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6530

Form 504 Rev. April 1935	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. "C"
<div>U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES MAY 18 1937 ACC. NO. _____</div>	
State	Washington
LOCALITY	
Henderson Inlet	
Puget Sound	
193 6.	
CHIEF OF PARTY	
G. C. Jones.	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. "C"

REGISTER NO. T-6530

State Washington

General locality Puget Sound

Locality Henderson Inlet

Scale 1:10,000 Date of survey May 26 - June 12, 1936

Vessel U.S.C. & G.S.S. EXPLORER

Chief of party G. C. Jones

Surveyed by Edwin C. ^{Baum} ~~Swan~~

Inked by Edwin C. Baum

Heights in feet above M.H.W. to ground ~~to tops of trees~~

Contour, Approximate contour, Form-line interval 50 feet

Instructions dated March 29, 1934.

Remarks: Project HT-171.

DESCRIPTIVE REPORT

TO ACCOMPANY TOPOGRAPHIC SHEET "C"

PUGET SOUND - WASHINGTON

SEASON OF 1936

- o -

G. C. JONES, CHIEF OF PARTY, C. & G. S.

DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET "C"
PUGET SOUND - WASHINGTON.

AUTHORITY:

Survey was executed in accordance with Director's Instructions, dated March 29, 1934. Project H.T. - 171.

LIMITS:

The area surveyed includes all of Henderson Inlet except that portion north of and east - west line 1.6 miles south of Johnson Point.

GENERAL DESCRIPTION:

Gently rising hills, occasionally footed by steep dirt eroding bluffs, covered with evergreen and deciduous trees characterize the topography.

Two well defined inlets separated by a high neck of land mark the west shore of Henderson Inlet.

The area, vicinity of two inlets referred to above, is utilized exclusively by the Meyerhauser Lumber interests. This is the rail terminal where logs are dumped, assorted and made into rafts for towing to mills throughout Puget Sound.

The south end of Henderson Inlet restricted in width, irregularly indented with numerous sloughs and baring at low water is typical of the heads of bays in this general area.

Several farms as shown were located.

CONTROL:

Triangulation control points executed during the season of 1936 and based on the North American 1927 datum were used.

SURVEY METHODS:

Standard plane table survey methods were used. Topographic signals were cut in from triangulation stations on the opposite shore and checked by traversing between control points.

All off-lying features were rodded in.

CONTOURS:

Obtaining contours presented one of the most trying problems in the execution of the topography. Due to the wooded nature of the country extreme caution had to be exercised in estimating the heights of the trees. These heights varied up to 175 feet depending on whether second growth or virgin timber.

TOWNS:

No towns.

DOCKS AND BRIDGES:

The pier at signal "PIER", and extending southward across Pattison Creek is used exclusively for railroading.

A highway bridge in excellent condition carrying considerable traffic crosses Pattison Creek near its center.

A small foot bridge extends across and a small boat landing projects into the otherwise unidentified bight adjacent to topographic signal No. 3.

The juncture of heavily traveled highways, bridges the extreme southern limits of Henderson Inlet at two points, within a distance of not over 200 meters. These bridges are in excellent condition.

COMPARISON WITH CHARTS NOS. 6460 and 6462:

Chart No. 6462, 20,000 scale, does not agree with this survey in that the shoreline on chart shows a more irregular or wavy delineation at the middle of the bight. This difference should be deleted from chart.

*Discussed in
par. 4, in Review.*

Chart No. 6460, 80,000 scale, is in excellent agreement with this survey with the exception as noted above. The knife edge slough at Latitude $47^{\circ}05.9'$, Longitude $122^{\circ}49.6'$, shown on this survey was omitted on chart.

Because of the almost **total** omission of contours and considering the difference in scale between chart and this survey no intelligent comparison is possible.

ROCKS AND LOW WATER LINE:

No rocks were found in this area.

The low water line was transferred from the smooth hydrographic sheet. ✓

TOPOGRAPHIC SIGNALS:

Except as noted on sheet, all topographic signals shown outside of highwater line are targets attached to stumps, fallen trees and etc., and are not of a permanent nature. ✓

GEOGRAPHIC NAMES:

Henderson Inlet is locally known as South Bay. * Recommend- * U.S.G.B. decision
ed that South Bay be used.

Respectfully submitted,

Edwin C. Baum

Edwin C. Baum,
Jr. H. & G. Engr., C. & G. S.,
U.S.C. & G.S.S. EXPLORER.

APPROVED AND FORWARDED: *and sheet examined & approved*

G. C. Jones

G. C. Jones,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

STATISTICS

Statute miles of shoreline	19.0
Statute miles of railroads	1.7
Statute miles of roads	0.9
Area, square statute miles (contoured)	2.8

Remarks

Decisions

1		USGB decision
2	Never charted before 1920 - 1 st Ch'd June 1924	Local Inquiry 5/27/37
3	For Title	USGB decision
4	For Title	" "
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GEOGRAPHIC NAMES

Survey No. T-6530

Name on Survey	Source										
	A. On Chart No. 6460	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	K.		
<u>Henderson Inlet</u>	✓ appd									1	
<u>Woodward</u>	✓		U.S.G.B	5/14/41						2	
<u>Pattison Creek</u>			See	GN 86 (1937)					not clear.	2	
<u>Puget Sound</u>	✓ appd									3	
<u>Washington</u>	✓ appd									4	
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Names underlined in red approved
by SAE on 5/27/37

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } ~~No. T-6530~~
 PHOTOSTAT OF } No. T-6530

{ received T-6530
 { registered
 { verified
 { reviewed
 { approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
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✓ 25		CKG	sent memo
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90			

RETURN TO

82	C. K. Green
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732

C O P Y

80-DRM

January 6, 1938.

To: Commanding Officer,
U. S. Coast and Geodetic Survey,
Ship EXPLORER,
601 Federal Office Building,
Seattle, Washington.

From: The Acting Director,
U. S. Coast and Geodetic Survey.

Subject: Topographic survey No. T-6530 (1936), Field No. C.

A question has arisen during the review of the above topographic survey in connection with the delineation of the low water line. The following is quoted from the review of the above sheet:

"The descriptive report states that the low water line was transferred from the hydrographic sheet. Apart from the areas that were not actually covered by the hydrography, there is evidence that on portions of the sheet the low water line as shown represents an original topographic determination and indicates that low water streams exist in the areas shown to be dry at low water by the hydrography."

Review modified to conform to information received, pursuant to this letter.

low There are being forwarded to you, under separate cover, photostats of topographic survey T-6530 and the contemporary hydrographic survey, H-6197. In order that a coordination may be made between the high water line of the topographic and hydrographic sheets, it is requested that the topographer, Lieutenant (j.g.) E. C. Baum, indicate on the photostat of T-6530 the sections of low water line which were located by plane table and return the photostat to this office.

(Signed) J. H. Hawley.

Acting Director.

Reply to this letter is filed in Descriptive Report

attach. to Descriptive Report of T-6530

80 782
POST-OFFICE ADDRESS:

601 Federal Office Bldg., Seattle, Washington

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

1938 JUL 21 AM 9 34

To: The Director, U. S. Coast & Geodetic Survey
Washington, D. C.

From: Lt. J. G. Edwin C. Baum
U. S. C. & G. S. S. Explorer

Subject: Topographic Survey No. T 6530

Reference: 80-DRM-January 6, 1938.

The low water line as shown on the topographic survey of Henderson Inlet was transferred direct from the Hydrographic Survey. The stream beds as shown at the head of the bay and two small arms extending westward of triangulation station WEYER 1936 are above mean lower low water. These stream beds are shown in juxtaposition and were not rodded in by the topographer.



Lt. J. G. Edwin C. Baum
U. S. C. & G. S. S. EXPLORER.

The topographic sheet corrected to conform to the hydrographic sheet.

POST-OFFICE ADDRESS: 601 - Federal Office Building, Seattle, Washington.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

U.S.C. & G.S.S. EXPLORER

January 13, 1938.

To: Director, U. S. Coast & Geodetic Survey,
Washington, D. C.

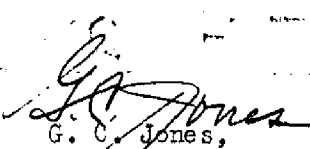
From: Commanding Officer, U.S.C. & G.S.S. EXPLORER,
Seattle, Washington.

Subject: Topographic survey No. T6530.

Reference: 80-DRM - January 6, 1938.

It has been determined from personnel engaged in this survey that the low water streams shown on photostat of topographic sheet T-6530, 1936, are stream beds which were rodded in but which are above the mean lower low water line. The low water lines as shown on the hydrographic survey are correct. On the topographic sheet, these low water lines should cross the stream beds at the places where they intersect.

Lieutenant Baum is now on leave in Texas and the photostat is being forwarded to him for compliance with the last paragraph of your letter by direct communication with your office.


G. C. Jones,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

The topographic sheet corrected to conform to the hydrographic sheet.

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6530 (1936) FIELD NO. C.

Henderson Inlet, Puget Sound, Washington
Surveyed in May and June 1936, Scale 1:10,000
Instructions dated Mar. 29, 1934 (EXPLORER)

Plane Table Survey.

Aluminum Mounted.

Chief of Party - G. C. Jones.
Surveyed by - E. C. Baum.
Inked by - E. C. Baum.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Topographic Manual except as follows:

- a. There is no evidence that the declinatoire was checked at a station of known declination during the season's work (paragraph 17). *Declinatoire Correction = +08' (See letter from Chief of Party, 1-28-38 attached to Descriptive Report). Correction too small to be applied to meridian on smooth sheet.*
- b. The information giving the junction limits and junction sheet numbers (field) was inked on the sheet by the field party and should have been left in pencil. This information was superseded in the office by the register numbers.
- c. The elevations and the contour numbers were shown on the sheet with the foot symbol. It is not the accepted practice to attach this symbol to these features (paragraphs 49 and 51).

The Descriptive Report satisfactorily covers all items of importance except the following:

- d. No information relative to the existence or non-existence of the charted roads falling on the present survey was mentioned. (see Paragraph 5a(1), this review.)
- e. In connection with topographic stations it is desirable that an alphabetical list of all the plane table stations determined and of all triangulation stations outside the high water line be included in the Descriptive Report, giving a brief description of the stations and a statement as to which plane table stations are recoverable.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project. Though the survey covers the shoreline area in general, several of the charted roads that fall within the limits of the present survey were not shown

on the sheet or mentioned in the Descriptive Report. It is assumed that since the sheet is primarily intended to be a control sheet for the hydrography, the survey of roads in the heavily wooded country was purposely avoided, and since no information is given to the contrary, the roads are considered existent as charted (see paragraph 5a(1), this review).

3. Junctions with Contemporary Surveys.

The junction with T-6528 (1936) on the north is satisfactory.

4. Comparison with Prior Surveys.

a. T-1672 (1878), 1:20,000.

(1) Shoreline and Associated Details.

The comparison of the old shoreline with the present shows a general good agreement, except the following changes are noted:

- (a) The west shoreline of the Inlet, in the bight, vicinity of $47^{\circ} 08.8'$, is more irregular than the present shoreline.
- (b) The neck of land in latitude $47^{\circ} 08'$ vicinity of the railroad on the north shore shows changes as a result of improvements.

(2) Contours and Inland Details.

- (a) The agreement of contours is generally poor. In a number of cases the contours on the old survey are of a different pattern from that on the present survey. In some cases the patterns are about the same but the positions of the contours are different from those of the corresponding contours on the present survey, the displacements varying from 20 to as much as 400 meters. For example; the 50 foot contour in approximate latitude $47^{\circ} 07.2'$, long. $122^{\circ} 49.7'$ and the 60 foot contour, lat. $47^{\circ} 08.4'$, long. $122^{\circ} 50.7'$. No elevations are shown on the old survey and it is believed that the contours may have been greatly generalized, due to the wooded character of the area. Numerous elevations are shown on the present survey and the contours shown thereon are considered the more accurate representation of the area.
- (b) Several second class roads (uncharted) fall within the limits of the present survey south of lat. $47^{\circ} 07'$. These roads are not shown on a Progressive Military Map of the U. S. Army Engineers (Olympia,

Wash. Quad.-1914) covering this area, and in all probability are no longer in existence. They should not be considered in future charting.

The present survey has adequately covered the area and is on a much larger scale. It should supersede T-1672 (1878) for charting purposes.

5. Comparison with Chart 6460 (New Print July 26, 1937).
Chart 6462 (New Print April 8, 1937).

a. Topography.

Within the area of the present survey the charts are based on surveys discussed in the foregoing paragraphs and the following additional information:

- (1) The charted roads originate with a Progressive Military Map of the U. S. Army Engineers (Olympia, Wash. Quad.-1914). Since there is no information on the present survey to indicate that the roads are no longer in existence, they are assumed to be as shown on the present chart.
- (2) No authority could be found for the land elevations charted in this area. They appear to be the elevations of the highest contours shown on T-1672 (1878). Since the contours were found to be in disagreement with those determined on the present survey (see paragraph 4a(2), this review), the charted elevations should be disregarded in future charting.

b. Magnetic Declination.

The magnetic declinations determined with the declinoire on stations, "Meyer" and "Lege" are approximately 3° less, and on stations "Staatz" and "Sunny" approximately 2° greater than the charted value, which indicates some local attraction. This matter has been referred to the Division of Magnetism. The other declination shown on the sheet agrees closely with the charted value.

c. Aids to Navigation.

There are no aids to navigation in this area.

6. Field Drafting.

The inking of the shoreline and topographic features is excellent. The lettering is good, but it is desirable that a mechanical lettering set should be used when practicable.

7. Additional Field Work Recommended.

The survey is complete except as noted in paragraph 2 of this review.

8. Note to Compiler.

The compiler's attention is called to the following:

- a. Paragraph 5a(1) and (2) of this review, relative to the present charted roads and land elevations.
- b. Triangulation stations Loge and Meyer are shown outside the high water line. They are not located on any topographic feature, but are standard triangulation marks established between high and low water.

9. Superseding Old Surveys.

In so far as the topography actually included on the present survey is concerned, the present survey supersedes the following survey for charting purposes.

T-1672 (1878) in part.

10. Reviewed by G. Risegari, December 8, 1937.

Inspected by A. L. Shalowitz.

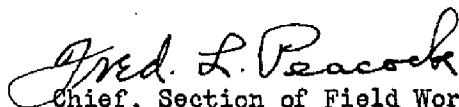
Examined and approved:



T. B. Reed,
Chief, Field Records Section.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.

T-6530

U.S.C. & G.S.S. EXPLORER.

January 27, 1938.

On receipt of above letter the plane table outfit used by Lt. (j.g.) Edwin C. Baum in 1936, was set up at Seattle Magnetic Station (Green Lake) and pointings made on three objects. One was rejected because of uncertainty of the object. The declinoire was placed alongside the alidade, a line drawn through control point and values scaled with steel protractor. Results are given below:

Jan. 22, 1938, 9:15 A.M.

	True	Declinatoire	
Apex of tank	N 56°27.5' E	N 33°35' E - 22°52' E	} 22°54' mean
Rt. edge smokestack	S 79°17.2' E	N 77°48' E - 22°55' E	

It was intended that the magnetic meridian by declinoire should be shown at least once during the season at a station which had been occupied by compass declinometer. If such was not done determination of index error at present is all that can be furnished. The plane table outfits used by the other topographers in 1936 have been sent to Washington.

Data furnished by Magnetic Division.

$$\left\{ \begin{array}{l} 23^{\circ} 08' \text{ in 1935} \\ \underline{06'} \\ 23^{\circ} 02' \text{ in 1938 (Jan.)} \\ \underline{22^{\circ} 54'} \\ +08' \text{ decl.} \\ \hline \end{array} \right.$$

/signed/ G. C. JONES
G. C. Jones,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

Original of this letter filed in
Magnetic Division

Information added to Review.

A.L.S.