10420

Diag. Cht. No. 6157 Inset

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline (Photogrammetric)

Field No. Ph-63 *Office No.* T-10420

LOCALITY

State Washington

General locality Columbia River

Locality Kennewick

1954-58

CHIEF OF PARTY

V.R.Sobieralski, Chief of Party
R.B.Melby, Portland Photo. Office

LIBRARY & ARCHIVES

DATE May 1, 1962

USCOMM-DC 5087

10420

DESCRIPTIVE REPORT - DATA RECORD

T - 10420

Project No. (II): Ph-63 Quadrangle Name (IV):

Field Office (II): Pasco, Washington Chief of Party: V. Ralph Sobieralski

Unit Chief: R. B. Melby

Photogrammetric Office (III): Portland, Oregon Officer-in-Charge: V. Ralph Sobieralski

Instructions dated (II) (III): 26 March 1956 (Field & Office) Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:15,000 Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): None

Date received in Washington Office (IV): OCT 16 1958 Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date: Date registered (IV): 28 May 1959

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

Geographic Datum (III): N.A. 1927 Vertical Datum (III): X

~~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~~
For the McNary Dam Reservoir the elevations refer to Normal Pool Level of 340 ft. above M.S.L.

Reference Station (III): DODGER(USE)1950

Lat.: 46° 13' 08.688" 268.3m (1584.3m) Long.: 119° 09' 23.221" 497.7m (788.3m) Adjusted X Unadjusted

Plane Coordinates (IV): State: Zone:

Y= X=

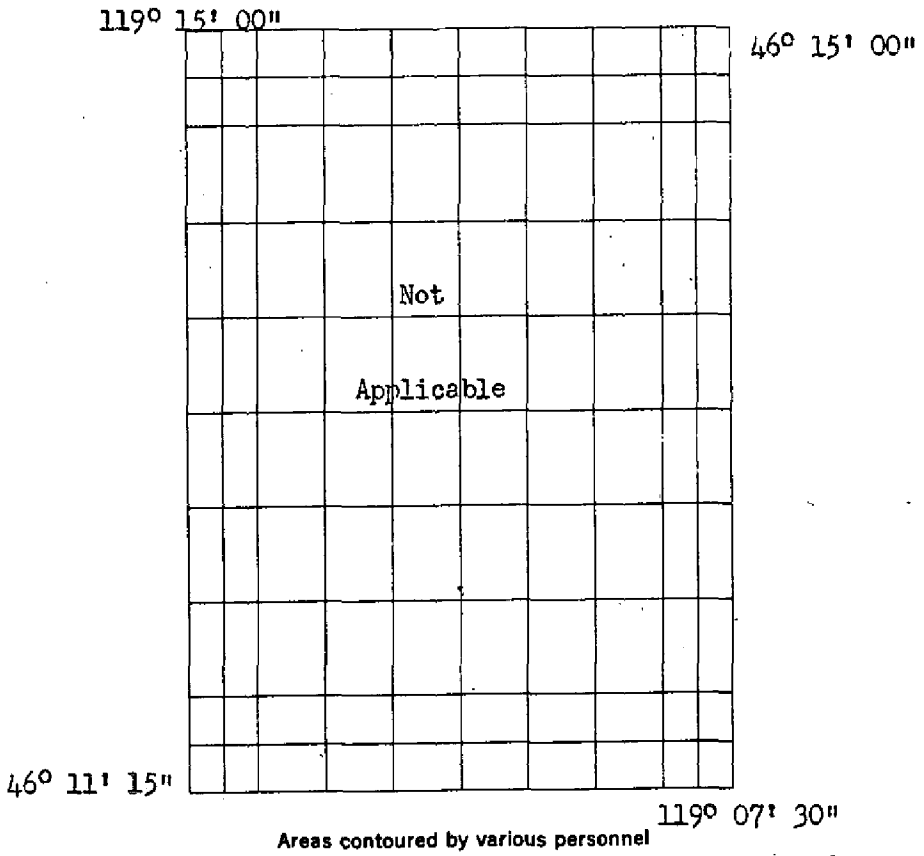
Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

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

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)

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): R. B. Melby — Date: Spring 1958

Planetable contouring by (II): — Date:

Completion Surveys by (II): — Date:

Shoreline at normal pool level (340 ft. above M.S.L.)
~~Mean High Water Location~~ (III) (State date and method of location): Spot locations at intricate places were made in the field. For the most part the shoreline at normal pool level of 340 ft. above M.S.L. was delineated in the office from photographs taken on 9-26-54 when the pool was at that level.

Projection and Grids ruled by (IV): — Date:

Projection and Grids checked by (IV): — Date:

Control plotted by (III): J. L. Harris — Date: 6-12-57

Control checked by (III): J. E. Deal — Date: 6-17-57

Radial Plot or Stereoscopic Control extension by (III): J. L. Harris — Date: 7-2-57

Stereoscopic Instrument compilation (III):
Planimetry — Date:
Contours — Date:

Manuscript delineated by (III): L. L. Graves (rough draft) — Date: 7-11-58
L. L. Graves (scribing) — 8-19-58
C. C. Harris (stick-up) — 9-5-58

Photogrammetric Office Review by (III): J. E. Deal — Date: 9-9-58

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

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): C&GS - 9 lens - focal length 8.25 inches

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
46200 and 46201	9-26-54	14:16	1:15,000	340 ft. above M.S.L.
54414 and 54415	6-11-56	08:55	1:15,000	340.4 ft. above M.S.L.

Tide (III)

Ratio of Ranges	Mean Range	Spring Range

Reference Station: Not applicable
Subordinate Station:
Subordinate Station:

Washington Office Review by (IV): J.H. Steffler — Date: May 1959

Final Drafting by (IV): Portland Photog. Office — Date: 1958

Drafting verified for reproduction by (IV): J.H. Steffler — Date: May 1959

Proof Edit by (IV): — Date:

Land Area (Sq. Statute Miles) (III): 22
Shoreline (More than 200 meters to opposite shore) (III): 10
Shoreline (Less than 200 meters to opposite shore) (III): 2
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): 17 Recovered: 17 Identified: 8
Number of BMs searched for (II): Recovered: Identified:
Number of Recoverable Photo Stations established (III): 5
Number of Temporary Photo Hydro Stations established (III): 10*

Remarks:

* These stations have topographic names but Forms 524 were not submitted in accordance with instructions.

Summary
to accompany shoreline manuscript T-10420

T-10420 is one of Shoreline Project PH-63 (27020). The project covers a portion of the upper Columbia River (from the vicinity of Pasco downstream to the McNary Dam) in the states of Washington and Oregon. T-10420 is the northwestern most of 18 compilation manuscripts of the project and extends upstream to Bateman Island.

This group of 18 shoreline manuscripts was planned in support of hydrographic surveys for the construction of new nautical charts. Instructions were sent out in March 1956. Aerial photography (nine-lens) of Sept. 1954, supplemented by photography of June 1956, and results of field inspection of spring of 1958 were used in the compilation of this project in 1957 and 1958 at the Portland Photogrammetric Office.

There are no previously registered topographic surveys of this area, and 1:125000 topographic maps by the Geological Survey from 1904 and 1914 preclude a detailed comparison.

A cronar film positive at the compilation scale of 1:15000 and the Descriptive Report will be registered and filed in the Bureau Archives.

May 1959

FIELD INSPECTION REPORT

(1958 Season)

Map Manuscripts T-9120, T-10420 and T-11316

Project Ph-63

2. Areal Field Inspection:

This portion of the project was field inspected on nine-lens photographs furnished by the Coast and Geodetic Survey. While some of the images on the photographs lacked the desired amount of clarity, they were adequate to interpret and denote the desired physical features. The field inspection of both photographs and terrain was conducted from a motor vehicle where possible and by small boat or on foot where vehicular travel was unfeasable.

The area can be considered as semi-arid. Near the northwest limits of the project an extensive irrigation system has made diversified farming possible. Grapes and mint are two of the chief crops. Where irrigation is not in use the land is tilled by dry-farming methods, grain being the main crop.

The Columbia River flows southeastward through this portion of the project. Near the town of Umatilla, Oregon is McNary Dam, that impounds the waters of the Columbia River to form a reservoir. This reservoir is referred to as McNary Pool, as to date, there has been no official name assigned to this feature. The Snake River flows southwestward through the northeast area of the project, joining the Columbia River near the town of Burbank. Near the northeastern limits of the project, Ice Harbor Dam is under construction, under the supervision of the Corps of Engineers, to impound the waters of the Snake River. Ice Harbor Dam will maintain a reservoir at a navigable depth and will produce hydro-electric power. It will include a navigation lock and a fish ladder.

The area is served by a system of paved, heavy duty, primary and secondary highways and roads. Three railroads serve the area; the Union Pacific Railroad, the Northern Pacific Railway and the Spokane, Portland and Seattle Railway. The city of Pasco has a municipal airport to serve both commercial and private aircraft.

Tug and barge traffic, as well as pleasure craft ply the waters of McNary Pool. Portions of the pool serve as Game Range and Wildlife Management Areas.

3. Horizontal Control:

Four new horizontal control stations were established by triangulation methods; stations PHILLIPS, PACIFIC CHEMICAL COMPANY LIGHT, a fixed aid to navigation; KENNEWICK, SILVER-COLORED ELEVATED WATER TANK and KENNEWICK, TELEVISION STATION KTRI, MAST, located because of landmark value; and RICHLAND LIGHT, a fixed aid to navigation not in the project area, located because it is the last and most northerly of the aids to navigation along the McNary Pool.

A systematic search was conducted for all listed horizontal control stations in the project area.

4. Vertical Control:

Vertical control for use by stereoscopic instruments was not required.

5. Contours and Drainage:

Contours not applicable. Drainage was interpreted on the field photographs. The drainage pattern is usually visible on the photographs due to the lack of woodland cover. The images of some of the dry, intermittent stream beds appear on the photographs. [illegible] for the Columbia River, Snake River and the Yakima River, the drainage in the area is mostly intermittent. The principal irrigation canals, ditches, pipelines and wasteways have been indicated on the field photographs.

6. Woodland Cover:

The area is almost devoid of woodland cover, except for [illegible] trees and similar deciduous trees that flourish in sloughs along the rivers and irrigation canals and the various trees that have been planted near residences for shade purposes.

7. Shoreline and Alongshore Features:

A water surface elevation of 340 feet above mean sea level was established by the Corps of Engineers and is maintained by the dam of McNary Dam as the normal pool level. This is the level of the pool that appears on most of the mine-lens photography and the accepted mean high water line. Near the northeast limits of this project the mine-lens photography along the Snake River was taken when the river was above the normal stage. Due to the [illegible] treatment of the shore, the horizontal displacement of the mean high water line would be very slight in most instances.

The low water line was not verified in the field. Due [illegible]

3. Horizontal Control:

Four new horizontal control stations were established by triangulation methods; stations PHILLIPS, PACIFIC CHEMICAL COMPANY LIGHT, a fixed aid to navigation; KENNEWICK, SILVER-COLORED ELEVATED WATER TANK and KENNEWICK, TELEVISION STATION KTRX, MAST, located because of landmark value; and RICHLAND LIGHT, a fixed aid to navigation not in the project area, located because it is the last and most northerly of the aids to navigation along the McNary Pool.

A systematic search was conducted for all listed horizontal control stations in the project area.

4. Vertical Control:

Vertical control for use by stereoscopic instruments was not required.

5. Contours and Drainage:

Contours not applicable. Drainage was indicated on the field photographs. The drainage pattern is usually visible on the photographs due to the lack of woodland cover. The images of some of the dry, intermittent stream beds appear on the photographs. Except for the Columbia River, Snake River and the Yakima River, the drainage in the area is mostly intermittent. The principal irrigation canals, ditches, pipelines and waterways have been indicated on the field photographs.

6. Woodland Cover:

The area is almost devoid of woodland cover, except for willow, locust and similar deciduous trees that flourish in clumps along the rivers and irrigation canals and the various trees that have been planted near residences for shade purposes.

7. Shoreline and Alongshore Features:

A water surface elevation of 340 feet above mean sea level was established by the Corps of Engineers and is maintained at the face of McNary Dam as the normal pool level. This is the level of the pool that appears on most of the nine-lens photography and is the accepted mean high water line. Near the northeast limits of the project the nine-lens photography along the Snake River was taken when the river was above the normal stage. Due to the flat gradient of the shore, the horizontal displacement of the mean high water line would be very slight in most instances.

The low water line was not verified in the field. Due to

level of McNary Pool at the time of field inspection, this feature was flooded. The project instructions require this feature to be delineated from Corps of Engineers photography, taken when the pool was at a lower surface level.

Small bodies of water that connect to McNary Pool and whose water surface elevations are controlled by the larger pool, have been termed pools. Other small bodies of water not normally influenced by the large McNary Pool are denoted as ponds.

Along the east shore of the Columbia River, in the vicinity of [illegible], an earth and boulder dike has been constructed to control the river during the flood stage, continuing northward the dike gives way to a natural, inclined shore, forming low bluffs. On the west side of the Columbia River in the vicinity of Kennewick, a similar earth and boulder dike has been constructed to prevent seasonal floodings. Proceeding northward, the dike gives way to a low, flat area that inundates during the extreme flood stage of the river. The low, flat area slowly rises to form natural earth bluffs in the vicinity of Island View. The mouth of the Yakima River is bounded by natural earth bluffs and a highway fill.

Kennewick has a small boat basin at Clover Island. Another small boat basin can be found near Island View, by the south side of Bateman Island.

There is one highway bridge and one power line crossing in the area. Clearances will be described under Item 12, Other Interior Features.

8. Offshore Features:

Except for a few small islands and rocks, the area appears relatively free of offshore features.

9. Landmarks and Aids:

Significant landmarks for nautical charts will be described on form 567.

A system of lighted, fixed aids, floating aids and day beacons have been constructed and are maintained along the Columbia River (McNary Pool). All fixed aids to navigation were located by either photogrammetric or triangulation methods. All floating aids, throughout the entire project were located by sextant fix.

10. Boundaries, Monuments and Lines:

Only one state, Washington, is involved in the area.

level of McNary Pool at the time of field inspection, this feature was flooded. The project instructions require this feature to be delineated from Corps of Engineers photography, taken when the pool was at a lower surface level.

Small bodies of water that connect to McNary Pool and whose water surface elevations are controlled by the larger pool, have been termed pools. Other small bodies of water not normally influenced by the large McNary Pool are denoted as ponds.

Along the east shore of the Columbia River, in the vicinity of Finley, an earth and boulder dike has been constructed to control the river during the flood stage, continuing northward the dike gives way to a natural, inclined shore, forming low bluffs. On the west side of the Columbia River in the vicinity of Kennewick, a similar earth and boulder dike has been constructed to prevent seasonal floodings. Proceeding northward, the dike gives way to a low, flat area that inundates during the extreme flood stage of the river. The low, flat area slowly rises to form natural earth bluffs in the vicinity of Island View. The mouth of the Yakima River is bounded by natural earth bluffs and a highway fill.

Kennewick has a small boat basin at Clover Island. Another small boat basin can be found near Island View, by the south side of Bateman Island.

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8. Offshore Features:

Except for a few small islands and rocks, the area appears relatively free of offshore features.

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A system of lighted, fixed aids, floating aids and day beacons have been constructed and are maintained along the Columbia River (McNary Pool). All fixed aids to navigation were located by either photogrammetric or triangulation methods. All floating aids, throughout the entire project were located by sextant fix.

10. Boundaries, Monuments and Limits:

Only one state, Washington, is involved in the area.

The three involved counties, Benton, Franklin and Walla Walla share common boundaries, formed by the Columbia and Snake Rivers in the project area.

The approximate boundary limits of Columbia Park were denoted on the field photographs. The park is located along the west shore of the Columbia River near Kennewick and is maintained by Benton county.

A portion of the reservation of the Atomic Energy Commission in the vicinity of the mouth of the Yakima River was shown on a field photograph. It is possible that this boundary may not fall in the project area during compilation as the field inspection was usually conducted beyond the project limits.

11. Horizontal Control:

Four marked, recoverable topographic stations and sixteen un-monumented photo-topo stations were established, all stations being along the Columbia River, Snake River and Yakima River, to furnish control for future hydrographic surveys.

The following are the marked, recoverable, topographic stations established:

T-9120 - None

T-10420 - OLD 1958, VISTA LIGHT 1958, YAKIMA RIVER LIGHT 1958

T-11316 - SPS-22 1957

The names of the un-monumented stations will be listed under Item 49, Notes to the Hydrographer.

Along the Snake River, triangulation stations established by the Corps of Engineers were set at intervals to make their use feasible for control of future hydrographic surveys.

12. Other Interior Features:

Highways and roads were classified on photographs as described under Section 5441, Topographic Manual.

The area along the Columbia River is settled, forming several towns and urban areas. Near the West Highlands area of Kennewick is a small airfield known as Vista Field. A grain elevator is at Vista railroad siding. An extensive irrigation system serves the area along the Columbia River. Railroads and the main, trunk power transmission lines were denoted on the photographs.

Clearances for the bridge and power transmission lines are listed below:

New Pasco - Kennewick Highway Bridge fixed span

Horizontal clearance	510 feet
Vertical clearance	60 feet

Power Transmission Line Crossing over Snake River at Strawberry Island

Vertical clearance	North span	38 feet
	South span	67 feet

13. Geographic Names:

A geographic names investigation was conducted for the project area and is submitted under separate cover.

15. Notes to the Compiler:

Prior to compilation of sheets T-9120 and T-11613, it is suggested that the Surveying and Drafting Branch, Corps of Engineers, U. S. Army, Office of the District Engineer, Walla Walla District, Walla Walla, Washington be contacted and the latest air photograph prints of the construction area of Ice Harbor Dam site be obtained to determine the extent of progress from the date of the nine-lens photography.

The abbreviation Orch was used in lieu of the conventional "O" to designate orchards to avoid possible confusion with class 1 houses that could be circled in orchard areas.

Approved:

V. Ralph Sobieralski
LCDR, C&GS
Officer-in-Charge

Respectfully submitted:

Robert B. Melby
Cartographic Survey Aid
Unit Chief.

T-9420

PHOTOGRAMMETRIC PLOT REPORT

Radial Plot "C"

Map Manuscripts T-9120,

T-10420 thru T-10423 and T-11316

21. Area Covered:

This radial plot covers the shorelines of the Columbia River to an interior depth of about 3 miles from Attalia, Washington upstream to Bateman Island and the shorelines of the Snake River to an interior depth of 3 miles from the Columbia River upstream to the Ice Harbor Dam. It comprises manuscripts T-9120, T-10420 thru T-10423 and T-11316.

22. Method:

The control extension was accomplished by the hand templet radial line plot method using acetate templets made from nine-lens photographs taken in 1954 and 1956. Photographs were prepared by the usual methods and master calibration templets No. 43497 and No. 48340 were used respectively for the 1954 and 1956 photography when correcting for transforming errors and paper disturbance. Refer to letter, 70-ak1, dated 9 August 1956, subject: "Compilation - Projects 27260, Charleston, S. C. and 27020, Upper Columbia River, Oregon", relative to the use of calibration templet No. 48340 (1955) for 1956 photography.

~~Five~~ Six 2' x 3' sheets of polar material, on each of which was ruled a polyconic projection of its area comprising 3 minutes - 45 seconds of latitude and 7 minutes - 30 seconds of longitude at a scale of 1:15,000 were furnished for work sheets. The Lambert State grids of Washington were also ruled on these sheets. The horizontal control stations falling on each of the respective ~~five~~ six manuscripts were plotted and verified. The sheets were joined with clear cellulose tape. The templets were oriented to the identified control directly on the joined work sheets and fastened with masking tape. After all templets were satisfactorily oriented and fastened the entire radial plot was turned face down and the locations of pass points and principal points were pricked and indicated by circles on the reverse sides of the work sheets using Craftint No. 111 red plastic ink. The plot was then turned face up and the templets were dismantled. The photogrammetric points falling in the margins at the junctions of the joining sheets were transferred and then the joined work sheets were dismantled.

There were more than an adequate number of identified horizontal control stations available and all were satisfactorily held in this radial plot. The results were excellent and well within the limits of horizontal accuracy requirements.

23. Adequacy of Control:

The identification of horizontal control stations was satisfactory and more than an adequate number were available.

24. Supplemental Data:

There were topographic maps, compiled by the Corps of Engineers, U. S. Army, Walla Walla District, available which covered the area of this radial plot. These were not needed to supplement the identified horizontal control stations, but they were used during the compilation of planimetric details for verification of certain features for which state coordinate positions of the U. S. Engineers were available.

25. Photography:

The photography was adequate. The P.M.A. ratio prints were not needed to supplement the nine-lens photography.

Approved:

V. Ralph Sobieralski
LCDR, C&GS
Officer-in-Charge

Respectfully submitted:

J. Edward [illegible]
Cartographer
C&GS

FORM 164
(4-23-54)

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

DESCRIPTIVE REPORT — CONTROL RECORD

MAP T-10420 PROJECT NO. Ph-63 SCALE OF MAP 1:15,000 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)
DODGER(USE)1950	1274	N.A. 1927	46 13 08.688 119 09 23.221			268.3 (1584.3) 497.7 (788.3)	
BASALT 1956	Field Comp.	"	46 11 15.19 119 12 23.02			469.0 (1383.6) 493.7 (793.0)	
RICHLAND 1947	1225	"	46 15 10.212 119 15 57.136			315.3 (1537.3) 1223.9 (61.3)	
FRANK(USE)1950	1272	"	46 14 30.501 119 16 37.489			941.8 (910.8) 803.2 (482.3)	
MINT(USE)1947	1273	"	46 15 40.993 119 13 54.356			1265.7 (586.9) 1164.1 (120.9)	
RICHLAND CONCRETE STACK 1947	1247	"	46 16 39.042 119 16 40.487			1205.5 (647.1) 866.8 (417.8)	
RICHLAND MUNICIPAL TANK No. 3, ELEVATED 1948	1247	"	46 16 00.375 119 17 24.941			11.6 (1841.0) 534.1 (750.8)	
RICHLAND MUNICIPAL TANK No.2, ELEVATED 1948	1247	"	46 15 46.205 119 16 18.761			1426.7 (425.9) 401.8 (883.2)	
KENNEWICK SILVER COLORED, ELEVATED WATER TANK 1958	G.P. Office Comp.	"	46 11 30.00 119 09 26.89			926.3 (926.3) 576.6 (710.0)	
KENNEWICK TELE-VISION STATION KTFX MAST 1958	G.P. Office Comp.	"	46 12 42.47 119 09 20.55			1311.3 (541.3) 440.5 (845.6)	→
ESTATE(USE)1950	1274	"	46 14 04.167 119 09 08.775			128.7 (1723.9) 188.0 (1097.7)	
GRAPE(USE)1950	"	"	46 14 03.413 119 08 02.086			105.4 (1747.2) 44.7 (1241.0)	

1 FT. = .3048006 METER

COMPUTED BY: C.C.H. DATE 5-9-58 CHECKED BY: B.N.W. DATE 5-9-58

COMM-DC-57843

FORM 164
(4-23-54)

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

MAP T-10420 PROJECT NO. Ph-63 SCALE OF MAP 1:15,000 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)
LESLIE(USE)1950	1279	N.A. 1927	46 13 48.165 119 15 22.319				
PIT(USE)1948	1273	"	46 16 26.521 119 15 25.412			818.9 (1033.7) 544.1 (740.6)	
RODEO(USE)1948	Form 525	"	330,318.5 2,319,131.1	318.5 (9681.5) 9131.1 (868.9)		97.1 (2950.9) 2783.1 (264.9)	
PASCO STATION KORD RADIO MAST 1957	Field Comp.	"	46 13 40.818 119 07 32.215			1260.3 (592.3) 690.4 (595.4)	
PASCO STATION KALE CENTER RADIO MAST 1957	"	"	46 14 34.050 119 10 41.024			1051.4 (801.2) 878.9 (406.6)	

1 FT. = .3048006 METER

COMPUTED BY: C.C.H. DATE: 5-9-58 CHECKED BY: D.N.W. DATE: 5-9-58

COMM-DC-57843

COMPILATION REPORT

Map Manuscript T-10420

Project Ph-63

31. Delineation:

The compilation and drafting were accomplished as follows:

(a) Graphic compilation in ink on work sheets having projections ruled in Washington

(b) Office review.

(c) Transfer of compiled planimery and projections to orange coated scribe sheet by "Watercote" methods.

(d) Scribing in negative of compiled details and projections.

(e) Reproduction of scribed features on CronarFlex material positive.

(f) Stick-up of symbols and type.

(g) Final office review and inspections by Officer-in-Charge.

32. Control:

Refer to items 22 and 23 of the Photogrammetric Plot Report and to item 3 of the Field Inspection Report, (1958 Season) copies of which are included in this Descriptive Report.

33. Supplemental Data:

Prints of maps and plans used to supplement the photographs and field inspection data are as follows:

(a) City of Kennewick, Washington Scale 1" = ¼ mile.
(b) City of Kennewick, Washington Scale 1" = 1000'.
(c) City of Pasco, Washington Scale 1" = 1000'.
(d) Riverview Area, Franklin Co., Washington Scale 1" = 1000'.
(e) General Highway Map, Benton Co., Washington Scale 1" = 1 mi.
(f) General Highway Map, Franklin Co., Washington Scale 1" = 1 mi.
(g) Benton County Road Map Scale 6" = 1 mile.
(h) Benton County Washington, County Road System Scale 4" = 1 mi.
(i) Walla Walla District, Corps of Engineers, Nov. 1, 1954 Scale 1" = 333.3', "Relocations and Section Corner Ties".

MDR-1-12/40 Sheet No. 45
MDR-1-12/41 Sheet No. 46
MDR-1-12/46 Sheet No. 50
MDR-1-12/45 Sheet No. 51
MDR-1-12/44 Sheet No. 52
MDR-1-12/43 Sheet No. 53
MDR-1-12/42 Sheet No. 54
MDR-1-12/47 Sheet No. 55

Numerous points of planimetry that appear on T-10420 were located by triangulation ties during the survey listed under (i). Lambert Coordinates were furnished by the Corps of Engineers for these points and they were plotted on the manuscript. It was found that the graphically compiled planimetry is in excellent agreement with all planimetric detail located by triangulation ties by the Corps of Engineers.

34. Contours and Drainage:

Contours are not applicable. Drainage was delineated by field inspection and refined by office examination of the photographs supplemented by reference to the U. S. Geological Survey quadrangles of the area.

35. Shoreline and Alongshore Details:

The shoreline of the nine-lens photographs taken on 9-26-54 when the pool level was 340 feet above mean sea level has been shown. Except where clarification was needed no field inspection was made of the shoreline.

The approximate low-water line was compiled from Corps of Engineers, U. S. Army photographs taken on 13 October 1953 when the water level of the pool was about 324 feet above mean sea level.

36. Offshore Details:

None.

37. Landmarks and Aids:

Form 567 is submitted for these features. Two fixed aids which fall north of the manuscript limits are included on the Form 567. Floating aids to navigation have been located in accordance with "Instructions, Shoreline Mapping - Project 63, McNary Pool, Oregon - Washington, Field and Office", Supplement 2 dated 24 April 1958. These were plotted from sextant angles furnished by the field units.

38. Control for Future Surveys:

Five Forms 524 are sumbitted for recoverable topographic station.

Ten photo-hydro stations of recoverable topographic station accuracy were located. These are either objects or stations marked by drill holes or iron pipes.

Refer to Item 49. "Notes to the Hydrographer" for the list of names of the Recoverable Topographic Stations and for descriptions of the photo-hydro stations.

39. Junctions:

A satisfactory junction has been made with T-10421. There are no contemporary surveys to the north, south and west of this manuscript.

40. Horizontal and Vertical Accuracy:

There are no areas believed to be of sub-normal horizontal accuracy. Vertical accuracy is not applicable.

46. Comparison with Existing Maps:

The U. S. Geological Survey quadrangle maps of the area are obsolete for comparison with this shoreline manuscript because they were made previous to the flooding of the McNary Pool.

47. Comparison with Nautical Charts:

There are no nautical charts of the area. Recent hydrographic surveys by the Corps of Engineers were not available for comparison purposes.

Approved:

V. Ralph Sobieralski

V. Ralph Sobieralski
LCDR, C&GS
Officer-in-Charge

Respectfully submitted:

J. Edward Deal

J. Edward Deal
Cartographer
C&GS

T-10420. Geographic Names.

Angus Village

Bateman Island (this appears same as Riverview Island of old U.S.G.S. quadrangle, but Bateman is presumably the name now in local use)

Columbia Irrigation District Canal
Columbia Park
Columbia River

Desert Lawn Memorial Park (Cem)

Fruitland Grade School

Hawthorne Elementary School

Island View

Kennewick

Mark Twain School

Northern Pacific

Pasco

Richland Junction
Richland Wye
River Heights Cemetery

Sanders Field
Union Pacific
Vista
Vista Airfield

Washington
Westgate Elementary School
West Highlands

Yakima River

Zintel Canyon

State 8

US 410 State 3
US 395 State 11

Street and church names have not been listed, since no city maps are available for comparison.

A comparison with 1958 State Highway and Rand McNally Road Map shows State 3 as continuing westward with US 410, and US 395 State 11 as extending northward from Pasco.

Names approved 10-14-58
L. Heck.

49. Notes to the Hydrographer:

The shoreline on this manuscript shown with a full line is at a water level of 340 feet above M.S.L. or normal pool level.

The approximate low-water pool level at 325 feet above M.S.L. is shown with a dotted line and was compiled from single lens ... photographs taken in 1953 by Corps of Engineers when the pool level was 324 feet.

Forms 524 are submitted for recoverable topographic stations namely:

Richland Light 1958, Yakima River Light 1958, Vista Light 1958, GOLF, 1957 and OLD 1957

Photo-hydro stations located with recoverable topographic station accuracy and for which Forms 524 were not required are:

Name	Photo. No.	Description
Topo No. 27	46200	A length of 3/4" pipe cemented in ground. "Topo 27" inscribed in cement.
Topo No. 28	46201	A length of 3/4" pipe cemented in boulder at the top of the south shoulder of a dike. "Topo 28" inscribed in cement.
Topo No. 29	46201	A drill hole in S.E. corner of concrete bulkhead. "Topo 29" painted on corner.
Topo No. 30	46201	A drill hole in S.W. corner of abandoned concrete foundation. "Topo 30" painted on corner.
*Topo No. 31	46202	A drill hole in S.W. corner of L-shaped abandoned concrete foundation. "Topo 31" painted on corner.
*Topo No. 32	46202	A drill hole in W. corner of abandoned concrete foundation. "Topo 32" painted on corner.
Topo No. 124	46199	A section of 1" pipe driven in the top of the north shoulder of a dike.
Topo No. 125	46200	A drill hole in the N.E. corner of abandoned concrete foundation. "Topo 125" painted on corner.

Name	Photo. No.	Description
Topo No. 126	46200	A drill hole in N.E. corner of old concrete house foundation. "Topo 126" painted on corner
Topo No. 127	46200	The N.E. corner of abandoned concrete pumping plant. "Topo 127" painted on corner.
Topo No. 128	46201	A length of 3/4" pipe cemented in an 8" concrete pipe. "Topo 128" inscribed in cement.
Topo No. 129	46202	A drill hole in N.E. corner of concrete base of the westernmost street lamp standard. "Topo 129" painted on corner.
*Topo No. 130	46202	A length of 3/4" pipe cemented in the top of an 8" concrete pipe. "Topo 130" inscribed in cement.

* Stations 31, 32 and 130 marked above fall north of the manuscript limits and they are not shown on the final copy of the advance manuscript. They have been located in the north marginal area on the rough draft manuscript.

Form 567
April 1945

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

T-10420

NONFLOATING AIDS [redacted]

TO BE CHARTED [redacted] STRIKE OUT ONE

Portland, Oregon 9 Sept., 1958

I recommend that the following objects which have [redacted] been inspected from seaward to determine their value as landmarks be charted on [redacted] the charts indicated.

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

V. Ralph Sobieralski, *Chief of Party.*

STATE WASHINGTON

CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE* ° ′	LATITUDE* ″ D.M. METERS	LONGITUDE* ° ′	LONGITUDE* ″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	VISTA LIGHT (1488)		46 14	06.782 209.4	119 12	25.174 539.4	N.A. 1927	Photo T-10420	4-14-58				New Chart
	YAKIMA RIVER LIGHT (1489)		46 15	40.752 1258.3	119 14	21.151 453.0	"	"	4-15-58				"
	RICHLAND LIGHT (1490)		46 16	30.699 947.9	119 16	08.841 189.3	"	3 Pt. Fix T-10420	"				"

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. 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.

* TABULATE SECONDS AND METERS

M-2836-3

Review Report of
Shoreline Manuscript T-10420
May 1959

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

There are no registered topographic surveys of this area.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

PASCO, WASH., 1:125000 Edition of 1917, U. S. Geological Survey

This is the only coverage by other agencies of subject area, and obsolete, because this topographic quadrangle was surveyed in 1904 and 1914.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

None!

65. COMPARISON WITH NAUTICAL CHARTS:

None!

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

Subject shoreline manuscript was compiled according to project instructions and is adequate and accurate for nautical charting purposes.

Reviewed by:

Joseph A. Streifler
Joseph A. Streifler

Approved by:

L C Lasde
Chief, Review & Drafting Section
Photogrammetry Division

Marvin Faulkner
Chief, Nautical Chart ~~Branch~~
~~Charts~~ Division

J E Waugh 8/11/62
Chief, Photogrammetry Division

Max B Ruckett
Chief, ~~Coastal Surveys~~ Operations Division

NAUTICAL CHARTS BRANCH

SURVEY NO. T-10420

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.