10882

Diag. Cht. No. 6157 Inset.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. Ph-5807 *Office No.* T-10882

LOCALITY

State Oregon & Washington

General locality Columbia River

Locality Paterson

19 59

CHIEF OF PARTY

Lorne G. Taylor, Photogrammetric Office

LIBRARY & ARCHIVES

DATE May 1962

USCOMM-DC 5087

10882

FORM 181
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T - 10882

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

Field Office (II): Umatilla, 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 & Office
Modification: Letter 73/rrj dated 9 March 1959
Letter 831/es dated 12 March 1959
Letter 732/rrj dated 21 May 1959
Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): Kelsh Stereoscopic Instrument

Manuscript Scale (III): 1:10,000
Stereoscopic Plotting Instrument Scale (III): Viewing Scale 1:6,000
Pantograph Scale 1:10,000

Scale Factor (III): None

Date received in Washington Office (IV): Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date: Date registered (IV): 15 June 1961

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

Geographic Datum (III): N.A. 1927
Vertical Datum (III): Refer to datum profile 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): MOLE (USE) 1942

Lat.: 45° 52' 54.590" Long.: 119° 35' 49.324" Adjusted X
Unadjusted

Plane Coordinates (IV): State: Oregon Zone: North

Y= 808,889.41 X= 2,229,976.19

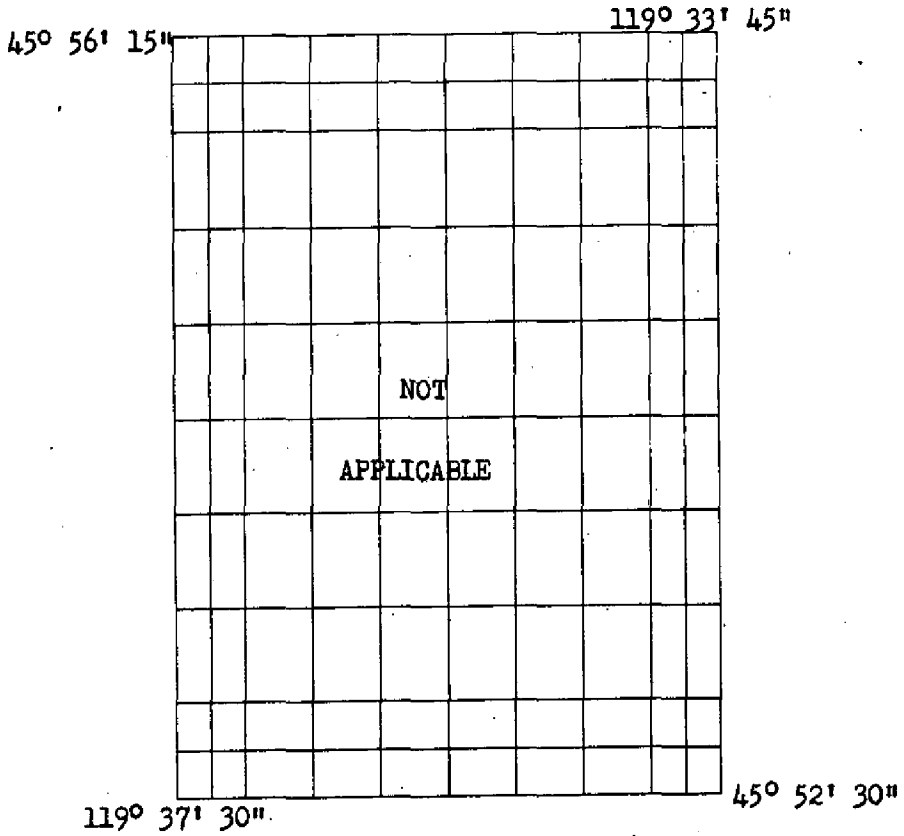
Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

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

FORM 181a
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD



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

FORM 181b
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II):	C. H. Bishop	(Shoreline)	Date: 4-14-59
	K. W. Jeffers	(Shoreline)	9-29-59
	K. W. Jeffers	(Interior)	Oct. 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 4-14 & 9-29-59 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: 7-27-59
Projection and Grids checked by (IV):	Shoup	Date: 8-3-59
Control plotted by (III):	J. L. Harris	Date: 8-28-59
Control checked by (III):	C. C. Harris	Date: 10-1-59
Radial Plot or Stereoscopic Control extension by (III):	John D. Perrow, Jr.	Date: June 1959
Stereoscopic Instrument compilation (III): Planimetry	D. N. Williams	Date: 10-27-59
Contours	None	Date:
Manuscript delineated by (III):	D. N. Williams (Scribing)	Date: 1-8-60
	C. C. Harris (Stick-up)	3-7-60
Photogrammetric Office Review by (III):	C. C. Harris (Rough Draft)	Date: 11-5-59
	J. E. Deal (Advance)	3-31-60
Elevations on Manuscript checked by (II) (III):	None	Date:

FORM 181c
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

5.

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

PHOTOGRAPHS (III)

Number	Date	Time	Scale
58-S-7607A thru 7609A	8-28-58	9:07	1:30,000 contact 1:10,000 ratio
58-S-7618A thru 7620A	8-28-58	9:20	DO

The Dalles Dam
~~Stage of Tide~~ (Forebay)
159.8' above M.S.L.

Flow at Arlington Gage and Paterson Gage was 107,000 cfs.

Tide (III)

Ratio of Ranges	Mean Range	Spring Range

Reference Station:
Subordinate Station: Not Applicable.
Subordinate Station:

Washington Office Review by (IV): J.J. Stiefler — Date: March 1961

Final Drafting by (IV): Portland Photog. Office — Date: Jan.-March 1960

Drafting verified for reproduction by (IV): J.J. Stiefler — Date: March 1961

Proof Edit by (IV): J.J. Stiefler — Date: June 1961

Land Area (Sq. Statute Miles) (III): 11
Shoreline (More than 200 meters to opposite shore) (III): 10 statute miles
Shoreline (Less than 200 meters to opposite shore) (III): 15 " "
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): 3 Recovered: 2 Identified: 2
Number of BMs searched for (II): None Recovered: Identified:
Number of Recoverable Photo Stations established (III): 6
Number of Temporary Photo Hydro Stations established (III): None

Remarks:

COMM-DC-57842

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 Manuscript T-10882

Project Ph-5807

2. Areal Field Inspection:

The area covered by this report includes a portion of the Columbia River from about one mile west of Paterson, Washington to a point about one mile west of Umatilla, Oregon. Interior coverage is about equally divided between the Oregon and Washington sides of the river.

There is no woodland cover within the area with the exception of a few trees along the banks of the Columbia River and along other drainage features. There are numerous truck farms and orchards on the flat irrigated lands and the remainder of the area is grazing land.

The major transportation routes in the area are the Spokane, Portland and Seattle Railway and a paved road from Paterson to Plymouth on the Washington side and U. S. Highway 730 (Oregon State Highway 32) on the Oregon side.

Irrigon, Oregon is the only incorporated town in the area. Paterson, Washington is the only unincorporated community within the area.

Photo coverage was not complete for the interior on the Oregon side on sheets 10884 and 10885.

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.

One additional station was identified on the photographs at this time:

Station	Photo	Sheet
PATERSON (U.S.E.) 1942	58 S 7618A	10882

(e) All Coast and Geodetic Survey stations were searched for.

The following are listed as destroyed:

Station	Sheet
Umatilla, standpipe, 1916	East of 10885
Umatilla railroad tank, silver top, elev., 1947	East of 10885
Umatilla, black stack, 1947	East of 10885
ARENA (U.S.E.), 1942	East of 10885

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.

The main irrigation canal West Extension has been indicated on the photographs. There are many small canals and pipes leading off the main canal. The larger and more prominent ones have been indicated on the photographs.

6. Woodland Cover:

There is no woodland cover within the area with the exception of a few trees along the banks of the Columbia River and along other drainage features. There are also a few orchards in the area that have been indicated 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 Paterson 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 an abandoned ferry landing that can be used for small boat launching shown on photograph 58 S 7618A.

(f) There are no submarine cables in the area. There is a submerged natural gas pipeline crossing shown on photograph 58 S 7601A.

(g) The only other shoreline structures in the area are some steel dolphins, a steel bulkhead, and some wooden cribs filled with rock. These features are indicated on photograph 58 S 7618A.

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) Two landmarks for charts were selected at this time:

Landmark	Photo	Sheet
Elevator	58 S 7618A	10882
Elevator	58 S 8385A	10883

(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 is one aeronautical landmark in the area:

Aid	Photo	Sheet
Tower	58 S 7601A	10885

This station is not a true Aeronautical aid but due to its height above ground it was located as a possible hazard to air navigation.

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

Aid	Photograph	Sheet
Blalock Island Range Front Light 1959 (Permanent Structure)	58 S 7620A	10882
Blalock Island Range Rear Light 1959 (Temporary Structure)	"	"
Patterson Reef Range 1 Front Light 1959 (Permanent Structure)	58 S 7618A	"
Patterson Reef Range 1 Rear Light 1959 (Temporary Structure)	"	"
Patterson Reef Range 2 Front Light 1959 (Temporary Structure)	"	10883
Patterson Reef Range 2 Rear Light 1959 (Temporary Structure)	"	"
Mile 81 Range Front Light 1959 (Temporary Structure)	58 S 7605A	10884
Mile 81 Range Rear Light 1959 (Temporary Structure)	"	"
Devils Bend Range 5 Front Light 1959 (Temporary Structure)	58 S 7603A	"
Devils Bend Range 5 Rear Light 1959 (Temporary Structure)	"	"
Devils Bend Range 3 Front Light 1959 (Temporary Structure)	"	"
Devils Bend Range 3 Rear Light 1959 (Temporary Structure)	"	"
Devils Bend Range 2 Front Light 1959 (Permanent Structure)	58 S 7601A	"
Devils Bend Range 2 Rear Light 1959 (Temporary Structure)	"	"
Devils Bend Range 4 Front Light 1959 (Temporary Structure)	"	"
Devils Bend Range 4 Rear Light 1959 (Temporary Structure)	"	"
Devils Bend Range 1 Front Light 1959 (Temporary Structure)	"	"
Devils Bend Range 1 Rear Light 1959 (Temporary Structure)	"	"
Umatilla River Shoals Range Front Light 1959 (Temporary Structure)	"	10885
Umatilla River Shoals Range Rear Light 1959 (Temporary Structure)	"	"

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

(e) There are nine floating aids to navigation in the area.

Aid	Photograph	Sheet
Devils Bend Rapids Buoy 32	58 S 7601A	10884
Devils Bend Rapids Buoy 34	"	"
Devils Bend Rapids Buoy 36	"	10885
Devils Bend Rapids Buoy 38	"	"
Devils Bend Rapids Buoy 40	"	"
Devils Bend Rapids Buoy 42	"	"
Devils Bend Rapids Buoy 44	"	"
Umatilla Shoals Buoy 48	"	"
Umatilla Shoals Buoy 50	"	"

Devils Bend Rapids Buoy 46 was not in place in April 1959 and is not in place in October 1959. The Coast Guard in The Dalles states buoy discontinued about 5 years ago.

10. Boundaries, Monuments and Lines:

The area falls entirely within Benton County, Washington and Morrow and Umatilla Counties in Oregon.

11. Other Control:

Seven photo-topostations were selected and pricked on the photographs:

Station	Photograph	Sheet	
West Gable, 1959	58 S 7601A	10885	
South Gable, 1959	"	"	
East Gable, 1959	"	"	
TANK, 1959	58 S 7599A	"	East of
YEL, 1959 (Azimuth point for Devils Bend Range 5)	"	"	" "
CUP, 1959	"	"	" "
West Gable, Elevator 1959	"	"	" "

Azimuth points for all ranges, except the one listed above, 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.

12. Other Interior Features:

The main irrigation canal West Extension, Natural Gas underground pipelines and a Union Pacific Railroad spur have been indicated on the photographs. The railroad runs from Umatilla to Irrigon, Oregon and its primary use is for storing of boxcars.

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
CDR, C&GS
Officer-in-Charge

Respectfully submitted:

for K. William Jeffers
LTJG, C&GS
Unit Chief.

PHOTOGRAMMETRIC PLOT REPORT

Map Manuscript T-10882

Project Ph-5807

Refer to the Photogrammetric Plot Report (Stereoplanigraph Bridge) for T-10870 thru T-10885 which is included in the Descriptive Report for T-10870 (1959).

FORM 164
(4-23-54)

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

DESCRIPTIVE REPORT — CONTROL RECORD

MAP T-10882 PROJECT NO. Ph-5807 SCALE OF MAP 1:10,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-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)
PATERSON (USE)	Oreg.N.	N.A.	829,762.28	4762.28	(237.72))		1451.5	(72.5)		
1942 (Wash)	Pg. 74	1927	2,237,261.03	2261.03	(2738.97)		689.2	(834.8)		
MOLE (USE) 1942	DO	"	808,889.40	3889.40	(1110.60)		1185.5	(338.5)		
			2,229,967.19	4967.19	(32.81)		1514.0	(10.0)		
DO		"	808,937.90	3937.90	(1062.10)		1200.3	(323.7)		
Sub Station "A"			2,229,909.20	4909.20	(90.80)		1496.3	(27.7)		
DO		"	808,863.63	3863.63	(1136.37)		1177.6	(346.4)		
Sub Station "B"			2,230,015.33	15.33	(4984.67)		4.7	(1519.3)		
JL-6.58, 1958(USE)	Walla Walla Dist. USE	"	813,451.70	3451.70	(1548.30)		1052.1	(471.9)		
			2,235,219.12	219.12	(4780.88)		66.8	(1457.2)		

1 FT. = .3048006 METER

COMPUTED BY: J.E.D. DATE 12-22-58 CHECKED BY: J.L.H. DATE 1-9-59

COMM-DC-57843

COMPILATION REPORT

Map Manuscript T-10882

Project Ph-5807

31. Delineation:

The Kelsh Stereoscopic Instrument was used to compile the planimetry.

The C&GS photography of 8-28-58 was adequate to compile the planimetry to the detail limits indicated on the project index.

Refer to last paragraph Item 31, Delineation of the Descriptive Report for T-10837 (1959).

32. Control:

Refer to the Photogrammetric Plot Report (Stereoplanigraph Bridge) T-10870 thru T-10885 which is included in the Descriptive Report for T-10870 (1959).

33. Supplemental Data:

None.

34. Contours and Drainage:

Contours are not applicable.

The drainage shown on the manuscript was delineated from field inspection notes supplimented by minute examination of the Kelsh models for drainage and by visual inspection of the U.S.G.S. topographic quadrangle, "Blalock Island", Oreg. - Wash., Scale 1:125,000, published 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 Washington on 1 December 1959 listing the scaled geographic positions of five fixed aids to navigation and one landmark for charts. There are no aeronautical aids within the area of this manuscript.

38. Control for Future Surveys:

The objects mentioned under Item 37 are listed under Item 49: Notes to the Hydrographer.

39. Junctions:

A satisfactory junction was made with T-10880 on the west and T-10883 on the east. There are no contemporary surveys to the north and south.

40. Horizontal and Vertical Control:

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.GLS. 30 minute "Blalock Island" Oreg. - Wash. quadrangle, Scale 1:125,000, published 1906.

47. Comparison with Nautical Charts:

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

T-10882

48. GEOGRAPHIC NAMES LIST

Benton County
Blalock Island

*Columbia River
Cooks Island

Morrow County

Oregon

*Paterson

Spokane, Portland & Seattle

Washington

* B.G.N. Decision

GEOGRAPHIC NAMES SECTION
17 MAY 1960

49. Notes to the Hydrographer:

Refer to Forms 567 which were submitted to Washington listing the scaled geographic positions of five fixed aids to navigation and one landmark for charts.

Blalock Island Range Front Light
Blalock Island Range Rear Light
Patterson Reef Range 1 Front Light
Patterson Reef Range 1 Rear Light
Patterson Reef Range 2 Front Light

South Gable of Grain Elevator West of Irrigon, Oregon

1979

FORM 182
(6-12-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

T-10882

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 X 18. Other alongshore physical features X 19. Other alongshore 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 None

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 None 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:

COMM-DC 34529

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 Comtemporary 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. Streifer

Approved by:

L. S. Lavoie
Chief, Review & Drafting Sec.
Photogrammetry Division

Marvin T. Paulson
Chief, Nautical Chart Division

J. E. Waugh 5/4/62
Chief, Photogrammetry Div.

G. L. Maat
Chief, Operations Division

NAUTICAL CHARTS BRANCH

SURVEY NO. T-10882

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
			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.