

5581

Diag. Cht. Nos. 6300-2 & 6380

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-26 (47) Office No. T-5581

LOCALITY

State Washington

General locality Bellingham

Locality Birch Bay

194 9-52

CHIEF OF PARTY

C.W. Clark, Lt. Comdr., Chief of Field Party

H. A. Paton, Comdr., Balto. Photo. Office

LIBRARY & ARCHIVES

DATE May 8, 1956

B-1870-1 (1)

5581

DATA RECORD

T -5581

Project No. (II): Ph-26(47)

Quadrangle Name (IV):

Field Office (II): Bellingham, Washington

Chief of Party:

Charles W. Clark

Photogrammetric Office (III): Baltimore, Md.

Officer-in-Charge:

Hubert A. Paton

Instructions dated (II) (III): 31 August 1949

Letter No. 731-aal, dated 24 October 1949

Copy filed in Division of
Photogrammetry (IV)

Office Files

Method of Compilation (III): Air photographic (multiplex)

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1:10,000

Scale Factor (III): 1.000

Date received in Washington Office (IV): JUN 25 1951

Date reported to Nautical Chart Branch (IV): JUN 29 1951

Applied to Chart No.

Date:

Date registered (IV): 20 May 1954

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N. A. 1927

Vertical Datum (III): MSL

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): BIRCH POINT, 1912

Lat.: 48° 56' 30.854"

Long.: 122° 49' 12.021"

Adjusted
~~CRACKED~~

Plane Coordinates (IV):

State: Washington

Zone: NORTH

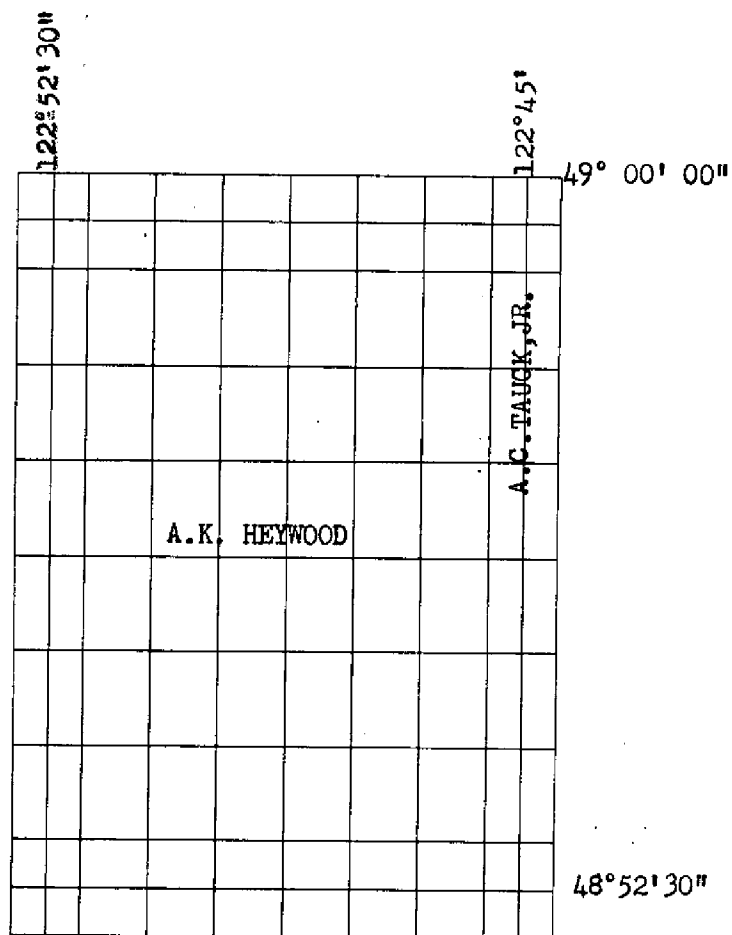
Y=

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.

01



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

DATA RECORD

Field Inspection by (II): John H. Winniford

Date: 11/17/49 ✓

Planetable contouring by (II):

Date:

Completion Surveys by (II): Ray H. Skelton II

Date: 1952 ✓

Mean High Water Location (III) (State date and method of location):
June 4, 1949 (Date of photography)

Projection and Grids ruled by (IV): T.L.J.

Date: Sept. 1950

Projection and Grids checked by (IV): H.D.W.

Date: Sept. 1950

Control plotted by (III): B.A. Dew
A.K. Heywood

Date: Nov. 1950

Control checked by (III): A.C. Rauck
D.M. Brant

Date:
Nov. 1950

~~Horizontal~~ Stereoscopic A.K. Heywood
Control extension by (III): A.C. Rauck

Date:
Nov. 1950

Stereoscopic Instrument compilation (III):
Planimetry A.K. Heywood
Contours A.C. Rauck
A.K. Heywood
A.C. Rauck

Date: Nov. 1950
Date: Nov. 1950

Manuscript delineated by (III): B. A. Dew N/2
(See remarks) C. A. Lipscomb S/2

Date: Jan. 1951
March 1951

Photogrammetric Office Review by (III): A.K. Heywood

Date: March 1951

Elevations on Manuscript
checked by (II) (III): A.K. Heywood
Heywood

Date: March 1951

Camera (kind or source) (III):

US&GS Camera Type "0" focal length 152.37 mm.

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
1125-1133	6-4-49	1141	1:24,000	5.6 above MLW
1150-1158	"	1151	"	5.4 " "
1387-1392	"	1145	"	2.3 " "

Tide (III)

Tide from predicted table of tides

Reference Station: PORT TOWNSEND, WASH.

Subordinate Station: BLAINE, SEMIAMOO BAY

Subordinate Station:

Washington Office Review by (IV): Everett H. Ramey

Final Drafting by (IV): A. J. Robinson

Drafting verified for reproduction by (IV): M. Wallin

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 9

Shoreline (More than 200 meters to opposite shore) (III): 18.5

Shoreline (Less than 200 meters to opposite shore) (III): 2.1

Control Leveling - Miles (II): 13

Number of Triangulation Stations searched for (II): 33

Recovered: 18

Identified: 7

Number of BMs searched for (II): 5

Recovered: 3

Identified: 3

Number of Recoverable Photo Stations established (III): 7

Number of Temporary Photo Hydro Stations established (III): 0

Remarks:

Assembly and evaluation of data on the public land lines was done by Donald M. Brant.

Diurnal

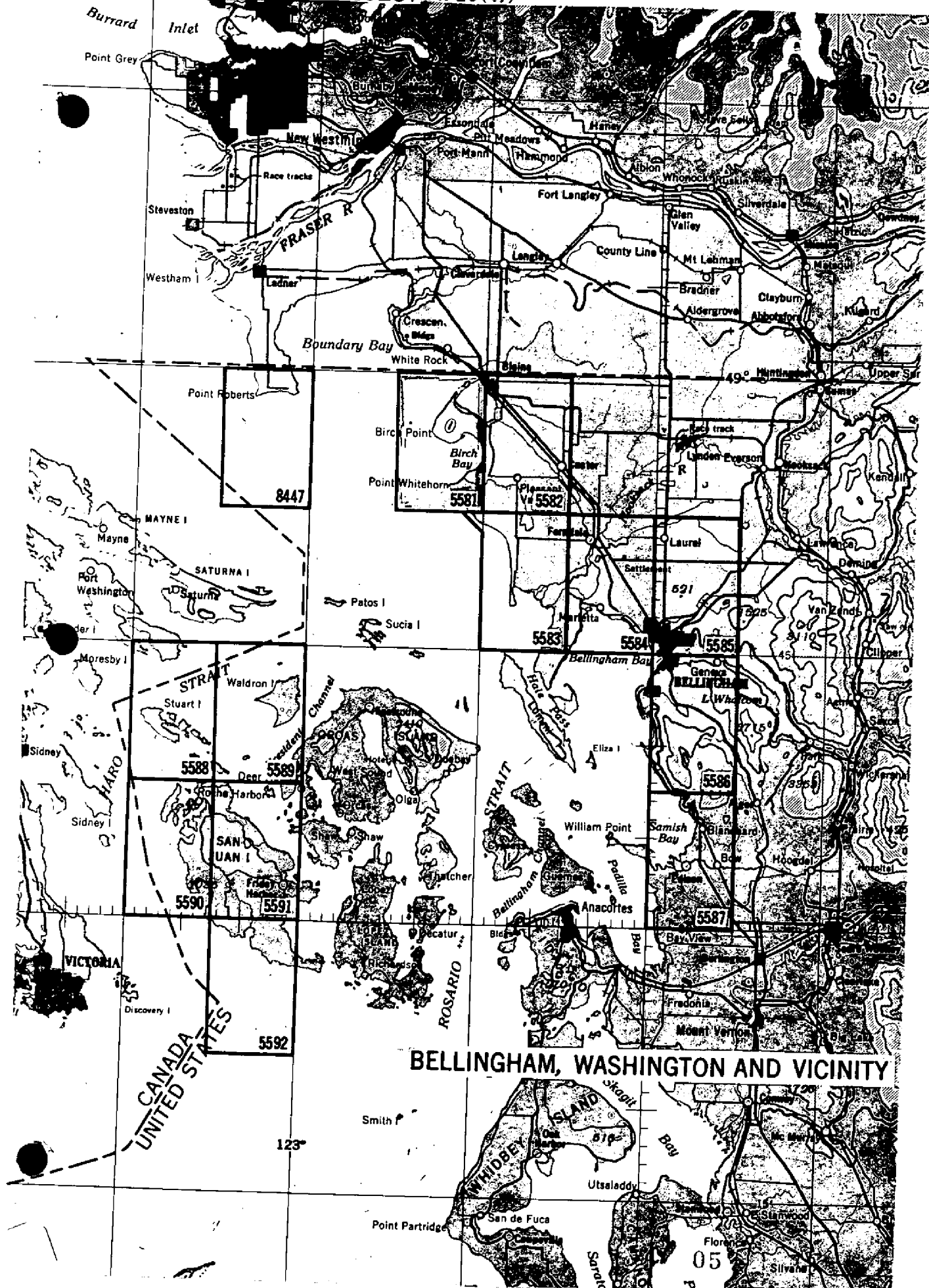
Ratio of Ranges	Mean Range	Spring Range
	5.1	8.3
1.2	5.9	9.5

Date: 23 Sept 1952

Date: 8-21-53

Date: 8-30-52

Date:



SUMMARY TO ACCOMPANY TOPOGRAPHIC MAP T-5581

Topographic map T-5581 is one of 13 similar maps of project Ph-26(47). It covers portions of Point Whitehorn, Birch Point and Blaine, Washington.

Project Ph-26(47) is a stereoscopic mapping project. Field work in advance of compilation included field inspection of shoreline and interior features, the recovery and establishment of horizontal and vertical control and the investigation of geographic names and boundaries.

Map T-5581 was compiled at a scale of 1:10,000 in two parts. After the addition of hydrography by this Bureau the map manuscript will be forwarded to the Geological Survey for publication as a standard $7\frac{1}{2}$ ' topographic quadrangle.

Items registered under T-5581 will include a cloth-mounted lithographic print of the map manuscript (in two parts) at a scale of 1:10,000, a cloth-mounted color print of the published map at a scale of 1:24,000 and the descriptive report.

FIELD INSPECTION REPORT
for
Sheets T-5581 and T-5582
Project Ph-26(47)

2: Areal Description:

The area covered by these two sheets lies largely in the basin formed between the lateral ridge paralleling the Canadian Border and the ridge lying between the Nooksack River and Georgia Strait. Birch Point, between Drayton Harbor and Birch Bay is an isolated hill, having no connection with either of the ridges mentioned above.

The area is drained by California Creek, Dakota Creek and their tributary sloughs. At one time, the alluvial bottom land surrounding these creeks was marshy but drainage has carried off much of the surface water and the land is now arable.

The principal industry in the area is dairy and poultry farming. The hilly area has been extensively logged and, where not cultivated, is now covered by brush and second growth conifers.

There is a large summer development at Birch Bay.

The largest town in the area is Blaine, Washington. At the time that timber was being cut, there were several large sawmills in Drayton Harbor, but since the area has been exhausted, these mills have burned and are now but an area of old piling. The town now exists primarily on trade with farmers in the surrounding territory and upon tourist trade.

Custer, in the southeastern quarter of T-5582 was an important stop on the Great Northern Railway, but with the advent of the truck, it has deteriorated into a crossroads village with little or no industry.

U.S. Highway 99 cuts diagonally across Sheet T-5582 and is the principal road in the area.

The entire area, except for Birch Point is interlaced by well maintained gravel or concrete roads which follow the sectionalized pattern of the country.

The Great Northern Railway parallels U.S. Highway 99 and runs through Blaine into Canada.

The border between the United States and Canada forms the northern boundary of these two quadrangles.

Custom and Immigration offices are maintained on U.S. Highway 99, and at a point about one mile east, on U.S. Highway 99 Alternate, by both the United States and Canada.

At the time of field inspection, the Birch Point area was being sub-divided and clearing was in progress. Since no definite plans have been made regarding road pattern, the field editor should pay special attention to any new construction.

Photograph coverage of the area was complete and adequate.

With regard to the interpretation of detail on the photographs, a densely wooded area of deciduous has a lighter grey tone and a greater uniformity of tone than a corresponding area of dense conifers. Deciduous trees abound in areas that have been extensively logged, and in low areas near drainage. Conifers are generally found in isolated groups where the cutting has not been as extensive.

A mottled color of light grey and black indicates a mixture of hard and softwood trees, while solid light grey tones indicate a brushy area.

In the areas near the water, a light pebbled effect indicates a mixture of brush and small willows, grey or white spots offshore indicate rocks, and white along the shoreline indicates small boulders and gravel on the beaches. Sand, which is found only on the spit at the west side of Drayton Harbor shows as white.

The various natural features have been delineated on the field inspection photographs a sufficient number of times so that the office personnel should be able to interpret any unnoted feature.

3. Horizontal Control:

(a) Supplemental control established by this party is as follows:

Semiahmoo, Alaska Packers Assn. Cannery, tank.
Semiahmoo Harbor Light

Semiahmoo Harbor Light is listed in the 1949 Light List as being rebuilt in 1944 thereby destroying the earlier position.

Positions were determined by third-order triangulation methods.

(b) No datum adjustments were made by the field party. Datum adjustments will be required before some of the identified control can be used.

(c) Control stations used and not established by the Coast and Geodetic Survey are boundary monuments and marks along the International Boundary. These stations were established by the International Boundary Commission. The accuracy of location is not known but it is thought to be at least third-order. This control is on the North American Datum of 1927 and no datum adjustment is necessary. Data on this control is listed in "Report on International Boundary Commission - Reestablishment of the Boundary between the United States and Canada - Gulf of Georgia to Northwesternmost Point of Lake of the Woods - 1937". Boundary Monument No. 5, 1905 is also listed on page 38 of list of geographic positions "Straits of Fuca and Gulf of Georgia" on U.S. Standard Datum.

Station ~~Cortel~~ which was recovered but not identified is also an International Boundary Commission station.

(d) All stations required by the project instructions and several others were identified.

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

The following stations were not recovered:

Quadrangle T-5581

BARTON, 1858	SHINGLE MILL STACK, 1925
BLAINE, 1888	SOUTH DOLPHIN, 1925
DRAYTON I., 1858	ALASKA PACKERS ASSN., FLAGSTAFF, 1925
SATELLITE 2, 1888	MORRISON MILL CO., STACK, 1925
SEMLAHMOO LIGHT, 1905	FLAGSTAFF, CITY DOCK, 1925
WHITEHORN, 1888	NORTH DOLPHIN, 1925
GROUSE, 1888	MILLER, 1905

Quadrangle T-5582

CREEK, 1888	SOUTH FLAGPOLE, PEACE ARCH, 1925
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4. Vertical Control:

(a) List of Bench Marks recovered.

Quadrangle T-5581

<u>B.M.</u>	<u>Established by</u>	<u>Accuracy</u>
H 6 = 19 J	USC&GS and G.S.C.	First-order
Tidal 4	" " "	?
Tidal 5	" " "	?

Quadrangle T-5582

<u>B.M.</u>	<u>Established by</u>	<u>Accuracy</u>
J 6 = 48 B (USGS)	USC&GS	First-Order
K 6 = 70 B (USGS)	"	" "
Tidal 6	"	?
Tidal 7	"	?
Tidal 8	"	?
Tidal 9	"	?
452 B	USGS	Third-Order

Elevations of all bench marks, except tidal bench marks, are above mean sea level. Datum adjustments were made on tidal bench marks reducing the elevations to mean sea level using the published value of 5.34 feet.

No bench marks were established by this party.

(b) In the comparatively flat area to the south of the ridge along the Canadian Boundary, fly lines were run with a wye level. All lines started and closed on USC&GS, USE or USGS bench marks, or on fly line level points established and adjusted by this party, in accordance with the project instructions.

In the more hilly regions north and south of this flat area, trigonometric levels were run with Kern Theodolite #36563 in accordance with the project instructions.

Elevations were established within the squares, which were blocked off in blue on the 1:25,000 contact prints, on points which were level for a distance of 3 meters in all directions. These points were numbered consecutively on the photographs, the points shown at the intersection of the cross lines shown in brown being the center of the level spot. Elevations were computed and checked in "Wye Leveling Book A" then transferred to the photograph and verified. A complete index of all points established in Quadrangles T-5581, T-5582 and T-5583, and of two points in T-5584 with the elevations and the photograph number of the picture bearing the data is listed in the front of the book. Each point whose elevation is recorded in this volume has the suffix "A" indicating the volume in which the line is recorded viz: 8206A, 8102A, etc.

Where trigonometric level lines were not used as a basis for further leveling, and where the error was less than 2 feet, as specified in the Project Instructions, the lines were not adjusted.

Reference will be made to Volume A in the Field Inspection Report for Sheets T-5583 and T-5584.

Elevations run from 8101A to 8109A in Sheet T-5581, from 8201A to 8251A in Sheet T-5582. Also included are 8301 to 8321 in Sheet T-5583, and 8401 and 8402 in Sheet T-5584.

(c) First and last designated level points for each map are as follows:

T-5581	8101 = 8230 to 8109, incl.
T-5582	8201 to 8251, incl.

5. Contours and Drainage:

Contouring is inapplicable.

All drainage was investigated in the field and verified under the stereoscope. Small ditches in fields, where the drainage had no pattern were omitted or deleted.

6. Woodland Cover:

Woodland cover was classified in accordance with Photogrammetry Instruction 21 dated 8-18-48. In areas where it was felt that the multiplex would be unable to read a ground elevation occasionally, the height of trees was estimated and recorded on the field photographs.

7. Shoreline and Alongshore Features:

The shoreline was inspected in accordance with "Supplemental Instructions - Shoreline Inspection dated 18 March 1944" by walking the shoreline and by inspection from a boat kept close to shore.

The datum plane of the photographs is such that the low water line is not visible, and it was not delineated. Where extreme low tides exposed mud flats, these were noted on the field photographs. *See item 52*

There are high bluffs fronting along Georgia Strait from the south end of Semiahmoo Spit to Birch Point, and from Pt. Whitehorn to the south limit of Quadrangle T-5582. These bluffs were classified, and the heights estimated.

On the north end of Semiahmoo Spit, that is to say, the south side of the entrance to Drayton Harbor, there is an installation of the Alaska Packers Assn. with its attendant wharves and docks. On the north side of the entrance, the old Elaine City Dock has been cribbed and fitted and is now a dirt causeway.

A submarine cable and pipe line cross from the causeway to the cannery, and a submarine cable runs from the cannery to Semiahmoo Harbor Light.

In Birch Bay, there are various groins and pile dikes to protect the shoreline from erosion. All these features were carefully investigated and appropriate notes were made on the field photographs.

8. Offshore Features:

The entire shoreline, with the exception of Semiahmoo Spit, is covered with boulders of varying size, and offshore boulders, which were visible on the photographs, were noted, with information as to height above mean lower low-water or high water. In Drayton Harbor, two large concrete foundations were classified on the field photographs. Various piling were located by sextant fix and information was noted on the back of the photographs.

Drayton Harbor and Birch Bay are both shallow in alongshore areas and mud flats bare at minus tides. The outer limit of these flats in Birch Bay was delineated but the condition in Drayton Harbor was such that an accurate delineation of the outer limits of mud was impossible, due to sun spots, and the different stages of the tide in different flights. *See item 51*

9. Landmarks and Aids:

(a) One new landmark for nautical charts was recommended and two were deleted.

(b) There are no interior landmarks.

(c) One aeronautical aid, Seattle-Vancouver Airway Beacon No. 10, exists within these quadrangles. *On T-5582*

(d) Three fixed aids to navigation exist in the vicinity of these quadrangles. All are listed on Form 567.

See Side Heading 3 "Horizontal Control" of this report.

International Boundary Range C Front Light (Offshore Range Mark, (East side Boundary Bay)(I.B.C.), 1934) and International Boundary Range C Rear Light (Shore Range Mark (East side Boundary Bay)(I.B.C.), 1934) are listed in the light list as established in 1941. It was verified locally that the structures are the same as established in 1934 and the lights were installed in 1941. Directions were observed to Offshore Range Mark to further verify the recovery.

The only range is the International Boundary range referred to above. The azimuth of the range is given in the International Boundary Commission publication referred to under Side Heading 3(c). No further determination of the azimuth was made on this project.

10. Boundaries, Monuments and Lines:

See "Special Report - Boundaries - Project Ph-26(47)" to be submitted later. This report is filed under project data, Division of Photogrammetry.

The only boundaries to be mapped in these two quadrangles are the International Boundary, the city limits of Blaine, and one election precinct boundary. The International Boundary is adequately defined and described in the publication referred to under Side Heading 3, Horizontal Control. The city limits of Blaine are unmonumented and the city limits are shown on the photographs. One election precinct boundary follows the township line between T39N and T40N across both of these quadrangles from Birch Bay to the range line between R1E and R2E. See item 56

* Boundary between Semishmoos and Mountain View Townships. ENR
35 section corners have been recovered and identified. All recovered corners are apparently remarked corners. Descriptions of section corners were obtained from the County Engineer of Whatcom County. No further verification as to the authenticity of the recovered corners has been obtained to date. For more complete information on land lines see "Special Report - Land Lines - Project Ph-26(47)" to be submitted later. See item 14

11. Other Control:

Recoverable topographic stations were established to provide a spacing of control stations of about two miles along the shoreline. Three existing and previously charted landmarks were identified and described as recoverable topographic stations. Three bench marks and five monumented section corners were identified and described as recoverable topographic stations for supplemental interior control.

Recoverable topographic stations not listed on Form 567 were established as follows:

Quadrangle T-5581

BART
SHAK

CORN (T-5583)

See item 38, this report

Quadrangle T-5582

GOLF
KOTA

See item 38, Descriptive Report for T-5582.

Quadrangle T-5582

CULT
T39&40N, R1E, $\frac{32}{5} \frac{33}{4}$

T39&40N, R1E $\frac{34}{3} \frac{35}{2}$

T39&40N, R1E $\frac{33}{4} \frac{34}{3}$

T40&41N, R1E & R1W $\frac{36}{1} \frac{31}{6}$

No photo hydro stations were established.

12. Other Interior Features:

All roads were classified in accordance with instructions contained in Part II, Chapters V and VII of the Topographic Manual.

Buildings to be shown on the map manuscript have been circled and classified in accordance with instructions contained in "Photogrammetry Instructions 29, dated 10-1-48" and in the Topographic Manual Part II, Chapters V and VII. All buildings of minor importance have been deleted with a green "X". See item 52.

In Birch Bay, a resort area, the numerous cabins have been outlined. These buildings are permanent in nature and are used during the summer months as residences.

All public buildings have been classified and named.

All vertical and horizontal clearances of bridges have been noted on the field photographs, with the time and date of such measurements. All bridges in this area are fixed.

There were no cables over navigable waters in the area.

Two submerged cables were found in Semiahmoo Bay and the ends of each were delineated on the photographs.

One Aeronautical Aid is located in the north portion of quadrangle T-5582. The ground elevations and the height of the tower were determined by trigonometric levels and the information noted on the photograph.

There is a small private landing field to the south of the town of Elaine. This is the only field within these two quadrangles.

A seaplane landing and anchorage area is charted in Boundary Bay. There are no aircraft facilities in this landing area.

13. Geographic Names:

See "Special Report on Geographic Names - Project Ph-26(47)" to be submitted later. on file 107 Filed in Geographic Names Section, Div. of Charts.

14. Special Reports and Supplemental Data:

Special Reports will be submitted later as follows:

1. "Special Report - Boundaries - Project Ph-26(47)"
 2. "Special Report - Land Lines - Project Ph-26(47)"
 3. "Special Report - Geographic Names - Project Ph-26(47)"
 4. "Coast Pilot Report - Project Ph-26(47)", *filed in Coast Pilot Section*
- Only one report. Filed under project number. See item 13*

Records and supplemental data are submitted as follows:

Original copies of geodetic records - record books, recovery notes, descriptions, abstracts and lists of directions, triangle computations, geographic position computation, progress sketch, etc., were forwarded to the Division of Geodesy on 30 January 1950. Duplicate copies of descriptions and geographic positions are forwarded to the Washington Office with this report.

Photographs and other photogrammetric records are forwarded to the Washington Office with this report. *in Gen. Files, Div. of Photogrammetry.*

Three copies of Form 567, Non-Floating Aids or Landmarks for Charts, were forwarded to the Washington Office 27 January 1950 in accordance with Subject 713 of the Topographic Manual. One copy of Form 567 is forwarded with this report.

Other supplemental data is submitted as follows:

- 1 Print Semiahmoo and Custer Townships, Whatcom County, Washington, Scale 2" = 1 mile.
- 1 Print Mountain View Township, Whatcom County, Washington, Scale 2" = 1 mile.

Approved:

Charles W. Clark
Charles W. Clark
Chief of Party

Respectfully submitted:

John C. Lajoie
John C. Lajoie
Cartographer

PHOTOGRAMMETRIC PLOT REPORT

21. Area Covered

T-5581, T-5582, T-5583 and T-5584.

22. Method

A cross-flight (1378 to 1385) was set first to control the south end of T-5581 and T-5582 and the north end of T-5583. This strip was bridged between two horizontal control points, HIGH 1950, and PEARSON 3, 1949. The horizontal pass points established were then used to control the north-south strips on the aforementioned quadrangles. The remainder of the area was then bridged according to the layout of strips on the sketch of control. All points were held with the exception of WHITEHORN 2, 1858. This will be discussed under item 23.

Adjustment between strips was necessary on T-5583. Only one control point (SANDY, 1949) was available on this quadrangle. The adjustment was required between strips in the lower portion of the quadrangle. The maximum adjustment between pass points was 0.7 mm. In the upper portion of the quadrangle agreement of pass points between the strips was good.

In quadrangle T-5581 a short strip (1129-31) was bridged between BIRCH POINT, 1912 and the horizontal pass points established from the flight to the east. The SUB. PT. for BIRCH POINT, 1912 in addition to being a poor point was difficult to identify as it was located near the outer limits of the model. A check was made monoscopically on SUB. PT. DRAYTON ID. 2, 1939 which appeared to hold well.

After bridging was accomplished the models could be sent individually to control and established pass points. Full advantage was taken of proven strips to avoid resetting.

All topography but shoreline was drawn by multiplex. Detail points were established for the location of the MHWL from the field inspection photographs.

All photo point identified in the field for location by multiplex were established.

One work sheet was used, that between HIGH, 1950 and PEARSON 3, 1949. This work sheet was used both for bridging and for details near the junction of T-5582 and 5583. These details and pass points were transferred to the manuscripts by matching projection lines. All other multiplex work was done directly on the manuscript.

23. Adequacy of Control

During the orientation of the cross-flight bridged between PEARSON 3, 1949 and HIGH 1950, multiplex detail points were established along the shoreline of Point Whitehorn. Most of these points were dropped monoscopically from photograph 1385. Model 1385-86 could not be made a part of the cross-flight bridging since it presented a poor parallax solution, the area being 75% water. An attempt was made during the orientation of the cross flight to identify SUB. PT. WHITEHORN II, 1858. A monoscopic image appeared to be about 0.8 mm south of its plotted position. Model 1385-86 was then set separately holding to the pass points along the east edge of the model, which were established from the cross-flight bridging, and to the detail points established along the shoreline. The position of SUB. PT. WHITEHORN was verified at 0.8 mm south of its plotted position. The multiplex position of this SUB. PT. has been plotted on the manuscript. Further investigation of this point will be requested during the field edit. *See item 53*

The horizontal control provided complied with the project instructions but was below our usual minimum requirements for multiplex mapping. The accuracy of a large portion of the project is dependent on the cross-flight between HIGH, 1950 and PEARSON 3, 1949. At the east end of this there is a check between PEARSON 3, 1949 and a well-controlled north-south strip from T-5584. Unfortunately at the west end there is no check on HIGH, 1950. Another weakness in the control was in T-5583 which contained only one horizontal control point (SANDY, 1949). This station located on a narrow peninsula is located poorly from the standpoint of affording a strong control point for aerial mapping.*
* *See §66, Descriptive Report T-5583 regarding accuracy in area. etc.*
In consideration of the above the control in this area was inadequate.

24. Supplemental Data:

Inapplicable.

25. Photography

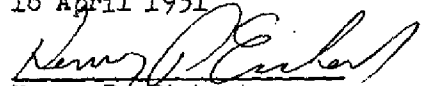
The coverage and overlap of the photographs was adequate. Definition and quality of the diapositives was fair to good.

26. Accuracy

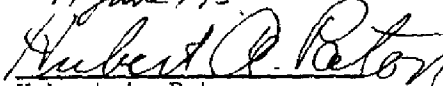
With the possible exception of quadrangle T-5583, it is believed that the accuracy requirements of the Coast and Geodetic Survey have been met.

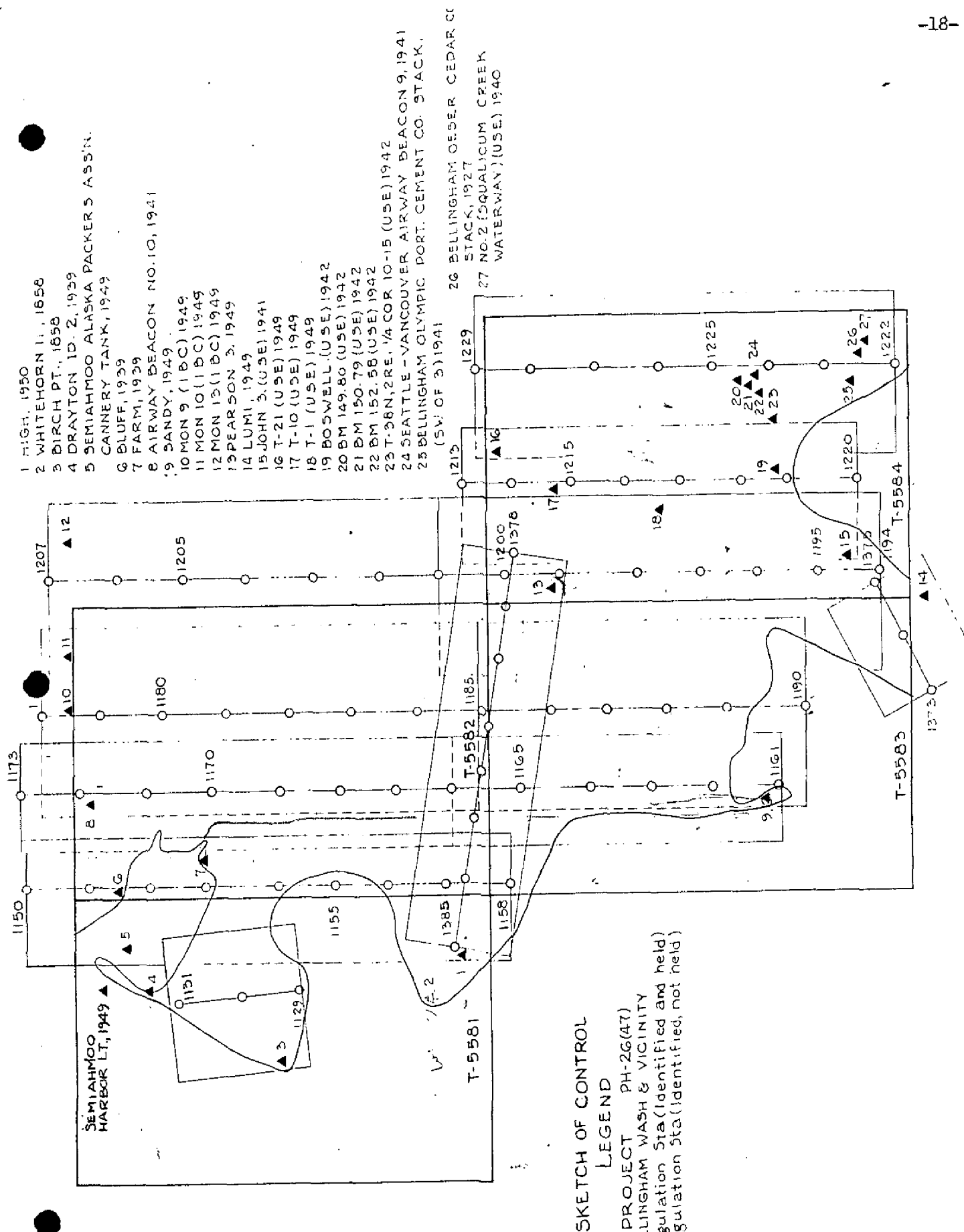
See item 53

Respectfully submitted
16 April 1951


Henry P. Eichert
Cartographer

Approved and forwarded

19 June 1951

Hubert A. Paton
Comdr., C&GS



MAP T. 5581

PROJECT NO. Ph-26(47)

SCALE OF MAP 1:10,000

SCALE FACTOR 1,000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y-COORDINATE LONGITUDE OR X-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
POINT WHITEHORN II, 1858	G.P. List P. 1263	N.A. 1927	48 53 40.91 122 47 31.98	1263.7 589.7 651.4 570.8			See item 67
SEA BIRD, 1858	"	"	48 57 21.98 122 48 59.15	679.0 1174.5 1203.4 17.3			
COERTEL 1934	IBC P. 272	"	48 57 21.217 122 48 57.555	655.4 1198.0 1170.9 49.7			
KNOWAIS (CAN) 1941	G.P. List P. 612	"	49 01 32.639 122 52 06.269	1008.3 845.2 127.4 1091.6			N. of map limits
SEMAHMOO HARBOR LIGHT, 1949	" P. 1006	"	48 59 32.862 122 46 57.957	1015.1 838.3 1178.2 41.5			
SEMAHMOO ALASKA PACKERS ASSOCIATION CANNERY TANK, 1949	" P. 1006	"	48 59 23.640 122 46 16.114	730.3 1123.2 327.6 892.2			
OFFSHORE RANGE ? MARK (EAST SIDE) BOUNDARY BAY (S-200)	IBC P. 272	"	49 00 08.208 122 46 50.139	253.6 1560.0 1000.0 1019.1 200.4			See h. 93/5-0 44.6-5
I.B.C. 1934							
DRAYTON ISLAND 2, 1939	G.P. List P. 1006	"	48 58 55.645 122 47 08.414	1718.9 134.5 171.1 1048.8			
BIRCH POINT, 1858	" P. 32	U.S. Standard	48 56 31.955 122 49 16.637	987.1 866.3 338.6 882.4	-29.8 -36.7	957.3 (896.1) 301.9 (919.1)	
BIRCH POINT, 1912- 1926	" P. 37	N.A. 1927	48 56 30.854 122 49 12.021	953.1 900.3 244.6 976.3			
BLUFF, 1939	" P. 1006	"	48 59 19.923 122 45 01.090	615.4 1238.0 22.2 1197.7			

COMPUTED BY: A.K. Heywood

DATE: 8/50

CHECKED BY: H.P. Eichert

DATE: 8/50

MAP T-5581

PROJECT NO. Ph-26(47)

SCALE OF MAP..... 1:10,000

SCALE FACTOR 1.000

[illegible]

1 FT. = .3048006 METER

A. K. Heywood

DATE 5/50

CHECKED BY: H.P. Eichert

DATE 8/50.

M-2388-12

COMPILATION REPORT T-5581

31. DELINEATION

Refer to Photogrammetric Plot Report, item 22, which is bound with this report.

32. CONTROL

Refer to Field Inspection Report, item 3 and Photogrammetric Plot Report, item 23.

33. SUPPLEMENTAL DATA

Land Plats

- 1 - Township No. 40 N. Range No. 1 West Willamette Meridian dated February 21, 1860.
- 1 - Township No. 39 N. R. No. 1 W Willamette Meridian dated Feb. 21, 1860

Township Layouts

- 1 - Semiahmoo Township TWP 40 N.R. 1 W W.M. Whatcom County, Wash.
- 1 - Mountainville Township TWP 39 N.R. 1W & 1E., W.M. Whatcom County, Wash.

34. CONTOURS AND DRAINAGE

The major portion of the quadrangle is covered with dense woods rendering contouring with the multiplex difficult; however, the field inspection party recorded approximate tree heights on the contact prints which aided in the delineation of the contours.

35. SHORELINE AND ALONGSHORE DETAILS

Special attention is called to the manner in which the MHW line was compiled in the vicinity of Point Whitehorn, model 1385-1386. The method is fully explained in the Photogrammetric Plot Report, item 23.

In the vicinity of Drayton Harbor, the land areas of the narrow spit extending outward NE was insufficient for multiplex compilation. The MHW line and cultural detail was delineated during compilation from the photographs holding three well distributed triangulation stations; SEMIAHMOO HARBOR LIGHT, 1949, DRAYTON ID 2, 1939, SEMIAHMOO, ALASKA PACKERS ASSN. CANNERY TANK, 1949.

36. OFFSHORE DETAILS

These are believed complete.

See item 68

37. LANDMARKS AND AIDS

Form 567 has been submitted and forwarded to the Washington Office with this report. There are three new landmarks in this quadrangle.

38. CONTROL FOR FUTURE SURVEYS

Seven form 524s have been submitted with this report.

The positions of the following topographic stations were determined by multiplex.

ARCH, 1949	FOOT (Flag Tower) 1949
BART (Gable) 1949	SHAK (Gable) 1949
CORN (Gable) 1949	TREE 1949

Topographic station "HIGH 1950" not noted above was located as supplemental control by triangulation methods during the time of field inspection. See item 53

A list of recoverable topographic stations has been prepared and is included in paragraph 49.

39. JUNCTIONS

Junctions were made to east with quadrangle T-5582 and to the south-east with quadrangle T-5583. To the west of this quadrangle is Georgia Strait and to the north, the International Boundary Line.

40. HORIZONTAL AND VERTICAL ACCURACY

See Photogrammetric Plot Report, item 23.

41. BOUNDARIES

Land lines:

See Special Reports, Boundaries, Project Ph-26(47), Land Lines, Project Ph-26(47), and item 10 of the field inspection report. See item 14

For details of land line compilation refer to compilation report, T-5584, item 41. The graphically enlarged copies of the land plots of townships listed in item 33 are submitted with this report.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with Geological Survey quadrangle "Blaine" Edition of 1907, reprinted in 1947, scale 1:62,500.

47. COMPARISON WITH NAUTICAL CHARTS

The Semiahmoo Spit area was compared with nautical chart No. 6399, scale 1:30,000, published March 1941, 4th Edition, corrected to October 20, 1945.

A wreck and extensive piling areas are shown on the chart in the vicinity of Semiahmoo Spit and the causeway running southwest from Blaine. This piling is not shown on the manuscript for lack of data and bears further investigation to determine its existence. It is not believed that this area as compiled on the manuscript is complete enough for the manuscript to supersede the nautical chart. See item 65

A wreck and a lone pile in the vicinity of 48° 58' and 122° 46' are also not shown on the manuscript and warrant further investigation.

Comparison also was made with Chart 6300, scale 1:200,000, published September 1941, II Edition, corrected to July 5, 1948.

Items to be applied to nautical charts immediately:

None.

Items to be carried forward

None.

Respectfully submitted


Albert K. Heywood
Cartographic Photo Aid

Approved and forwarded

19 June 1951

Hubert A. Paton

Hubert A. Paton,
Comdr., C&GS
Officer in Charge

By Joseph Steinberg

50- PHOTOGRAMMETRIC OFFICE REVIEW

T-5581

1. Projection and grids AKH 2. Title AKH 3. Manuscript numbers AKH 4. Manuscript size AKH

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy AKH 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) AKH 7. Photo hydro stations AKH 8. Bench marks AKH
9. Plotting of sextant fixes AKH 10. Photogrammetric plot report AKH 11. Detail points AKH

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline AKH 13. Low-water line AKH 14. Rocks, shoals, etc. AKH 15. Bridges AKH 16. Aids to navigation AKH 17. Landmarks AKH 18. Other alongshore physical features AKH 19. Other along-shore cultural features AKH

PHYSICAL FEATURES

20. Water features AKH 21. Natural ground cover AKH 22. Planetable contours AKH 23. Stereoscopic Instrument contours AKH 24. Contours in general AKH 25. Spot elevations AKH 26. Other physical features AKH

CULTURAL FEATURES

27. Roads AKH 28. Buildings AKH 29. Railroads AKH 30. Other cultural features AKH

BOUNDARIES

31. Boundary lines AKH 32. Public land lines AKH

MISCELLANEOUS

33. Geographic names AKH 34. Junctions AKH 35. Legibility of the manuscript AKH 36. Discrepancy overlay AKH 37. Descriptive Report AKH 38. Field inspection photographs AKH 39. Forms AKH
40. Albert C. Rauch, Jr. Henry J. Eicher
Reviewer Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Albert C. Rauch, Jr.
Compiler

Henry J. Eicher
Supervisor

43. Remarks:

See attached sheet.

FIELD EDIT REPORT
 Quadrangle T-5581
 Project Ph-26(47)

51: Methods:

No new or unique methods were employed in the field edit of this sheet. The detail was checked visually by driving the roads, and inspecting from the truck, dismounting and walking where necessary.

The test profile and several areas of questionable contouring were run out with the plane table.

A legend of the colored inks used is shown on Field edit sheet No. 1.

Field edit information is shown on Field edit sheets numbered 1 to 5 and on photos 0-1125, 1126, 0-1129, 0-1130, 0-1131, 1386, 1387, 1388. *Material filed in General Files, Div. of Photogrammetry.*

52: Adequacy of Compilation:

The compilation of this quadrangle is quite good. The only errors picked up were due to incorrect delineation by the field inspection, new construction, and in one or two cases omissions by the field inspection.

The field inspector included far too many buildings in the class II group. Many of these were deleted to make the map more consistent with those which follow; wholesale deletions seemed inadvisable, too, and while a few questionable class II buildings may remain, it is believed that a fairly consistent presentation of buildings has been made.

The reviewer raised an editorial question about the presentation of the shoreline. The shallow line shown has little value. A M.L.L.W would be very difficult to run in, owing to mud in many places, and the very large horizontal displacements of the line with very small tide differences due to the very flat bottom. An effort has been made to sketch a very approximate M.L.L.W but this line is mostly a sketched line; it is submitted as a matter of interest and information only, and not for compilation on the map. The M.L.L.W shown is incomplete in Drayton Harbor. Around Birch Point and Point Whitehorn it was drawn by inspection at fairly low tides. The reviewer's questions made further inspection of the shoreline appear desirable. This was done by walking the shoreline at very low tides (about +1.5 to -1.0). The images of many rocks appeared on one photograph or another, and could be proved by careful pacing. A very few

See item 68

were added with "Position doubtful". The rock data was in general incorrectly presented by the shoreline inspector, probably due to incomplete instruction. It is believed that the impression of the shoreline when all these rocks are shown should eliminate the necessity of showing a foul area all along the shoreline. Except for the few scattered offshore rocks most of the rock fouling is above M.L.L.W, and a strip of fine sand bares at zero tide almost all the way along the shoreline. Should a foul line be desirable, the limit of the outermost rocks is the best the topographer can offer. Anything more must be furnished by the hydrographer.

An extensive area of piling north of the fill leading to the Blaine Municipal Dock was located by plane table intersections by the field editor. It is believed the area was simply omitted during the field inspection. The reviewer questioned several fixes of piling in Drayton Harbor. The field editor located this piling by plane table intersections. There was some question about which quad they appeared on; they fall mostly in 5582.

53: Map accuracy:

The location of map accuracy tests is shown on a small plot attached. One mile of the specified horizontal accuracy test fell on this sheet. One station, Clem 1951 at the end of the traverse replaced High 1950 which was held during the plot. Another station about 400 feet from High was not tested. Detail at the third and last point on the sheet scaled about 10 feet southwest of the plotted position. A summary* of the results of this horizontal accuracy test for all quads will be submitted at a later date.

** Attached to this report.*

Ties to planimetry were made for position checks at BIRCH POINT 1912 and OERTEL 1934. Detail at BIRCH POINT seems quite good for position, but the field delineation was incorrect. Detail at OERTEL is shifted about 20 feet too far west.

The identification of station WHITEHORN II 1858 was substantially checked. New data varying only five minutes in azimuth and three feet in distance (sub-point is a very large boulder) are recorded in purple on the same pricking card. *See item 67*

About seven miles of test profiling is submitted. About two miles of this was requested by the reviewer, one mile was in connection with the horizontal accuracy, and the balance is divided between traverses run to obtain elevations or checks requested by the reviewer, or lines run to develop suspicious areas.

174 shots have been summarized on this profile. Of these 9 % were in error by more than $\frac{1}{2}$ contour interval, and 1 % were in error over a full interval.

(3)

The results of this test are rather deceptive however, there being rather serious errors at two places in the sheet. Excessive error appeared at the south end of Semiahmoo Spit. This is in an area of very dense woods, and was resketched using a tape, compass and handlevel. The vertical closure was around four feet - quite good enough to control the resketching of a forty-foot difference, but the shots so obtained were not included in the summary. Error also appeared east of Pt. Whitehorn. This was worked out with the plane table, but only the shots indicating the trouble were included in the summary, not the shots needed to develop it.

It is believed that the map meets National Map Accuracy Standards after the corrections made by the field editor. *See item 66*

54: Recommendations:

The only recommendation is further training of field personnel. This work was undertaken by a newly - organized field party which suffered considerable turnover in personnel. The most serious deficiency in the field work was in the presentation of shoreline data. A simple presentation has evolved from the Bureau's experience which inspectors should learn before they start work.

55: Examination of proof copy:

Mr. Ray Doubt, Route I, Blaine, Washington has agreed to examine a proof copy of the map before publication. Mr. Doubt seems quite interested in maps, apparently reads them with facility. He remarked that the old Geological Survey map made quite a faithful presentation of the local topography, with which observation the field editor has been forced to agree. He is quite eager to see a new sheet.

No new names were added in the area. With Whitehorn School, Whitehorn Church, etc. in the area, an effort was made to make an application of a community name, Whitehorn, but it will not apply too well.

The area is unique in the field editor's experience in that all the roads have very strong names, even the hyphenated names carrying in just that manner in usage. This fact has reduced the local need for names for drains, creeks, etc, and for topographic features, and there is truly a dearth of names for natural features.

(4)

56: Boundaries:

See paragraph 10 of the Field Inspection Report.
The field inspection party did not furnish a description of the Blaine Corporation Limit. This was obtained by the field editor and is furnished with this report. The limit has been applied to the field edit sheet, but the description of the portion in the harbor is rather vague and is subject to study by the reviewer. The original intent was to extend the city limits to the thirty-foot depth curve, to include all the dock facilities but the description was later redrafted to the form given here.

See §69

Approved and forwarded:

Charles W. Clark

Charles W. Clark
Lt. Comdr.-USC&GS
Chief of Party

Respectfully Submitted:

Ray H. Skelton —

Ray H. Skelton II
Cartographer

CORPORATE LIMITS OF THE CITY OF BLAINE, WASHINGTON

The city of Blaine, Washington was incorporated as a municipal corporation of the fourth class on 19 May 1890. The following year petition was made for incorporation as a municipal corporation of the third class. The authority for these incorporations is included in an "Act providing for the Organization, Classification, Incorporation, and Government of Municipal Corporations, and declaring an Emergency" passed by the first legislature of the State of Washington on 27 March 1890. The description below is taken from the act of approval of the Board of County Commissioners of Whatcom County, when they acted on the petition of the residents of Blaine submitted 13 March 1891. The date of approval was 4 May 1891.

"---** Beginning at the meander post on the east shore of Semiahmoo Bay, which said post is the meander post between lots one (1) and two (2) of Section thirty-six (36) in Township forty one (41) North of Range one (1) West of the Willamette Meridian, and running thence west to a point five thousand (5000) feet from said meander post and on the east side of Semiahmoo Bay; thence in a southerly direction, but not due south, along the eastern side of said Semiahmoo Bay to the mouth of Drayton Harbor, and along said Drayton Harbor to a point five thousand one hundred (5100) feet west of the southeast corner of lot three (3) in Section seven (7), Township forty (40), North of Range one (1) East of the Willamette Meridian; thence running east to the southeast corner of said lot three (3); thence running north on the Section line between Sections five (5) and six (6), seven (7) and eight (8), in Township forty (40), North of Range one (1), East of the Willamette Meridian, and Section thirty-one (31) and thirty two (32), in Township forty one (41), North of Range one (1) East to the southeast corner of lot(s) one (1) of Section thirty one (31) in Township forty one (41), North of Range one (1) East of the Willamette Meridian; thence running westerly along the south line of lots one (1), two (2), three (3), and four (4) of Section thirty one (31) in Township forty one (41), North of Range one (1), East and Lot one (1) of Section thirty six (36), in Township forty one (41), North of Range one (1) West of the Willamette Meridian to the place of beginning; * * * * - - -"

TABULATION of VERTICAL ACCURACY TESTS

Quadrangle T-5581

Project ph-26(47)

Prof. elev. Feet	Map elev. Feet	✂ Error Feet	✂ Error after - 40' shift Feet	Rem.
---------------------	-------------------	-----------------	--------------------------------------	------

Horizontal accuracy test route - west along Aldergrove Road,
south edge of sheet.

102	105	✂ 3	✂ 3	
102	108	✂ 5	✂ 5	
102	110	✂ 8	✂ 8	
103	109	✂ 6	✂ 6	
101	107	✂ 6	✂ 6	
101	105	✂ 4	✂ 4	
101	104	✂ 3	✂ 3	
100	104	✂ 4	✂ 4	
102	104	✂ 2	✂ 2	
104	106	✂ 2	✂ 2	
107	110	✂ 3	✂ 3	
107	110	✂ 3	✂ 3	
108	108	0	0	
108	108	0	0	
105	108	✂ 3	✂ 3	
104	107	✂ 3	✂ 3	
103	106	✂ 3	✂ 3	
99	105	✂ 6	✂ 6	
98	104	✂ 6	✂ 6	
96	99	✂ 3	✂ 3	

West, along Koehn Road to Whitehorn Point. To check topo on
Point Whitehorn.

76	82	✂ 6	✂ 4	
96	104	✂ 8	✂ 7	
106	114	✂ 8	✂ 7	
118	125	✂ 7	✂ 5	
102	110	✂ 8	✂ 5	
75	82	✂ 7	✂ 5	
70	75	✂ 5	✂ 3	
69	74	✂ 5	✂ 2	
73	85	✂ 12	✂ 10	
89	103	✂ 14	✂ 11	
97	113	✂ 16	✂ 11	
116	130	✂ 14	✂ 10	
122	143	✂ 21	✂ 17	
143	163	✂ 20	✂ 17	
149	169	✂ 20	✂ 17	
139	170	✂ 31	✂ 31	
142	168	✂ 26	✂ 23	

(2)

Prof. elev. Feet	Map elev. Feet	+ - Error Feet	+ - Error after 40' shift Feet	Rem/
149	170	+ 21	+ 19	
164	164	0	0	
150	163	+ 13	+ 10	
140	157	+ 17	+ 13	
137	153	+ 16	+ 11	
135	148	+ 13	+ 8	
134	150	+ 16	+ 11	
133	148	+ 15	+ 10	
132	147	+ 15	+ 10	
129	139	+ 10	+ 10	
129	140	+ 11	+ 11	
128	135	+ 7	+ 7	
129	129	0	0	
124	124	0	0	
117	125	+ 8	+ 8	
115	122	+ 7	+ 7	
121	121	0	0	
103	110	+ 7	+ 7	

South on Point Whitehorn Road

92	102	+ 10	+ 9
103	103	0	0
108	108	0	0
109	111	+ 2	+ 2
113	118	+ 5	+ 5
126	125	-1	-1
118	118	0	0

Line across middle of Birch Point, suggested by reviewer.

37	24	-13	-12	OK
45	39	-6	-5	
82	82	0	0	
96	96	0	0	
97	99	+ 2	0	
144	146	+ 2	0	
201	193	-8	-7	
205	198	-7	-6	
211	208	-3	0	
213	216	+ 3	+ 1	
219	226	+ 7	+ 6	
224	228	+ 4	+ 3	
227	231	+ 4	+ 3	
232	234	+ 2	+ 1	
237	241	+ 4	+ 3	
240	243	+ 3	+ 3	
238	241	+ 3	+ 2	
235	239	+ 4	+ 4	

(3)

Prof. elev. Feet	Map elev. Feet	\pm Error Feet	\pm Error after 40' shift Feet	Rem.
232	238	+6	+6	
232	238	+6	+6	
229	235	+6	+6	
223	230	+7	+7	
230	230	0	0	
235	235	0	00	
245	239	-X6	-X5	
238	240	+2	+2	
237	241	+4	+4	
241	244	+3	+3	
242	244	+2	+2	
243	244	+1	+1	
240	242	+2	+2	
230	234	+4	0	
224	225	+1	0	
208	208	0	0	
206	204	-2	0	
207	200	-7	-5	
200	199	-1	0	
197	197	0	0	
192	192	0	0	
190	182	-8	-6	
188	178	-10	-9	
183	172	-11	-10	
175	169	-6	-5	
165	163	-2	-1	
160	160	0	0	
139		Tie		
139	139	0	0	
145	139	-6	-5	
139	138	-1	0	
126	135	+9	+8	
121	+35	+14	+14	
130	138	+8	+8	
138	138	0	0	
140	139	-1	-1	
133	139	+6	+5	
130	130	0	0	
108	115	+7	+5	
77	84	+7	+5	

Completely
Erroneous picture
caused by
expression here.

Short line east of OERTEL

178	175	-3	-1
181	180	-1	-1
183	183	0	0
189	191	+2	+2
207	201	-6	-6

(4)

Prof. elev. Feet	Map elev. Feet	\pm Error Feet	\pm Error after 40' shift Feet	Rem.
---------------------	-------------------	---------------------	--	------

Line on southwest corner of Birch Point, run east to west.

104	104	0	0
99	99	0	0
96	96	0	0
101	101	0	0
108	108	0	0
107	107	0	0
98	103	5	5
89	101	12	12
82	88	6	6
75	83	8	8
80	84	4	4

Line north along Shitaffer Road, thence east and west.

55	53	-2	-2
58	55	-3	-3
59	55	-4	-4
60	59	-1	-1
60	59	-1	-1
60	57	-3	-3
59	59	0	0
61	59	-2	-2
54	46	-8	-7
49	44	-5	-4
27	27	0	0
26	22	-4	-4
21	22	1	1
16	21	5	5
17	22	5	5
13	21	8	8
8	5	-3	-3
17	23	6	6
41	41	0	0
35	39	4	3

Line West from vicinity of TRAP 2

31	31	0	0
56	64	8	6
68	68	0	0
66	68	2	2
65	82	17	16
85	101	16	9
119	120	1	0
130	132	2	0
163	154	-9	0
173	173	0	0
197	201	4	0
203	210	7	5
214	220	6	5

(5)

Prof. elev.	Map elev.	\nearrow - Error	\nearrow Error after - 40' shift	Rem.
255	247	- 8	- 6	
257	256	- 1	0	
265	265	0	0	
267	267	0	0	
268	268	0	0	

About 7.0 miles Profiled
1.0 " recontoured

173 shots
16 out over $\frac{1}{2}$ int.
2 out over full int.

711
711
711
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
General Delivery
Bellingham, Washington

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

19 April 1952

EXPRESS ADDRESS:

To: The Chief, Division of Photogrammetry
U. S. Coast and Geodetic Survey
Dept. of Commerce Bldg.
Washington 25, D. C.

Through: Lt.-Comdr. Charles W. Clark

Subject: Horizontal Accuracy Test, Project Ph-26(47)

Reference: Instructions for field edit, Project Ph-26, a letter
of the Acting Director, file 711 1mh, dated 27 September 1951.

The results of the horizontal accuracy test requested in the
instructions indicate that the map is well up to standards in this
respect. The attached tabulation of the results is self-explanatory.

The traverse was run from station PEARSON 3 west northwest along
the route suggested to a new station CLEM, established about seven
meters from station HIGH. Station HIGH could not be reoccupied due
to local conditions. The traverse was run by third-order methods,
but does not quite give a third-order check; this may be due in part
to a weakness in the terminal stations. CLEM was established by a
resection giving excellent checks. Field computations accompany this
report.

It was necessary to use many building corners as detail ties
near the stations. From the large amount of pigment ink used to
intensify the buildings on the photographs, it would appear that
much of this detail is compiled from the photographs to the
manuscript without using the stereoplotter. This undeniably
introduces certain inconsistencies into the compilation which would
not otherwise be present. In view of these inconsistencies each
station was identified by the usual sub-station method. The only
true test of the accuracy of the scale extension which was originally
in doubt will be the check between the rayed-in or stereophotogrammetrically
plotted positions of these substitute stations and their computed
positions.

Respectfully submitted,

Ray H. Skelton II
Ray H. Skelton II
Cartographer

30 April 1952

Forwarded.

Charles W. Clark
Charles W. Clark
Lt. Comdr. USCGS
Chief of Party

TABULATION OF HORIZONTAL ACCURACY TEST
Quads T-5581, T-5582, T-5583, and T-5584
Project Ph-26(47)

Station	Error (feet) = E *	E ²
SN 1	Not occupied	--
SN 2	15 ft. N.	225
SN 3	15 ft. ENE.	225
SN 4	10 ft. SE.	100
SN 5	15 ft. NNW, 15 ft. NNW **	225
SN 6	15 ft. N.	225
SN 7	5 ft. W.	25
SN 8	25 ft. W.	625
SN 9	30 ft. SW, 8 ft. N. **	361
SN 10	No mapped detail.	--
SN 11	18 ft. E.	324
SN 12	25 ft. W.	625
SN 13	20 ft. W.	400
SN 14	5 ft. E.	25
SN 15	0	0
SN 16	20 ft. E.	400
SN 17	0	0
SN 18	15 ft. E.	225
SN 19	10 ft. SE.	100
SN 20	35 ft. SE.	1225
SN 21	15 ft. NE.	225
SN 22	10 ft. NE.	100
SN 23	No mapped detail.	--
SN 24	10 ft. NW.	100
SN 25	10 ft. NE.	100
SN 26	Not occupied.	--
		$\sum E^2 = 5,860$

$$E_m \text{ (Mean square error)} = \sqrt{\frac{\sum E^2}{n-1}} = \sqrt{\frac{5,860}{21}}$$

$$E_m = 16.6 \text{ ft.}$$

$$E_p \text{ (Probable error)} = (0.6745) \times E_m$$

$$E_p = 11.2 \text{ ft.}$$

* E is shown as the distance and direction from the office compiled position of the point to the field established position.

** E² is the square of the arithmetic mean of the two values in the center column.

All points meet accuracy requirements. EHK

REVIEW REPORT T-5581
Topographic Map
23 September 1952

62. Comparison with Registered Topographic Surveys

T-603	1:20,000	1857
T-1872	1:10,000	1888
T-1873	1:10,000	1888 revised 1913
T-6738	1:10,000	1939-40

Survey T-5581 is to supersede for nautical charting purposes the above surveys for common areas.

63. Comparison with Maps of Other Agencies

Blaine, Wash. (USGS) 1:62,500 1907 reprinted 1947

64. Comparison with Contemporary Hydrographic Surveys

None

65. Comparison with Nautical Charts

6300		1941	corrected	50-11/6
6380	1:80,000	1947	"	51-5/21
6399	1:30 000	1941	"	51-2/12

Reference item 47. The wrecks and some of the piling were non-existent according to the field editor. Other details were completed during field edit for this area. See item 52.

66. Adequacy of Results and Future Surveys

This map meets the National Standards of Map Accuracy and complies with project instructions.

67. Control

Because station "Point Whitehorn II 1858" could not be held in the photogrammetric plot and the accuracy of the area was verified by the field editor, it was not shown on the map manuscript. This station was converted to the 1927 datum by the Division of Geodesy by applying datum differences. No verification of the accuracy of the original position has been made. Also the station is on an offshore boulder which possibly has shifted position the distance necessary for an eight-meter discrepancy.

68. Offshore Details

Reference item 52. The shallow line was deleted during the review. The line will serve no purpose with the addition of hydrography to the map manuscript.

The MLLW line has been retained on the map manuscript and labeled approximate.

The rocks labeled with "position doubtful" on the photographs were located by the field editor by referencing to an identifiable point on shore by surveying methods. Although they are of lesser accuracy than those which could be identified directly on the photographs, they should be within the required accuracy for nautical charting. Thus they are not designated differently on the map manuscript from other rocks.

69. Boundaries

The portion of the Blaine corporation limit referred to in item 56 is shown as a generalized line and labeled as "approximate".

Reviewed by:

Everett H. Ramey
Everett H. Ramey

Approved:

L. C. Landry
Chief, Review Section
Division of Photogrammetry

Wallace A. Bruder
Actg. Chief, Nautical Chart Branch
Division of Charts *6/1*

Will Peterson
Chief, Div. of Photogrammetry

Earl O. Heaton
Chief, Div. Coastal Surveys

4 May 1956

48. GEOGRAPHIC NAMES

✓ Aldergrove Rd

✓ Birch Bay

✓ Birch Bay Rd

✓ Birch Point

✓ Birch Point Rd

✓ Blaine

✓ Brown Rd

✓ Drayton Harbor

✓ Georgia Strait

✓ Grandview Rd

✓ Great Northern Ry

✓ Koehn Rd

✓ Loomis Trail Rd

✓ Mountain View Township *

✓ Pacific Highway - U.S. 99

✓ Peace Portal Park

✓ Pt. Whitehorn

✓ Pt. Whitehorn Rd

✓ Selden Rd

✓ Semiahmoo

✓ Semiahmoo Bay

✓ Semiahmoo Spit

✓ Shintaffer Rd ← Semiahmoo Township *

✓ State L-A

✓ Terrell Creek

✓ US 99

✓ Cottonwood Beach

Names underlined in red are approved. 7-18-51
L Heck.

Based on names report for project. Road names from 1939 Whatcom Co. Highway Map.

* These names added to list during field edit corrections by Baltimore Office.

~~TO BE DELETED~~

STRIKE OUT ONE

Baltimore, Md.

March

1951

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

I recommend that the following objects which have ~~(been inspected)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(reference to)~~ the charts indicated.

The positions given have been checked after listing by

Albert K. Heywood

Hubert A. Paton	Chief of Party.
-----------------	-----------------

[illegible]

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

49. NOTES FOR THE HYDROGRAPHER

The following is a list of recoverable topographic stations within this quadrangle:

ARCH, 1949	GAB (SHAK, 1949)
GAB (BART 1949)	FLAG TOWER (FOOT 1949)
GAB (CORN, 1949)	TREE, 1949
Clem 1951 <i>FWL</i>	See item 53

The Semiahmoo Spit area was compared with nautical chart 6399, scale 1:30,000, published March 1941, 4th Edition corrected to October 20, 1945. A wreck and extensive piling area are shown on the chart in the vicinity of Semiahmoo Spit and the causeway running southwest from Blaine. This piling is not shown on the manuscript for lack of data and bears further investigation to determine its existence.

A wreck and lone pile in the vicinity of 48° 58' and 122° 46' are also not shown on the manuscript and warrant further investigation.

It is believed that these areas as compiled on the manuscript are not complete enough for the manuscript to supersede the nautical chart. See item 65

History of Hydrographic Information
T-5581 (N & S)
Georgia Strait, Washington

Hydrography was compiled on the map manuscript in accordance with the general specifications of 18 May 1949.

Depth curves and soundings are in fathoms at mean lower low-water datum and originate with the following:

C&GS hydrographic surveys

H-1954	1:10,000	1889
H-2049	1:20,000	1890
H-2079	1:20,000	1889-91
H-4466	1:10,000	1925
H-6557	1:10,000	1940

Depth curves are shown at 1, 3, 5, and 10 fathoms.

Hydrographic data was compared with the following nautical charts:

6300	1941	corr. to	50	-	11/16
6380	1947	"	"	51	- 5/21
6399	1941	"	"	51	- 2/12

Hydrography was compiled by Everett H. Ramey and verified by O. Svendsen.

Everett H. Ramey
Everett H. Ramey
26 May 1953

NAUTICAL CHARTS BRANCH

SURVEY NO. _____

Record of Application to Charts

[illegible]

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.