

7083a&b Graphic Control

7084 Graphic Control

Diag. Cht. No. 6157

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey GRAPHIC CONTROL
HO-D-48 T-7083a G.C.
Field No. HO-E-48 Office No. T-7083b G.C.
HO-F-48 T-7084 G.C.

LOCALITY

State Oregon - Washington

General locality Columbia River

Locality Ruthton, Oregon to Klickitat River

Light, Oregon

1948

CHIEF OF PARTY

W.H.Bainbridge

LIBRARY & ARCHIVES

DATE 11 JULY 1950

B-1870-1 (1)

1951 Single len. photo

7083a&b Graphic Control

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FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T - 7083a Graphic Control

TOPOGRAPHIC TITLE SHEET

FIELD NO. HO-D-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

Ruthton, Oregon to White Salmon, Washington

SCALE

1:10,000

DATE OF SURVEY

Aug. 19 to Sept. 1, 1948

VESSEL

Ship HODGSON

CHIEF OF PARTY

W. H. Bainbridge

SURVEYED BY

Henry J. Healy

INKED BY

Henry J. Healy and A. M. Logako

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.

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T - 7083b Graphic Control

TOPOGRAPHIC TITLE SHEET

FIELD NO.
HO-E-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

White Salmon, Washington to Mosier, Oregon.

SCALE

1:10,000

DATE OF SURVEY

Sept. 2 - 23, 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.

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T - 7084 Graphic Control

TOPOGRAPHIC TITLE SHEET

FIELD NO.

HO-F-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

Mosier, Oregon to Klickitat River Light, Oregon

SCALE

1:10,000

DATE OF SURVEY

Sept. 28 - 30, 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.

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.

<u>Sheet No.</u>	<u>From Longitude</u>	<u>To Longitude</u>
T-7052-b	121° 46:5W	121° 40:0W
T-7053b	121° 40:7W	121° 35:0W
T-7083a	121° 35:0W	121° 29:4W
T-7083b	121° 29:4W	121° 23:9W
T-7084	121° 23:9W	121° 18:0W

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, 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.

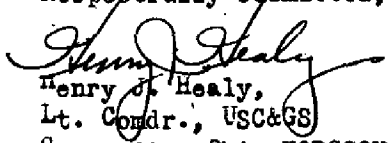
GEOGRAPHIC NAMES:

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 $67^{\circ} 09'$ True and is located on Sheet T-7053(b). The second range is the Underwood Range, Azimuth $67^{\circ} 09'$ True and is located on sheet T-7063(a).

Respectfully submitted,


Henry J. Healy,
Lt. Comdr., USCGS
Commanding Ship HODGSON

LIST OF RECOVERABLE TOPOGRAPHIC STATIONS:

(Sheet T-7083(a))

Station & Description	Latitude	Longitude
FAR (center-black stack)	45° 43' 858.2(996.2)	121° 33' 670.5(627.0)
GAS (saw dust burner)	45° 43' 859.5(992.9)	121° 33' 648.3(649.2)
RIG (gable-white house)	45° 43' 1228.9(623.5)	121° 32' 1213.4(84.0)
IDA (tip-flag pole)	45° 43' 1390.0(552.4)	121° 32' 673.4(624.1)
NIL (Rwy. semaphore)	45° 42' 1569.0(283.4)	121° 32' 824.0 (473.8)
EGG (center-mile post)	45° 42' 1670.4(182.0)	121° 32' 13.7 (1285.1)
JIM (Rwy. semaphore)	45° 43' 141715(434.9)	121° 31' 1236.0(61.5)
UNDERWOOD RANGE FRONT	45° 43' 1410.5 (441.9)	121° 31' 802.6 (494.8)
UNDERWOOD RANGE REAR	45° 43' 1468.0 (384.4)	121° 31' 670.0 (627.4)
MAX (gable-red. bldg)	45° 43' 1384.2 (468.2)	121° 31' 662.5 (635.0)
BENCH MARK BB-44, 1933 (USGS)	45° 43' 1358.0(494.4)	121° 31' 333.4 (964.0)
ION (center-flag pole)	45° 42' 1333.3(519.1)	121° 31' 186.0 (1111.9)
IVY (center-flag pole)	45° 42' 1192.2(660.2)	121° 30' 1097.8(200.0)
PIN (center-mile post)	45° 42' 1213.0(639.4)	121° 30' 973.5(324.3)
TAN (center-water tank)	45° 42' 1136.4(716.0)	121° 30' 868.0(429.8)
BENCH MARK Y-198, 1940	45° 42' 1537.0(315.4)	121° 30' 780.0(518.0)
MAR (center-flag pole)	45° 42' 969.4(883.0)	121° 30' 720.4(577.5)
PEG (center-black stack)	45° 42' 899.4(953.0)	121° 30' 460.0(838.0)
NEW (gable-building)	45° 42' 1239.4(613.0)	121° 30' 438.4(859.4)
PET (quonsett hut)	45° 42' 1278.5(573.9)	121° 30' 219.0(1078.8)
SAL (gable-white house)	45° 42' 714.0(1138.4)	121° 30' 3.0 (1295.0)
PAL (gable-tool shed)	45° 42' 1397.0(455.4)	121° 29' 1238.8(59.0)
NIG (base-water tank)	45° 42' 1383.0(469.4)	121° 29' 1197.8(100.0)
RAG (center-dolphin)	45° 42' 1339.0(513.4)	121° 29' 979.3(318.5)
SAX (center-dolphin)	45° 42' 1216.0(636.4)	121° 29' 895.3(402.5)
SOW (center-dolphin)	45° 42' 1182.9(669.5)	121° 29' 842.0(456.0)
ROY (Rwy. semaphore)	45° 43' 945.0(907.4)	121° 29' 1036.0(261.5)
PIE (corner-white house)	45° 43' 805.2(1047.2)	121° 29' 754.6(543.0)

LIST OF U. S. ENGR'S. TRIANGULATION STATIONS
LOCATED BY GRAPHIC CONTROL on Sheet T-7083(a):

<u>Station and Description</u>	<u>Latitude</u>	<u>Longitude</u>
BOX U.S.E. 1939	45° 42' 1396.4(456.0)	121° 34' 423.0(874.8)
HOOD U. S. E. 1939	45° 43' 590.3(1262.1)	121° 34' 26.4 (1271.2)
SOL U. S. E. 1939	45° 43' 718.0(1134.4)	121° 33' 533.6(763.8)
HIGH U. S. E. 1939	45° 42' 1140.0(412.4)	121° 32' 1149.0(1148.8)
WOOD U. S. E. 1939	45° 43' 1373.0(479.4)	121° 32' 150.6(1146.8)
NAVY U. S. E. 1940	45° 43' 1237.8(616.6)	121° 31' 87.0 (1210.4)
CAMP U. S. E. 1940	45° 42' 1350.0(502.4)	121° 28' 1141.0(156.8)
SPAN U. S. E. 1940	45° 43' 692.5 (1159.9)	121° 29' 623.5 (674.0)

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, Oregon, 1943."

LIST OF RECOVERABLE TOPOGRAPHIC STATIONS: Sheet T-7083(b) ✓

<u>Station & Description</u>	<u>Latitude</u>	<u>Longitude</u>
DAW (Rwy. semaphore)	45° 42' 1004.0(848.4)	121° 29' 480.1(-----)
WOO (Gable-building)	45° 42' 575.4(1277.0)	121° 28' 732.0(566.0)
OLD (tip-Stanley Rock)	45° 42' 594.4(1258.0)	121° 28' 474.0(824.0)
SUE (Rwy. semaphore)	45° 41' 1754.8(97.6)	121° 28' 210.1(1088.0)
TAP (Rwy. semaphore)	45° 41' 1381.0(471.4)	121° 26' 1167.2(131.0)
ACE (Rwy. semaphore)	45° 41' 757.0(1095.4)	121° 26' 331.0(967.3)
BAT (Rwy. mile post)	45° 41' 491.0(1361.4)	121° 25' 832.3(466.0)
CRY (corner-white house)	45° 41' 461.4(1391.0)	121° 25' 641.3(657.0)
DAY (Rwy. semaphore)	45° 41' 321.0(1531.4)	121° 25' 425.6(872.8)
ARM (Rwy. semaphore)	45° 41' 1782.4(70.0)	121° 25' 362.0(936.1)
FAT (Rwy. semaphore)	45° 41' 393.0(1459.4)	121° 24' 589.0(709.4)
CAT (Rwy. semaphore)	45° 41' 1664.0(188.4)	121° 24' 221.5(1076.9)

LIST OF U. S. ENGR'S. TRIANGULATION STATIONS
LOCATED BY GRAPHIC CONTROL ON Sheet T-7083(b):

HARP U. S. E. 1940	45° 42' 855.0(997.4)	121° 29' 45.0(1252.9)
STAN U. S. E. 1940	45° 42' 554.0(1298.4)	121° 28' 545.0(753.0)
LORD U. S. E. 1940	45° 41' 1576.4(276.0)	121° 27' 875.0(523.2)
COMET U. S. E. 1940	45° 42' 583.0(1269.4)	121° 27' 654.0(644.0)
TOKE U. S. E. 1940	45° 42' 427.0(1425.4)	121° 27' 321.0(977.0)
HORN U. S. E. 1940	45° 42' 392.6(1459.8)	121° 26' 701.0(597.0)
COON U. S. E. 1940	45° 41' 1159.0(693.4)	121° 26' 656.0(642.2)
OASIS U. S. E. 1940	45° 41' 477.0(1375.4)	121° 25' 752.0(546.3)
GINGER U. S. E. 1940	45° 41' 477.0(1375.4)	121° 24' 739.4(559.0)
TONY U. S. E. 1940	45° 41' 1706.4(146.0)	121° 24' 558.5(739.6)

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

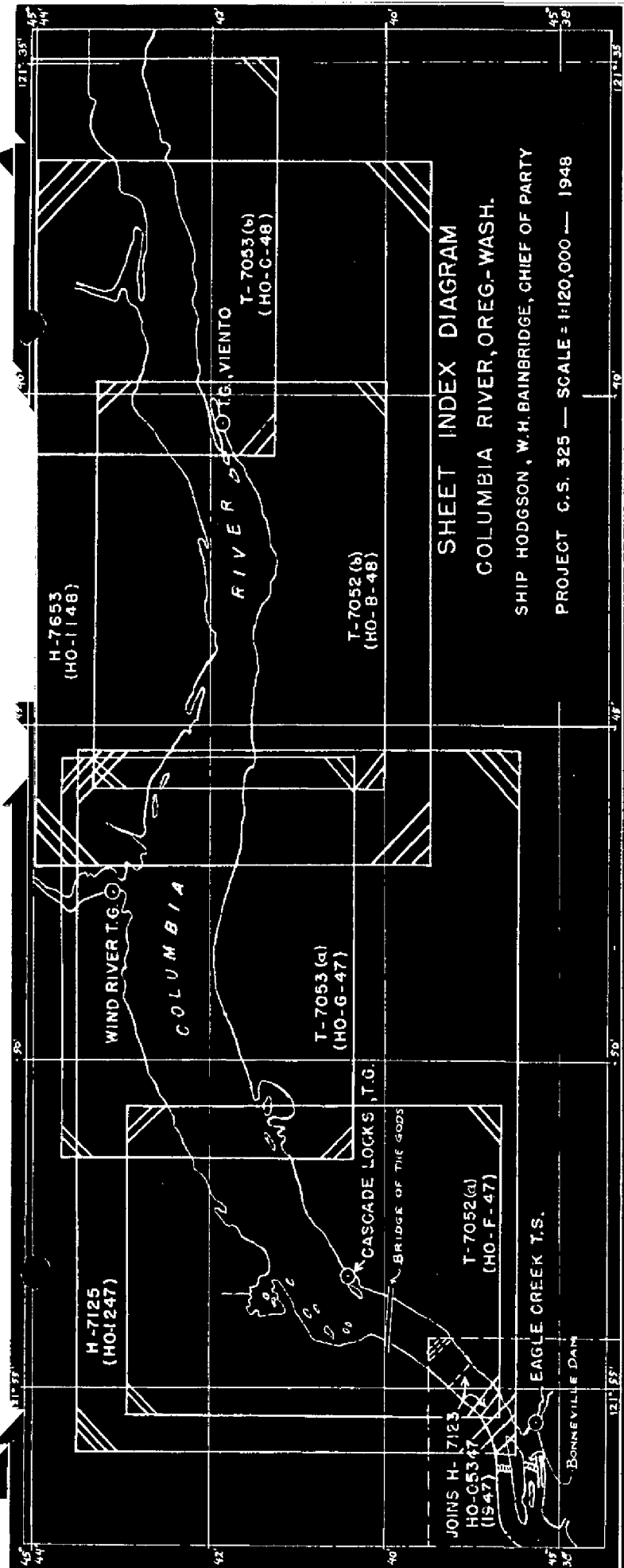
In regards to the U. S. E. triangulation scheme, refer to U. S. E. Print No. CL-04-34, "Columbia River Triangulation, Bonneville to The Dalles, 1943".

LIST OF RECOVERABLE TOPOGRAPHIC STATIONS: Sheet T-7084

<u>Station & Description</u>	<u>Latitude</u>	<u>Longitude</u>
(U.S.E.) N.E.COR.D.L. C.NO. 37, R.M.No. 1, 1939	45° 41' 780.0(1072.4)	121° 23' 192.3(1106.0)
ION (Rwy. Semaphore)	45° 41' 977.6(874.8)	121° 22' 1263.2(35.0)
ICE (Rwy. Semaphore)	45° 41' 1294.4(558.0)	121° 22' 915.8(382.4)
LUX (Rwy. Semaphore)	45° 41' 1691.4(161.0)	121° 22' 193.0(1105.1)
EVA (center-dolphin)	45° 42' 455.5(1396.9)	121° 22' 1143.0(155.0)
DOT (center-dolphin)	45° 42' 510.4(1342.0)	121° 22' 1113.0(185.0)
CUR (center-dolphin)	45° 42' 552.0(1300.4)	121° 22' 1083.0(215.0)
BOB (center-dolphin)	45° 42' 585.0(1267.4)	121° 22' 1040.5(257.5)
ANT (center-dolphin)	45° 42' 620.0(1232.4)	121° 22' 991.0(307.0)
HEN (Rwy. semaphore)	45° 42' 840.4(1012.0)	121° 21' 1156.0(142.0)
ORB (Rwy. semaphore)	45° 42' 92.4(1760.0)	121° 21' 904.1(394.0)
OAK (Rwy. semaphore)	45° 41' 1696.4(156.0)	121° 20' 1064.7(233.4)
ORA (apex-r.r. shack)	45° 41' 1703.4(149.0)	121° 20' 972.2(325.9)
MEMALOOSE ISLAND DAY BEACON	45° 42' 236.0(1616.4)	121° 20' 553.0(745.1)
NEW (Rwy. semaphore)	45° 42' 1001.0(851.4)	121° 20' 316.0(981.9)
RIG (Rwy. semaphore)	45° 41' 1546.4(306.0)	121° 19' 1278.4(19.8)
SKY (Rwy. semaphore)	45° 41' 1445.0(407.4)	121° 19' 93.3(1205.0)
ROY (Rwy. semaphore)	45° 42' 383.4(1469.0)	121° 18' 767.0(531.0)
TAX (center-mile post)	45° 42' 322.0(1530.4)	121° 18' 631.0(667.0)
TUB (center-mile post)	45° 42' 267.4(1585.0)	121° 18' 520.6(777.4)
VIM (Rwy. semaphore)	45° 41' 1263.0(589.4)	121° 18' 594.3(704.0)
KLICKITAT RIVER LIGHT	45° 41' 1246.0(606.4)	121° 18' 416.2(882.0)

LIST OF U. S. ENGR'S. TRIANGULATION STATIONS
LOCATED BY GRAPHIC CONTROL ON SHEET T-7084:

<u>Station & Description</u>	<u>Latitude</u>	<u>Longitude</u>
LOOK U. S. E. 1940	45° 41' 1592.1(260.3)	121° 23' 879.1(419.0)
MOSIER U. S. E. 1940	45° 41' 383.0(1469.4)	121° 23' 632.1(666.2)
LILY U. S. E. 1940	45° 41' 1281.4(571.0)	121° 22' 911.4(387.8)
VILLA U. S. E. 1940	45° 42' 256.1(1596.3)	121° 22' 1296.1(2.0)
FALCON U. S. E. 1940	45° 41' 1743.9(108.5)	121° 21' 633.0(665.1)
ANDY U. S. E. 1940	45° 42' 783.4(1069.0)	121° 21' 763.8(535.2)
MEMAL U. S. E. 1940	45° 41' 1660.0(192.4)	121° 20' 725.4(572.7)
BARD U. S. E. 1940	45° 42' 645.0(1207.4)	121° 19' 1241.8(56.2)
DAVIS U. S. E. 1940	45° 42' 536.4(1316.0)	121° 18' 1218.8(79.2)
SAGO U. S. E. 1940	45° 42' 60.0(1792.4)	121° 18' 83.8(1214.3)
AIR U. S. E. 1940	45° 41' 1194.0(658.4)	121° 18' 381.0(917.2)

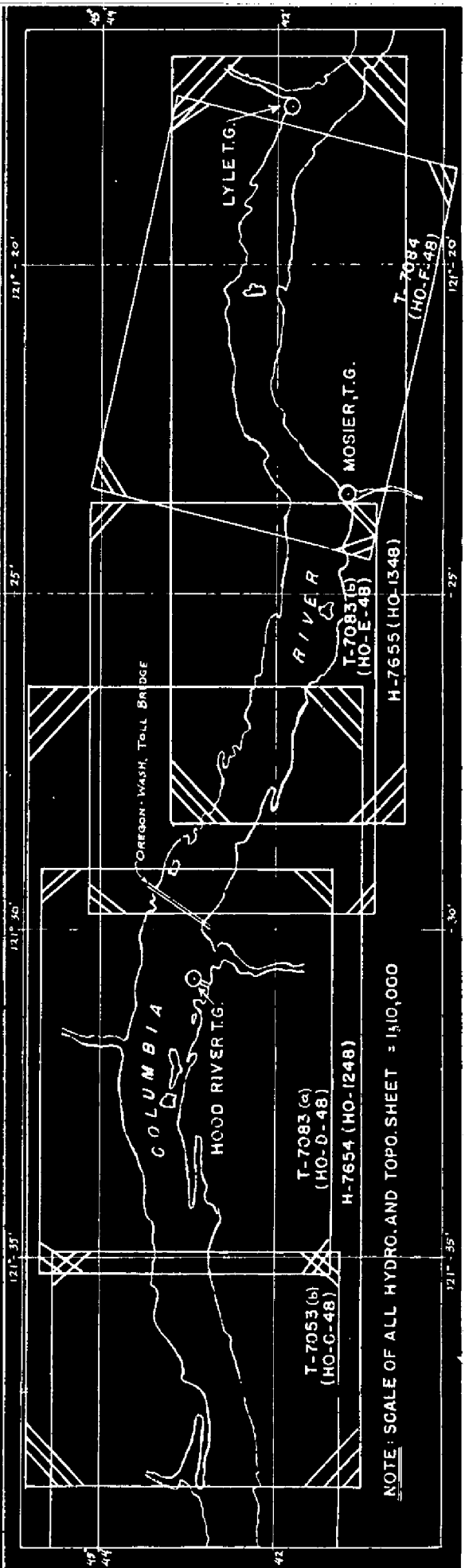


SHEET INDEX DIAGRAM

COLUMBIA RIVER, OREG.-WASH.

SHIP HODGSON, W. H. BAINBRIDGE, CHIEF OF PARTY

PROJECT C.S. 325 — SCALE = 1:120,000 — 1948



NOTE: SCALE OF ALL HYDRO. AND TOPO. SHEET = 1:10,000

STANDARDIZATION OF DECLINATOIRE

1948 Field Season

Project CS-325

Columbia River

Ship HADGEON

W. H. Bainbridge, Comdg.

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

On 24 February 1949, this declinoire 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 declinoire 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 (1) 227° 00'	
(Air Beacon to Mag. North) (2) 227 10	
(3) 227 00	
(4) 227 05	
Mean of Measured Angle - - - - -	227° 04'
	-(180 00)
Magnetic North by Declinoire - - - - -	21° 47' E
Actual Variation (Taken from Chart #6156) - - -	21 44 E
Declinoire Error - - - - -	- 03'