

10870

Orig.

Diag. Cht. No. 6157 Inset

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Shoreline
Field No.	Fh-5807
Office No.	T-10870
LOCALITY	
State	Oregon & Washington
General locality	Columbia River
Locality	McCarthy Island
1959	
CHIEF OF PARTY	
Lorne G. Taylor, Photogrammetric Office	
LIBRARY & ARCHIVES	
DATE	May 1962

USCOMM-DC 5087

10870

DESCRIPTIVE REPORT - DATA RECORD

T - 10870

Project No. (II): Ph-5807 Quadrangle Name (IV):

Field Office (II): Arlington, Oregon Chief of Party: Lorne G. Taylor

Photogrammetric Office (III): Portland, Oregon Unit Chief: K. W. Jeffers

Instructions dated (II) (III): Undated Copy filed in Division of
Field and Office Photogrammetry (IV)

Modification: Letter 73/rrj dated 9 March 1959
Letter 831/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): 23 June 1961

Publication Scale (IV): Publication date (IV):

Geographic Datum (III): N.A. 1927 Vertical Datum (III): Refer to datum pro-
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-
U.S. Engineers Columbia River
Low-Water Profile

Reference Station (III): There are no triangulation stations within
area of manuscript. Refer to T-10871.

Lat.: Long.: Adjusted
Unadjusted

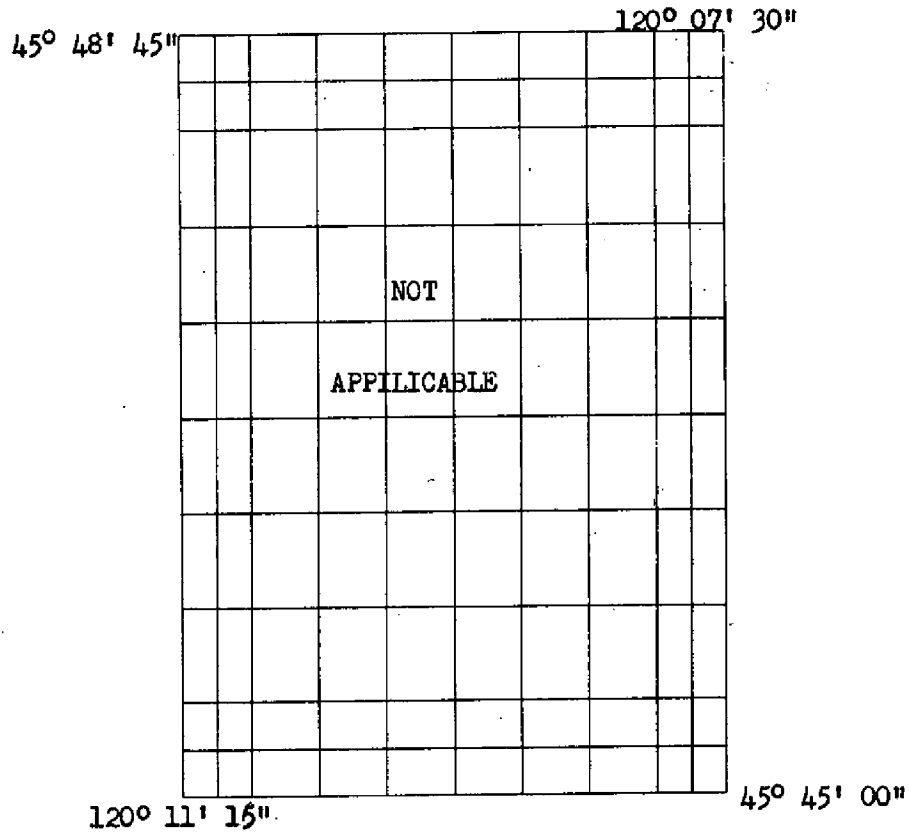
Plane Coordinates (IV): State: Zone:

Y= X=

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): K. W. Jeffers (Shoreline) Date: 4-9-59
K. W. Jeffers (Interior) Sept. 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 4-9-59 on single lens ratio prints taken 8-28-58 and delineated by Kelsh Stereoscopic Instrument on this photography. The shoreline is the normal gradient of the Columbia River at 110,000 cfs.

Projection and Grids ruled by (IV): P. Dempsey Date: 5-20-59

Projection and Grids checked by (IV): Shoup Date: 8-3-59

Control plotted by (III): J. L. Harris (Pass Points) Date: 8-19-59

Control checked by (III): C. C. Harris Date: 9-9-59

Radial Plot or Stereoscopic Control extension by (III): John D. Ferrow, Jr. Date: June 1959

Stereoscopic Instrument compilation (III): Planimetry L. L. Graves Date: 9-25-59

Contours Date:

Manuscript delineated by (III): J. L. Harris (Scribing) Date: 12-15-59
L. L. Graves (Stick-up) 1-29-60

Photogrammetric Office Review by (III): J. L. Harris (Rough Draft) Date: 10-6-59
J. E. Deal (Advance) 3-30-60

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

DESCRIPTIVE REPORT - DATA RECORD

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

The Dalles Dam
(Forebay)

Number	Date	PHOTOGRAPHS (III)		Scale	Stage-of-Tide
		Time			
58 S 7641A thru 7643A	8-28-58	9:42		1:30,000 contact 1:10,000 ratio	158.8' above MSL. Flow at Arlington Gage was 107,000 cfs.
*58 S 7676A thru 7679A	"	10:18		DO	DO

* Used for field inspection only.

Tide (III)

Ratio of Ranges	Mean Range	Spring Range

Reference Station:

Subordinate Station:

Subordinate Station: Not Applicable

Washington Office Review by (IV):

W. Streifler

Date: *May 1961*

Final Drafting by (IV):

Portland Photogrammetric Office

Date: *Dec. 59 - March 60*

Drafting verified for reproduction by (IV):

W. Streifler

Date: *May 1961*

Proof Edit by (IV):

W. Streifler

Date: *June 1961*

Land Area (Sq. Statute Miles) (III): 1

Shoreline (More than 200 meters to opposite shore) (III): 7 Statute miles

Shoreline (Less than 200 meters to opposite shore) (III): 1 " "

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): None Recovered:

Identified:

Number of BMs searched for (II): None Recovered:

Identified:

Number of Recoverable Photo Stations established (III): 8**

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

Remarks:

** All fixed aids to navigation located by Kelsh Instrument.

SUMMARY
to accompany Shoreline Map Manuscripts
T-10870 through T-10885

The sixteen (16) subject surveys represent the eastern portion of project Ph-5807. The project consists of forty-nine (49) shoreline surveys of the Columbia River (Ore.-Wash.) from Bonneville eastward to Umatilla and was designed to aid in the construction of a new series of nautical charts. T-10870 thru T-10885 extend from Arlington to Umatilla, which are covered by a stereoplanigraph bridging plot done in the Washington Office in June 1959.

The map manuscripts were compiled by Kelsh stereoscopic instruments in the Portland Photogrammetric Office from photography of August 1958 and field inspection information (shoreline - April 59, interior - September 59).

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.

May 1961

FIELD INSPECTION REPORT

Map Manuscripts T-10870,

T-10871, T-10872, T-10873

T-10874 and T-10875

Project Ph-5807

2. Areal Field Inspection:

The area covered by this report includes a portion of the Columbia River from just east of Arlington, Oregon to a point about two miles west of Castle, Oregon. Interior coverage is about equally divided between the Oregon and Washington sides of the river.

There is no woodland cover in the area, with the exception of a few trees growing along drainage features. The high plateaus and some of the more gentle slopes are under cultivation, and the remainder of the area is grazing land.

The major transportation routes in the area are the Union Pacific Railroad and U. S. Highway 30 on the Oregon side, and the Spokane, Portland and Seattle Railway and Washington State Highway 8 on the Washington side. Oregon State Highway 74 junctions with U. S. Highway 30 eleven miles east of Arlington, Oregon.

There are no incorporated towns within the area. Three unincorporated communities in the area are as follows: Moonax and Alderdale in Washington; Willows in Oregon.

Photo coverage was complete and adequate for the entire area.

3. Horizontal Control:

- (a) No supplemental control was established at this time.
- (b) No datum adjustments were made in the field.
- (c) Stations of other agencies were not recovered.
- (d) The recovery done in 1958 met the minimum requirements in project instructions for the control of compilation.
- (e) All Coast and Geodetic Survey stations were searched for.

The following stations were listed as destroyed:

Portland-Pendleton Aviation Beacon No. 13, 1932
Portland-Pendleton Aviation Beacon No. 14, 1932

4. Vertical Control:

Not applicable.

5. Contours and Drainage:

Contours are 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:

There is no woodland cover in the area. Some trees are found along streams and have been noted on the photographs.

7. Shoreline and Alongshore Features:

(a) through (c) Water Levels and Shoreline

The level and shoreline of the river depend on the volume of runoff.

The photographs were taken on the 28th of August 1958 when the rate of flow at Arlington was 107,000 cfs. Since the adopted normal river level is that corresponding to a rate of flow of 110,000 cfs., the shoreline at the time of photography may be considered the same as that of normal river level.

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

(d) Bluffs and cliffs along both shores of the Columbia River 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 launching site on a naturally graded beach shown on photo 58 S 7636A. This launching site is accessible by Jeep only.

(f) There are no submarine cables in the area.

(g) There are no other shoreline structures in the area.

8. Offshore Features:

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

9. Landmarks and Aids:

(a) One landmark for charts was selected at this time; elevation and height determinations are given on the back of the photograph:

<u>Landmark</u>	<u>Photograph</u>	<u>Sheet</u>
Alderdale Elevator, 1959	58 S 7659A	10875

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

(c) There are no aeronautical aids in the area. The Arlington Airport Beacon is still in existence, but it is not regularly maintained.

A few local residents of Arlington use the beacon when they fly their own small planes, but for the most part the beacon is not in use and not lighted. For this reason, the beacon was not listed on the Form 567 and no height or elevation determinations were made.

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

<u>Aid</u>	<u>Photograph</u>	<u>Sheet</u>
Island No. 30 Range 1 Front Light 1959 (Temporary Structure)	58 S 7678A	10870
Island No. 30 Range 1 Rear Light 1959 (Temporary Structure)	"	"
McCarthy Island Range Front Light 1959 (Temporary Structure)	"	"
McCarthy Island Range Rear Light 1959 (Temporary Structure)	"	"
Peyaka Island Range Front Light 1959 (Permanent Structure)	"	"
Peyaka Island Range Rear Light 1959 (Temporary Structure)	"	"
Mile 47-48 Range Front Light 1959 (Permanent Structure)	"	"
Mile 47-48 Range Rear Light 1959 (Permanent Structure)	"	"

<u>Aid</u>	<u>Photograph</u>	<u>Sheet</u>
Mile 46.7 Range Front Light 1959 (Temporary Structure)	58 S 7640A	10872
Mile 46.7 Range Rear Light 1959 (Temporary Structure)	"	"
Pine Creek Range 1 Front Light 1959 (Temporary Structure)	58 S 7630A	"
Pine Creek Range 1 Rear Light 1959 (Temporary Structure)	"	"
Pine Creek Range 2 Front Light 1959 (Temporary Structure)	58 S 7640A	"
Pine Creek Range 2 Rear Light 1959 (Temporary Structure)	"	"
Heppner Junction Range Front Light 1959 (Permanent Structure)	58 S 7656A	10874
Heppner Junction Range Rear Light 1959 (Permanent Structure)	"	"
Island No. 27 Range Front Daybeacon 1959 (Temporary Structure)	"	"
Island No. 27 Range Rear Daybeacon 1959 (Temporary Structure)	"	"
Thanksgiving Island Range 1 Front Light 1959 (Temporary Structure)	"	"
Thanksgiving Island Range 1 Rear Light 1959 (Temporary Structure)	"	"
Thanksgiving Island Range 2 Front Light 1959 (Temporary Structure)	"	"
Thanksgiving Island Range 2 Rear Light 1959 (Temporary Structure)	"	"
Thanksgiving Island Range 3 Front Light 1959 (Temporary Structure)	"	"
Thanksgiving Island Range 3 Rear Light 1959 (Temporary Structure)	"	"
Alderdale Range 1 Front Light 1959 (Temporary Structure)	58 S 7632A	10875
Alderdale Range 1 Rear Light 1959 (Temporary Structure)	"	"
Alderdale Range 2 Front Light 1959 (Permanent Structure)	58 S 7656A	10874
Alderdale Range 2 Rear Light 1959 (Temporary Structure)	"	"
Alderdale Range 3 Front Light 1959 (Permanent Structure)	58 S 7632A	10875
Alderdale Range 3 Rear Light 1959 (Temporary Structure)	"	"

The elevation of some of the fixed aids have been determined by rough measurement with a hand level. Those values have been noted on the photographs.

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

10. Boundaries, Monuments and Lines:

The area falls entirely within Klickitat County, Washington, and in Gilliam and Morrow Counties in Oregon.

11. Other Control:

Five photo-topo stations were selected and pricked on the photographs:

<u>Station</u>	<u>Photograph</u>	<u>Sheet</u>
North End of Billboard 1959	58 S 7640A	10872
West Gable, Maroon Roofed Shack 1959	58 S 7638A	10873
Alderdale Elevator 1959	58 S 7657A	10875
U. S. C. E. BM L 207 1959	"	"
SW Corner Railway Bridge Abutment 1959	"	"

Azimuth points for all ranges except Island No. 30 Range 1 were located by sextant fix. The fix for each azimuth point is recorded on the back of the photograph on which the corresponding range has been pricked. An azimuth point for Island No. 30 Range 1 was pricked on photo 58 S 7701A, previously submitted.

12. Other Interior Features:

Arlington airport is shown on photograph 58 S 7702A. The landing strip is gravel and is not maintained.

13. Geographic Names:

Geographic names are the subject of a special report: Geographic Names Report, Part 2, Columbia River, The Dalles to Umatilla, forwarded in June 1959.

14. Special Reports and Supplemental Data:

Geographic Names Report, Part 2, Columbia River, The Dalles to Umatilla, forwarded in June 1959.

Approved:

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

Respectfully submitted:

K. William Jeffers
LTJG, C&GS
Unit Chief

JUL 1959

PHOTOGRAMMETRIC PLOT REPORT
COLUMBIA RIVER, PH-5807
STEREOPLANIGRAPH BRIDGING
 JUNE 1959

21. AREA COVERED.

T-10870 thru T-10885

22. METHOD.

Two stereoplanigraph bridges were run and were designated as strips #84 and #85. Both were computed and adjusted by IBM methods.

23. ADEQUACY OF CONTROL.

ALL control stations within the area covered by the T-sheets numbered above held in their respective bridges and were adequate to control same, with the following exceptions:

ARLE (USE) 1942 Sub PT."B"
 DALE (USE) 1942 Sub PT."A"
 BOULDER (USE) 1942 Sub PT."B"

It is recommended that these substitute stations be eliminated. Station Paterson was weak in strip #84 and should be used with caution.

24. SUPPLEMENTAL DATA.

None

25. PHOTOGRAPHY.

Photographs used in the bridging described in this report are all at scale 1:30,000 and are numbered as follows:

STRIP #84 58-S- 7617A thru 7643A
 STRIP #85 58-S- 7597A thru 7607A

Photography was adequate in quality.

26. ADDITIONAL INFORMATION.

There were a few instances of pass points being common to two separate strips. In these cases the two positions obtained were meaned and the meaned positions were written in on the IBM computational sheets involved. The original positions were crossed out.

SUBMITTED

John D. Farrow Jr.
John D. Farrow Jr.

APPROVED

Morton Keller
Morton Keller

41

COLUMBIA RIVER ORE - WASH

PH-5807

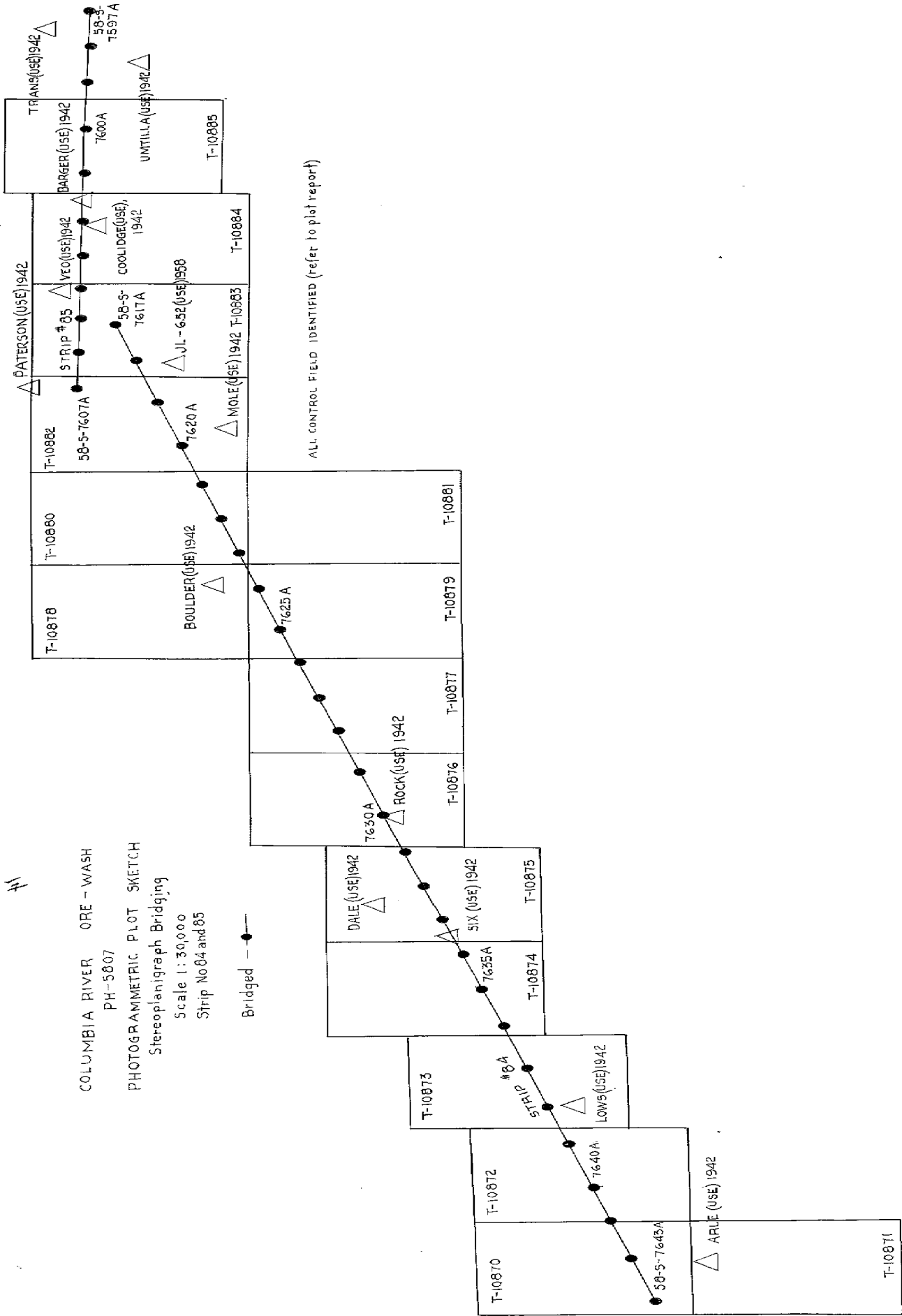
PHOTOGRAMMETRIC PLOT SKETCH

Stereoplanigraph Bridging

Scale 1:30,000

Strip No 84 and 85

Bridged —●—



ALL CONTROL FIELD IDENTIFIED (refer to plot report)

MAP T-10870

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 FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	
		Note:	There were no triangulation stations recovered within area of this manuscript.					
							15.	

COMPILATION REPORT

Map Manuscript T-10870

Project Ph-5807

31. Delineation:

The Kelsh Stereoscopic Instrument was used to compile the planimetry.

The C&GS photography was adequate to compile the planimetry to the extent of detail limits indicated on the project index. A stereoplanigraph bridge was not made for the photograph flight 58 S 7676A thru 7679A and neither were Kelsh diapositives furnished, so the area of planimetric compilation in Washington was limited to the extent of the pass points located in the stereoplanigraph bridge for strip 84. Refer to photogrammetric plot report which is included in this Descriptive Report. Also refer to letter modifying the instructions 732/rrj dated 21 May 1959.

Refer to last paragraph under this heading in the Descriptive Report for T-10837 (1959), page 19.

32. Control:

Refer to the Photogrammetric Plot Report (Stereoplanigraph Bridge) for T-10870 thru T-10885 which is included in this Descriptive Report.

33. Supplemental Data:

None.

34. Contours and Drainage:

Contours are not applicable.

The drainage shown on the manuscript was delineated from field inspection notes supplemented by minute examination of the Kelsh models for drainage and by visual inspection of the U.S.G.S. topographic quadrangle, "Arlington", Oreg. - Wash., Scale 1:125,000, published 1947, reprinted 1948.

35. Shoreline and Alongshore Details:

The shoreline shown on this map manuscript is at the normal river gradient of 110,000 cfs flow. A graph showing this gradient from which the elevation of the shoreline may be determined for any place along the river is shown on the manuscript.

Refer to correspondence included in the Descriptive Report for T-10837 (1959) for a detailed report on this feature.

36. Offshore Details:

Refer to remarks under this heading in the Descriptive Report for T-10865 (1959).

37. Landmarks and Aids:

Forms 567 were submitted to the Washington Office for nautical aids on 12 October 1959. There are no aeronautical aids or landmarks for charts. Refer to correspondence in the Descriptive Report for T-10837 (1959) for other details on nautical aids.

38. Control for Future Surveys:

Eight fixed aids to navigation were located by Kelsh Instrument. They are listed under Item 49, Notes to the Hydrographer.

39. Junctions:

A satisfactory junctions was made with a portion of T-10869 on the west, with T-10871 on the south and with T-10872 on the east. There is no contemporary survey to the north.

40. Horizontal and Vertical Accuracy:

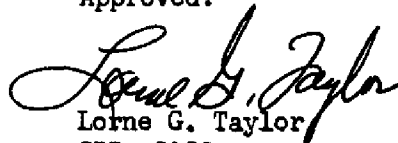
Refer to remarks under this item in the Descriptive Report for T-10837 (1959).

46. Comparison with Existing Maps:

Comparison was made with U.S.G.S. 30 minute "Arlington", Oreg.-Wash., quadrangle, Scale 1:125,000, edited 1916, reprinted 1948.

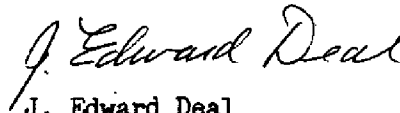
47. Refer to remarks under this heading in the Descriptive Report for T-10853 (1959).

Approved:



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

Respectfully submitted:



J. Edward Deal
Cartographer
C&GS

48. GEOGRAPHIC NAMES LIST

*Columbia River
Columbia River Hwy.

Gilliam County

Klickitat County

McCarthy Island

Oregon

Spokane, Portland & Seattle RR

Union Pacific R.R.

Washington

* B.G.N. Decision

George M. Bass
GEOGRAPHIC NAMES SECTION
17 MAY 1960

49. Notes to the Hydrographer:

Eight fixed aids to navigation were located by Kelsh Instrument. Forms 567 were submitted listing the scaled geographic positions.

- Island No. 30 Range 1 Front Light
- Island No. 30 Range 1 Rear Light
- McCarthy Island Range Front Light
- McCarthy Island Range Rear Light
- Peyaka Island Range Front Light
- Peyaka Island Range Rear Light
- Mile 47-48 Range Front Light
- Mile 47-48 Range Rear Light

PHOTOGRAMMETRIC OFFICE REVIEW

T. 10870

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 X 11. Detail points X

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-10870 through T-10885
May 1961

62. Comparison with Registered Topographic Surveys:

There are no registered topographic surveys of this area.

63. Comparison with Maps of Other Agencies:

- ARLINGTON, ORE.-WASH. 1:125,000, 1916, U.S. Geological Survey
- BLALOCK IS., ORE.-WASH. 1:125,000, 1906, U.S. Geological Survey
- UMATILLA, ORE.-WASH. 1:125,000, 1908, U.S. Geological Survey

Because of scale difference a detailed comparison is impractical.

64. Comparison with Contemporary Hydrographic Surveys:

There are no contemporary hydrographic surveys of subject area.

65. Comparison with Nautical Charts:

The first nautical charts of this portion of the Columbia River are being constructed now. Incomplete compilations are not available for comparison.

66. Adequacy of Results and Future Surveys:

T-10870 through T-10885 have been compiled according to instructions and meet the adequacy and accuracy requirements for this type of survey.

Reviewed by:

Josef J. Streifler

 Josef J. Streifler

Approved by:

L. A. Lande

 Chief, Review & Drafting/Sec.
 Photogrammetry Division

Martin Kaden

 Chief, Nautical Chart Division

J. E. Vaughn 4/26/62

 Chief, Photogrammetry Div.

G. L. Mast 6/19/62

 Chief, Operations Division

