

8807

Diag. Cht. No. 526.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. HFP 12-5-64 Office No. H-8807

LOCALITY

State NEVADA - ARIZONA

General locality BOULDER CANYON

Locality LAKE MEAD, NEVADA - ARIZONA

1964

CHIEF OF PARTY

H. E. McCall, Lt., USC&GS

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DATE

USCOMM-DC 5087

8807-2088

HYDROGRAPHIC TITLE SHEET

H-8807

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 12-5-64

State NEVADA - ARIZONAGeneral locality BOUIDER CANYONLocality LAKE MEAD, NEVADA - ARIZONAScale 1:12,000Date of survey 3 Aug. 1964 TO 14 Oct 19642100B-pt, S-2-219Instructions dated 10 May 1963Project No. OPR-443Vessel LAUNCH CS 1177 and LAUNCH CS 183Chief of party H.E. McCall, Lt., USC&GSSurveyed by Richard H. Allbritton, Lt. (jg), USC&GS

Soundings taken by echo sounder, hand lead, pole _____

Graphic record scaled by PARTY PERSONNELGraphic record checked by PARTY PERSONNEL

Protracted by _____

Soundings penciled by _____

Soundings in ~~fathoms~~ feet at ~~MLW~~ ~~MLLW~~ elevation above MSLREMARKS: All echo soundings are in feet and tenths of feet. All soundingsare converted to elevation of feet above mean sea level. Soundingson the boat sheet are elevation above mean sea level. Only three digitswere used, the first digit in 1,000, 1100 and 12.00 were left off tomake room on the sheet less congested.For example: Elev. -1126 on the boat sheet would be 126.

114° 45'

30'

15'

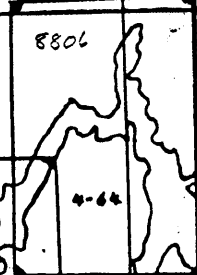
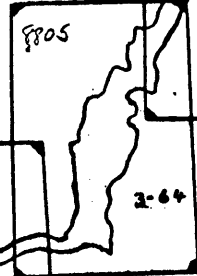
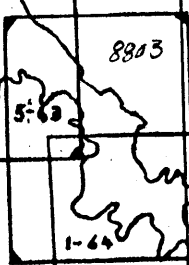
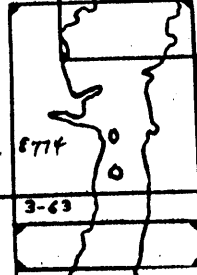
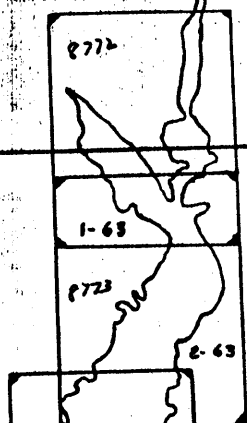
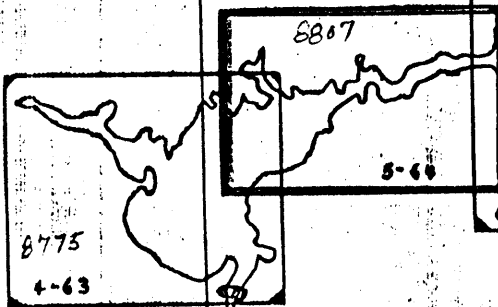
114° 00'

LAKE MEAD, NEVADA → ARIZONA

36° 30'

30'

15'



36° 00'

114° 30'

15'

114° 00'

35° 45'

114° 45'

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-8807
(Field No. H.F.P. 12-5-64)
Project OPR-443

SCALE: 1:12,000

H.F.P. 219

CHIEF OF PARTY:

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

* * * * *

A. PROJECT

Project OPR-443 was completed in accordance with instructions 2100B-pt, S2-219 dated 10 May 1963, Lake Mead, Nevada-Arizona.

B. AREA SURVEYED

The geographical limits of this sheet are from Lat. $36^{\circ}05' N$ to Lat. $36^{\circ}10' N$ and Long. $114^{\circ}32' W$ to Long. $114^{\circ}44' W$.

This sheet covers the eastern portion of Boulder Basin, Boulder Canyon and Boulder Wash.

This survey makes junction with contemporary survey H-8775 (HFP 12-4-63) on the West and contemporary survey H-8777 (HFP 12-6-63) on the East.

This survey also makes junction with Navy sheet No.1 dated 1948-1949, Scale 1:12,000 on the West and Navy sheet No.3 dated 1948-1949, Scale 1:12,000 on the East.

This survey area was covered by Navy sheet No.2 dated 1948-1949. Scale 1:12,000.

Hydrography began on August 3, 1964 and was completed October 14, 1964.

C. SOUNDING VESSEL

The vessels used were Launch CS 1177, designated by blue day letters, and Launch 183 designated by violet day letters.

D. SOUNDING EQUIPMENT

On Launch CS 1177 the following Raytheon DE 723 fathometers were used:

Number	265	200 K C
Number	544	20 K C
Number	263	20 K C

On Launch CS 183 the following Raytheon DE 723 fathometers were used:

Number	544	200 K C
Number	549	200 K C

In certain areas two fathometers were run simultaneously. The 200 K C fathometer was run on feet and the 20 K C fathometer was run on fathoms. This procedure was used to assist the fathometer operator in keeping up with the scales. In some instances the soundings from the 20 K C fathogram were converted from fathoms to feet and placed in the sounding volumes. Such soundings are noted in the sounding volumes by an asterisk and the word fathoms, or an abbreviation, thereof, was placed in the remarks column.

Daily bar checks were taken to determine the corrections to be applied for the 200 K C unit. Bathythermography observations were made to obtain temperatures at depths beyond the range of the bar checks. One bar check was taken to determine the corrections for the 20 K C units on fathoms.

E.SMOOTH SHEETS

To be completed by smooth plotter.

F.CONTROL

All signals were located by ground survey methods. Appendix B contains a list of signals and indicates the methods used to locate the signals.

The hydrography was controlled by visual three point fixes.

In all of the coves in which hydrography was run, where there were no available fixes, the hydrographic lines were run by dead reckoning. The normal procedure of the hydrographer spotting his position on the boat sheet from adjacent features of the shoreline and placing "see boat sheet" in the sounding volumes was not adhered to for the following reason:

The lake level at the time of hydrography was in the vicinity of 1100 feet above MSL. The closest contour to this lake level on the boat sheet was the 1150 foot contour and this contour was taken from Navy Survey Sheet No.2. It was almost impossible to identify a position from the adjacent features of the shoreline. Hence, it was felt that a more accurate position could be obtained by the smooth plotter by using the indicated course and speed rather than using a position determined by the hydrographer.

Since all signals had to be located by ground survey methods, the cost and the time which would have been required to locate signals in all of the coves would have been prohibitive. Thus, the procedure of dead reckoning into coves was adopted for the entire project (OPR-433).

G.SHORELINE

The shoreline was transferred from a film position of Navy Sheet No.2 dated 1948 outlining the 1200 foot and the 1150 foot contour.

The 1150 foot contour is shown in red and the 1200 foot contour is shown in black on the boat sheet.

When the lake level dropped to 1150 feet above MSL, aerial infrared photographs were made. This contour was not verified by hydrography due to the low lake level at the time of hydrography.

H. CROSSLINES

Crosslines were run in excess of 10%. Favorable crossings were found.

I. JUNCTIONS

Depths at junctions with contemporary surveys H-8775 (HFP 12-4-63) and H-8777 (HFP 12-6-63) are in agreement. Contour curves can be adequately drawn at the junction.

J. COMPARISONS WITH PRIOR SURVEYS

Comparison with Navy Sheet No.2, 1948 Scale 1:12,000:

The prior survey was of a reconnaissance nature and since no shoals or rocks were investigated, an adequate comparison can not be made.

In general, the depths of this survey are shoaler than the depths of the prior survey. This is probably due to silt.

K. COMPARISION WITH THE CHART

Chart. C. & G.S. 5457A 2nd edition
Oct. 17, 1955
Revised Oct. 16, 1961
Scale 1:48,000

C. & G.S. 5457B
Scale 1:48,000

All reefs and rocks indicated on the chart were plotted on the boat sheet in red pencil with their respective elevations indicated in pencil.

A danger to navigation not adequately shown on the chart was located in Boulder Canyon. It consists of a narrow shoal projecting into the water from the shore (a spit). The spit has three high points which are marked by three National Park Service Reef Markers respectively.

The critical elevations ^{and} ~~are~~ positions are as follows:

Position	Elevation Above MSL	Lat.	Long.
114f	1112	36°08' .32N	114°37' .79W <i>App'd as * (12)</i>
115f	1114	36°08' .30N	114°37' .79W
116f	1121	36°08' .28N	114°37' .79W

Recommendation is made that the following rocks and reefs be deleted from the chart:

1. ROCK

Charted pos. Lat. 36°08'89 N
Long. 114°38'70 W
Charted elev. 1121✓

This is not a rock. It is a point of land jutting out from the shore. *Del. Rk*

2. ROCK

Charted pos. Lat. 36°08'18 N
Long. 114°39'71 W
Charted elev. 1088✓

This is not a rock, but rather an extension of a ridge from the shore. *Delete*

3. ROCK

Charted pos. Lat. 36°08'08 N
Long. 114°35'89 W
Charted elev. 1124

This rock was visually ^{*Searched for*} inspected at a lake level of 1092 and no evidence of the rock was found to exist. *Delete*

4. ROCK

Charted pos. Lat. 36°07'92 N
Long. 114°36'79 W
Charted elev. 1119✓

This rock was visually ^{*Searched for*} inspected at a lake level of 1092 and no evidence of the rock was found to exist. *Delete*

5. ROCK

Charted pos.	Lat.	36°08'98 N
	Long.	114°32'66W
Charted elev.		1137

This rock was investigated when the lake level was 1102 and a visual inspection was made at a lake level of 1092. No evidence of the rock was found to exist. *Delete*

6. ROCK

Charted pos.	Lat.	36°09'79 N
	Long.	114°32'85W
Charted elev.		1145

This rock is actually a ridge running from the shore. Signal TAR is in the middle of the ridge. It is recommended that it be deleted as a rock and placed on the chart as a ledge. No new elevation was determined. *Retain (too small to show ledge)*

7. ROCK

Charted pos.	Lat.	36°07'92 N
	Long.	114°39'40W
Charted elev.		1125/

This rock was visually investigated at a lake level of 1099. No evidence of its existence was found. *Delete* ✓

8. ROCK

Charted pos.	Lat.	36°07'55 N
	Long.	114°39'30W
Charted elev.		1129/

This rock was visually investigated at a lake level of 1099. No evidence of its existence was found. *Delete* ✓

13. ROCK

Charted pos.	Lat.	36°05'39 N
	Long.	114°41'89W
Charted elev.		1143

This is not a rock. It should be placed on the chart *Charted as (43) sdy.*
as a sounding if placed on the chart at all.

Neither the accuracy of its position nor the accuracy of its elevation were checked.

14. ROCK

Charted pos.	Lat.	36°07'97 N
	Long.	114°42'60W
Charted elev.		1146

Charted pos.	Lat.	36°07'92 N
	Long.	114°42'49W
Charted elev.		1146

These are not rocks. They are points on ridges *Delete*
which extend from the shore into the water.

15. ROCK

Charted pos.	Lat.	36°07'30 N
	Long.	114°42'70W
<i>Charted elev. 1135</i>		

This rock does not exist. It was visually investi- *Delete (Shown as 19' sdy.)*
gated at a lake level of 1092.

16. ROCK

Charted pos,	Lat.	36°07'22 N
	Long.	114°42'82W
Charted elev.		1095

Charted pos.	Lat.	36°07'.06 N
	Long.	114°42'.75W
Charted elev.		1092✓
Charted pos.	Lat.	36°06'.87 N
	Long.	114°42'.80W
Charted elev.		1090✓

A thorough investigation was made and no evidence of *Delete* these three rocks was found:

17. ROCK

Charted pos.	Lat.	36°07'.47 N
	Long.	114°43'.00W
Charted elev.		1124✓

A visual investigation was made for this rock and no *Delete* evidence of its existence was found.

18. ROCK

Charted pos.	Lat.	36°08'.18 N
	Long.	114°39'.71W
Charted elev.		1088

This is not a rock. It is an extension of a ridge *Some 200 ft #2* from the shore line into the water.

The following ledges, rocks, and reefs exist but were not investigated:

1. LEDGE

Charted pos.	Lat.	36°09'.08 N
	Long.	114°35'.19W
Charted elev.		1140

No Cor

This ledge is charted as a rock. No fix was available. The position and elevation as charted are approximately correct.

2. LEDGE

Charted pos.	Lat.	36°08'99 N
	Long.	114°38'59W
Charted elev.		1140

This ledge should be plotted at Lat. 36°09'02 N and Long. 114°38.62 W. This is an approximate position as no fix was available at this point. The charted elevation is approximately correct. *No Corr.*

3. REEFS

Charted pos.	Lat.	36°08'92 N
	Long.	114°38'36W
Charted elev.		1142
Charted pos.	Lat.	36°08'91 N
	Long.	114°38'48W
Charted elev.		1142

No fix was available at these two reefs. The position and elevation as charted are approximately correct. These two reefs are charted as rocks, but it would be more accurate to chart them as reefs. *No Corr*

4. LEDGE

Charted pos.	Lat.	36°08'60 N
	Long.	114°41'99W
Charted elev.		1147

No fix available at this point. The charted position and elevation are approximately correct. This ledge is charted as a rock but it should be charted as a ledge. *No Corr*

5. ROCK

Charted pos.	Lat.	36°07'.19 N
	Long.	114°42'.70W
Charted elev.		1092

This rock should have been investigated. It was simply overlooked. There is an indication of its existence from the sounding lines where an elevation of 1086 was obtained. Rocks and reefs were reinvestigated in the area at a lake level of 1092.2, and the launch came within 100 meters of the rocks charted position. Hence, it can be stated with full confidence that it is not above 1092. The rock should be charted as it is presently charted.

No Corr

6. ROCKS

Charted pos.	Lat.	36°07'.77 N
	Long.	114°43'.36W
Charted elev.		1133
Charted pos.	Lat.	36°07'.88 N
	Long.	114°43'.59W
Charted elev.		1141

These rocks were not investigated!

No Corr.

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 adequate to supercede prior surveys up to the 1150 foot contour. The actual hydrography covered only that area up to the 1100 foot contour, but all rocks, reefs and ledges up to the 1150 foot contour were located and an elevation determined except for the exceptions noted in the previous section of this report. Above the 1150 contour this survey is not adequate for charting.

M. AIDS to NAVIGATION

✓ There is a lighted beacon on Beacon Island. This beacon has a triangulation disc (A-7, 1947) embeded in its base.

No reflectors were located. At the time of hydrography, the reflectors were 100 feet to 150 feet above the lake level and their value was questionable.

There are reef markers on some of the numerous reefs. All reef markers were located. The reef markers are placed at the highest part of the reef.

The Beacon, reflectors and reef markers are all maintained by the National Park Service.

The standard National Park Service reef marker is a hard, black, rubber cylinder which is 4.0 feet to 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 marker is flexible enough that if hit by a boat, it would bend and probably not inflict any serious damage to the boat.

N. STATISTICS

LAUNCH	No. of POSITIONS	NAUTICAL MILES of sounding lines
CS 1177	1538	175.5
CS 183	228	22.4
TOTAL	1766	197.9
Total Area of Survey		8.5 sq. NM
Total No. of Bottom Samples		16

A Bristol bubbler gage located at Boulder Wash provided lake level control for this sheet.

Data for reduction of soundings ~~were~~^{were} taken directly from the marigram without time or range corrections. See appendix A for additional information concerning tides.

O. MISCELLANEOUS

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

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

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 is approximately the same as the 1100 foot contour.

The following scheme was used for placing contours on the boat sheet:

<u>Contour</u> (Feet Above MSL)	<u>Color</u>
1200	black
1150	red
1100	orange
1050	green
1000	red
950	blue
900	red
850	orange
800	blue
750	violet

George L. Fernandez
FOR: Respectfully submitted,
Richard H. Allbritton
LTJG., USC&GS

APPENDIX A

TIDAL NOTE

PROJECT OPR-443

Gage Location: Boulder Wash, Lake Mead, Nevada
 Lat. 36° 10.28'
 Long. 114° 31.18'

Gage Type: Bristol Bubbler Gage

Staffs Zeros:

<u>Staff Number</u>	<u>Date Established</u>	<u>Elevation</u>
1	12 July 1963	1153.412
2	30 August 1963	1142.086
3	13 November 1963	1132.766
4	17 January 1964	1124.260
5	30 March 1964	1114.125
6	23 June 1964	1107.007
7	23 July 1964	1094.771
8	23 September 1964	1088.165

Gage was used to control sheets 12-5-63, 12-6-63, and 12-5-64. No time or height corrections were applied to the results obtained from the gage for the reduction of soundings, except for the following days; November 20th, 21st, 22nd, 26th, and the 27th 1963. Hoover Dam gage was used with a -0.1ft correction applied to the heights, due to the gage at Boulder Wash out of operation necessitated this action.

105th meridian time was used from July 1963-through October 1963.
 120th meridian time was used from November 1963 through the completion of the project.

APPENDIX B

The basic control on H-8807 (HFP 12-5-64) was USGS third-order triangulation stations.

A short traverse was run, using a WILD T-2 and subtense bar, to locate 4 topographic signals at the east end of Boulder Canyon. Additional topographic signals were located by T-2. Hydrographic signals were cut in by sextant.

The majority of the signals were located as intersecting 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.

APPENDIX B (con't).

The source of this list of (topo. & hydro.) signals is Master Control Sheet 12-5-64 except as noted:

TRIANGULATION

ABE	(N-11,1947)	HUD	(A-6,1947)
ACE	(N-13,1948)	ICE	(N-17,1948)
ACT	(N-12,1948)	JAY	(N-10C,1948)
AIM	(A-20,1948)	KAY	(A-8,1947)
AIE	(N-27B,1948)	KID	(A-17,1948)
BAG	(A-7, 1947)	LAG	(N-9,1947)
BAT	(N-25,1948)	LEG	(N-21,1948)
BUT	(A-12,1948)	MAG	(N-16,1948)
CAT	(A-9, 1948)	MAN	(N-22,1948)
CUT	(A-21,1948)	MOE	(A-5,1947)
DAY	(A-19,1948)	NAT	(N-8D,1948)
EAR	(A-13,1948)	PAC	(N-10A,1948)
ENT	(A-22A,1948)	POI	(N-27,1948)
FAR	(A-14,1948)	SET	(A-18,1948)
FIN	(N-15,1948)	VIM	(N-27A,1948)
FIX	(N-23,1948)	WAX	(N-26,1948)
GAD	(A-15,1948)		

APPENDIX B (cont)

TOPOGRAPHIC

ANN	MUG
ANT	ODD
ARK	OUT
ARM	PAL
BIG	PIT
BOX	RAY
CAN	REE
COW	ROY
CUR	SAD
DAD	SAN
DEB	SHE
DIM	SKY
DOG	SUE
ELF	TAN
FED	TAR
HAT	TIC
JOY	TOM
JUG	VEX
LAD	WAR
MAY	WIN
MOP	

APPENDIX B (con't)

HYDRO

AMY

RED

ERG

WET

NOE

YAK

RAM

FATHOMETER CORRECTIONS
 HYDROGRAPHIC SURVEY H-8807 - (12-5-64)
 Lake Mead, Nevada - Arizona

Vessel: Launch CS-183
 Day Letters: a
 Fath. No. DE-723 - #265

Vessel: Launch CS-183
 Day Letters: B,c,d (1 thru pos 6d)
 Fath. No: DE- 723 - #544

A SCALE

0.0 to 20.4	+0.6
20.6 to 34.0	+0.8
34.2 to 50.0	+1.0

B SCALE	+0.8
C SCALE	+0.2
D SCALE	0.0
E SCALE	-0.2
F SCALE	-0.6

A SCALE

6.0 to 8.0	+1.0
8.1 to 11.0	+1.2
11.1 to 16.0	+1.4
16.1 to 21.5	+1.6
21.6 to 27.5	+1.8
27.6 to 35.0	+2.0
35.1 to 40.5	+2.2
40.6 to 46.5	+2.4
46.6 to 50.0	+2.6

Vessel: Launch CS-183
 Day Letters: a
 Fath. No: DE-723 - #544 (fathoms converted to feet)

10.0 to 14.0	0.0
14.1 to 17.0	+0.2
17.1 to 22.0	+0.4
22.1 to 27.0	+0.6
27.1 to 32.0	+0.8
32.1 to 38.0	+1.0
38.1 to 45.0	+1.2
45.1 to 52.0	+1.4
52.1 to 59.0	+1.6
59.1 to 66.0	+1.8
66.1 to 73.0	+2.0
73.1 to 80.0	+2.2
80.1 to 87.0	+2.4
87.1 to 91.0	+2.6
91.1 to 95.0	+2.8
95.1 to 110.0	+3.0
110.1 to 114.5	+2.8
114.6 to 120.0	+2.6
120.1 to 126.0	+2.4
126.1 to 134.0	+2.2
134.1 to 146.0	+2.0
146.1 to 180.0	+1.8

B SCALE

40.0 to 49.0	+1.8
49.1 to 52.0	+2.0
52.1 to 56.5	+2.2
56.6 to 62.0	+2.4
62.1 to 64.5	+2.6
64.6 to 65.5	+2.8
65.6 to 87.5	+3.0
87.6 to 90.0	+3.2

C SCALE	+2.5
D SCALE	+2.7
E SCALE	+2.4
F SCALE	+1.8
G SCALE	+2.4
H SCALE	+2.1
I SCALE	+1.3

FATHOMETER CORRECTIONS
 HYDROGRAPHIC SURVEY H-8807 - (12-5-64)
 Lake Mead, Nevada - Arizona

Vessel: Launch CS-183
 Day Letters: d
 Fath. No: DE-723 - #544

B SCALE

		48.0 to 53.0	+1.4
Fathoms converted to feet		53.0 to 65.5	+1.6
		65.5 to 90.0	+1.8
12.0 to 24.0	-2.0		
24.0 to 36.0	-1.5		
36.0 to 44.0	-1.0		
44.0 to 50.0	-0.5	C SCALE	+1.5
50.0 to 55.0	-0.0	D SCALE	+1.3
55.0 to 60.0	+0.5	E SCALE	+0.9
60.0 to 70.0	+1.0	F SCALE	+0.5
70.0 to 75.0	+1.5	G SCALE	+0.7
75.0 to 142.0	+2.0	H SCALE	+0.3
142.0 to 180.0	+3.0	I SCALE	-0.4
180.0 to 240.0	+2.5	J SCALE	-0.7
240.0 to 300.0	+2.0		

Vessels: Launch CS-1177
 Day Letters: a,b,c,d,e,f,g,h,j,k,l,
 (l.l-721) m,n,p
 Fath. No: DE-723 - #265

A SCALE

6.0 to 13.0	+0.4
13.0 to 19.5	+0.6
19.5 to 25.0	+0.8
25.0 to 30.0	+1.0
30.0 to 35.5	+1.2
35.5 to 42.0	+1.4
42.0 to 48.0	+1.6

FATHOMETER CORRECTIONS
HYDROGRAPHIC SURVEY H-8807 - (12-5-64)
Lake Mead, Nevada - Arizona

Vessel: Launch CS-1177
Day Letters: 1 (721 - 751)
Fath. No: DE-723 - #263

A SCALE

6.0 to 23.5	0.0
23.5 to 30.0	+0.2
30.0 to 35.0	+0.4
35.0 to 38.0	+0.6
38.0 to 41.0	+0.8
41.0 to 48.0	+1.0

B SCALE

48.0 to 50.5	+0.8
50.5 to 56.0	+1.0
56.0 to 74.5	+1.2
74.5 to 78.5	+1.4
78.5 to 84.0	+1.6
84.0 to 90.0	+1.8

C SCALE	+1.8
D SCALE	+1.6
E SCALE	+1.5

APPENDIX D

Approval sheet to accompany Hydrographic Sheet H-8807
(HFP 12-5-64).

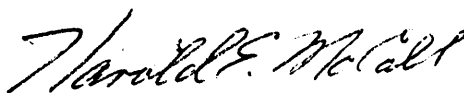
Project OPR-443

The records, corrections and all field and office work
~~was~~ ^{were} supervised by H.E.McCall, Lt., USC&GS.

This descriptive report was written by Richard H.
Allbritton, Lt. (jg), USC&GS.

The report and records for this survey are complete to
the best of my knowledge.

Approved and forwarded,



H.E.McCall, Lt., USC&GS
Officer-in-Charge

TIDE NOTE FOR HYDROGRAPHIC SHEET

March 11, 1968

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8807

Locality: Lake Mead, Nevada - Arizona

Chief of Party: H. E. McCall (1964)

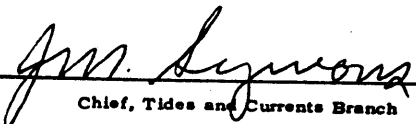
Plane of reference is mean lower lake level (which is 1100 feet
above sea-level datum)

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

Boulder Wash

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

Remarks


Chief, Tides and Currents Branch

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8807

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	1					
VOLUMES	9					
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				
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 - 8807

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>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
<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 - BOAT SHEET</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>	

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8807

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
661-5C	9-13-66	Charles R. Lupis	Full Part Before After Verification Review Inspection Signed Via Drawing No.
			<i>adequately</i>
18687A (661-5C)	12-12-79	Gregory B. Norris RTH	Full Part Before After Verification Review Inspection Signed Via Drawing No. BA Exam; Considered adequately applied
			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 Drawing No.
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Partially app'd to chf 661-5C "A" 9-13-66
Before Review