

10847

Diag. Cht. No. 6157.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. Ph-5807 Office No. T-10847

LOCALITY

State Oregon and Washington

General locality Columbia River

Locality Chatfield, Oregon

1958-59

CHIEF OF PARTY

L.G.Taylor, Chief of Party
K.W.Jeffers, Portland Photo. Office

LIBRARY & ARCHIVES

DATE May 1962

USCOMM-DC 5087

10847

DESCRIPTIVE REPORT - DATA RECORD

T - 10847

Project No. (II): Ph-5807

Quadrangle Name (IV):

Field Office (II): Hood River, Oregon

Chief of Party: Lorne G. Taylor

Unit Chief: K. W. Jeffers

Photogrammetric Office (III): Portland, Oregon

Officer-in-Charge: Lorne G. Taylor

Instructions dated (II) (III): Undated
Field and Office

Copy filed in Division of
Photogrammetry (IV)

Modification: Letter 73/rrj dated 9 March 1959
Letter 83/es dated 12 March 1959
Letter 732/rrj dated 21 May 1959

Method of Compilation (III): Kelsh Stereoscopic Instrument

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1:6000

Scale Factor (III): None

Viewing Scale
Pantograph Scale
1:10,000

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

10 Aug 1961

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Refer to datum pro-
Vertical Datum (III): file on manuscript

Mean sea level except as follows:
Elevations shown as (25) refer to ~~mean high water~~
Elevations shown as (5) refer to ~~sounding datum~~
i.e., ~~mean low water or mean lower low water~~

From 72.0 ft. above M.S.L. at Bonneville Dam forebay and upstream at the gradient of Bonneville Pool as of the date of photography, 30 Aug. 1958.

Reference Station (III): MEMA, 1957

Lat.: 45° 41' 39.724"

Long.: 121° 20' 58.401"

Adjusted X
Unadjusted

Plane Coordinates (IV):

State: Oregon

Zone: North

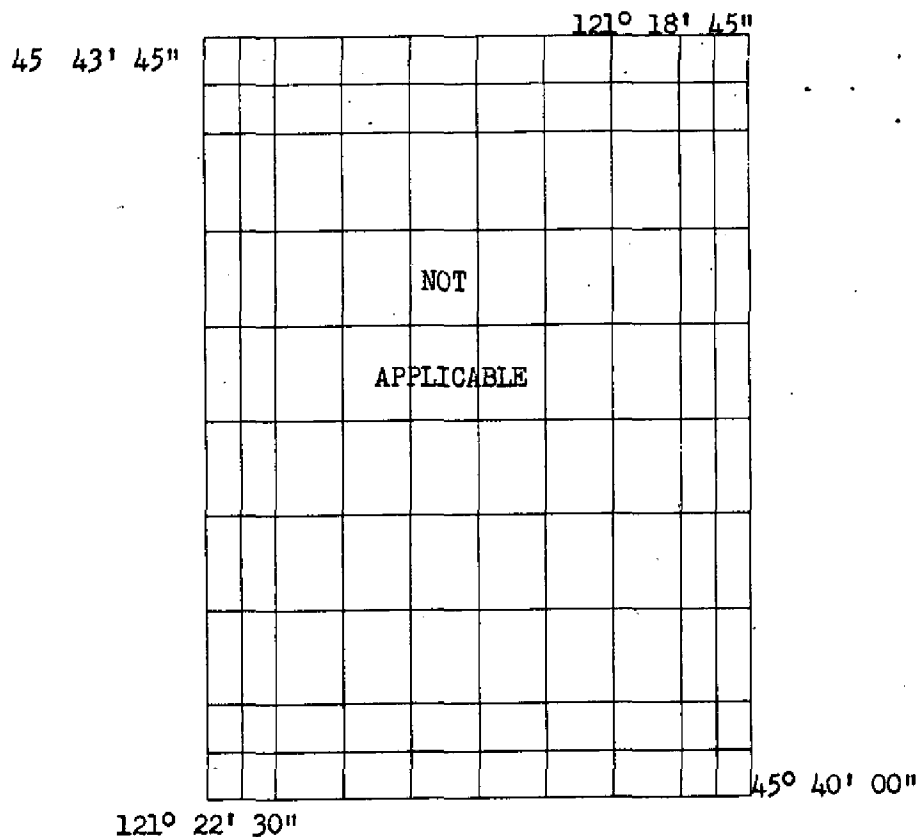
Y= 740,389.97

X= 1,782,915.90

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

DESCRIPTIVE REPORT - DATA RECORD



Areas contoured by various personnel
(Show name within area)
(II) (III)

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): Charles H. Bishop
K. W. Jeffers

Date: March & May
1959

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Shoreline

~~Mean-High-Water~~ Location (III) (State date and method of location): Located by field inspection on 3-10-59 on single lens ratio prints taken 28 August 1958 and delineated by Kelsh Stereoscopic Instrument from models of the same photography. The shoreline is the gradient of the Bonneville Dam Pool from 72.0 ft. normal pool level at the forebay and proceeding upstream at the pool gradient of 28 Aug. 1958, the date of C&GS photography.

Projection and Grids ruled by (IV): P. J. Dempsey

Date: 12-22-58

Projection and Grids checked by (IV): Shoup

Date: 12-24-58

Control plotted by (III): L. L. Graves

Date: 3-2-59

Control checked by (III): J. E. Deal

Date: 3-5-59

Radial Plot or Stereoscopic
Control extension by (III):

George Ball

Date: 2-11-59

Stereoscopic Instrument compilation (III):
Planimetry D. N. Williams

Date: 6-9-59

Contours

Date:

Manuscript delineated by (III): C. C. Harris, (Scribing)
C. C. Harris (Stick-up)

Date: 8-7-59
12-24-59

Photogrammetric Office Review by (III): J. E. Deal

Date: 6-11-59
1-25-60

Elevations on Manuscript
checked by (II) (III):

Date:

DESCRIPTIVE REPORT - DATA RECORD

5.

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Camera (kind or source) (III): U.S.C. & G.S. - Single lens 58-S

Number	Date	PHOTOGRAPHS (III)		Scale	Bonneville Dam Pool
		Time			Level - Forebay Stage at Tide
58-S-7823A & 7824A	8-28-58	11:53	1:30000(contact) 1:10,000 (ratio)		73.6 ft. above M.S.I
58-S-7864A & 7865A	8-30-58	10:12	DO		73.5 ft. " "

Tide (III)

Reference Station:

Subordinate Station:

Subordinate Station:

Not Applicable

Ratio of Ranges	Mean Range	Spring Range

Washington Office Review by (IV):

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Date:

Date:

Date:

Date:

Land Area (Sq. Statute Miles) (III): 12

Shoreline (More than 200 meters to opposite shore) (III): 6.0

Shoreline (Less than 200 meters to opposite shore) (III): None

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 13

Recovered: 11

Identified: 3

Number of BMs searched for (II): None

Recovered:

Identified:

Number of Recoverable Photo Stations established (III): 1

Number of Temporary Photo Hydro Stations established (III): None

Remarks:

6

SUMMARY
TO ACCOMPANY SHORELINE MAP MANUSCRIPTS
T-10847 through T-10857

These eleven (11) shoreline surveys are a part of PH-5807. The project covers the Columbia River and adjacent land areas of Oregon and Washington from Bonneville eastward to Umatilla. It was designed to aid in the revision of present nautical charts and in the construction of new charts from the Dalles Dam upstream to the McNary Dam. Subject T-sheets extend from the vicinity of Memaloose Island eastward to Miller Island.

A stereoplanigraph bridging plot of T-10847 through T-10857 was done in the Washington Office in February 1959 (see separate report). They were compiled by stereoscopic instruments (Kelsh Plotter) in the Portland Photogrammetric Office in the latter part of 1959 from photography of August 1958 and field inspection information of March and May 1959.

The completed compilations as submitted to the Washington Office are the result of adequately scribed sheets and suitable for the direct reproduction of registration copies.

A cronar film positive at the compilation scale of 1:10,000 and the Descriptive Report of each will be registered and filed in the Bureau Archives.

July 1961

FIELD INSPECTION REPORT
Project Ph-5807
Sheets 10847, 10848 & 10849

2. Areal Field Inspection:

The area covered by this report includes a portion of the Columbia River Gorge which has steep wooded slopes and precipitous cliffs along both shores of the river. The more gentle slopes along both sides of the river are under cultivation; orchards comprise about 50% of the cultivated regions.

At the east end of the area, woodland cover becomes sparse along the north side of the river and the river valley widens as it emerges from the gorge.

The major transportation routes are U. S. Highway 30 and the Union Pacific Railroad along the south shore and U. S. Highway 830 and the Spokane, Portland and Seattle Railway along the north shore. A single track of the S.P. & S. Railway branches up the Klickitat River from Lyle, Washington.

Photo coverage was adequate although the edges of the project area were in some places off the limits of photography. Where this occurred, there is little or no detail to inspect.

There are no incorporated towns in the area. Three unincorporated communities are: Lyle and Murdock, Washington and Rowena, Oregon.

3. Horizontal Control:

(a) One supplemental control station was established at this time:

Rowena Range Front Light 34 by third order intersection.

(b) No datum adjustments were made in the field.

(c) Stations of other agencies were not recovered. The recovery done in 1958 met the minimum requirements in project instructions for the control of compilation.

(d) Authority was received on 4-30-59 to defer recovery of triangulation stations that are not required for compilation.

(e) The following stations have been reported as destroyed:

Sheet 10847

Memaloose Island Light, 1939

Sheet 10848

Klickitat River Light, 1939

Rowena Front Range Light, 1939

Rowena Rear Range Light, 1939

4. Vertical Control:

Not applicable.

5. Contours and Drainage:

Contours not applicable.

Drainage has been delineated on the photographs wherever it is obscure in interior regions that were accessible by truck, and along the Columbia River where visible from the skiff.

6. Woodland Cover:

Representative areas of woodland cover have been noted on the photographs. Along the north side of the Columbia River, woodland cover becomes sparse at the east limit of the area covered by this report. Orchards have been noted on the photographs.

7. Shoreline and Alongshore Features:

(a) thru (c) Water Levels and Shoreline.

The river level and shoreline depend on the volume of runoff and the rate of flow controlled at Bonneville Dam. The Normal Pool Level at the Hood River gage is 72.8 feet at time of photography.

The photographs were taken on 28 and 30 August 1958 when the Hood River gage read 74.38 and 74.43 feet respectively. The shoreline was inspected on 10 and 11 March 1959 when the Hood River gage read 75 feet. Because of the steep gradient of the shore in most of the area, a two foot change in the pool level causes negligible displacement of the shoreline so the shoreline at the time of photography may be considered the same as that of normal pool level.

Low gradient shoreline features such as mud flats, sand bars, and shoals have been noted on the photographs. Foul areas have been sketched on the photographs.

(d) On both sides of the river are steep canyon walls, typical of the Columbia River Gorge. Alongshore bluffs and cliffs have been noted on the photographs and estimated heights given.

(e) There are no docks, wharves, or piers in the area. There is a small boat float about 0.2 mile up the Klickitat River from the highway bridge. In the inlet just west of Rowena on the Oregon side are two small floats and a graded beach for small boat launching.

(f) There is a submarine cable crossing at Crates Point shown on photograph 58 S 7818A.

(g) In the region of Lyle and Rowena there are pilings and ruins along the shore as noted on photograph 58 S 7820A.

8. Offshore Features:

Estimated heights along with time and date of inspection are noted on the photographs for all offshore rocks. The limits of offshore foul areas have also been sketched on the photographs.

9. Landmarks and Aids;

(a) Five towers were picked as landmarks on photo 58 S 8042A. These towers support two parallel transmission line crossings over the Columbia River just south of Crates Point Light. The easterly one of these five towers is an old landmark indicated on C&GS Chart 6157 as POLE (lighted). The center tower of the northerly cable crossing is a triangulation station.

(b) No interior landmarks were selected. Buildings have been circled and classified on the photos in accordance with Photogrammetric Instructions 54, dated 2 January 1958.

(c) One aeronautical aid exists in the area. The elevation and height of Portland-Spokane Airway Beacon No. 6-B was determined.

(d) There are seven fixed aids to navigation in the area:

Aid and type of structure	Photo	Sheet
Mosier Upper Light 26 (Triang. 1939)	58S7824A	10847
Memaloose Island Light 29 (temporary structure)	58S7822A	10847

Aid and type of structure	Photo	Sheet
Klickitat River Light 32 (Triang. 1957)	Identified No. 1958	
Rowena Range Front Light 34 (permanent structure, triang. 1959)	58S7822A	10848
Rowena Range Rear Light (temporary structure)	58S7822A	10848
Squally Point Light 36 (Triang. 1939)	58S7818A	10849
Crates Point Light 38 (Triang. 1939)	58S7793A	10849

Point A, pricked on photo 58 S 7818A, is on the extension of the Rowena Range and was selected for use in determining the azimuth of the Rowena Range.

(e) There are no floating aids to navigation in the area.

10. Boundaries, Monuments and Lines:

The area falls entirely within Klickitat County on the Washington side and Wasco County on the Oregon side. There are no incorporated towns within the area.

11. Other Control:

Lyle Gage was located as a topographic station in 1959. It is pricked on photograph 58 S 7820A.

12. Other Interior Features:

Project instructions called for a clearance measurement of a cable crossing at Lat. $45^{\circ} 38' 05''$, Long. $121^{\circ} 11' 43''$. This cable crossing is not in the position indicated on C&GS Chart 6157. There are two parallel cable crossings at Lat. $45^{\circ} 38.9'$, Long. $121^{\circ} 11.8'$. The northerly one of the two is shown on Chart 6157 and a clearance is given. The southerly one of the two is the one believed called for in project instructions and its vertical clearance is 156.4 feet above normal pool level. This clearance was determined from observed vertical angles using planetable and alidade. The computations and observations are submitted.


13. Geographic Names:

Geographic names are the subject of special report Geographic Names Report - Part 1, Columbia River, Bonneville to The Dalles forwarded in March 1959.

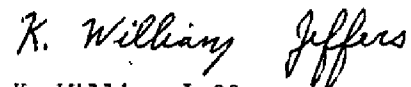
14. Special Reports and Supplemental Data:

(a) Geographic Names Report - Part 1, Columbia River,
Bonneville to The Dalles - Submitted in March 1959.

Approved,


Lorne G. Taylor
LCDR, C&GS
Officer-in-Charge

Respectfully submitted,


K. William Jeffers
LTJG, C&GS

PHOTOGRAMMETRIC PLOT REPORT
Columbia River, PH-5807
(Stereoplanigraph Bridge)

21. Area Covered

T-10847 thru T-10857

22. Method

Three stereoplanigraph bridges were run and were designated as strips 78, 79 and 80. All three were computed by IBM methods.

23. Adequacy of Control

Triangulation Station B0, 1939 SUB. STA. A was entirely indistinguishable on both strips 78 and 80 and the stereoplanigraph positions read for this point were strictly guesswork. The bridged positions for this station also did not agree with the true position and it is recommended that this station be completely disregarded in compilation.

Triangulation Station MEMA, 1957 SUB. PT. B. \triangle FARM, 1939 SUB. PT. B, and Triangulation Station KASER, 1939 SUB. PT. A were also designated as poor stations at the time of bridging and they failed to "hold" in their respective strips. Inasmuch as each one of these points has a companion sub point that was both adequately distinguishable in bridging and held in computation, it is recommended that all of the questionable sub stations discussed above be thrown out.

24. Supplemental Data

None

25. Photography

Photographs of scale 1:30,000 used in the bridging of the area covered in this report were:

58-S-7774A thru 7784A — 7778-7784 only, rec.
58-S-7789A thru 7795A
58-S-7812A thru 7824A

Photography was adequate in quality.

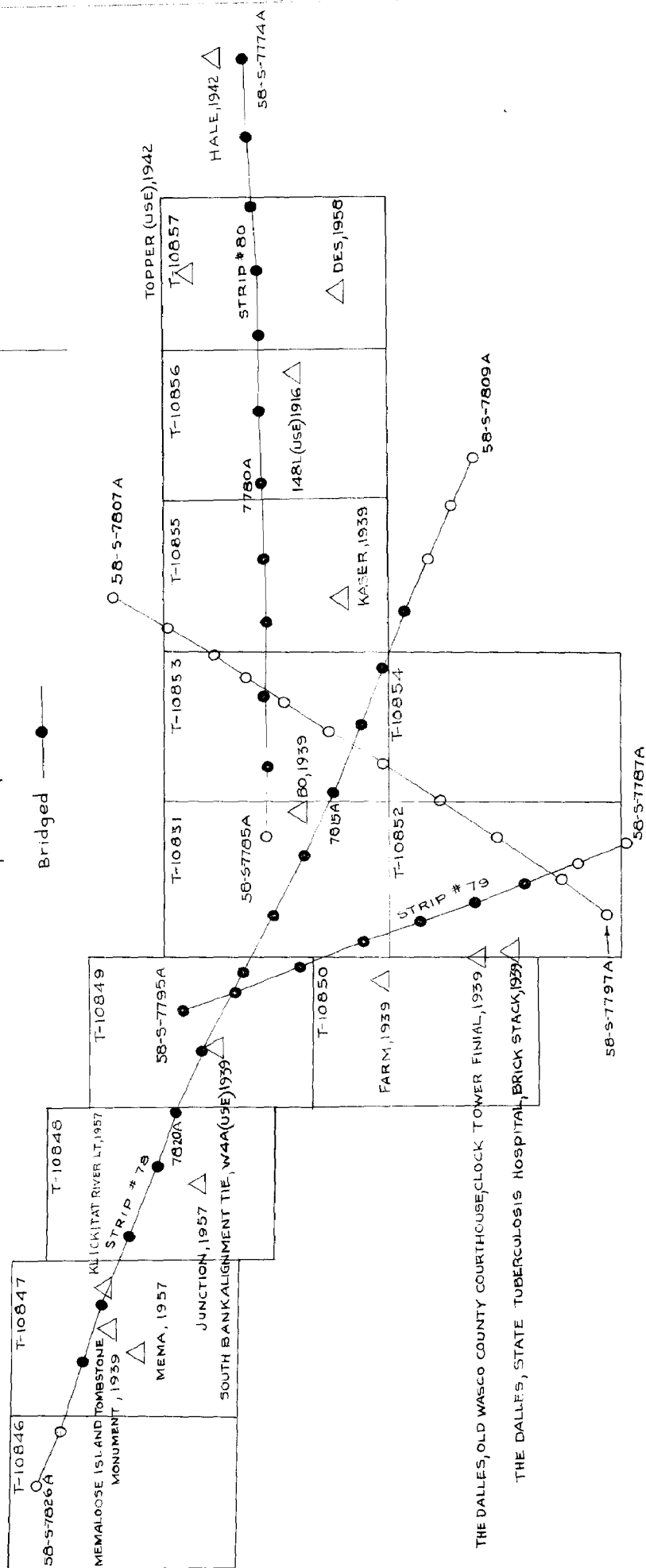
PH-5807

PHOTOGRAMMETRIC PLOT SKETCH

Scale 1: 30,000

Strip No. 78, 79 and 80

Bridged



ALL CONTROL FIELD IDENTIFIED (refer to plot report)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
DESCRIPTIVE REPORT
CONTROL RECORD

MAP T-1084.7

PROJECT NO. Ph-5807

SCALE OF MAP 1:10,000

SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR λ -COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
				FORWARD	(BACK)		FORWARD	(BACK)	
MEMA, 1957	Oreg.N. Pg.1196	N.A. 1927	740,389.97 1,782,915.90	389.97 2915.90	(4610.03) (2084.10)		118.9 888.8	(1405.1) (635.2)	
Ditto		"	740,384.75	384.75	(4615.25)		117.3	(1406.7)	
Sub Station "A"		"	1,782,880.58	2880.58	(2119.42)		878.0	(646.0)	
Ditto		"	740,397.75	397.75	(4602.25)		121.2	(1402.8)	
Sub Station "B"		"	1,782,918.50	2918.50	(2081.50)		889.6	(634.4)	
MEMALOOSE ISLAND, Tombstone monument 1939	Oreg.N. Pg.41	"	743,302.73 1,785,342.88	3302.73 342.88	(1697.27) (4650.12)		1006.7 106.6	(517.3) (1417.4)	
HUDSON, 1939	Oreg.N. Pg.28	"	737,833.70 1,782,272.58	2833.70 2272.58	(2166.30) (2727.42)		863.7 692.7	(660.3) (831.3)	
PORTLAND-SPOKANE AIRWAY BEACON #6-B 1939	Oreg.N. Pg.41	"	737,814.50 1,782,316.05	2814.50 2316.05	(2185.50) (2683.95)		857.9 705.9	(666.1) (818.1)	
MOSIER UPPER LT. 1939	" "	"	742,991.77 1,779,203.54	2991.77 4203.54	(2008.23) (796.46)		911.9 1281.2	(612.1) (242.8)	
SAUTER, 1939	" Pg.29	"	745,202.34 1,788,824.22	202.34 3824.22	(4797.66) (1175.78)		61.7 1165.6	(1462.3) (358.4)	
ROWLAND, 1939	" Pg.28	"	747,178.14 1,777,456.67	2178.14 2456.67	(2821.86) (2543.33)		663.9 748.8	(860.1) (775.2)	
T3N R12E SEC.33 USE MONUMENT C 38 1939	" Pg.41	"	741,376.28 1,786,973.76	1376.28 1973.36	(3623.72) (3026.24)		419.5 601.6	(1104.5) (922.4)	
T3N R12E SECS 32&33 MEANDER CORNER (USE) 1939	" Pg.41	"	744,287.10 1,790,442.99	4287.10 442.99	(712.90) (4557.01)		1306.7 135.0	(217.3) (1389.0)	17
Ta 2 & 3N R12E SECS 5,6,31 & 32 USE MONUMENT, 1939	" Pg.41	"	740,058.78 1,781,549.70	58.78 1549.70	(4941.22) (3450.90)		17.9 472.3	(1506.1) (1051.7)	

1 FT. = 3048006 METER

COMPUTED BY: J.E.D.

DATE: 12-1-59

12-4-58

CHECKED BY: J.L.H.

DATE

12-1-59
12-5-58

COMM. DC-57843

COMPILATION REPORT

Map Manuscript T-10847

Project Ph-5807

31. Delineation:

The Kelsh Stereoscopic Instrument was used to compile the planimetry.

There were parts of three flights of C&GS 1958 photography falling within the area of this map manuscript which were adequate to compile all of the planimetry. The stereoplanigraphy bridge used only the flight which included photographs 58 S 7823A and 7824A to locate pass points. From these pass points it was possible to orient a model in a flight to the north of photographs 58 S 7864A and 7865A and the planimetry was completed to the northern limits of the manuscript. It was not possible to orient models in the flight to the south of photographs 58 S 7847A thru 7849A and therefore an area in the southwest portion of the manuscript south of Latitude $45^{\circ} 40' 30''$ could not be detailed.

Refer to letter modifying the instructions 732/rrj dated 21 May 1959.

Refer to the last paragraph under Item 37 in the descriptive report for T-10837 (1959), page 19.

32. Control:

Refer to the Photogrammetric Plot Report (Stereoplanigraph Bridge) T-10847 thru T-10857 which is included in this Descriptive Report, pages 12 and 13.

The pass points located in this control extension along with the identified horizontal control stations were adequate to orient the Kelsh models as explained under Item 31, Delineation.

33. Supplemental Data:

None.

Items 34 thru 37:

Facts relative to the subjects of Items 34 thru 37 are identical with those described under these items in the Descriptive Report for T-10837 (1959) except that under Item 34 the U.S.G.S.

15 minute quadrangle "White Salmon", Oreg. - Wash., Scale 1:62,500, published 1957 was available for comparison with drainage. Also under Item 37 the Forms 567 were forwarded to Washington on 31 Aug. 1959.

38. Control for Future Surveys:

One aid to navigation was located by Kelsh Instrument. It is listed under Item 49. Notes to the Hydrographer.

39. Junctions:

A satisfactory junction has been made on the east with T-10848 and on the west with T-10846.

40. Horizontal and Vertical Accuracy:

Identical with T-10837.

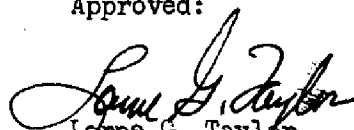
46. Comparison with Existing Maps:

Comparison was made with U.S.G.S. 15 minute quadrangle "White Salmon", Oreg. - Wash., Scale 1:62,500, published 1957.


47. Comparison with Nautical Charts:

Identical with T-10837.

Approved:


Lorne G. Taylor
LCDR, C&GS
Officer-in-Charge

Respectfully submitted:


J. Edward Deal
Cartographer
C&GS

GEOGRAPHIC NAMES LIST

Balch Lake

Catherine Creek

Chatfield

*Columbia River

Columbia River Highway

Hewett Lake

Klickitat County

Lewis & Clark Highway

Major Creek

Memaloose Island

Memaloose Park

*Oregon

Rowena Creek

Rowland Lake

Spokane, Portland & Seattle R.R.

Union Pacific R.R.

Wasco County

*Washington

* B.G.N. Decision

George M. Ball
GEOGRAPHIC NAMES SECTION
9 MARCH 1960

49. Notes to the Hydrographer:

One aid to navigation "Memaloose Island Light 29, 1959 was located by Kelsh Instrument.

PHOTOGRAMMETRIC OFFICE REVIEW

T-10847

1. Projection and grids X 2. Title X 3. Manuscript numbers X 4. Manuscript size X

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy X 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) X 7. Photo hydro stations None 8. Bench marks None 9. Plotting of sextant fixes None 10. Photogrammetric plot report None 11. Detail points None

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline X 13. Low-water line None 14. Rocks, shoals, etc. X 15. Bridges None 16. Aids to navigation X 17. Landmarks None 18. Other alongshore physical features X 19. Other along-shore cultural features X

PHYSICAL FEATURES

20. Water features X 21. Natural ground cover X 22. Planetable contours None 23. Stereoscopic instrument contours None 24. Contours in general None 25. Spot elevations None 26. Other physical features X

CULTURAL FEATURES

27. Roads X 28. Buildings X 29. Railroads X 30. Other cultural features X

BOUNDARIES

31. Boundary lines X 32. Public land lines None

MISCELLANEOUS

33. Geographic names X 34. Junctions X 35. Legibility of the manuscript X 36. Discrepancy overlay X 37. Descriptive Report X 38. Field inspection photographs X 39. Forms X 40. _____

Reviewer

J. Edward Deal

Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler

Supervisor

43. Remarks:

REVIEW REPORT
 †OF
 SHORELINE MAP MANUSCRIPTS
 T-10847 through T-10857
 July 1961

62. Comparison with Registered Topographic Surveys

There are no registered topographic surveys of this area.

63. Comparison with Maps of Other Agencies

WHITE SALMON, ORE.-WASH., 1:62,500, 1957, U.S. Geological Survey
 THE DALLAS, ORE.-WASH., 1:62,500, 1957, U.S. Geological Survey
 WISHRAM, ORE.-WASH., 1:62,500, 1957, U.S. Geological Survey

A detailed comparison is impractical because of scale difference. However, several disagreements in shoreline delineation are apparent.

64. Comparison with Contemporary Hydrographic Surveys

There are no contemporary hydrographic surveys of subject area.

65. Comparison with Nautical Charts

6157	1:40,000	Revised to March 1961
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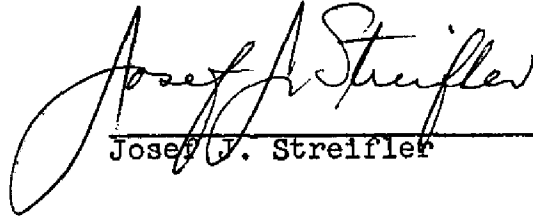
There are shoreline differences between these surveys, which should be considered in the future revision of chart 6157. Additional navigation aids have been installed since the field inspection of the T-sheets in 1959 and that are shown on the nautical chart. The surveys, however, are in agreement with their corresponding light lists.

The eastern portion of this group of T-sheets is not covered by existing nautical charts. A new series of nautical charts of the upper Columbia River is being constructed now and at the time of the Washington Office Review, not available for comparison.

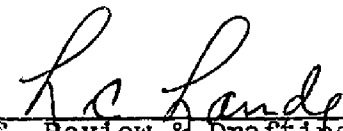
66. Adequacy of Results and Future Surveys


T-10847 through T-10857 have been compiled according to instructions and meet the adequacy and accuracy requirements for this type of survey.


Reviewed by:


Joseph V. Streifler

Approved by:


Chief, Review & Drafting Section
Photogrammetry Division


Chief, Nautical Chart
Division

 4/26/62
Chief, Photogrammetry Division


Chief, Operations Division

NAUTICAL CHARTS BRANCH

SURVEY NO. T-10847

Record of Application to Charts

[illegible]

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.