7052a&b Graphic Control

7053a&b Graphic Control

7052a&b Graphic Control

7053a&b Graphic Control

Diag. Cht. No. 6157

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

Graphic Control

DESCRIPTIVE REPORT

Type of Survey GRAPHIC CONTROL

Field No. HO-F-47, HO-B-48, HO-G-47, HO-C-48

Office No. T-7052a, b, T-7053a, T-7053b

LOCALITY

State Oregon - Washington

General locality Columbia River

Locality Sheridan Point, Wash. to Ruthton, Oregon

1948

CHIEF OF PARTY

W.H.Bainbridge

LIBRARY & ARCHIVES

DATE 11 JULY 1950

B-1870-1 (1)

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T - 7052(a) Graphic Control

TOPOGRAPHIC TITLE SHEET

FIELD NO. HO-F-47

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE	Oregon -- Washington
GENERAL LOCALITY	Columbia River
LOCALITY	Sheridan Point to Area One Mile East Of Stevenson, Wash.
SCALE	1 : 10,000
DATE OF SURVEY	17 - 21 May, 1948
VESSEL	Ship HODGSON
CHIEF OF PARTY	W. H. Bainbridge
SURVEYED BY	R. M. Stone
INKED BY	R. M. Stone & A. M. Legake
HEIGHTS IN FEET ABOVE MHW OR _____	☐ TO GROUND ☐ TO TOPS OF TREES
CONTOUR	APPROXIMATE CONTOUR FORM LINE INTERVAL _____ FEET
PROJECT NUMBER	CS-325

REMARKS

The Columbia River Datum between Bonneville Dam and The Dalles, Ore. is Normal Pool Level, 72.0 feet above Mean Sea Level.

12136

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T - 7052b

TOPOGRAPHIC TITLE SHEET

FIELD NO. HO-B-48

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE
Oregon - Washington

GENERAL LOCALITY
Columbia River

LOCALITY
Wyeth, Oregon - Viento, Oregon

SCALE
1:10,000

DATE OF SURVEY
July 13 - 20, 1948

VESSEL
Ship HODGSON

CHIEF OF PARTY
W. H. Bainbridge

SURVEYED BY
Henry J. Healy

INKED BY
Henry J. Healy and A. M. Legako

HEIGHTS IN FEET ABOVE MHW OR _____ ☐ TO GROUND ☐ TO TOPS OF TREES

CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL _____ FEET

PROJECT NUMBER
CS-325

REMARKS

The Columbia River Datum between Bonneville Dam and The Dalles, Oregon, is Normal Pool Level, 72.0 feet above Mean Sea Level.

12136

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T - 7053(a) Graphic Control

TOPOGRAPHIC TITLE SHEET

FIELD NO. HO-G-47

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE	Oregon — Washington
GENERAL LOCALITY	Columbia River
LOCALITY	Area One Mile East of Stevenson, Wash. to Wyeth, Ore.
SCALE	1 : 10,000 — DATE OF SURVEY 21 - 26 May, 1948
VESSEL	Ship HODGSON
CHIEF OF PARTY	W. H. Bainbridge
SURVEYED BY	R. M. Stone
INKED BY	R. M. Stone & A. M. Legake
HEIGHTS IN FEET ABOVE MHW OR _____	☐ TO GROUND ☐ TO TOPS OF TREES
CONTOUR	APPROXIMATE CONTOUR — FORM LINE INTERVAL _____ FEET
PROJECT NUMBER	CS-325

REMARKS

The Columbia River Datum between Bonneville Dam and The Dalles, Ore. is Normal Pool Level, 72.0 feet above Mean Sea Level.

12136

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T - T-7053b Graphic Control

TOPOGRAPHIC TITLE SHEET

FIELD NO. HO-C-48

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE
Oregon - Washington

GENERAL LOCALITY
Columbia River

LOCALITY
Viento, Oregon to Ruthton, Oregon

SCALE
1:10,000

DATE OF SURVEY Aug. 3 to Aug. 12, 19 48

VESSEL
Ship HODGSON

CHIEF OF PARTY
W. H. Bainbridge

SURVEYED BY
Henry J. Healy

INKED BY
Henry J. Healy and A. M. Legako

HEIGHTS IN FEET ABOVE MHW OR _____ ☐ TO GROUND ☐ TO TOPS OF TREES

CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL _____ FEET

PROJECT NUMBER
CS-325

REMARKS

The Columbia River Datum between Bonneville Dam and The Dalles, Oregon, is Normal Pool Level, 72.0 feet above Mean Sea Level.

12136

Descriptive Report

to accompany

Graphic Control Sheets

Nos. T-7052b (HO-B-48); T-7053b (HO-C-48);
T-7083a (HO-D-48); T-7083b (HO-E-48);
and T-7084 (HO-F-48)

Wyeth, Oregon to Klickitat Light, Oregon

Scale 1:10,000 July to Sept. 1948

Ship HODGSON W. H. Bainbridge,
Chief of Party.

Henry J. Healy

AUTHORITY:

These surveys were executed in accordance with Orders from the Director, U. S. Coast and Geodetic Survey, dated 7 May 1948.

LIMITS AND DATES:

The scale of these graphic control sheets is 1:10,000. The sheets extend eastward along the course of the Columbia River.

Sheet No.	From Longitude	To Longitude
T-7052-b	121° 46.5' W	121° 40.0' W
T-7053-b	121° 40.7' W	121° 35.0' W
T-7083-a	121° 35.0' W	121° 29.4' W
T-7083-b	121° 29.4' W	121° 23.9' W
T-7084	121° 23.9' W	121° 18.0' W

The limits of these sheets are also shown on the sheet index appended to this report.

Field work on these sheets began July 13, 1948 and ended Sept. 30, 1948.

PURPOSE:

These sheets were accomplished in order to locate signals for the use of the hydrographer, location of landmarks, and the verifying of aids to navigation.

CONTROL:

The area included in this survey was controlled by second-order triangulation established by Comdr. W. M. Scaife along the Columbia River during the year of 1939.

No additional triangulation was established during this season. The datum of normal pool level as established by the U. S. Engineers, is 72 feet above Mean Sea Level.

SURVEY METHODS:

All signals with the exception of a very few, were located by cuts taken from planetable set-ups. No fewer than three cuts passing through a point were accepted for the location of a signal or aid to navigation. Set-ups were made either over a triangulation station, or a strong three-point fix was made, in order to get strong intersections for the locations of survey signals. Rod readings were used only for signals which could not be intersected.

The shore line was located around set-ups, and also along places where changes were noted. During the beginning of this survey the river level was at flood stage and the shore line was impossible to determine.

The magnetic declination was determined in various places along the river as shown on the graphic control sheets. Declinatoire No. 186 was used for this purpose. The error for this

declinatoire was determined during February 1949 and the results are attached to this report.

RECOVERABLE TOPOGRAPHIC STATIONS:

A list of all recoverable topographic stations is attached to this report. All recoverable topographic stations have been described on Form No. 524 and forwarded to the Seattle Processing Office.

Triangulation stations established by the U. S. Engineers during 1939 and 1940 were also located. These stations were described as recoverable topographic stations and are listed separately in the "List of Recoverable Topographic Stations".

AIDS TO NAVIGATION:

All aids to navigation in this section of the Columbia River were located previously by triangulation. All these aids were checked by graphic control methods. The positions of the following aids were found to have had their positions changed. These were reported on Form No. 567.

COLLINS POINT LIGHT

KLICKITAT RIVER LIGHT

There are no floating aids to navigation in this section of the Columbia River.

LANDMARKS FOR CHARTS:

Data for the landmarks for charts is submitted on Form No. 567, a copy of which is attached to the descriptive report for the hydrographic sheets.

GEOGRAPHIC NAMES:

The geographic names as used on Chart No. 6157 and covered by these sheets are correct and no changes should be made.

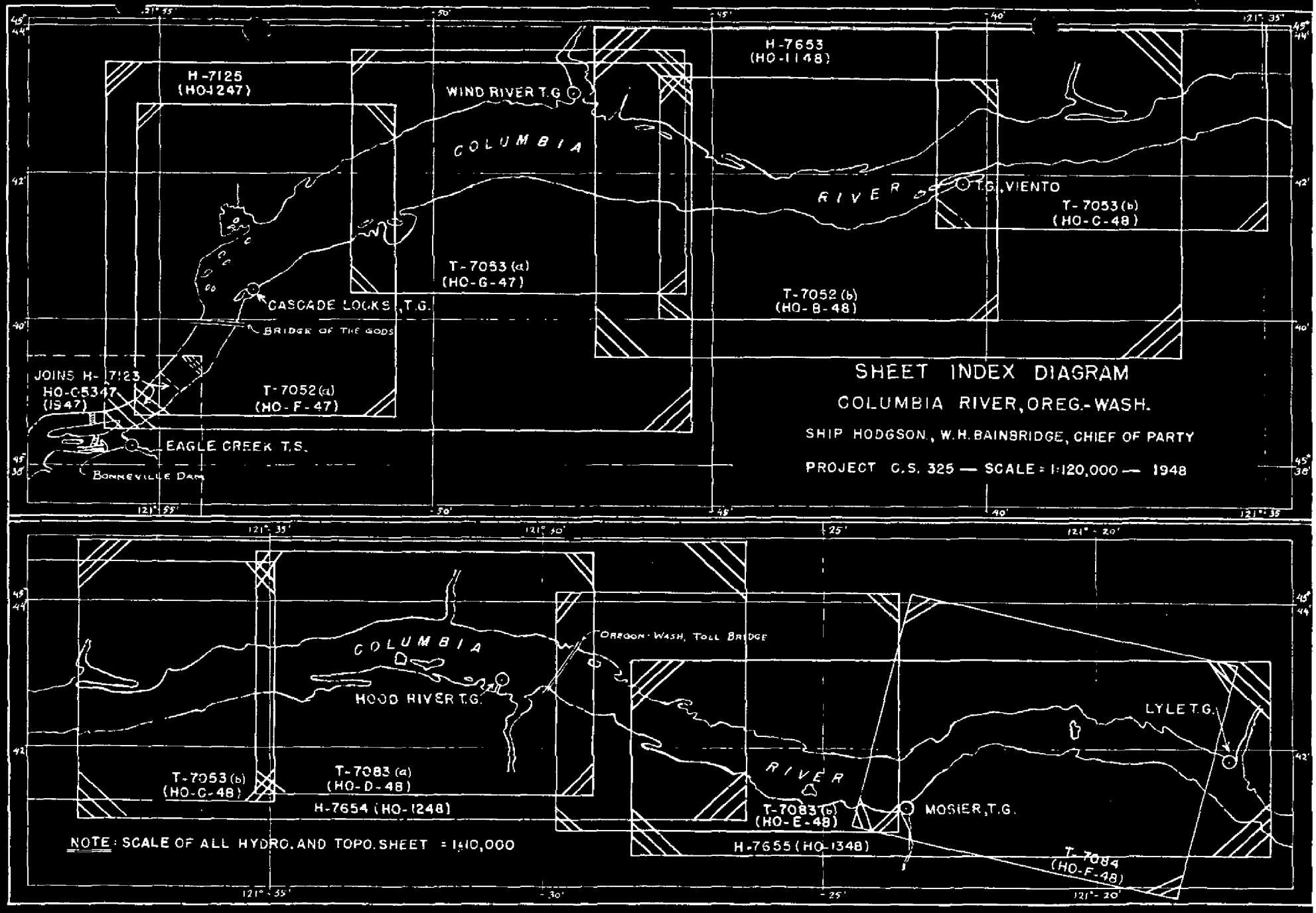
RANGES:

There are two ranges shown in this area. The westerly range is Mitchell Point Range, Azimuth 67° 09' True and is located on Sheet T-7053(b). The second range is the Underwood Range, Azimuth 67° 09' True and is located on sheet T-7083(a).

Respectfully submitted;

/s/ Henry J. Healy

Henry J. Healy
Lt. Comdr., USC&GS
Commanding Ship HODGSON


SHEET INDEX DIAGRAM
COLUMBIA RIVER, OREG.-WASH.
SHIP HODGSON, W.H. BAINBRIDGE, CHIEF OF PARTY
PROJECT C.S. 325 — SCALE = 1:120,000 — 1948
H-7125 (HO-1247)
H-7653 (HO-1148)
WIND RIVER T.G.
COLUMBIA
RIVER
T.G. VIENTO
T-7053 (b) (HO-C-48)
T-7053 (a) (HO-G-47)
T-7052 (b) (HO-B-48)
CASCADE LOCKS, T.G.
BRIDGE OF THE GODS
JOINS H-7123 HO-C5347 (1547)
T-7052 (a) (HO-F-47)
EAGLE CREEK T.S.
BONNEVILLE DAM
OREGON-WASH. TOLL BRIDGE
HOOD RIVER T.G.
LYLE T.G.
T-7053 (b) (HO-C-48)
T-7083 (a) (HO-D-48)
H-7654 (HO-1248)
T-7083 (b) (HO-E-48)
MOSIER, T.G.
H-7655 (HO-1348)
T-7084 (HO-F-48)
NOTE: SCALE OF ALL HYDRO. AND TOPO. SHEET = 1:10,000

DESCRIPTIVE REPORT

to accompany

GRAPHIC CONTROL SHEETS

No. T-7052(a), (Field No. HO-F-47)
& No. T-7053(a), (Field No. HO-G-47)

Columbia River

Sheridan Point, Ore. to Wyeth, Ore.

Scale 1 : 10,000 May 1948

Ship HODGSON

W. H. Bainbridge
Chief of Party

R. M. Stone
Topographer

AUTHORITY:

Instructions, Project CS-325, Reference 22/MEK; S-2-HO, dated 7 May 1947.

LIMITS & DATES:

Scale of survey 1 : 10,000

Limits of sheets are as follows:

Sheet No.	Latitude			Longitude		
T-7052(a)	45° 38'.70	to	45° 42'.95	121° 50'.75	to	121° 55'.45
T-7053(a)	45° 40'.40	to	45° 43'.68	121° 45'.43	to	121° 51'.50

(Refer to Sheet Index Diagram, appended to this report.)

NOTE: The back side of these sheets are numbered T-7052(b) and T-7053(b), (Field Nos. HO-B-48 and HO-C-48, respectively), and are part of this seasons survey. (Refer to Descriptive Report for Graphic Control Sheets: T-7052(b), (HO-B-48)
T-7053(b), (HO-C-48)
T-7083(a), (HO-D-48)
T-7083(b), (HO-E-48)
T-7084 , (HO-F-48), submitted under separate cover.

Field work on these two sheets was begun on 17 May and concluded on 26 May 1948.

PURPOSE:

These topographic sheets are for the establishment of graphic control, location of landmarks, and location of aids to navigation.

CONTROL:

The area is covered by second order triangulation surveyed by W. M. Scaife, Chief of Party, Year 1939.

No additional triangulation was established during this season.

The datum is normal-pool-level or 72 feet above Mean Sea Level for the area upstream of Bonneville Dam as far east as The Dalles, Ore.

SURVEY METHODS:

Standard planetable methods were used. All objects were located by graphic triangulation. No traverses were run.

No shoreline was located on these sheets as the Columbia River was at flood stage of 12 to 18 feet during the time of this survey.

Magnetic azimuths were determined by Declinatoire No. 186 at the following triangulation stations:

Sheet No.	Triangulation Stations	Scaled Magnetic Declination
T-7052(a)	Bench Mark T-44, 1939	19° 20'
"	95 Ft. Contour Monument (USE), 1939	20° 15'
"	T3N, R7½E, DLC No. 43 Southeast Corner (USE), 1939	19° 53'
T-7053(a)	End, 1901-1939	20° 31'
"	Iron Pipe On Property Line, 1939	19° 00'
"	Martin, 1946	19° 39'

The declinatoire error was determined during February 1949 for Declinatoire No. 186,- refer to "Calibration of Declinatoire", a copy of which is attached to this report.

RECOVERABLE TOPOGRAPHIC STATIONS:

A list of Recoverable Topographic Stations is appended to this report. All recoverable topographic stations have been described on Form No. 524.

Triangulation stations established by the U. S. Army Engineers during 1939 & 1940 were also located at this time and described as recoverable topographic stations. These stations are listed separately in the "List Of Recoverable Topographic Stations". Regarding the U. S.

RECOVERABLE TOPOGRAPHIC STATIONS: (Continued)

Engineers triangulation scheme, refer to U.S.E. Print No. CL-04-34, "Columbia River Triangulation, Bonneville to The Dalles, 1943".

AIDS TO NAVIGATION:

The positions of Aids to Navigation located by triangulation during 1939 were verified by graphic control methods. New aids to navigation established since that time were also located.

It was found that Sheridan Point Light had been moved since it was established in 1938. Its new location is Lat. 45° 39' 592.0 meters (1260.5), Long. 121° 54' 734.5 meters (564.5).

One floating aid to navigation was cut in on Sheet T-7052(a) from various planetable setups. This floating aid is a red nun buoy "2", located at Lat. 45° 40' 1757.0 meters (95.5), Long. 121° 53' 251.0 meters (1047.5). Its position was verified on 29 June 1948 by taking a sextant fix at the buoy during the course of hydrography,- (Refer to Hydrographic Volume 12, page 5, position 1-f, of Hydrographic Sheet H-7125).

The "Floating" and "Nonfloating Aids to Navigation" are reported on Form #567, a copy of which is attached to the descriptive report for Hydrographic Sheet H-7125, on pages 43 - 45 incl..

LANDMARKS FOR CHARTS:

Data relative to landmarks for charts is submitted on Form #567, a copy of which is appended to the descriptive report for Hydrographic Sheet, H-7125, on page 46.

A list of the recommended landmarks located within the limits of these two topographic sheets is as shown on the following page:

LANDMARKS FOR CHARTS: (Continued)

Topo Sheet Number	Charting Name	Description
T-7052a	CUPOLA	Stevenson, Skamania County Courthouse, Stevenson, Washington.
T-7053a	AERO	Portland-Spokane Airway Beacon Near Triangulation Station TROTTER, (Aero Beacon No. 4).
"	TANK	Union Pacific Railroad Water Tank, Wyeth, Oregon.
"	ROCK	Prominent Finger Rock, Approx. ½ mile west of Wyeth, Oregon.

GEOGRAPHIC NAMES:

The names shown on Chart No. 6157 in the area covered by these two topographic sheets are correct.

Government Cove, (Lat. 45° 41'.2, Long. 121° 50'.6), and Rock Cove, (Lat. 45° 41'.4, Long. 121° 53'.2), are the only additional names not shown on this chart. All are well-established local names.

RANGE BEARINGS:

The Cascade Rapids Lower Range was located by actually setting the planetable on the range on the north shore of the Columbia at Lat. 45° 40'.78, Long. 121° 54'.07.

The Cascade Rapids Upper Range and the Stevenson Range were both accurately plotted on the topographic sheets from many hydrographic fixes taken during the course of hydrography. It was not feasible to make planetable setups on these ranges.

The azimuths of these ranges are as follows:

Range	Azimuth	Determined By:
Cascade Rapids Lower Range	356° 32' True	Topo. --T-7052(a), (HO-F-47)
Cascade Rapids Upper Range	58 00	Hydro.--H-7125 , (HO-1247)
Stevenson Range	86 31	Hydro.--H-7125 , (HO-1247)

LIST OF RECOVERABLE TOPOGRAPHIC STATIONS: (Sheet T-7052(a)

Station & Description	Latitude			Longitude		
ABE (Rwy. Semaphore)	45°39'	65.5	(1787.0)	121°54'	989.0	(310.0)
ACT (Rwy. Semaphore)	45 39	343.0	(1509.5)	121 54	459.5	(839.5)
SHERIDAN POINT LIGHT	45 39	592.0	(1260.5)	121 54	734.5	(564.5)
CASCADE RAPIDS LOWER RANGE FRONT	45 39	1024.5	(828.0)	121 53	1253.0	(46.0)
CASCADE RAPIDS LOWER RANGE REAR	45 39	961.2	(891.2)	121 53	1249.0	(50.0)
CASCADE LOCKS LOWER LIGHT	45 39	1695.5	(157.0)	121 53	1154.0	(145.0)
CASCADE RAPIDS UPPER RANGE REAR	45 40	219.5	(1633.0)	121 54	460.0	(839.0)
AXE (Pinnacle Rock)	45 40	546.5	(1305.9)	121 54	185.4	(1113.4)
AZO (Pinnacle Rock)	45 40	579.0	(1273.4)	121 54	79.8	(1219.0)
CASCADE LOCKS LIGHT	45 40	494.5	(1358.0)	121 53	834.0	(465.0)
BENCH MARK NN-44,1943	45 40	905.5	(947.0)	121 54	632.5	(666.0)
BON (Top of Dome)	45 41	37.0	(1815.4)	121 53	1020.2	(278.2)
CRY (Lamp Post)	45 41	1156.7	(695.7)	121 53	590.0	(708.4)
DIP (Cable X'ing Sign)	45 41	910.0	(942.4)	121 52	1118.4	(180.0)
DON (Gable of Shed)	45 41	1058.2	(794.2)	121 52	928.0	(370.4)
DOG (Cable X'ing Sign)	45 40	1804.6	(47.8)	121 51	1112.4	(186.4)
EGG (Gable of Mill)	45 41	49.0	(1803.4)	121 51	544.6	(753.8)

Copy

LIST OF U.S. ENGR'S. TRIANGULATION STATIONS
LOCATED BY GRAPHIC CONTROL on Sheet T-7052(a):

Station		Latitude		Longitude	
CALL	U.S.E. 1939	45°38' -----	(66.3)	121°54' 1226.0	(73.0)
OAR	U.S.E. 1939	45 39 382.5	(1470.0)	121 54 1045.0	(254.0)
POT	U.S.E. 1939	45 39 275.5	(1577.0)	121 54 659.0	(640.0)
BAIL	U.S.E. 1939	45 39 498.0	(1354.5)	121 54 859.0	(440.0)
RON	U.S.E. 1939	45 39 642.0	(1210.5)	121 54 290.0	(1009.0)
REX	U.S.E. 1939	45 39 854.5	(998.0)	121 54 80.0	(1219.0)
TOLL	U.S.E. 1939	45 39 1485.5	(367.0)	121 54 182.0	(1117.0)
CANAL	U.S.E. 1939	45 39 1680.0	(172.5)	121 53 1046.0	(253.0)
MILL	U.S.E. 1939	45 40 1063.7	(788.7)	121 53 46.0	(1253.0)
VOLT	U.S.E. 1939	45 40 1488.7	(363.7)	121 52 662.5	(636.5)
BUD	U.S.E. 1939	45 41 371.4	(1481.0)	121 53 495.4	(803.0)
COVE	U.S.E. 1939	45 41 1803.7	(48.7)	121 51 896.5	(401.5)
OHIO	U.S.E. 1939	45 41 709.5	(1143.0)	121 51 03.0	(1295.5)

LIST OF U.S. ENGR'S. TRIANGULATION STATIONS
LOCATED BY GRAPHIC CONTROL on Sheet T-7053(a):

Station		Latitude		Longitude	
FARLEY	U.S.E. 1939	45°41' 1508.0	(344.5)	121°49' 1018.0	(280.5)

NOTE: All of the above U.S.E. triangulation stations are brass tablets set in the top of concrete monument or set in a drill hole in rock.

In regards to the U.S.E. triangulation scheme, refer to U.S.E. Print No. CL-04-34, "Columbia River Triangulation, Bonneville to The Dalles, 1943".

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LIST OF RECOVERABLE TOPOGRAPHIC STATIONS: Sheet T-7052(b)

Station & Description	Latitude	Longitude
BOX (gable-house)	45° 41' 883.0(969.4)	121° 45' 436.4 (-------)
COD (corner-building)	45° 42' 273.2(1579.2)	121° 44' 1100.7(197.4)
BENCH MARK I-24,1921	45° 41' 979.1(873.3)	121° 44' 842.0 (456.4)
DIX (top-foundation)	45° 42' 82.4(1770.0)	121° 44' 595.8 (~~8~~7 02.3)
COLLINS POINT LIGHT	45° 41' 1584.3(268.1)	121° 44' 257.2 (1041.2)
EAT (Rwy. semaphore)	45° 41' 1017.4)835.0)	121° 44' 389.0(909.4)
JOE (semaphore box)	45° 41' 442.4(1410.0)	121° 42' 550.0(748.4)
KEY (gable-building)	45° 41' 1789.9(62.5)	121° 42' 618.0(680.4)
MAG (Rwy. semaphore)	45° 42' 247.4(1605.0)	121° 41' 898.1(400.0)

LIST OF U. S. ENGR'S. TRIANGULATION STATIONS
LOCATED BY GRAPHIC CONTROL on Sheet T-7052(b):

WIND U. S. E. 1939	45° 42' 288.0(1564.4)	121° 45' 446.5(------)
BEACON U. S. E. 1939	45° 41' 966.3(886.1)	121° 44' 218.0(1080.4)
FIR U. S. E. 1939	45° 41' 881.3(971.1)	121° 43' 69.9(1228.5)
HAM U. S. E. 1939	45° 41' 1702.3(150.1)	121° 42' 1219.2(79.2)
SEA U. S. E. 1939	45° 41' 1616.7(235.7)	121° 42' 369.3(929.1)
CAM U. S. E. 1939	45° 41' 1430.0(422.4)	121° 40' 837.2(461.2)

NOTE: All of the above U. S. E. triangulation stations are brass tablets set in the top of concrete monument or set in a drill hole in rock.

In regards to the U. S. E. triangulation scheme, refer to U. S. E. Print No. CL-04-34, "Columbia River Triangulation, Bonneville to The Dalles,1943".

LIST OF RECOVERABLE TOPOGRAPHIC STATIONS: (Sheet T-7053(a)

Station & Description	Latitude			Longitude		
FOX (Dolphin)	45°41'	303.4	(1549.0)	121°50'	869.8	(428.6)
FLAG (Flagpole)	45 40	-----	(80.0)	121 50	777.6	(520.8)
FOR (Dolphin)	45 41	442.4	(1410.0)	121 50	657.8	(640.6)
GET (Rwy. Semaphore)	45 41	1256.6	(595.8)	121 50	4.6	(1293.8)
JIM (W. Gable Bldg.)	45 42	1086.8	(765.6)	121 50	155.7	(1142.4)
WAG (Weather Vane)	45 42	1090.1	(762.3)	121 50	149.5	(1148.6)
IDA (Rwy. Semaphore)	45 41	1568.7	(283.7)	121 48	1058.2	(240.2)
NEW (RR Control Box)	45 42	1833.1	(19.3)	121 48	684.5	(613.6)
KID (Rwy. Semaphore)	45 41	1518.0	(334.4)	121 47	1181.0	(117.4)
MUG (Rwy. Semaphore)	45 41	1130.1	(722.3)	121 47	313.4	(985.0)
BENCH MARK K-44, 1933	45 42	1777.3	(75.1)	121 47	611.7	(686.4)
SOW (Bridge Pier)	45 43	218.5	(------)	121 47	420.1	(877.6)
RAG (Rwy. Semaphore)	45 42	1698.6	(153.8)	121 47	449.7	(848.4)
SKY (Finger Rock)	45 41	1155.4	(697.0)	121 46	606.0	(692.4)
VIA (Rwy. Semaphore)	45 42	840.5	(1011.9)	121 45	-----	(153.1)
TAN (Water Tank)	45 41	960.0	(892.4)	121 45	-----	(340.4)

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LIST OF RECOVERABLE TOPOGRAPHIC STATIONS: (Sheet T-7053(b)

Station & Description	Latitude	Longitude
SIS (saw dust burner)	45° 42' 1195.0(657.0)	121° 39' 413.0 (885.0)
NIX (boat house)	45° 43' 235.0(1617.0)	121° 38' 874.0 (424.0)
QUO (ice house)	45° 43' 295.0(1557.0)	121° 38' 871.0 (527.0)
WIT (Rwy. semaphore)	45° 42' 1130.0(722.0)	121° 37' 1055.0(243.0)
YES (apex-yellow house)	45° 42' 1163.4(689.0)	121° 37' 784.0 (514.0)
MITCHELL POINT RANGE REAR	45° 42' 552.0 (1300.0)	121° 36' 746.0 (552.0)
EAT (Rwy. semaphores)	45° 42' 770.0 (1082.0)	121° 35' 566.0 (732.0)
ROY (Rwy. semaphore)	45° 42' 1143.0(709.0)	121° 40' 441.0 (-----)
SOW (Gable-white house)	45° 42' 1160.0(692.0)	121° 39' 456.0 (842.0)

LIST OF U. S. ENGR'S. TRIANGULATION STATIONS LOCATED BY GRAPHIC CONTROL on Sheet T-7053(b):

TOKEN U.S.E. 1940	45° 42' 980.0 (872.0)	121° 39' 1290.0 (8.0)
CLIFF U.S.E. 1939	45° 42' 986.0 (866.0)	121° 39' 880.5 (417.5)
BAYO U. S. E. 1939	45° 42' 28.4 (1824.0)	121° 39' 504.0 (794.0)
POLK U. S. E. 1939	45° 42' 78.0 (1774.0)	121° 38' 553.0 (745.0)
LAKE U. S. E. 1939	45° 42' 1180.8(671.6)	121° 38' 514.0 (784.0)
OAK U. S. E. 1939	45° 42' 1186.0(666.0)	121° 37' 493.0 (805.0)
MAP U. S. E. 1939	45° 42' 538.0 (1314.0)	121° 36' 1235.0(53.0)
TUN U. S. E. 1915	45° 42' 1547.0(305.0)	121° 36' 1267.0(31.0)
CAL U. S. E. 1939	45° 42' 697.4 (1155.0)	121° 36' 415.0 (883.0)
BOA U. S. E. 1940	45° 43' 207.4 (1645.0)	121° 36' 727.0 (571.0)
MENO U. S. E. 1940	45° 42' 905.0 (947.0)	121° 35' 225.0 (1073.0)
TUN U. S. E. 1931	45° 43' 338.0 (1514.0)	121° 35' 54.0 (1245.0)

NOTE: All of the above U.S.E. triangulation stations are brass tablets set in the top of concrete monument or set in a drill hole in rock.

In regards to the U.S.E. triangulation scheme, refer to U.S.E. Print No. CL-04-34, "Columbia River Triangulation, Bonneville to The Dalles, 1943".

STANDARDIZATION OF DECLINATOIRE

1948 Field Season

Project CS-325

Columbia River

Ship HODGSON W. H. Bainbridge, Comdg.

In connection with graphic control work on Proj. CS-325 during the 1948 field season, declinatoire No. 186 was used to determine the magnetic meridian.

On 24 February 1949, this declinatoire was checked at magnetic station COLWOOD, (Colwood Public Golf Course, located 1½ miles north of Portland, Oregon).

The object pointed on in order to get a true azimuth, was the center of the Air Beacon on Rocky Butte, (distance 1½ miles, true azimuth 334° 43'.0 measured from South).

Four declinatoire lines were drawn in such a manner that the angles made with the true azimuth line could be scaled with a steel protractor,- Refer to computations as follows:

Magnetic Station - COLWOOD, (Multnomah County, Oregon)
Lat. 45° 35', Long. 122° 35', N.A. 1927 Datum
Mark — Center of Air Beacon on Rocky Butte
Date — 24 February 1949 (Thursday)
Time — 1400 (120th Meridian)

True Azimuth of Mark - - - - - - - - - - - - - - -		334°	43'
Measured Angle (Air Beacon to Mag. North)	(1) 227° 00'		
	(2) 227 10		
	(3) 227 00		
	(4) 227 05		
Mean of Measured Angle - - -	227° 04' - - -	227	04
		-(180	00)
Magnetic North by Declinatoire - - - - - - - - -		21°	47' E
Actual Variation (Taken from Chart #6156) - - -		21	44 E
Declinatoire Error - - - - - - - - - - - - - - -			- 03'

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List Of Signals Located Outside Of The HWL are as Follows:

Name	Description	Topo. Sheet No.
AXE	Pinnacle Rock	T-7052(a)
AZO	Pinnacle Rock	"
CASCADE LOCKS LOWER LIGHT	Navigational Aid	"
FOX	Dolphin	T-7053(a)
FOR	Dolphin	"
LONE, 1939	Islet	"
HOME, 1939	Islet	"
SOW	Center of Pier (Bridge has been removed)	"

Respectfully submitted,

R. M. Stone

R. M. Stone, Lieut. USC&GS
H. & G. Engr.

Approved:

Henry J. Healy

Henry J. Healy, Lt. Comdr. USC&GS
Commanding Ship HODGSON