13216

13216

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Chart Topography

Field No. ..... *Office No.* T-13216

LOCALITY

State Oregon-Washington

General locality Columbia River

Locality Paterson

~~19 68~~ 1967-69

CHIEF OF PARTY

V. Ralph Sobieralski, Chief
Chief, Photogrammetry Division

LIBRARY & ARCHIVES

DATE .....

USCOMM-DC 5087

FORM C&GS-181a
(3-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T- 13216

PROJECT NO. (II):

PH-6718

FIELD OFFICE (II):	CHIEF OF PARTY
PHOTOGRAMMETRIC OFFICE (III):	**OFFICER-IN-CHARGE**
Washington Science Center	V. Ralph Sobieralski

INSTRUCTIONS DATED (II) (III):

Field - July 12, 1967
Field, Supplement 1 - December 26, 1967
New Chart Topography - September 19, 1967
Nautical Chart Requirements - March 6, 1968
Aerotriangulation - March 20, 1968
Office - April 15, 1968

METHOD OF COMPILATION (III):

B-8 stereoplotter

MANUSCRIPT SCALE (III): 1:20,000 (1:10,000 compilation worksheets)	STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): 1:10,000
DATE RECEIVED IN WASHINGTON OFFICE (IV):	DATE REPORTED TO NAUTICAL CHART BRANCH (IV):
APPLIED TO CHART NO.	DATE: / DATE REGISTERED (IV):

GEOGRAPHIC DATUM (III):	VERTICAL DATUM (III):
NA. 1927	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*

REFERENCE STATION (III):

LAT.:	LONG.:	☐ ADJUSTED ☐ UNADJUSTED

PLANE COORDINATES (IV):	STATE	ZONE
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.

USCOMM-DC 36393A-P66

FORM C&GS-181b
(3-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T-13216

FIELD INSPECTION BY (II):	DATE:
Robert B. Melby	Jan.-Mar. 1968

MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):

Normal pool level, 265 ft. MSL, located by office interpretation from color photography, dated November 1967 and June 1968, and infrared dated June 1968.

PROJECTION AND GRIDS RULED BY (IV):	DATE
R. Lillis	March 1968
PROJECTION AND GRIDS CHECKED BY (IV):	DATE
CONTROL PLOTTED BY (III):	DATE
R. Youngblood	September 1968
CONTROL CHECKED BY (III):	DATE
J. Battley	September 1968
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):	DATE
I. I. Saperstein	Apr.-May 1968

STEREOSCOPIC INSTRUMENT COMPILATION (III):		
J. Richter	PLANIMETRY	DATE
	X	September 1968
	CONTOURS	DATE
	X	September 1968

MANUSCRIPT DELINEATED BY (III):	DATE
R. Youngblood	September 1968
SCRIBING BY (III):	DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):	DATE

REMARKS:

FIELD EDIT - SEPT 1969

USCOMM-DC 36393B-P66

FORM C&GS-181c
(3-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T-13216

CAMERA (KIND OR SOURCE) (III):
RC-8 (Corps of Engineers "Y" camera)
RC-8 "E"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
67-Y(C)-7212-6216	11/2/67	12:52-12:53	1:20,000	
67-Y(C)-7234-7240	"	13:18-13:21	"	
68-E(C)-6418-6419	6/16/68	11:28	1:20,000	
68-E(C)-6450-6454	"	11:58-11:59	"	
68-E(C)-6443-6445	"	11:44	"	

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION:			
ORDINATE STATION:			
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV): J. P. BATTLEY	DATE: MAY-JUNE 1971
PROOF EDIT BY (IV):	DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):	RECOVERED: 1	IDENTIFIED: 1
NUMBER OF BM(S) SEARCHED FOR (II):	RECOVERED: 4	IDENTIFIED 4

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:

USCOMM-DC 56393-C-P66

Summary to Accompany Descriptive Report T-13216

T-13216 is one of seven 1:20,000 scale chart topography maps covering Lake Umatilla (John Day Pool) a part of the Columbia River. John Day Pool was formed by impounding the water behind John Day Dam east to McNary Dam. The seven maps will provide the base for two small craft charts (673 SC and 674 SC).

Field operations began in late 1967 with the paneling of selected triangulation stations just prior to acquiring aerial photography. Field inspection continued and encompassed the determination of elevations of selected bench marks, shoreline inspection and the photoidentification of features that could possibly have a critical elevation for charting when the pool is formed.

Twelve strips were bridged by the analytical method, two strips at 1:60,000 scale and ten at 1:20,000 scale. Excellent horizontal and vertical accuracy was obtained from the premarked control and field determined elevations.

Photo-compilation was accomplished in the Washington office, utilizing the 1:20,000 scale color photography taken November 2, 1967, prior to the flooding of the John Day Pool. The Columbia River ranged in elevation, on this photography, from approximately 165 feet above MSL to 235 feet at McNary Dam. The shoreline to be shown on the charts is the "normal pool level" of 265 feet. Contours and spot elevations were compiled on the B-8 stereoplotter at selected intervals between the river level and the 265 foot shoreline contour. These will be used as depth curves and soundings on the published chart. All required chart compilation features were compiled at this same time. The original instructions called for the photogrammetric compilation at chart scale (1:20,000) but upon initiating the B-8 compilation, it was apparent that for clarity the contours would have to be compiled at 1:10,000 scale. This scale allows the Marine Chart compiler and the field editor to clearly interpret the contours and other compiled features and evaluate, what will be shown on the finished chart. Discussion with the Marine Chart Division resulted in the decision to supply them with 1:10,000 scale inked "Manuscript work bases" for interpolation. Field edit was applied to these bases (approx. two bases for each T-sheet). These bases were reduced to one-half size and paneled to the 1:20,000 scale manuscripts for copy

and registration. Any new features revealed by the 1968 photography were added during edit application. This photography was taken after the area was flooded and a comparison was made with the compiled shoreline.

Field edit was completed in September 1969.

1:10,000 scale cronaflexes and 1:20,000 scale reductions were furnished Marine Charts. Due to a change in their priorities, completion was delayed on this project. Review and registration was re-scheduled and completed in June 1971.

Submitted by:

J. P. Battley, Jr.

Areal Field Inspection

The area is the reservoir to be formed by the John Day Dam on the Columbia River, between the states of Washington and Oregon. The land adjacent to this section of the river could be considered semi-arid, with dry land grain farming on the plateaus above the river gorge and irrigated lands adjacent to the river.

The major portions of the river flows through a rocky gorge, althrough stretches of the river"s present shoreline is of a gravel-stone composition notably the upper reaches of the proposed reservoir.

The color photography furnished the field unit was of good quality for the selection of vertical features.

Horizontal Control

The horizontal control requirements were fulfilled when a selected number of triangulation stations were paneled prior to the flying of the horizontal bridging photography, during the summer of 1967. White plastic or whitewash was used as paneling material. The plastic material required a considerable amount of stones or stakes to hold it in place during windy periods.

Vertical Control:

Vertical Control points had been selected and indicated on the photography furnished to the field party. An elevation was determined in the field for each selected point by trigonometric leveling, using stadia, electrochain or geodetic lengths.

The pool area was inspected for possible critical elevation features in conjunction with the Corps of Engineers topographic maps. Near the upper end of the pool, several islands that are awash during

the spring flooding of the river were considered to be possible obstruction features even though they are relatively flat. They will probably form shoal areas once the reservoir has been filled.

A tabulation of the vertical control points (V. P.-) and critical elevation features (C. E. F.-) have been compiled as to photograph number field record book, to aid the compiler.

Recovery notes C(form 685A) will be submitted for each C&GS bench mark recovered. Recovery notes for each U.S. Corps of Engineers bench mark recovered and used as basic vertical control are being submitted with a concise description, as the majority of these marks do not have previous descriptions and the time necessary to make a complete recovery of each mark was considered to be excessive in view of the fact many of the U.S.E. bench marks do not meet C&GS requirements for monumentation and some will be inundated in the near future.

Possible changes may occur on the major areas of Blalock Island, as it is composed mostly of fine drifting sand. The river currents after the flooding by the dam, will probably cause some degree of erosion as the sand is primarily in ridges and dunes. Along the south shore of the river in the vicinity of the old railroad station of Quinton, Oregon is an area composed of a large group of rocky outcroppings (Photo 67y7109). The elevations of the most prominent outcroppings were determined in the field. This area should be charted foul.

Shoreline Inspection

The alongshore area including the river islands were inspected and classified as to their sediment characteristics. After the flooding

of the reservoir, this will give the equivalent of bottom samples. This data was indicated on the field photographs.

Field Methods:

The majority of the field trigonometric leveling was performed with the Wild T1A theodolite. This particular instrument incorporates a self leveling vertical circle feature which expedited each instrument setup. Rod levels were used in conjunction with the stadia rods to insure the verticality of the rods, as the wind was a frequent factor. The U.S. Geological Survey "Stadia Tables for Obtaining Differences of Elevations". No. 9-1163 was used in the computations.

The use of the electrochains to determine distances were used only when the physical conditions of the terrain made the usual trig-level impractical.

Only two full sets of instrument readings were recorded for each observation setup instead of the normal procedure of two full and eight fine sets of readings. In each case an offset or eccentric point was occupied. In effect this allows a double-determination of the new point by a sliver triangle. When the electrochains were used reciprocal observations were observed with the Wild T-2 theodolite.

Field Problems

It was necessary to be selective in the choice of horizontal control stations to be paneled as the panels required a relatively large area, the remote stations were selected as the panels would not have to be set in cultivated ~~areas~~ areas. The plastic paneling material undergoes a change when exposed to the elements and becomes quite brittle after a short period and more or less disintergrates and the fragments are

scattered by the winds. In the future it may be necessary for the field units to revisit and remove the paneling after photography to control the litter problem.

Steep, rocky cliffs required a zigzag course to maintain the 10 degree vertical angle maximum as per the project instructions. No particular difficulty was encountered other than the reservoir area was being cleared of cultural features and the removal of bridges, culverts and the construction of railroad and highway right-of-way fences created an access problem at times.

Contact with the U. S. Corps of Engineers, Walla Walla District can be made with Mr. J. P. Futhey, Phone 509-525-5500, extension 400, Walla Walla, Washington

Approved:
Gerold L. Short
CAPTAIN, USESSA

Respectfully Submitted:
Robert B. Melby
Chief Photo Party
Pacific Marine Center

PHOTOGRAMMETRIC PLOT REPORT
JOB PH-6718
COLUMBIA RIVER, OREGON - WASHINGTON
August 1968

21. Area Covered

This report covers the Columbia River from the John Day Dam to the McNary Dam, consisting of seven (7) 1:20,000 scale T-sheets, T-13211 thru T-13217. - (T-13214 was changed to T-12150)

22. Method

Twelve (12) strips were bridged using analytical methods. Strips 1 and 2 were 1:60,000 scale panchromatic diapositives and strips 3 thru 12 were 1:20,000 scale color diapositives. Numerous tie points were located from the 1:60,000 scale photography to control the 1:20,000 scale photography.

The attached sketch of the strips bridged shows the placement of triangulation used in the final strip adjustments. Closures to both horizontal and vertical control are shown for each strip on the IBM readouts along with all bridge points on Oregon Zone 1 plane coordinates. All points have been converted to Mercator values.

23. Adequacy of Control

All horizontal control was premarked and was adequate to control the 1:60,000 scale bridge.

Since the vertical accuracy of our bridging results was of prime importance, the field party was required to furnish elevations to insure results of high accuracy. The results of our bridging proved their work to be very good. The RMS deviations for 173 vertical points in our bridged strips was 1.0 feet.

24. Photography

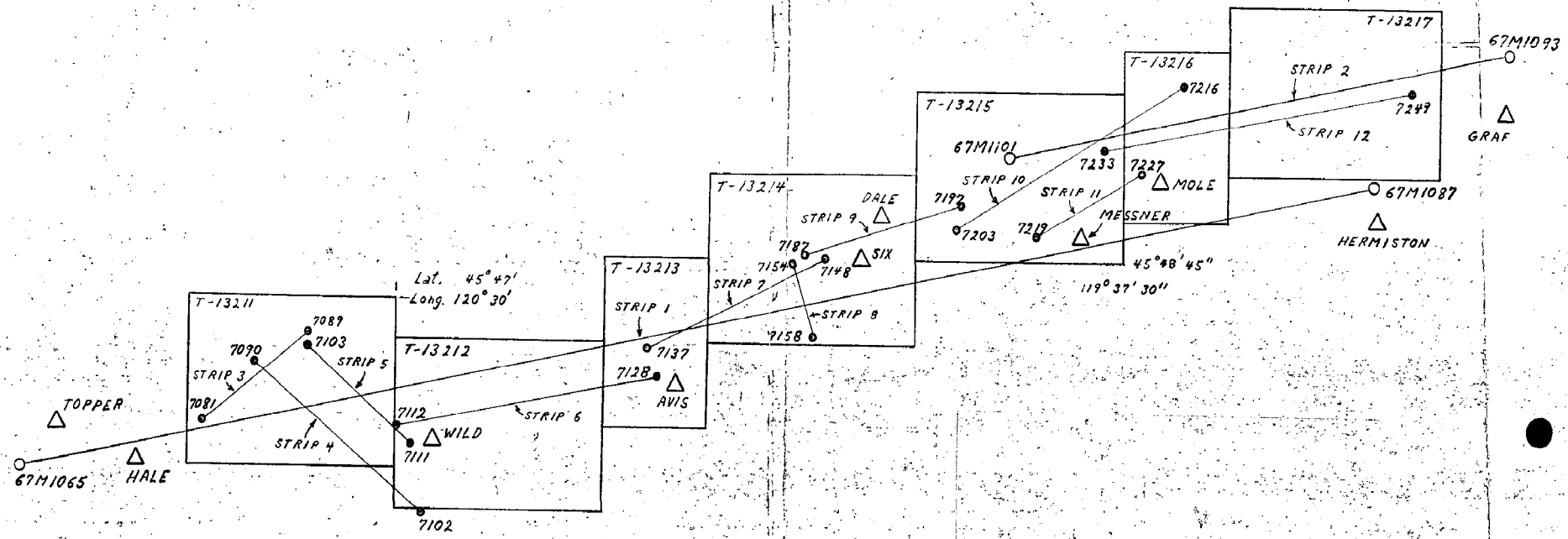
The definition and quality of the RC-9 "M" and RC-8 "Y" photography were good. No difficulty was encountered in the bridging of any strip.

Respectfully submitted,

I. I. Saperstein

Approved and forwarded,

Chief, Aerotriangulation Section



AEROTRIANGULATION SKETCH
JOHN DAY POOL
COLUMBIA RIVER
OREGON - WASHINGTON
MAY, 1968

○ 1:60,000 panchromatic
• 1:20,000 color
△ horizontal control

COMPILATION REPORT
T-13216

Refer to Descriptive Report T-13211 for Field Inspection and Photogrammetric Plot Reports.

31. Delineation

T-13216 is a 1:20,000 scale chart compilation manuscript. Worksheets for T-13216 were compiled on the B-8 stereoplotter at a scale of 1:10,000. Color photographs, scale 1:20,000, taken November 2, 1967, were bridged and used in the instrument. This photography was supplemented with color photography taken in June 1968 after the John Day Pool area was flooded. The 1:10,000 scale ratio prints of 1968 photographs were with the compiled worksheets and additions or revisions were made prior to inking. One worksheet was inked at 1:10,000 scale to cover the area of T-13216. This scale afforded clarity of the compiled features. A cronaflex copy and ozalid copies were ordered for these worksheets for field edit use. After field edit is applied, one-half reduction cronaflexes will be made and paneled onto the 1:20,000 scale manuscript for T-13216.

32. Control

All horizontal control was premarked and adequate in density and placement. Vertical control was of prime importance for this project as the area contoured is to be used as a bathymetric chart (depth curves, etc.). Excellent vertical accuracy was achieved in the bridge from numerous field-identified vertical points. (See the Photogrammetric Plot Report.)

33. Supplemental Data

None used in photogrammetric compilation.

34. Contours and Drainage

Color photography at 1:20,000 scale was bridged by analytic methods and used in the B-8 stereoplotter for contouring. This photography taken in November 1967 before the pool area was flooded was of good quality and contours within the required accuracy ($\pm$2 feet) were obtained. Contours were drawn at prescribed intervals from the old river shoreline to 262 ft. These intervals were: 3 ft. from the 265-ft. shoreline to

259 feet (6-ft. depth curve), 6 ft. down from 259 feet to 235 feet (30-ft. depth curve) and 10-ft. intervals from there to the old river level. In areas of congestion the 247-ft. and 259-ft. contours (18-ft. and 6-ft. depth curve) were given preference and contoured without feathering. The 265-ft. elevation was then contoured as the shoreline at normal pool level.

35. Shoreline and Alongshore Details

The shoreline was delineated as stated in item 34. Color photography of 1968 taken after the John Day Pool was flooded, was ratioed and compared with the contoured shoreline. Minor differences were noted and revised. The area east of Paterson to the east limits of T-13216 and north of the dismantled R.R. and to the new R.R. lacks sufficient color photo coverage. The 1:40,000 scale infrared photography was used to supplement the color photography to detail the shoreline in this area. This photography was taken June 17, 1968, after the pool was flooded.

36. Offshore Detail

No comment.

37. Landmarks and Aids

Nine aids to navigation are located from U.S. Coast Guard positions and all are in agreement. Landmarks to be located by field edit.

38. Control for Future Surveys

None

39. Junctions

Junctions were made to the west with T-13215 and to the east with T-13217 are in agreement.

40. Horizontal and Vertical Accuracy

Refer to paragraph No. 23 of the Photogrammetric Plot Report and paragraph No. 32 of the Descriptive Report.

41 thru 45.

Inapplicable

46. Comparison with Existing Maps

Comparison has been made with USGS Quadrangle Paterson, Washington-Oregon, scale 1:24,000, dated 1962, contour intervals 10 feet. The quadrangle was enlarged to 1:10,000 scale so that detail could be checked. Compilation instructions state that all detail and the 300-ft and 400-ft contours that have changed above the 265-foot pool level should tie into the contours on the existing quads. Areas of change were recompiled and ties made.

47. Comparison with Nautical Charts

Comparison was made with Nautical Chart No. 6162, scale 1:20,000, 2nd edition, September 1967, at which time John Day Pool Dam was under construction. Preliminary Chart No. 6162, scale 1:20,000, 3rd edition, dated June 1968, was compiled from John Day Lock and Dam Reservoir drawings of U.S. Corps of Engineers, dated 1965, using an interpreted line between the 260-ft. and 270-ft. contour as the 265-foot pool level for the shoreline.

Items to be applied to Nautical Charts immediately: None

This is a new chart compilation.

Respectfully submitted:

John C Richter

John C. Richter
Cartographer

Approved and Forwarded:

K. N. Maki, Chief,
Compilation Section

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6718 (Lake Umatilla,

Oregon and Washington)

T-13216

Blalock Islands

Columbia River

Lake Umatilla

North Channel

Paterson

Paterson Ferry Road

South Channel

Spokane, Portland and Seattle (R. R.)

State No. 8 (Highway)

State No. 32 (Highway)

U.S. No. 730 (Highway)

Approved by:

A. J. Wraight

A. Joseph Wraight
Chief Geographer

Prepared by:

Frank W. Pickett

Frank W. Pickett
Cartographic Technician

REVIEW REPORT
T-13216
June 1971

61. General Statement

See Summary in Preface.

62. Comparison with Registered Topographic Surveys

None

63. Comparison with Maps of Other Agencies

Comparison was made with USGS Quadrangle Paterson, Washington-Oregon, scale 1:24,000, dated 1962, contour interval 10 feet. Revisions necessitated by new construction of the first two index contours above the normal pool level (300' and 400') were made on the B-8 stereoplotter until junction was made.

64. Comparison with Contemporary Hydrographic Surveys

None

65. Comparison with Marine Charts

Comparison was made with Chart No. 6162, scale 1:20,000, 3rd edition, dated June 1968. This is a preliminary chart compiled from Corps of Engineers' drawings dated 1965. The shoreline was interpolated between the 260- and 270-foot contour for the 265-foot mean pool level.

66. Adequacy of Results and Future Surveys

This map complies with project instructions and meets the National Standards of Accuracy. T-13216 and the other six maps in the project will provide an excellent base for new charts 673 and 674SC.

Approved by:

Chief, Photogrammetric Branch

Jack E. Guth
Chief, Photogrammetry Division

Reviewed by:

Peter P. Bartley Jr

FORM C&GS-164
(4-68)
USCOMM-DC
50318-P68

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT CONTROL RECORD

MAP T- T-13216 PROJECT NO. PH-6718 SCALE OF MAP 1:20,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (1 Ft. = 3048006 meter) FORWARD (BACK)
MOLE (USE) 1942 Target	PC Pg. 74	N.A. 1927	808,889.40 2,229,967.19	

COMPUTED BY DATE CHECKED BY DATE

FORM C&GS-567
(5-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE REVISED~~
~~TO BE DELETED~~
} STRIKE OUT TWO

Umatilla, Oregon March 13, 1959

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

The positions given have been checked after listing by J. Richter

R. B. Melby
Chief of Party.

STATE Washington-Oregon — Light List

CHARTING NAME	DESCRIPTION	~~SIGNAL NAME~~	POSITION LATITUDE* ° ′	″ D.M. METERS	LONGITUDE* ° ′	″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
MESSNER	LOWER RANGE FRONT LIGHT	1808.11	45 51	01.34 41.37	119 41	41.47 894.6	N.A. 1927	T-13215 Photo	3/12/69				6161
MESSNER	LOWER RANGE REAR LIGHT	1808.12	45 51	01.53 47.24	119 41	34.40 742.1	"	"	"				"
MESSNER	LIGHT 55	1810.11	45 51	07.07 218.3	119 43	01.00 21.58		"	"				"
MESSNER	MIDDLE RANGE FRONT LIGHT	1811.11	45 51	35.45 1094.5	119 39	29.78 642.4		"	"				"
MESSNER	MIDDLE RANGE REAR LIGHT	1811.12	45 51	36.73 1134.0	119 39	22.27 480.4		"	"				"
MESSNER	LIGHT 56	1813.11	45 51	11.37 351.0	119 41	21.76 469.5		"	"				"
MESSNER	LIGHT 57	1814.11	45 51	31.05 958.6	119 40	24.60 530.7		"	"				"
MESSNER	UPPER RANGE FRONT LIGHT	1815.11	45 51	18.15 560.4	119 39	54.72 1181.7		"	"				"
MESSNER	UPPER RANGE REAR LIGHT	1815.12	45 51	10.55 325.7	119 40	01.17 25.24		"	"				"
MESSNER	LIGHT 59	1818.11	45 52	24.50 756.4	119 39	07.07 152.5		"	"				"
BLALOCK	LIGHT 61	1819.11	45 53	20.63 636.9	119 38	21.34 460.1		"	"				6162
BLALOCK	LIGHT 62	1820.11	45 53	42.72 1319.0	119 37	30.60 659.7		"	"				"
PATERSON	LIGHT 63	1821.11	45 54	53.25 1644.0	119 36	44.17 951.9		T-13216 "	"				"
PATERSON	LIGHT 65	1822.11	45 55	22.04 680.5	119 35	42.25 910.3		"	"				"

This form shall be prepared in accordance with Hydrographic Manual, Publication 20-2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. 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

USCOMM-DC 36485-P65

FORM C&GS-567
(5-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE REVISED~~
~~TO BE DELETED~~
} STRIKE OUT TWO

Umatilla, Oregon March 13, 19 71

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

The positions given have been checked after listing by R. B. Melby

Chief of Party.

STATE Washington-Oregon Lt. List

CHARTING NAME	DESCRIPTION	~~SIGNAL~~ NAME	POSITION LATITUDE* ° ′	″ D.M. METERS	POSITION LONGITUDE* ° ′	″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
PATERSON	LIGHT 67	1823.11	45 55	30.28 934.9	119 35	03.43 73.9	N.A. 1927	T-13216 Photo	3/12/69				6162
IRRIGON	LOWER RANGE FRONT LIGHT	1824.11	45 54	09.33 288.1	119 30	45.96 990.5		"	"				"
IRRIGON	LOWER RANGE REAR LIGHT	1824.12	45 54	00.78 24.08	119 30	22.28 480.2		"	"				"
IRRIGON	LIGHT 68	1826.11	45 55	12.27 378.8	119 34	03.04 65.5		"	"				"
IRRIGON	LIGHT 69	1827.11	45 54	45.22 396.2	119 32	14.72 317.3		"	"				"
IRRIGON	LIGHT 71	1828.11	45 54	27.80 858.3	119 31	10.67 230.0		"	"				"
IRRIGON	MIDDLE RANGE FRONT LIGHT	1830.11	45 55	19.81 611.6	119 26	28.46 613.2		T-13217 "	"				"
IRRIGON	MIDDLE RANGE REAR LIGHT	1830.12	45 55	23.80 734.8	119 26	16.29 351.0		T-13217 "	"				"
IRRIGON	LIGHT 72	1832.11	45 54	19.13 590.6	119 28	55.76 1201.6		"	"				"
IRRIGON	LIGHT 74	1833.11	45 54	45.01 1389.7	119 27	50.59 1090.3		"	"				"
IRRIGON	UPPER RANGE FRONT LIGHT	1834.11	45 55	09.62 297.0	119 27	25.88 557.6		"	"				"
IRRIGON	UPPER RANGE REAR LIGHT	1835.12	45 55	09.13 281.9	119 27	53.82 1159.5		"	"				"
UMATILLA	LIGHT 76	1838.11	45 54	58.74 1813.6	119 23	35.16 757.8		"	"				"
PLYMOUTH	LIGHT 77	1839.11	45 55	34.48 1064.6	119 21	42.27 910.8		"	"				"

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted land[illegible] and *nonfloating aids* to navigation, if redetermined, shall be reported [illegible]s form. Revisions shall show both the old and new positions. The d[illegible]ld 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

USCOMM-DC 36485-P66

FORM C&GS-567
(5-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE REVISED~~
~~TO BE DELETED~~ } STRIKE OUT TWO

Umatilla, Oregon March 19, 1969

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

The positions given have been checked after listing by L. L. Riggers

R. B. Melby
Chief of Party.

STATE Washington-Oregon

CHARTING NAME	DESCRIPTION	~~Photo~~ SIGNAL NAME NO.	POSITION LATITUDE* ° ′	″ E.M. METERS	LONGITUDE* ° ′	″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
TANK	Tank	68-E 6315	45 43	21.48 563.2	120 42	12.39 268.0	N.A. 1927	Photo T-13211	3/19/69				6159
W.GAB	West Gable, Building	6329	45 41	45.44 1402.9	120 35	18.97 410.5	"	"	"				"
W.GAB ELEVATOR	West Gable, Grain Elevator	6354	45 41	50.04 1544.9	120 20	16.99 367.6	"	T-13212	"				"
A	Letter"A" on Hillside	6361	45 43	18.72 573.0	120 11	51.01 1103.3	"	T-13213	"				6160
ELEVATOR	Flashing red lt. atop Grain Elevator at Arlington	6361	45 43	25.65 791.9	120 12	16.34 353.4	"	"	"				"
ELEVATOR	Grain Elev. at Roosevelt	6377	45 45	10.92 337.1	120 11	29.53 638.2	"	"	"				"
TANK (Elev.)	Elevated Water Tank	6438	45 50	26.80 827.4	119 42	05.84 126.0	"	T-13215	"				6161
N.GAB ELEVATOR	North Gable, Elevator	6452	45 55	05.12 158.1	119 33	44.91 967.6	"	T-13216	✓ "				6162
MICROWAVE TOWER	Microwave, skeleton steel tower ht.=149' (314')	6463	45 55	03.25 100.3	119 18	42.47 915.1	"	T-13217	"				"
TOWER	Microwave ht.=100' (380')		45 53	53.70 1812.4	119 29	13.74 296.3	"	"	"				"

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. 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

USCOMM-DC 36485-P66

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-13216

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
6161	7/7/72	R. DAVIS	~~Full~~ Part ~~Before~~ After ~~Verification~~ Review Inspection Signed Via
			Drawing No. 5 (Proof)
6162	5-20-75	Ray Spence	~~Full~~ Part ~~Before~~ After ~~Verification~~ Review Inspection Signed Via
			Drawing No.
6161	1-14-76	[illegible]	~~Full~~ Part ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No.
6161	6/15/76	N. Carter	Full ~~Part Before~~ After ~~Verification~~ Review Inspection Signed Via
			Drawing No. Consider fully appl
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975. USCOMM-DC 8558-P63