7689
7690

Diag. Cht. No. 6157 (Insert)

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. LR-10748 LR-10848 *Office No.* H-7689 H-7690

LOCALITY

State WASHINGTON

General locality FRANKLIN D. ROOSEVELT LAKE

Locality GEROME LIGHT TO BISSELL FLATS

194 8-'49

CHIEF OF PARTY

J. T. JARMAN

LIBRARY & ARCHIVES

DATE Mar 7 — 1950

8-1870-1 (1)

7689 7690

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-7689

Field No. LR-10748

State Washington

General locality Franklin D Lake Roosevelt Lake

Locality Hunters Landing and Vicinity ~~Gerome Light to Harvey Creek Lt.~~

Scale 1:10,000 Date of survey July-Aug. 1948 - June 1949

Instructions dated 20 June 1947

Vessel LCVP and Launch 98 (Field Party)

Chief of party J.T. Jarman

Surveyed by Glenn W. Moore and Hal A. Marchant

Soundings taken by fathometer, graphic recorder, hand lead, wire Graphic Recorder

Fathograms scaled by Floyd E. Gerken and Harry Lantzy

Fathograms checked by Henry Aanenson and L.J. Evart, Jr.

Protracted by G.W. Bergford

Soundings penciled by G.W. Bergford

Soundings in ~~fathoms~~ feet at ~~MEAN LOW WATER~~ a/ 1288.575 ft. above mean sea level, or 1290 feet USBR 1937

REMARKS:

a/ Soundings in feet at lake level datum of 1288.6 ft above mean sea level (or 1290 ft USBR, 1937). Elevations are in feet above lake level datum

U. S. GOVERNMENT PRINTING OFFICE 777082

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-7690

Field No. LR 10848

State ..... Washington

General locality ..... Lake Roosevelt

Locality ..... Harvey Creek Light to Bissell Flats

Scale ..... 1/ 10 000 ..... Date of survey July-August 1948 - June 1949

Instructions dated ..... 20 June 1947

Vessel ..... LCVP (Field Party)

Chief of party ..... J.T.Jarman

Surveyed by ..... Hal A. Marchant

Soundings taken by fathometer, graphic recorder, hand lead, wire ~~XXXXXXXXX~~ Graphic recorder

Fathograms scaled by ..... Floyd E. Gerken and Harry Lantzy

Fathograms checked by ..... Henry Svenson and L.J.Evart, Jr.

Protracted by ..... C.W.Fanders

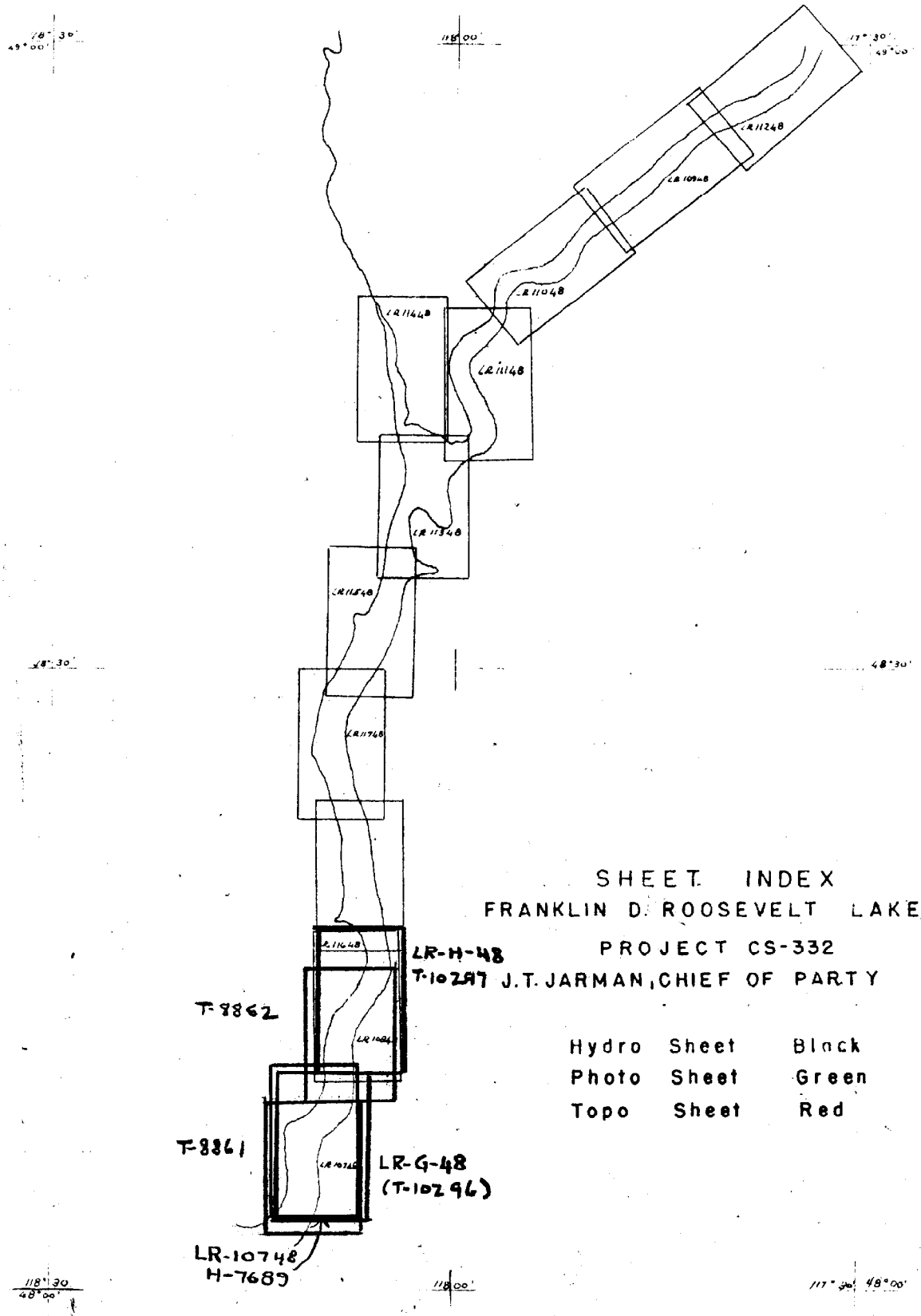
Soundings penciled by ..... C.W.Fanders

Soundings in ~~fathoms~~ feet at ~~MLW~~ ~~XXXXXXXXX~~ 1288.575 MSL USC&GS, or 1290 Feet USBR datum of 1937

REMARKS:

a. Same note as H-7689

U. S. GOVERNMENT PRINTING OFFICE 693019



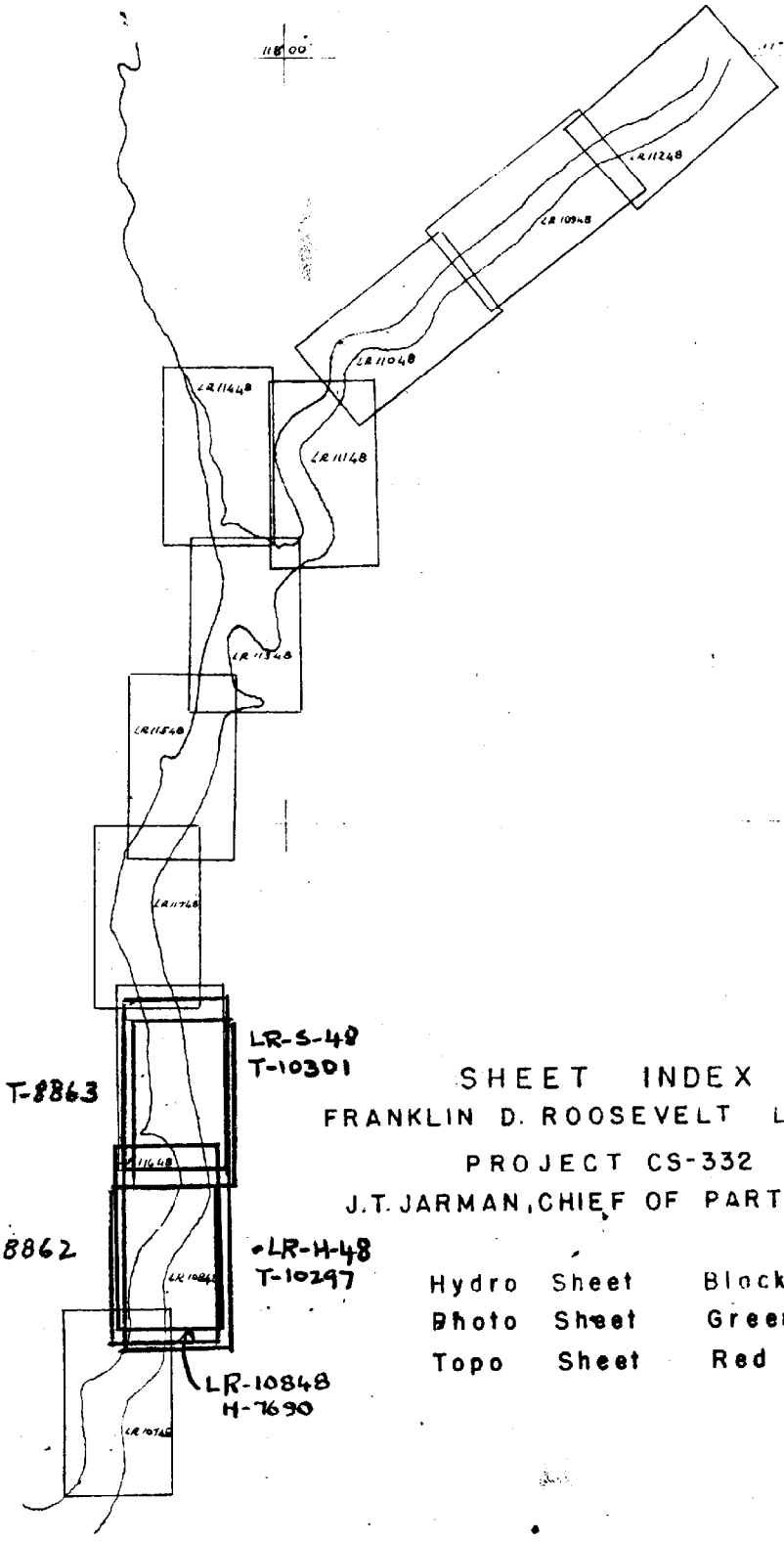
SHEET INDEX

FRANKLIN D. ROOSEVELT LAKE

PROJECT CS-332

J.T. JARMAN, CHIEF OF PARTY

Hydro	Sheet	Black
Photo	Sheet	Green
Topo	Sheet	Red



SHEET INDEX

FRANKLIN D. ROOSEVELT LAKE

PROJECT CS-332

J.T. JARMAN, CHIEF OF PARTY

Hydro	Sheet	Black
Photo	Sheet	Green
Topo	Sheet	Red

DESCRIPTIVE REPORT
To Accompany

Hydrographic Survey H-7689, Field No. LR-10748
Hydrographic Survey H-7690, Fiedl No. LR-10848

A. INSTRUCTIONS

1. The hydrographic survey of Franklin D. Roosevelt Lake has been designated Project CS-332. This is in accordance with original INSTRUCTIONS, No. 22/MEK FP-Jarman dated 20 June 1947.

B. SURVEY LIMITS AND DATES

1. Both of these sheets are on the main body of Franklin D. Roosevelt Lake. They were surveyed in July-August 1948.

H-7689

2. Sheet LR-10748 extends from Gerome Light to Harvey Creek Light; work began on July 22, 1948 and the sheet was completed on August 11, 1948.

H-7690

3. Sheet LR-10848 extends from Harvey Creek Light to Bissell Flats; work began on July 30, 1948 and the sheet was completed on August 13, 1948.

C. VESSELS AND EQUIPMENT

1. A navy type landing craft, vehicle and personnel, hereinafter referred to as launch LCVP was used for hydrographic surveying. It was leased with a boat operator furnished by the owner for $590.00 per month. The launch gave satisfactory results. The turning radius at sounding speed was approximately 25 meters. A squat and settlement test on the launch gave negligible results. This launch used an outboard fish set at 2 feet below the surface.

2. A gasoline powered sounding launch, designated launch No. 98, was furnished the party by the USC&GS Ship SURVEYOR. It used an inboard fish set at 1.5 feet below the surface; turning radius was 20 meters.

3. A large houseboat (camp barge type) which served as a base of operations, provided the necessary living accommodations and storage space for supplies, such as instruments and other necessary equipment. Fuel, generating equipment, and battery chargers were maintained on a small auxiliary barge. Signal building supplies and heavier items of such nature that would not be damaged by the weather, were stored on a large open barge which was generally kept ahead of the main operations.

4. Both the Nk-7 and the 808 type portable depth recorders were used on these two sheets.

5. A lead line was used for feeling over shoals and obtaining least depths on submerged rocks.

6. A hand sounding machine and calibrated sheave mounted on the LCVP was used for comparisons in deep water and for obtaining deep water temperatures and salinities. The bulk of the temperatures and salinities used on these two sheets were obtained by the LCVP. When possible, the launch 98 obtained supplemental temperature and salinity observations, using a leadline to support the apparatus.

D. TIDE AND CURRENT STATIONS

1. Tidal notes for the three sheets under discussion are attached to this report. Paragraphs 1, 2, 3, 5 and 6 under this same heading, Descriptive Report to accompany sheet LR-10147 H-7681 and LR-10247 H-7682, apply to these sheets also.

2. Soundings on sheet LR-10748 H-7689 were reduced by data from the Miles tide gage between July 22, 1948 at 10:00 a.m. and July 24, 1948, and between August 4, 1948 to August 11, 1948. Data from the Kettle Falls gage was used from 10:00 a.m. on July 24, 1948 to August 4, 1948.

3. Soundings on sheet LR-10848 H-7690 were reduced by data from the Kettle Falls tide gage from July 30, 1948 to August 3, 1948. The Miles tide gage furnished the reduction data from August 3, 1948 to August 13, 1948. The Kettle Falls gage was used for the development and feeling operations on November 4, 1948.

4. The USBR gage at Grand Coulee Dam furnished the data for reduction of soundings accomplished during the 1949 season on both these sheets.

5. No current was noted during the hydrographic operations, and no current observations were undertaken.

E. SMOOTH SHEETS

1. The smooth sheets have not been plotted. It is expected that remarks under this heading will be inserted in the final descriptive report by the Processing Office.

F. CONTROL STATIONS

1. Horizontal control for this project is second and third order triangulation executed by the USBR from 1934 to 1940. For a complete treatment of the main source of the horizontal control, refer to the "Special Report on Boundary Reservoir Control Points, Project Ph-2(45)", previously submitted to the Washington Office. Acc No G-7380

2. The foregoing control was supplemented by photo-hydro and topographic stations established by the Photogrammetric personnel. Project Ph-2(45). The registry numbers of the planimetric or shoreline survey sheets common to sheet LR-10748 H-7689, are T-8861 and T-8862; those common to LR-10848 H-7690 are T-8862 and T-8863. of 1946-47.

3. Additional hydrographic stations were established by plane-table methods to replace several photogrammetric points which were marked doubtful, or could not be identified. In some instances, the photogrammetric points were so situated that they were not visible over a wide portion of the lake. Such stations were supplemented by establishing new stations. The locations of these new additional stations are shown on graphic control topographic sheets. The control sheet common to H-7488 LR-10748 is LR-G-48; that common to H-7488 LR-10848 is LR-H-48. (subsequently destroyed).

4. An index map has been prepared for each sheet to show the limits and field numbers of contemporary planimetric shoreline surveys and control sheets; they are attached to this report.

5. The graphic control sheets which accompany the hydrography give the final accepted locations for the hydrographic control; where discrepancies exist, if any, the control sheet locations should be accepted. Location of photo-hydro stations from the shoreline survey sheets which were accepted have been shown on the graphic control sheet with green circles. Locations of additional signals plus the locations of photo-hydro stations found to be in error, have been shown with red circles. The majority of the photo-hydro stations used for hydrographic control were checked with a plane-table. Since the USBR third order control points are listed in plane coordinates, both of these sheets show the Washington North State plane coordinate grid system.

G. SHORELINE AND TOPOGRAPHY

1. The planimetry shoreline was transferred to the boat sheets from ozalid prints of applicable shoreline survey sheets. Topographic stations were transferred to the boat sheets from applicable graphic control sheets. During the course of the hydrographic survey, some discrepancies were detected and corrected in the shoreline location. The corrected shoreline is shown in red ink on the control sheets, (LR-G-48); the discussion of these discrepancies will be found in the Descriptive Report to Accompany Control sheets LR-G-48 and LR-H-48. Filed with this Desc. Report.

H. SOUNDINGS

1. During the 1948 season, 808 type fathometers operating in fathoms were used; the short 1949 season employed both the 808 and the NK-7 type fathometers operating in both feet and fathoms.

2. The general procedure was as follows: In the case of the LCVP, the oscillator depth was maintained at 2 feet. The initial of the fathometer was adjusted to read 2 feet when the fathometer was operating in feet. This initial adjustment was not changed when the machine was operating in fathoms, and under such conditions, the initial in fathoms was found to be 1.7 fathoms (average). The error in the initial reading in fathoms was absorbed in the velocity correction curve. Instructions were given to take three bar checks daily. The fathograms were scanned for variations from the standard initial of 2 feet in feet and 1.7 fathoms in fathoms, and such variations were applied in the record books as an index correction.

The bar checks and vertical comparisons were used to obtain a check on the computed velocity corrections, but the computed velocity corrections were actually used for correcting the soundings. In the case of the launch 98, the initial was adjusted to read 1.5 feet when the machine was operating in feet; otherwise, the procedure was the same for this launch as the LCVP. The average fathom initial on launch 98 was 1.23 fathoms.

3. Procedure during the short 1949 season was varied from that discussed in the foregoing paragraph. In general, the procedure outlined in Paragraph 2, sub-head "H" of Descriptive Report for sheets LR-10147 and LR-10247 was followed. Since all soundings obtained during this period were in fathoms, the initial was set in fathoms to a known bar check depth. It was expected that this procedure would eliminate the "Bar Check Residual" discussed in the next paragraph.

4. During the winter months between the 1948 and the 1949 seasons, a study was made of the bar check data. It was found that a fairly constant residual existed after velocity corrections had been applied to the bar check soundings. Since the residuals were so nearly constant for the various depths of the bar check, it was indicated that it was an initial correction. When the above was discovered, the fathograms had already been scanned and initial corrections entered as described in Paragraph 2 above. Therefore, the average residual for all of each days bar checks was determined and applied algebraically to the scanned initial. See "Cahier of Bar Check Residuals" to be submitted with the 1948 Season's data. Filed with H-7681

5. The boats sheets covered by this report have been plotted in fathoms since the majority of the soundings were obtained in that unit. The Washington Office has specified that the depth unit for smooth plotting will be feet. The datum plane used on both boat sheets under discussion is the normal lake level of 1290 feet, USBR Independent Datum of Leveling, or 1288.575 feet above mean sea level. This is the datum which will be employed on the smooth plotted sheets.

I. CONTROL OF HYDROGRAPHY

1. The control of the sounding launch was entirely on board the sounding vessel using the standard three point fix method of position finding. A few exceptions occur in coves and bights where the method outlined in Paragraph 3352 of the Hydrographic Manual was used. The latter cases have been covered by notes in the position data column of the sounding records.

2. It should be noted that the records of the launch 98 contain a large number of recorded soundings at the ends of lines with the abbreviation "TC" opposite them. (TC means time and course.) These soundings should be saved and plotted, using the established time and spacing on the line to forward plot them; otherwise, there will be a gap between the end of the line and the beach. The launch 98 is a low powered, V-bottom boat which could not safely run lines at full speed all the way into the beach. Therefore, the fix was obtained at a safe distance from the shore, but the vessel continued on course without slackening speed and sheered off from the beach at the last possible moment. The LCVP used this procedure in only a few instances.

J. ADEQUACY OF SURVEY

1. It is believed that both of these sheets are complete. Boat sheet junctions between these sheets and contemporary sheets appear to be satisfactory; depth curves can be completely drawn.

K. CROSSLINES

1. Crosslines obtained on these sheets exceed the minimum 8% specified in the instructions. The crosslines check the normal system of development within the limits specified by the Hydrographic Manual.

L. COMPARISON WITH PRIOR SURVEYS

1. Prior surveys of this type do not exist in the area.

M. COMPARISON WITH CHART

1. There is no existing chart of Franklin D. Roosevelt Lake.

N. DANGERS AND SHOALS

1. Sheet H-7689 LR-10748 is comparatively free of dangers to navigation. Several shoal indications which are well below the lowest expected drawdown of 70 to 80 feet were developed, but no dangers to navigation were uncovered. Navigators should use caution when landing in areas where the above water terrain is rocky since the same type formations may be expected under the surface. The entire east shoreline of this sheet is a slide area. Bluffs of 100 feet or more overhang this shoreline at the north half of the sheet. Small boats should avoid navigating adjacent to and beneath these bluffs since a slide of any proportion would capsize them.

2. There is only one major danger to navigation on sheet H 7690 LR-10848. The dangers found on the sheet are listed below:

(a) Sand and gravel bar, Lat. 48° 15.5', Long. 118° 08.2'; ~~least depth ½ foot.~~ awash at lake level datum This danger is extensive and is a major danger to navigation. The main channel lies to the west of it although small boats with local knowledge may safely pass to the east of it.

(b) Shoal area adjacent to the east shoreline, Lat. 48° 14.8' 15', Long. 118° 09.05'; least depth ½ foot; bottom sand and gravel.

(c) Sand hump, Lat. 48° 13.85, Long. 118° 09.4' 36; least depth 2 3 feet.

(d) Gravel bar, Lat. 48° 09.75' 3, Long. 118° 11.20; least depth, 11 feet.

O. COAST PILOT INFORMATION

1. For a complete discussion of Coast Pilot information refer to

"Coast Pilot Report, Franklin D. Roosevelt Lake, Project Ph-2(45)", previously submitted to the Washington Office. Filed in C.P. Sect.

2. No serious dangers to navigation exist on sheet H-7689 LR-10748, and mid-channel courses are recommended. The same conditions hold true for sheet H-7690 LR-10848 except that caution must be employed to avoid the extensive gravel bar at Lat. 48° 15.5', Long. 118° 08.2'.

3. The numerous large coves on these two sheets offer the best protected anchorages. The best of these cove anchorages are listed below:

(a) Sheet H-7689 LR-10748: Cove, Lat. 48° 03.9', Long. 118° 15.2'; depths, 60 to 80 feet; bottom, mud.

(b) Sheet LR-10748: Cove, Lat. 48° 04.9', Long. 118° 13.5'; depths, 40 to 70 feet; bottom, mud.

(c) Sheet LR-10748: Cove, Lat. 48° 06.7', Long. 118° 14.0'; depths, 20 to 55 feet; bottom, mud.

(d) Sheet LR-10748: Bight, Lat. 48° 05.95', Long. 118° 15.4'; depths, 50 to 70 feet; bottom, sand.

(e) Sheet LR-10748: Cove, Lat. 48° 08.4', Long. 118° 13.5'; depths, 35 to 70 feet; bottom, mud.

(f) Sheet H-7690 LR-10848: Cove, Lat. 48° 10.2', Long. 118° 11.2'; depths, 35 to 60 feet; bottom, mud.

(g) Sheet LR-10848: Cove, Lat. 48° 11.6', Long. 118° 11.0'; depths, 35 to 60 feet; bottom, mud.

(h) Sheet LR-10848: Cove, Lat. 48° 15.5', Long. 118° 08.9'; depths, 20 to 60 feet; bottom, mud.

The several flats adjacent to the shoreline on these sheets have good holding ground and will be a safe anchorage provided the proper ground tackle is available.

P. AIDS TO NAVIGATION

1. Aids to navigation are listed on Form 567 which is attached to this report. These are the same objects submitted by field units of project Ph-2(45), and they are at the same locations with the exception of West Bissell Flats Day Beacon 35 which location was moved slightly by the topographic units, Project CS-332.

Q. LANDMARKS FOR CHARTS

1. Data relative to landmarks for charts are shown on Form 567 which was submitted with Project Ph-2(45). A copy of the form is attached to this report.

H 7689
LR 10748

Processing Office Notes.

Smooth sheet.

The projection and grid were ruled on the machine in Washington. Triangulation signals are from the data for compiling photo-topo sheets T 8861 and T 8862 of Project Ph-2(45). Red topographic signals are from T ~~10296~~, green signals are from T 8861 and T 8862, unless changed in the field on T 10296. Shoreline is from T 8861 and T 8862.

Fathometer speed.

All fathograms have been tested for fathometer speed at random intervals on each days work and found satisfactory. The templates used were graduated at rates of speed suitable to the calibration of the fathometer in operation.

Other pertinent subjects have been covered by the report of the field party.

Edgar E. Smith
Cart. Engr.

2/6/50

R. GEOGRAPHIC NAMES 814

1. For a complete treatment of Geographic Names, refer to "Special Report, Geographic Names, sheets 8849 to 8859, Project Ph-2(45)" previously submitted to the Washington Office. No additional information was obtained by the topographic and hydrographic units, Project CS-332. Filed in Geo. Name Sect.

S. SILTED AREAS

1. No silted areas were detected from an inspection of the fathograms.

T. BY-PRODUCT INFORMATION

1. In addition to providing a basic hydrographic survey of Franklin D. Roosevelt Lake, this party has attempted to obtain sufficient information by hydrographic methods from which the Bureau of Reclamation can delineate 10 foot bottom contours. Therefore, the survey is somewhat more detailed than would ordinarily be the case.

U. MISCELLANEOUS

1. This report is compiled from notes submitted by Lt. Comdr. G. W. Moore and Mr. Hal A. Marchant.

V. REFERENCES

1. The following listed reports will be of help and interest in connection with this survey:

Descriptive Report to Accompany Hydrographic Survey Nos. H-7681 and H-7682, Field Nos. LR-10147 and LR-10247.
Coast Pilot Report, Franklin D. Roosevelt Lake, Project Ph-2(45). Filed in C.P. Sect
Special Report, Investigation of Geographic Names, Sheets 8849 to 8859, Project Ph-2(45). Filed in Geo Name Sect.
Special Report on Reservoir Boundary Control Points, Project Ph-2(45). G-7380
Field Inspection Report, Area of the Third Radial Plot, Project Ph-2(45).
Water Surface Elevations (Tides), Season 1948, Project CS-332.
Water Surface Elevations (Tides), Season 1949, Project CS-332. Filed in Div. of Tides
Cahier "Copies of Correspondence and Related Information Applicable to Project CS-332, Lake Roosevelt". Filed with H-7681
Cahier "Bar Check Residual Study". Filed with H-7681
Report of Preliminary Investigation of Lake Roosevelt by John C. Ellerbe dated 27 September 1945. Filed with H-7681

W. TABULATION OF APPLICABLE DATA

1. The following data is being submitted with sheet H-7689 LR-10748:

Sounding volumes (Form 275)	8 vol.
Fathograms	5 rolls
Boat sheet (LR-10748)	1 ea.

H 7690
LR 10848

Lake Roosevelt, Washington.

Processing Office Notes.

Smooth sheet.

The projection and rectangular grid, for Washington Stete North, were ruled on the machine at Washington D.C. Planetable signals are from graphic control sheets T 10297* and T 10301. Shoreline is from T 8862 and T 8863. Green signals are from the same sheets unless changed by the field party on the graphic control sheets. Triangulation points determined by USBR are found in the control data for T 8862 and T 8863 of Proj. Ph-2(45).

* subsequently destroyed

Fathometer speed.

All fathograms have been checked for fathometer speed at random intervals on each days profile. The template used was spaced at intervals suitable to the calibration of that fathometer.

Plotting has been done under the supervision of the C O P. Other pertinent subjects have been covered in the report of the field party.

Edgar E. Smith
Cart. Engr.
Seattle Proc Off. 2/7/50

Control sheet (LR-G-48)	1 ea.
Descriptive Report (Combined for 2 sheets)	

H-7690

2. The following data is being submitted for sheet LR-10848:

Sounding volumes (Form 275)	6 vol.
Fathograms	4 rolls
Boat sheet (LR-10848)	1 ea.
Control Sheet (LR-H-48)	1 ea.
Descriptive Report (Combined for two sheets)	

3. The following data is applicable to all sheets covered by this report:

Velocity corrections, 4 June 1948 to 13 August 1948 (Filed with H-7681)	1 cahier
Velocity corrections, 1949 Season (Filed with H-7681)	1 "
Water Surface Elevations, 1948 Season (Filed with H-7681)	1 "
Water Surface Elevations, 1949 Season (Filed with H-7681)	1 "
Bar Check Residuals (Filed with H-7681)	1 "
Tide data and marigrams for all gages (Filed in Div. of Tides)	
Level records for all gages (Filed in Div. of Tides)	
Recovery notes, triangulation (Filed in Div. of Tides)	
Bench mark descriptions and recovery notes (Filed in Div. of Tides)	

4. The following work has been accomplished on the records and data of these sheets:

All fathograms have been checked and scaled.
Velocity corrections have been entered and checked.
Tide reducers have been entered and checked.
Fathogram index corrections have been entered and checked.
Soundings have been partially reduced but not checked in volumes 1 through 4, sheet LR-10748.

H-7689

5. There remains to be accomplished the following work on the records and data of these sheets:

H-7689
Sheet LR-10748: Complete the reduction of soundings, volume 1 through 4, and check.
Reduce and check sounding, volume 5 through 8.
H-7690 Plot smooth sheet.
Sheet LR-10848: Reduce and check soundings, all records.
Plot smooth sheet.

Respectfully submitted.

J. T. Jarman

J. T. Jarman, Chief of Party.

Encl.

Statistics
Hydrographic Title Sheets
List of Hydrographic Signals
Landmarks for Charts
Index Sheets
Abstract of Velocity Corrections
Abstract of Tide Reducers
Approval Sheet

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

POST-OFFICE ADDRESS: Box 337, Coulee Dam, Wash.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

Sept. 13, 1949

To: The Director
U.S. Coast and Geodetic Survey
Washington, D.C.

Subject: Approval of Hydrographic Sheets LR-10748 (H-7689) and LR-10848 (H-7690).

The records and data of hydrographic surveys LR-10748 and LR-10848 have been inspected and are approved.

J.T. Jarman
Chief of Party

Form 567
Rev. March 1935

DEPARTMENT OF COMMERCE
U. S. COAST A GEODETIC SURVEY

LANDMARKS FOR CHARTS

TO BE CHARTED } STRIKE OUT ONE
~~TO BE DELETED~~ }

Coulee Dam, Wash. Sept., Oct. 1947, 193

I recommend that the following objects which have (~~known~~) been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing. J.E. Deal

J.T. Jarman
Chief of Party.

GENERAL LOCALITY State of Washington
Franklin D. Roosevelt Lake

NAME AND DESCRIPTION	POSITION				DATUM	METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	LATITUDE		LONGITUDE								
	° ′	D. M. METERS	° ′	D. P. METERS							
T-8861 (H-7689) BARN, southwest gable	48 05	(519.7) 1333.5	118 13	(1092.8) 148.8	NA 1927	Radial Plot	1947		x		Area not Charted
T-8861 (H-7689) USBR) SPIRE, church (M.E. church spire	48 04	(1435.8) 417.4	118 16	(692.6) 549.5	"	Triangulation	1935		x		
T-8862 (H-7690) BARN, west gable	48 11	(126.2) 1727.0	118 10	(222.1) 1016.9	"	Radial Plot	1947		x		"
(H-7690) (T-8862) HOUSE, west peak	48 15	(1264.5) 588.8	118 07	(179.7) 1057.9	"	"	1947		x		"

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

U. S. GOVERNMENT PRINTING OFFICE 60675

Form 567
April 1945

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS ~~OR LANDMARKS FOR CHARTS~~

TO BE CHARTED
~~TO BE DELETED~~ } STRIKE OUT ONE

Coulee Dam, Wash. Sept. 13, 1949

I recommend that the following objects which have ~~(have not)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(deleted from)~~ the charts indicated.

The positions given have been checked after listing by J.E. Deal & Henry Aanenson

J.T. Jarman
Chief of Party.

STATE			POSITION					METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
			LATITUDE		LONGITUDE								
CHARTING NAME	DESCRIPTION	SIGNAL NAME	° ′	D.M. METERS	° ′	D.P. METERS	DATUM						
LIGHT	T-8861 Falls Creek 31 Lt. H-7689	RIG	48 07	(1690.3) 163.0	118 15	(721.2) 520.5	NA 1927	Field Comp.	1947		x		Area not Charted
LIGHT	T-8862 Harvey creek 32 Lt. H-7689	HAR	48 09	(1769.4) 83.8	118 11	(1010.4) 230.2	"	Transit angles	"		x		"
LIGHT	T-8862 Severn Springs 33 Lt. H-7690	JAY	48 12	(1020.7) 832.5	118 11	(118.6) 1120.2	"	Radial Plot	"		x		"
LIGHT	Bissell Flats 34 Lt. H-7690	BIS	48 14	(895.5) 957.7	118 08	(402.4) 835.6	"	"	"		x		"
DAY BEACON	West Bissell Flats Day Beacon 35 H-7690	DAY	48 16	(1498.2) 355.0	118 08	(430.6) 806.8	"	Plane-table	1948		x		"

This form shall be prepared in accordance with Hydrographic Manual pages 800 to 804. Positions of charted landmarks and *nonfloating*

Data applicable to Sheet LR-10748(H-7689)

Tide Reducers- 1948 Season
Sheet LR-10748 (H-7689)

7-186
(July 1935)

Date	Feet	Fms.
July 22	0.0	0.0
23	0.0	0.0
26	0.0	0.0
27	0.0	0.0
28	0.0	0.0
29	0.0	0.0
30	0.0	0.0
Aug. 2	∠ 0.2	0.0
3	∠ 0.2	0.0
5	0.0	0.0
11	∠ 0.2	0.0

Refer to Miles Tide Gage: July 22 to July 24 at 10:00 AM
" " Kettle Falls " : July 24 at 10:00 AM to Aug. 4
" " Miles Tide Gage: Aug. 4 to Aug. 11.

The USBR gage at Grand Coulee Dam is the reference station for all of the above gages.

Sheet LR-10748

BAR CHECK RESIDUAL

(To be applied to algebraically to scanned Index Correction)

7-186
(July 1935)

Date	Bar Check Residual Feet	Fms.	Fath.	Launch	Remarks
July			808-		
22	-0.7	0.0	122	98	
23	-0.5	~~-0.3~~ -0.2	122	98	
26	-0.5	0.0	122	98	
27	-0.5	0.1	122	98	
28	-0.4	0.0	122	98	
29	-0.5	0.0	122	98	
30	-0.6	~~0.1~~ 0.0	122	98	
Aug.					
2	-0.2	0.0	122	98	
3	-0.3	0.0	122	98	
5	-0.5	~~0.1~~ 0.0	122	98	
11	-0.1	~~0.1~~ 0.0	115	LCVP	

Season 1949, Tide Reducers

Sheet LR 10748

Refer to Coulee Dam Gage

				Fms.
June 4	+ 0.2			
June 5	0.0	All day	0.0 fms.	all day
June 6	≠ 0.2'	" "	≠ 0.0 "	" "

Data applicable to sheet LR-10848 (H-7690)

Tide Reducers- 1948 Season
Sheet LR-10848, (H-7690)

7-186
(July 1935)

Date	Feet	Fms.
July 30	0.0	0.0
Aug 2	∕ 0.2	0.0
3	∕ 0.2	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
9	0.0	0.0
10	0.0	0.0
13	0.0	0.0
Nov. 4	∕ 1.6	∕ 0.3

Refer to Kettle Falls Tide Gage: July 30 to Aug. 3

" " Miles Tide Gage : Aug. 3 to Aug. 13

" " Kettle Falls Tide Gage: November 4.

The USBR gage at Grand Coulee Dam is the reference station for all of the above gages.

Season 1949, Tide Reducers

Sheet LH 10848

Refer to Coulee Dam, Wash. Gage.

	Feet		Fms.
June 3	+ 0.4'	All day	+ 0.1 fm. all day
June 4	+ 0.4'	" "	+ 0.1 " " "

Sheet LR-10848 (H-7690)

BAR CHECK RESIDUALS

(To be applied algebraically to the scanned Index Corrections)

7-186
(July 1935)

Date	Bar Check Residuals Feet	Fms.	Fath.	Launch	Remarks
July 30	-0.2	-0.5	808-115	LCVP	
Aug. 2	-0.1	0.0	115	LCVP	
3	-0.3	-0.2	115	LCVP	
4	-0.1	-0.2	115	LCVP	
5	-0.2	-0.1	115	LCVP	
6	0.0	0.0	115	LCVP	
9	-0.2	-0.1	115	LCVP	
10	-0.2	-0.2	115	LCVP	
13	-0.2	-0.2	115	LCVP	
Nov. 4	-1.3	-0.1	NK-7 86	LCVP	

FEB 15 1950

FORM 537a (9-24-47) DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY

REGISTER NO. ~~T-10297~~ Destroyed.

TOPOGRAPHIC TITLE SHEET

FIELD NO. LR-H-48

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE: Washington

GENERAL LOCALITY: Lake Roosevelt

LOCALITY: Harvey Creek Light to Bissell Flats

SCALE: 1: 10,000

DATE OF SURVEY: July, 1948

VESSEL: Field Party

CHIEF OF PARTY: J.T. Jarman

SURVEYED BY: P.A. Rabideau

INKED BY: P.A. Rabideau

HEIGHTS IN FEET ABOVE ~~MHW OR MLW~~ 1288.575 ft. ~~M.S.L.~~ ☐ TO GROUND ☐ TO TOPS OF TREES

CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL _____ FEET

PROJECT NUMBER: CS-332

REMARKS

The normal lake level is 1290 feet, USBR Independent Datum, or 1288.575 feet above mean sea level. Heights of rocks and islands are referred to the normal lake level, i.e., the height of the feature above the normal lake level is given.

Hydro. Signals shown on LR-H-48 were applied to H-7690 after which LR-H-48 was destroyed.

The magnetic declination at

△ CP-165 on July 29, 1948, at 0930, was 21°50'E (scaled)

△ CP-114 on July 29, 1948, at 1400, was 21°50°E (scaled)

12136

DESCRIPTIVE REPORT
To Accompany
Topographic Control Survey T-10296, Field No. LR-G-48 } applied to H.7689-90
Topographic Control Survey T-10297, Field No. LR-H-48 } and then destroyed

These surveys are a by-product of Projects Ph-2(45) and CS-332. Project Ph-2(45) furnished shoreline and photo-hydro locations for the hydrographic survey of Franklin D. Roosevelt Lake, Project CS-332 is the hydrographic survey of the lake. The graphic control sheets were used to locate additional hydrographic stations by planetable methods, as well as to verify, in several instances, the compilation of the shoreline, and the location of some of the photo-hydro stations.

INSTRUCTIONS

1. These surveys are not covered by specific instructions. In general, Instructions for Project CS-332 cover the surveys. The latter instructions suggest that additional hydrographic stations be located by sextant cuts plotted on the boat sheets. Due to the large number of additional stations necessary plus the desirability of having some check on the photo-hydro locations, the suggestion was not practical, and separate graphic control sheets were adopted.

SURVEY LIMITS AND DATES

1. These surveys are on the main body of Lake Roosevelt extending from Gerome Light to Bissell Flats; they were executed in July 1948.

T-10296, (LR-G-48) extends from Gerome Light to Harvey Creek Light; work began on July 15, 1948, and the sheet was completed on July 22, 1948.

T-10297, (LR-H-48) extends from Harvey Creek Light to Bissell Flats; work began on July 23, 1948 and the sheet was completed on July 30, 1948.

2. After the completion of the foregoing sheets, the topographic unit moved to Northport, Washington, to work in the fast water area.

CONTROL

1. Horizontal control for these surveys is second and third order triangulation executed by the Bureau of Reclamation from 1934 to 1940. For a complete treatment of the main source of the horizontal control, refer to the "Special Report on Reservoir Boundary Control Points, Project Ph-2(45)", previously submitted to the Washington Office. 9-7380

2. The USBR third order triangulation within this area is listed in plane coordinates based on the Washington North State Grid system. Therefore, these survey sheets contain the latter grid system as well as the geographic system.

METHODS

1. Standard planetable mthods were used throughout the survey. In a few instances, the planetable method was supplemented by theodolite

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7698 (1948-49) on the north and with H-7689 (1948-49) on the south.

5. Comparison with Prior Surveys

No prior surveys of the area have been made by this Bureau.

6. Comparison with Charts

There are no charts of the area by this Bureau.

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive.

b. The field plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This is an excellent basic survey and no additional field work is recommended.

Examined and approved:

H. R. Edmonston
Chief, Nautical Chart Branch

R. W. Knox
Chief, Division of Charts

L. S. Hubbard
Chief, Section of Hydrography

W. M. Scaife
Chief, Division of Coastal Surveys

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. H-7690

FIELD NO. LR-10848

Washington, Franklin D. Roosevelt Lake, Harvey Creek Light to Bissell Flats
Surveyed in July 1948-June 1949 Scale 1:10,000
Project No. CS-332

Soundings:

808 Fathometer
NK-7 Fathometer

Control:

Sextant fixes on shore signals

Chief of Party - J. T. Jarman
Surveyed by - H. A. Marchant
Protracted by - C. W. Fanders
Soundings plotted by - C. W. Fanders
Verified and inked by - W. Klein
Reviewed by - I. M. Zeskind, 27 July 1950
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline of this survey originates with air-photographic surveys T-8862 and T-8863 of 1946-47.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

This is a portion of the Franklin D. Roosevelt Lake formed by the impoundment of the Columbia River upstream from the Grand Coulee Dam. The bottom is fairly irregular. In general it slopes abruptly from the shore to depths of 30 to 120 ft. and less abruptly offshore to a natural channel where depths along the axis range from 169 to 230 ft. A number of shoals and channel deeps contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-7690 (1948-49) on the north. The junction with H-7688 (1948-49) on the south will be discussed in the Review of that survey.

5. Comparison with Prior Surveys

No prior surveys of the area have been made by this Bureau.

6. Comparison with Charts

There are no charts of the area by this Bureau.

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive.

b. The field plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This is an excellent basic survey and no additional field work is recommended.

Examined and approved:

H. R. Edmonston
Chief, Nautical Chart Branch

R. W. Knox
Chief, Division of Charts

L. S. Hubbard
Chief, Section of Hydrography

W. M. Scaife
Chief, Division of Coastal Surveys

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. H-7689

FIELD NO. LR-10748

Washington, Franklin D. Roosevelt Lake, Hunters Landing and Vicinity
Surveyed in July - August 1948 & June 1949 Scale 1:10,000
Project No. CS-332

Soundings:

808 Fathometer
NK-7 Fathometer

Control:

Sextant fixes on shore signals

Chief of Party - J. T. Jarman
Surveyed by - G. W. Moore and H. A. Marchant
Protracted by - G. W. Bergford
Soundings plotted by - G. W. Bergford
Verified and inked by - W. Klein
Reviewed by - I. M. Zeskind, 19 July 1950
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline of this survey originates with air-photographic survey T-8861 and T-8862 of 1946-47. The shoreline revision in red is from graphic control survey LR-G-48 (field number) which was subsequently destroyed.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

This is a portion of the Franklin D. Roosevelt Lake formed by the impoundment of the Columbia River upstream from the Grand Coulee Dam. The bottom is fairly irregular and in general slopes sharply from the shore to depths of 35 to 185 ft.

Depths along the channel axis range from 150 to 234 ft.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7689

Records accompanying survey:

Boat sheets 1; sounding vols. 8; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 2 envel.;

special reports, etc. .....

.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		1740.
Number of positions checked		340 (Necessary for identification of positions.)
Number of positions revised		2
Number of soundings revised (refers to depth only)		315
Number of soundings erroneously spaced		39
Number of signals erroneously plotted or transferred		0
Topographic details	Time	45 hrs
Junctions	Time	2
Verification of soundings from graphic record	Time	19

Verification by William Klein Total time 350 hrs Date July 13, 1950

Reviewed by [signature] Time 20 Date July 19, 1950

M-2232-1

cuts which were protracted.

2. Elevations of rocks and islands are referred to the "1290 Foot Datum Plane" which is based on the 1937 USBR Independent Datum of Leveling. The "1290 Foot Plane" is the normal lake level being the maximum height to which the water rises in the lake. This plane is the equivalent to 1288.575 feet above mean sea level. For additional treatment of this subject, refer to Descriptive Report to accompany Hydrographic Sheets H-7681 and H-7682, side heading "D".

3. Recovery notes are being submitted for all triangulation stations visited during the course of the survey. In some instances, USBR Second Order triangulation stations were used for orientation purposes, but the stations were not visited. The original tripod placed by the USBR when the triangulation was executed was still standing, and was used for the sighting point.

4. Locations of photo-hydro stations which were accepted from the shoreline survey sheets, have been shown on the graphic control sheets with green circles. Locations of additional stations, plus the locations of those photo-hydro stations found to be in error, have been shown with red circles. Most of the photo-hydro stations accepted were checked with the planetable.

5. These control sheets contain the final accepted location for all hydrographic control, and where discrepancies exist, if any, the control sheet location should be accepted.

SHORELINE AND TOPOGRAPHY

1. The shoreline shown in pencil on these sheets came from shoreline survey sheets T-8861 through T-8863. of 1947-48 The following checks, or shoreline changes were ascertained by planetable methods:

(a) Change in cove shoreline, Lat. 48° 09.0', Long. 118° 14.1'; corrected shoreline shown in red ink; believed to be caused by slide.

(b) Change in cove shoreline at Lat. 48° 08.5', Long. 118° 15.15'; corrected shoreline shown in red ink; believed to be a compilers error.

(c) Change in shoreline of cove, Lat. 48° 04.25', Long. 118° 15.1'; corrected shoreline shown in red ink; believed to be a compilers error.

These shoreline changes were made on H-7689 (1948)

2. All of the foregoing changes appear on ~~T-10296~~ (LR-H-48); no changes were detected on ~~T-10297~~ (LR-G-48).

COAST PILOT INFORMATION

1. For a complete discussion of Coast Pilot information, refer to "Coast Pilot Information, Franklin D. Roosevelt Lake, Project Ph-2(45)", previously submitted to the Washington Office. Also refer to Descriptive Report to accompany hydrographic sheets H-7689 and H-7690. of 1948-49

Fixed in C.P. Sect.

GEOGRAPHIC NAMES

Survey No. H-7689

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	
Washington									USGB	1
Stevens County										2
Ferry County										3
Colville Indian Reservation										4
Franklin D. Roosevelt Lake									USGB	5
										6
Gerome Light										7
Alder Creek										8
Manahan Creek										9
Hunter Creek										10
Hunters Landing										11
Fall Creek										12
Nez Perce Creek										13
Harvey Creek										14
Hunters						Names underlined in red are approved 3-9-50 L Heck				15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

AIDS TO NAVIGATION

1. Aids to Navigation are listed on Form 567 which is attached to this report. These are the same objects submitted by field units of Project Ph-2(45), and they are at the same locations with the exception of West Bissell Flats Day Beacon 35 which location was moved slightly by the topographic unit, Project CS-332.

LANDMARKS FOR CHARTS

1. Data relative to landmarks for charts are shown on Form 567, a copy of which is attached. These are the same objects submitted by personnel of Project Ph-2(45), and are at the same locations.

GEOGRAPHIC NAMES

1. For a complete treatment of Geographic Names, refer to "Special Report, Geographic Names, Sheets 8849 to 8859, Project Ph-2(45)" previously submitted to the Washington Office. Filed in Geo. Name Sect.

2. No additional information was obtained by the topographic and hydrographic units, Project CS-332.

3. It is known that the National Park Service is contacting the Bureau of Reclamation, the Indian Service and various residents along the lake shore in an endeavor to provide suitable names for the large number of unnamed features on the lake. This information is not yet available.

Respectfully submitted,

J. T. Jarman

J. T. Jarman
Chief of Party

FEB 15 1950

FORM 537a (9-24-47) DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY

REGISTER NO. ~~T-10296~~ Destroyed

TOPOGRAPHIC TITLE SHEET

FIELD NO. LR-G-48

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE: Washington

GENERAL LOCALITY: Lake Roosevelt

LOCALITY: Gerome Light to Harvey Creek Light

SCALE: 1: 10,000

DATE OF SURVEY: July, 1948

VESSEL: Field Party

CHIEF OF PARTY: J.T. Jarman

SURVEYED BY: P.A. Rahideau

INKED BY: ~~xHxx~~ Federico Ridad

HEIGHTS IN FEET ABOVE ~~xxxxx~~ 1288.575 ft. M.S.L. ☐ TO GROUND ☐ TO TOPS OF TREES

CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL _____ FEET

PROJECT NUMBER: CS-332

REMARKS

The normal lake level is 1290 feet, USBR Independent Datum, or 1288.575 feet above mean sea level. Heights of rocks and islands are referred to the normal lake level, i.e., the heights of the features above normal lake level are given.

Hydro. signals and shoreline changes shown on LR-G-48 were applied to H-7689 after which LR-G-48 was destroyed.

The magnetic declination at ACP-137, 1935 (USBR) at 0930 Jun 6, 1949, was 24° 09' E (scaled).

12136

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

Division of Charts:

Plane of reference approved in
volumes of sounding records for

HYDROGRAPHIC SHEET LR-10848 (H-7690)

Locality State of Washington
Lake Roosevelt
Harvey Creek Light to Bissell Flats

Chief of Party: J.T. Jarman
Plane of reference is 1288.575 feet above mean sea level
3.362 ft. on tide staff at Miles Tide gage (staff No. 1)
138.248 ft. below B. M. OB-37 (USBR)

Plane of Reference -Same
3.204 ft. on tide staff at Kettle Falls
81.714 ft. below B.M. A-281

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 788675

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

Division of Charts:

Plane of reference approved in
volumes of sounding records for

HYDROGRAPHIC SHEET LR-10748 (H-7689)

Locality State of Washington
Lake Roosevelt
Gerome Light to Harvey Creek Light

Chief of Party: J.T. Jarman
Plane of reference is 1288.575 ft. above mean sea level
3.362 ft. on tide staff at Miles Tide gage (staff No. 1)
138.248 ft. below B. M. OB-37 (USBR)

Plane of Reference- Same
3.204 ft. on tide staff at Kettle Falls
81.714 ft. below B.M. A-281

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 756675

H 7689
LR 10748

Lake Roosevelt, Wash.

List of geographic names
penciled on smooth sheet.

Washington

Franklin D. Roosevelt Lake.

Stevens County

Ferry County

Colville Indian Reservation

Nez Perce Creek

Hunters Landing

See also Special Report on Geographic Names, Sheets 8849 to 8859, Ph-2(45) by J.T.Jarman. The Processing Office does not have a copy of that report.

STATISTICS
Sheet LR-10748 (H-7689)

Vol. No.	Day Letter	Date	HL Smd.	Positions	Statute Miles
		Launch 98 (1948 Season)			
1	a (red)	July 22	0	172	42.8
1 & 2	b "	23	0	144	46.2
2	c "	26	0	166	34.4
3	d "	27	0	124	29.6
3 & 4	e "	28	0	151	39.1
4	f "	29	0	142	34.0
4 & 5	g "	30	0	168	30.1
5	h "	Aug. 2	0	121	17.3
6	j "	3	0	149	22.5
6	k "	5	1	154	22.5
		Launch LCVP (1948 Season)			
7	a (blue)	Aug. 11	6	42	1.8
		Launch LCVP (1949 Season)			
8	b (blue)	June 5	0	127	13.0
8	c "	6	0	80	8.1
		Totals	7	1740	341.4

Area Square statute miles-- 8.5

H 7690
LR 10848

Statistics

1948	Boat	Day	Pos.	Stat. Miles. Sound. Line.	Vol.
Jul.30	LCVP	a	160	46.5	1
Aug. 2		b	125	31.7	1
3		c	141	30.4	2
4		d	125	27.6	2
5		e	144	25.1	3
6		f	144	20.6	3
9		g	75	6.9	4
10		h	112	9.3	4
13		d	41	2.8	4
Oct. 4 1949		k	31	2.5	5
Jun 3		l	26	5.7	6
4		m	2	---	6
Totals			~~982~~ 1126	~~138.5~~ 209.1	

Area Squ.Stat.Mi. 4.9

H 7690
LR 10848

Lake Roosevelt, Washington.

List of geographic names
penciled on smooth sheet.

Washington

Ferry County

Stevens County

Franklin D. Roosevelt Lake

Colville Indian Reservation

Harvey Creek

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7689

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9-13-51	6168	GAE	~~Before~~ After Verification and Review
8/14/52	6169	JAMcGann	Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

GEOGRAPHIC NAMES

Survey No. H-7690

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H		
Washington									USGB	1
Stevens County										2
Ferry County										3
Colville Indian Reservation										4
Franklin D. Roosevelt Lake									USGB	5
										6
Harvey Creek										7
Bissell Flats										8
Stray Dog Canyon										9
					Names underlined in red are approved. 3-9-50 L. H.					10
										11
										12
										13
										14
										15
										16
										17
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										23
										24
										25
										26
										27
										M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7690

Records accompanying survey:

Boat sheets 1; sounding vols. 6; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 2 envel.

special reports, etc. .....

.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		126.
Number of positions checked		359 (necessary for identification of positions)
Number of positions revised		90. (80 Pos. revised because of revisions of signals)
Number of soundings revised (refers to depth only)		250.
Number of soundings erroneously spaced		613.
Number of signals erroneously plotted or transferred		4.
Topographic details	Time	15 hrs
Junctions	Time	8.
Verification of soundings from graphic record	Time	24.

Verification by William K. Klein ...Total time 226.. Date July 14, 1950

Reviewed by ..... Time ..... Date 1950

M-2232-1

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7690

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/14/52	6169	F.P. McGann	~~Before~~ After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 13 March 1950

Division of Charts: R. H. Carstens

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 7689

Locality Monagham, Lake Roosevelt, Washington

Chief of Party: J. T. Jarman in 1948-49
Plane of reference is
~~1290 feet (USBR 1937 Datum of Leveling)~~
or 1288.6 feet (Sea-level datum of 1929)

3.4 ft. on tide staff No. 1 at Miles
138.0 ft. below B. M. OB 37

-1.4 ft. on tide staff at Coulee Dam
166.2 ft. above B. M. OSBORNE 2

Condition of records satisfactory except as noted below:

E.C. McKay
Section
Chief, ~~Division~~ of Tides ~~and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 756075

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 13 March 1950

Division of Charts: R. H. Carstens

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 7690

Locality Severn Springs, Lake Roosevelt, Washington

Chief of Party: J. T. Jarman in 1948-49
Plane of reference is
~~mean tide stream~~ 1290 feet (USBR 1937 Datum of Leveling)
~~mean tide at~~ or 1288.6 feet (Sea-level datum of 1929)

3.4 ft. on tide staff No. 1 at Miles
138.0 ft. below B. M. OB 37

3.2 ft. on tide staff at Kettle Falls
81.7 ft. below B. M. A 281

-1.4 ft. on tide staff at Coulee Dam
166.2 ft. above B. M. OSBORNE 2

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division~~ of Tides ~~and Currents.~~

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