0	+0.2
15.1 to 39.0	+0.4
39.1 to 42.8	+0.6
42.1 to 48.0	+0.8

B SCALE

48.0 to 69.0	+0.6
69.1 to 81.0	+0.8
81.1 to 89.0	+0.6
89.1 to 90.0	+0.8

C SCALE	+0.2
D SCALE	-0.0
E SCALE	-0.3
F SCALE	-0.5
G SCALE	-0.5
H SCALE	-0.8
I SCALE	-1.5
J SCALE	-1.8

Vessel: Launch CS-1177
Day Letters: fa,ga,ha,ja, ka,la
Fath.No: DE- 723 - #265

A SCALE

0.0 to 18.0	+0.2
18.1 to 27.0	+0.4
27.1 to 33.2	+0.6
33.3 to 42.8	+0.8
42.9 to 48.0	+1.0

B SCALE

48.0 to 50.0	+0.8
50.1 to 60.0	+1.0
60.1 to 72.6	+1.2
72.7 to 81.0	+1.4
81.1 to 87.0	+1.6
87.1 to 90.0	+1.8

C SCALE	+1.3
D SCALE	+1.3
E SCALE	+1.1
F SCALE	+1.1

APPENDIX D

Approval sheet to accompany Hydrographic Sheet H-8774 (HFP 12-3-63)

Project OPR-443

The records, corrections and all field and office work were supervised by

P.A.STARK,CDR.,USC&GS

H.E.McCALL,LT.,USC&GS

This descriptive report was written by:

GUY F.TREFETHEN,SURVEYING TECH.

This survey was conducted prior to the time I was assigned to this party and this report written after my reporting.

APPROVED AND FORWARDED

RICHARD E. ALDERMAN,LCDR.,USC&GS

OFFICER - IN - CHARGE HFP*242

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

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

March 11, 1968

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
15 volumes of sounding records for

HYDROGRAPHIC SHEET 8774

Locality: Lake Mead, Nevada - Arizona

Chief of Party: P. A. Stark; H. E. McCall (1963-64)

Plane of reference is mean lower lake level (which is 1100 feet above sea-level datum)

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

Overton Arm
Boulder Wash

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

Remarks

J. M. Symons
Chief, Tides and Currents Branch

USCOMM-DC 6680-P64

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8774

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Bighorn Island										1
Calico Bay										2
Cathedral Cove										3
Cleopatra Cove										4
Cormorant Rock										5
Echo Bay										6
Gull Island										7
Heron Island										8
Quail Bay										9
Ramshead Island										10
Surprise Reef										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names approved
April 20, 1962
Frank W. Parker

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

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

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO. 8774

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

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

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	4					
VOLUMES	15					
BOXES						

T-SHEET PRINTS *(List)*

SPECIAL REPORTS *(List)*

1 Cahier - Misc. Data filed with H-8772.

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				

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

USCOMM-DC 36271-P65

FORM C&GS-946A
(REV. 11-68)
(PRES. BY HYDROGRAPHIC MANUAL, 6-94)

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

VERIFIER'S REPORT

HYDROGRAPHIC SURVEY, H-8774

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

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

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

Part I - DESCRIPTIVE REPORT	CL	R
Note: The verifier should first read the Descriptive Report for general information and problems.		
1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None		
2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: --None		
3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None		
Part II - SHORELINE AND SIGNALS		
4. Source of shoreline signals Remarks Required: -- List all surveys		
a. Give earliest and latest dates of photographs		
b. Field inspection date		
c. Field Edit date		
d. Reviewed-Unreviewed		
5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.		
6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None		
7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.		
Part III - JUNCTIONS		
Note: Make a cursory comparison preliminary to inking soundings in area of overlap.		
8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None		
9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None		

Part III - JUNCTIONS (Continued)	CL	R
10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of Butt junctions and areas which are SUPERSEDED.		
Part IV - VOLUMES		
11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None		
12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following:		
(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		
Part V - PROTRACTING		
13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None		
14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None		
15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None		

USCOMM-DC 36272-P65

Part V - PROTRACTING (Continued)	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.		
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.		
Part VI - SOUNDINGS		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None		
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.		
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None		
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None		
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: — Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.		
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		
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 VIII - AIDS TO NAVIGATION	CL	R
26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. Remarks Required: -- Conflicts of any nature listed.		
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 IX - BOATSHEET		
28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information. Remarks Required: -- None		
29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.		
Part X - GENERAL		
30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2). Remarks Required: -- None		
31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None		
32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: — None		
33. The bottom characteristics are adequately shown. Remarks Required: -- None		
Part XI - NOTES TO THE REVIEWER		
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

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8774

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
661-SC	12-8-66	Charles F. Kupies	~~Full~~ Part Before ~~After Verification~~ Review Inspection Signed Via
			Drawing No.
			adequately BEFORE
18687B	12-12-79	[illegible] B. Nor[illegible]	~~Full Part Before After Verification~~ Review Inspection Signed Via
(661 SC)		RF	Drawing No. 8B Exam; Considered adequately app'd
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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			Drawing No.