

9623

9623

FORM C&GS-504
U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION COAST AND GEODETIC SURVEY
DESCRIPTIVE REPORT
Type of Survey <u>Shoreline (Photogrammetric)</u>
Field No. _____ Office No. <u>T-9623</u>
LOCALITY
State <u>Alaska</u>
General locality <u>Prince of Wales Island</u>
Locality <u>Barrier Islands</u>
<u>1953-1955</u>
CHIEF OF PARTY Curtis LeFever, Chief of Field Party E. H. Kirsch, Baltimore Photo. Office
LIBRARY & ARCHIVES
DATE _____

DATA RECORD

T - 9623

Project No. (II): Ph-87

Quadrangle Name (IV):

Field Office (II): Ship LESTER JONES

Chief of Party: Curtis LeFever
G.A. Nelson

Photogrammetric Office (III): Baltimore, Maryland

Officer-in-Charge: E. H. Kirsch

Instructions dated (II) (III): Office: 17 Dec. 1953, 6 Sept. 1955
12 Nov. 1954
Field: 28 Dec. 1953, 3 June 1953,
13 Dec. 1954, 25 Jan. 1955

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): 1.000

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III): MHW

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): PLOVER, 1954

Lat.: 56° 12' 37.495" (1159.7m) Long.: 133° 38' 07.586" (130.8m)

Adjusted
Unadjusted

Plane Coordinates (IV):

State: Alaska

Zone:

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.

DATA RECORD

Field Inspection by (II): H. A. Garcia

Date: June 1954 thru
Oct. 1954*P.A. Stark }
C.W. Clark }**July 1955*

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location): 1953, date of photography.
Field identification.

Projection and Grids ruled by (IV): A. Riley

Date: 12/23/53

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

Date: 12/29/53

Control plotted by (III): H. R. Rudolph

Date: 12/6/54

Control checked by (III): F. M. Wisiecki

Date: 12/10/54

Radial Plot or ~~Stereoscopic~~

Date: 12/21/54

~~Orthorectification by (III):~~ E. L. Williams*10/21/55*

Planimetry

Date:

Stereoscopic Instrument compilation (III):

Contours

Date:

Manuscript delineated by (III): B. Kurs

Date: 1/5/55

*J. Phillips**10/28/55*

Photogrammetric Office Review by (III): R. Glaser

Date: 1/7/55

*11/10/55*Elevations on Manuscript
checked by (II) (III):

Date:

Camera (kind or source) (III): U.S.C. & G. S. nine-lens 8 $\frac{1}{4}$ " focal length.

Number	Date	PHOTOGRAPHS (III) Time	Scale	Stage of Tide
41544 thru 41549	8/22/53	11:25	1:10,000	9.6 above MLLW
41503 thru 41508	"	10:50		9.0 " "

Tide (III)
From Predicted Tables

Diurnal

Reference Station: Sitka, Alaska
Subordinate Station: Shakan, Kosciusko Is., Alaska
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	7.7	9.9
1.3	9.7	11.7

Washington Office Review by (IV): *Leo F. Beugnot, Atlantic Marine Center* Date: *June 1968*

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): ~~2.5~~ 4.0

Shoreline (More than 200 meters to opposite shore) (III): ~~17.0~~ 20.0

Shoreline (Less than 200 meters to opposite shore) (III): ~~3.0~~ 5.0

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 1

Recovered: 1

Identified: 1*

Number of BMs searched for (II):

Recovered:

Identified:

Number of Recoverable Photo Stations established (III): 4 (see par. 38)

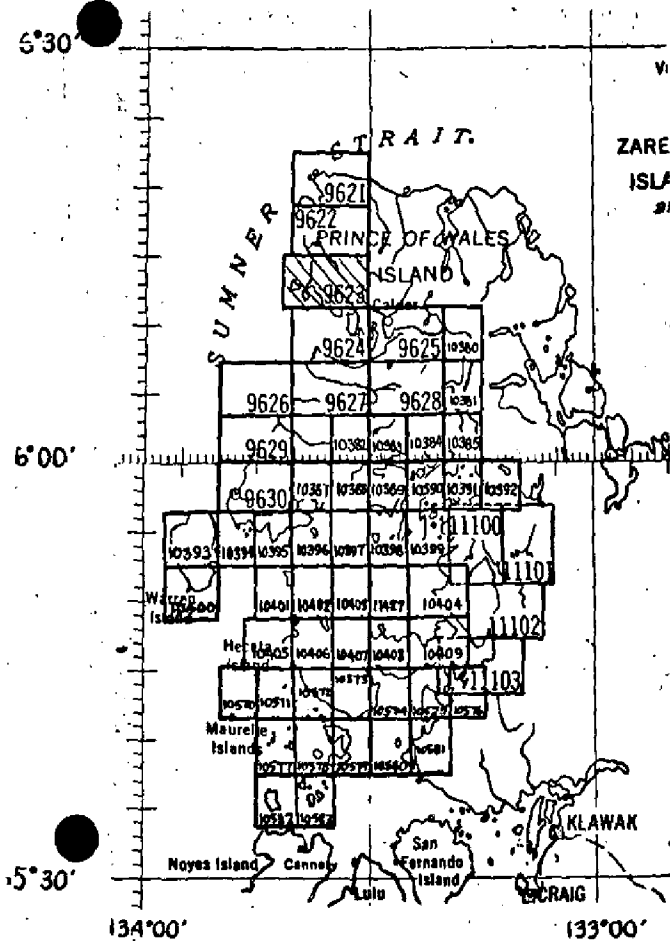
Number of Temporary Photo Hydro Stations established (III): ~~65~~ 66

Remarks: *Five triangulation stations were established and identified in 1954.

One station established and identified in 1955

T-9623

COMPILATION RECORD	COMPLETION DATE	REMARKS
PRELIMINARY MANUSCRIPT	1954	SUPERSEDED
Compiled (ADVANCE)	January 1955 October 1955	} SUPERSEDED
Final Review	June 1968	



Project Ph-87
Official Mileage for Cost
Accounts

Sheet No.	Area Sq.Mi.	Lin. Mi. Shoreline
9621	12	10
9622	16	11
9623	15	7
9624	17	12
9625	21	11
9626	4	5
9627	15	15
9628	14	2
9629	5	6
9630	7	6
11100	32	16
11101	9	8
11102	18	10
11103	16	15
10380	6	4
10381	5	10
10382	8	2
10383	6	8
10384	7	5
10385	4	8
10386	9	1
10387	6	7
10388	3	6
10389	7	12
10390	6	16
10391	4	12
10392	8	7
10393	12	10
10394	2	4
10395	5	8
10396	2	4
10397	1	1
10398	3	5
10399	4	11
10400	6	8
10401	1	2
10402	2	3
10403	3	6
11427	1	1
10404	5	10
10405	2	2
10406	8	1
10407	8	2
10408	5	7
10409	10	10

10570	1	1
10571	1	1
10572	5	6
10573	8	2
10574	3	4
10575	2	4
10576	7	2
10577	1	1
10578	2	2
10579	1	6
10580	2	2
10581	12	9
10582	2	6
10583	2	5
TOTAL	412	378

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-9623

Shoreline survey T-9623 is one of 58 similar surveys in Project PH-87. It covers the area of the Barrier Islands on the west shore of Prince of Wales Island.

This survey was originally compiled as a Preliminary manuscript. In 1954 additional horizontal control was established and identified, along with other existing control, and shoreline inspection was accomplished. In the fall or winter of 1954 a new radial plot was laid, the manuscript re-compiled and labeled Advance. * SEE BELOW

There was no actual field edit of this survey. Field Edit consisted of corrections to the MHWL made by the hydrographer. These corrections were applied to the manuscript by the final reviewer.

Compilation was at 1:10,000 scale by graphic methods using the 1:10,000 scale nine-lens photographs obtained in August 1953. A cronaflex copy of the manuscript, blue line tracing, ozalids and specially prepared photographs were furnished for preparation of the hydrographer's boat sheet, location of photo-hydro signals and field edit use.

The manuscript was a vinylite sheet 3 3/4 minutes in latitude by 11 minutes in longitude, which was smooth drafted and reproduced on cronaflex. One cronaflex positive and one cronar negative are provided for record and registry.

* A NEW RADIAL PLOT (COVERING A PART OF THIS SURVEY) WAS ASSEMBLED IN 1955 - RADIAL PLOT REPORT INCLUDED IN THE DESCRIPTIVE REPORT FOR T-9624. THE FIELD INSPECTION REPORT (1955) AND THE SUPPLEMENTARY COMPILATION REPORT ARE BOUND WITH THIS REPORT. JMS

1954

7
REPORT FOR FIELD WORK ACCOMPLISHED
IN 1955 - PAGE 13A

2. Areal Field Inspection

The area inspected for boat sheet LJ 1154 (covered by manuscript T 9621) is on the northwest side of Prince of Wales Island from about two miles east of Point Baker to the north point of Protection Head including the settlement at Point Baker, the settlement in Protection Cove, and the northern half of Port Protection. The south side of Strait Island was included in the hydrographic survey, but it was not adequately covered by photography and was not field inspected. About two miles of shoreline east of the eastern limits of LJ 1154 was covered by photography and was field inspected.

The area inspected for boat sheet LJ 1254 (covered by manuscript T 9621, T 9622, T 9623) includes the southern half of Port Protection. The west side of Protection Head, Labouchere Bay, Hole-in-the-Wall and the shoreline south to the northern sector of the Barrier Islands.

The area inspected for boat sheet LJ 1354 (covered by manuscripts T 9623, T 9624) includes most of the Barrier Islands, and the shoreline south to the first point of land on the northwest side of Shakan Bay.

Field inspection consisted of (1) recovery and identification on aerial photographs of existing triangulation stations, identification of newly established triangulation stations; (2) identification of hydrographic control signals; (3) shoreline inspections.

Green and red waterproof ink was used on the field photographs exclusively. Red ink was used to delineate the high water line, offshore rocks and cultural features not readily discernable on the photographs; green ink was used to delineate the limits of kelp patches and the approximate low water line. Attention is called to photograph 41620 on which the small boat channel through Point Baker is shown with special symbol as described in a legend at the top of the photograph.

Strait Island was not included in the photogrammetric plot, but was part of the hydrographic survey. It was therefore necessary to sketch an approximate shoreline from one photograph on which the island appeared on an oblique section. Several hydrographic stations with computed positions and triangulation stations on the island were approximately identified on the photograph and the shoreline sketched on the boat sheet holding to these positions. The shoreline thus determined proved adequate for the purposes of the hydrographic survey.

The photographic coverage consisted of nine lens photographs at a scale of 1:10,000 and nine lens photographs at a scale of 1:20,000. The 1:10,000 photographs were used throughout with the exception of the identification of triangulation station SID 1915 which could only be positively identified on one 1:20,000 photograph. The photography was generally good, and areas where vertical or near vertical sections were

poor due to reflection, overhang of trees, or shadows, oblique sections of adjacent photographs were used to complement the field inspection. The principal difficulty encountered was due to shadows cast by trees on the northerly and northwesterly sides of islands. Field photographs were cut and the sections joined with tape to fold into compact 25" x 20" units for convenient handling in the field. The photographs were cut to embody the vertical lens and its immediate area on one large uncut section and the oblique areas in two flaps on either side. Vast water areas were eliminated and all useful shoreline preserved in order to expedite handling in the field.

Photographs and pertinent data were transmitted to the Washington Office on the 27 July 1954, and the 12 August 1954, and the remainder of the completed photographs and data are being submitted as of the date of this report.

3. Horizontal Control

(a) Horizontal control established by second order triangulation

ASPEN 1954	FRANK 1954	JAPAN 1954	MINK 1954	PLOVER 1954	SANDY 1954
CABOT 1954	GLASS 1954	KAPOK 1954	NICHE 1954	QUEEN 1954	SHELL 1954
DEBIT 1954	HERON 1954	LOTUS 1954	OCTET 1954	RAVEN 1954	STRAIT 1954
EAGLE 1954	INGOT 1954	MANOR 1954	PATIO 1954	RIDER 1954	WOLF 1954

Horizontal control with computed positions established with third order accuracy.

Ago (dm)	Cod	End (dm)	Gal (dm)	Cat (dm)
Bib (dm)	Con (protection	Era (dm)	How (dm)	Eat (dm)
Bob	day beacon)	Few	Nav (Protection	Fix
	Dim		light)	Tin (dm)
Was (m)	Hamilton Is. Day Beacon		(m) marked topo	Station
	Station Is. Nav. Lt.			

(b) All horizontal control is on N.A. 1927 datum and no datum adjustments are necessary.

(c) All control is established, computed and adjusted by the Coast and Geodetic Survey.

(d) Existing triangulation stations were recovered in accordance with Paragraph 12, Supplemental Instructions, Project CS 347. Additional triangulation was established and carried into Port Protection and Labouchere Bay; to Strait Island; and to intervals along the west side of Prince of Wales Island to Shakan Bay, more than satisfying minimum spacing requirements. All triangulation thus recovered and established were identified on the office photographs wherever the station fell within good photographic coverage in accordance with Photo-

We should call this all to the survey staff

grammetry Instruction No. 22. A washable yellow ink was used throughout on the office photographs. All signals were identified on as many overlapping photographs as they were clearly distinguishable. 9

- (e) All marked Coast and Geodetic Survey stations were recovered within the survey limits. The following are unmarked topographic stations identified in the plot which were not recovered because no description was available.

Gun, Twin, Tre, (All three stations are located on map T-9621)

- (f) Control Station Identification cards were made for every station that was identified on the photographs, and have been transmitted to the Washington Office or will be submitted as of the date of this report.

Office identified control verified by field inspection proved to be quite accurate in most cases. Notation was made on the Control Station Identification Cards as to the amount of error determined by field inspection. The office identified position for Ship 2 1915 was not changed, and the positions for Sumner 2 1915, Fly 1886, and Now 1922 were changed only slightly. Shakan 1886 was found to be in considerable error; however, it was evidently not used as a control point, but merely as a pass point in the preliminary plot.

4. Vertical Control

Tidal benchmarks located in Port Protection are the only old benchmarks found in the project. One additional bench mark was established at the Port Protection gage site, and new sites were established at Point Baker and Hole-in-the-Wall, each containing three benchmarks. Tidal benchmarks were not used to establish elevations of vertical control points, and were not identified on the photographs.

The Mt. Calder Cairn is the only elevation observed by trigonometric leveling. It was observed from three horizontal control stations whose elevations were estimated in feet above the mean high water level. There were no vertical control stations required by the project instructions for stereoscopic mapping.

5. Contours and Drainage - Inapplicable

6. Woodland Cover

The islands are almost entirely covered by a dense stand of coniferous (spruce, cedar, hemlock) trees. There are a few isolated areas in which slides or cut timber have given rise to a new growth of Aspen and Alder trees. At very high elevations as on Mt. Calder, and at the heads of bays as in Hole-in-the-Wall and Calder Bay, the tree cover ends, and grass and low foliage cover the open area. In many instances the tree line reaches the waters edge and partially overhang making identification of some signals very difficult or impossible.

7. Shoreline and Alongshore Features

was this noted on advance sheet

a) Shoreline and alongshore features were inspected from a skiff equipped with an outboard motor running close inshore. The high waterline is generally definable in most places, but is obscured in others, usually by shadows and overhanging trees. The high waterline and other features were sketched on the photographs in places where they were not clearly distinguishable. Easily interpreted images were verified with an occasional dashed line. The high waterline transferred from the blue line manuscript to the boat sheet was revised occasionally on the boat sheet during the course of inshore hydrography and noted in black ink; otherwise, all changes were noted on the field photographs. *D*

- (b) An approximate low waterline was shown on the field photographs in green ink. In cases where the bottom could be seen from the boat, its low water position was estimated and outlined on the image appearing on the photograph. If no image was evident, a position was indicated in reference to the surrounding topography.
- (c) On most of the open coast the foreshore has very little horizontal displacement, and is almost invariably of a monolithic limestone composition. Where it uncovers as a rocky ledge, it is usually evidenced on the photographs by foam and breakers. At the inshore end of large bights and bays the foreshore is usually quite wide and uncovers as a muddy flat often with sand or gravel near the high water edge. Particularly is this situation true at the heads of Port Protection, Labouchere Bay, Hole-in-the-Wall, and Calder Bay.
- (d) Bluffs and cliffs are indicated on the field photographs with an estimated height for each. There are two outstanding light colored, vertical, rock cliffs situated directly on the shoreline that have usefulness as landmarks. One is on the west side of Protection Head about 200 meters north of triangulation station DEBIT. The other is about a half mile south of the entrance to the Hole-in-the-Wall. In other places steep bluffs and deep narrow ravines are covered with tree mantle overlaying the extensive limestone bedrock that characterizes the region.
- (e) Shoreline structure consists principally of floats in the few habitated areas. These are located in Point Baker and Wooden Wheel Cove in Port Protection where permanent settlements reside. In the course of the seasons work a float was built by the Ship LESTER JONES near a water source in a protected bight on the west side of Port Protection. It is not probable that the float will endure unless it is maintained by local inhabitants.
- (f) The only other shoreline structures located so far in the project are a few abandoned or stored fish traps beached in the south end of Port Protection.

8. Offshore Features

All offshore features were field inspected for possible identification on the field photographs. In practically all instances rocks located could be identified on the photographs and their relative height was estimated above the surface at the time of inspection. The time and date was shown on the photograph for each rock, or a group of rocks were bracketed for an interval of time. Submerged rocks and rocks awash but covered at the time of inspection were given an estimated depth below the surface. Images appearing on the photographs in the likeness of rocks but not found were thusly noted as "not visible" or "no rock". Breakers shown on the photograph were inspected to find any evidence of rocks or shoals. Kelp patches of any significance were delineated - - described as to density, and were investigated for possible rocks. The following are abbreviations used on the field photographs.

Rock - rk *RE* * uncovered - uncov ✓ not visible - not vis
Awash - aw covered - cov ✓ heavy - hvy
Feet - ft ✓ submerged - sub *subm* light - lt *lt*

* some high water rocks were
also described as bares - ft

All important offshore rocks that fell within the area surveyed were located directly by a field inspection party taking sextant fixes on or near the rock; by theodolite or sextant cuts from nearby stations; or by the launch hydrographic party. These records are entered in the horizontal direction volumes, sounding volumes for the skiff, and sounding volumes for the launch, respectively. In cases where a rock was transferred to the boatsheet as it appeared on the manuscript and its location determined directly, a note was made to that effect on the boatsheet. A few dolphins and piles were located directly by the hydrographic party.

9. Landmarks and Aids

(a) Landmarks for nautical charts - See 7 (d).

(b) The most extent-interior landmark is the spire on Mount Calder which rises about a thousand feet above the tree line, and can be seen from practically every direction in the surrounding water area. The north face of the spire is extremely precipitious and contains a vertical crevass that retains a column of snow almost year round. Horizontal directions were observed from three triangulation stations to the cairn on the summit.

A very marked feature of lesser significance is a slide area on the west slope of the mountain which appears as an elongated cut in the trees. The slide is no longer active and is covered with a light colored growth of trees.

(c) Aeronautical Aids. Inapplicable

(d) Fixed Aids to Navigation listed on Form 567 to be forwarded to the Washington Office.

Demons that are cryptic abbreviations should be used for Rock, submerged lights - and other correct ones not be repeated on cover. RE all in Hydro or Top manual.

(e) Floating Aids to Navigation - See Hydrographic Descriptive reports

10. Boundries and Monuments. Inapplicable

11. Other Control

All recoverable topographic stations have computed G.P.'s and are listed under side heading 3, Horizontal Control. Topographic stations were established along the coast in compliance with spacing requirements of paragraph 10 of project instructions.

All hydrographic signals that could be identified were pricked on the office photographs, and transferred to the acetate manuscript. All triangulation stations and computed topographic stations that could be identified were similarly located on the acetate manuscript, thus establishing a uniform datum for the two systems of control. The computed stations were plotted on the boat sheet projection in their true positions and the manuscript oriented on the projection by matching corresponding stations. It was found that on the north end of the project from Port Protection to the eastern limits of the sheet, the plot was quite accurate in both azimuth and scale; therefore, the passpoint method was used to transfer positions from the office photographs to the acetate manuscript, thence signals were pricked directly through to the boat sheet. In order to check the accuracy of signals located on the north side, triangulation station BARRIE 2 1915 on the opposite side of Sumner Strait was occupied and theodolite cuts taken to all observable signals. BARRIE 2 1915 was plotted on a dogear off of the projection, and the cuts were laid off on a steel protractor. The photohydro signals checked in this manner were proved to be essentially correct.

As the survey moved progressively south the same system was employed for location control, but it became evident that there was some distortion in the manuscript through the middle portion of Port Protection and Labouchere Bay where no previous control existed. Other methods were utilized to complement photogrammetric means to maintain a uniform geodetic datum. Fortunately, triangulation was carried into these areas and provided a rigid network from which other signals could be cut in. If a signal had three or more triangulation cuts, the intersection position was used in preference to a photographic position. In most other cases the photographic location was used, and theodolite cuts and sextant cuts from nearby stations were used as an overall check. Some signals could not be identified on the photographs and were located entirely by sextant cuts from from adjacent stations or by the hydrographic launch using three point fixes.

From Labouchere Bay south considerable distortion persisted in the manuscript, and thereafter the radial plot method was used to keep the proper internal relationship between control. Along the open coast.

Note: This refers to use of Preliminary Photogrammetric Manuscripts in accord with Photogrammetry Inst. 45. Copies of T 9621 to T 9630 furnished Lester Jones in spring 1961. These are preliminary manuscripts. BAA

strong triangulation intersection were used whenever possible, and photographic locations adjusted to these. In instances where a photographic location was thought to be out of position, it was checked or relocated by the hydrographic party. It is probable that in the controlled radial plot, most photohydro signals necessarily relocated in the field will fall in their correct relationship. A few signals were misidentified in the field, but all have been detected, and another method used for their final location.

A comprehensive list of all control and their method of final location (excepting triangulation stations listed in side heading 3) is attached at the end of this report. Theodolite cuts are recorded in the horizontal direction volumes, and sextant cuts are recorded in the sounding volumes for the launch, and skiff.

12. Other Interior Features.

The village of Point Baker has about 20 year-round residents, but during the summer fishing seasons this number is greatly increased by transient and summer resident fishermen. There is a fish buying station and a combined store and postoffice. Point Baker is served by Alaska Coastal Airlines which makes a scheduled mail stop at least once a week during the summer. The Point Baker store is equipped with a licensed radio transmitting station.

The village of Port Protection in Wagon Wheel Cove has about four resident families, a fish buying station and store. The store, known as the B. S. Trading Post, has recently become a chart distribution agency for the Coast and Geodetic Survey. It also is equipped with a radio transmitter that can be utilized in emergencies.

Practically all other isolated dwellings in the area are abandoned fox farms or mink trapping camps used in special seasons. There are no roads, bridges, cables, or landing fields in the area field inspected.

13. Geographic Names

A special report on geographic names will be prepared and forwarded to the Washington Office at the earliest date possible.

14. Supplemental Data Forwarded to the Washington Office

<u>Item</u>	<u>Transmitting Letter Date</u>
Field Photographs	27 July 1954
Office Photographs	"
Control Station Identification Cards	"
Geographic Positions for Triangulation located stations	"
List of Photohydro Signal Names	"
Field Photographs	12 August 1954
Office Photographs	"
Control Station Identification Cards	"
Field Photographs	2 November 1954
Office Photographs	"
Control Station Identification Cards	"

FIELD INSPECTION REPORT (in part)

For

MAPS T-9623 to T-9630

1955

2. AREAL FIELD INSPECTION

The shoreline inspection was started from the southern limit of the 1954 work and continued southward to include all of the shoreline encompassed by the 1955 hydrography. Control Identification was further extended southward to Cape Pole and around the south end of Kosciusko Island to Holbrook Point at the head of Davidson Inlet.

The shoreline was inspected from an open skiff, and the inspection was intermittent, depending upon the weather, surf conditions and the locale of hydrographic operations.

The area inspected was heavily wooded, the tree line almost always reaching the high water line. The overall photographic coverage was good, being more than adequate for a good compilation of the shoreline. In some instances, however the foreshore was completely obliterated by excessive shadows on some of the photographs.

The locale being Alaska, a detailed inspection was not feasible and the field inspection was standard only with respect to control identification. No extra time was taken to make low tide inspection of any area to determine the low water line. Usually the foreshore was very steep, thus decreasing the relative importance of a low water line delineation. Where the gradient of the foreshore was gradual, a low water line was usually obtained by the hydrography that was done concurrently with the field inspection.

3. HORIZONTAL CONTROL

(a) New Stations

The following new stations were established by second-or third order triangulation:

*BILL	1938-1955	LOWER	1955	SHAKE	1955
CALDER	1955	MARBLE	1955	*SICKLE	1938-1955
CENTER	1955	MIDDLE	1955	*SLEEPY	1938-1955
DEAD 2	1955	MILTON	1955	SQUEEZE	1955
DIVIDE	1955	*MUD	1938-1955	TURN	1955
*FRAN	1938-1955	*PLAY	1938-1955	TWIST	1955
GRAZE	1955	QUARRY	1938	UPPER	1955
INNER	1955	SHAKAN STRAIT DAYBEACON, 1955			

*Although stations BILL, FRAN, MUD, PLAY, SICKLE and SLEEPY were set in 1938, no observations were made then to enable a determination of geographic positions.

(b) No datum adjustments were made in 1955.

(c) All control used in 1955 was established by the Coast & Geodetic Survey.

(d) No specific stations were required by the instructions, and considerably more control was identified than required to meet the spacing requirements of Photogrammetry Instruction No. 46.

(e) The following stations were determined lost:

ALDER, A	1922	OUT	1922
BIGHT	1922	SLIDE	1922
DEAD	1922	STATION ID. LIGHT	1915
ISLE	1922	TAINÉ	1922

Station ISLE was considered lost as a triangulation station because the center mark was missing. However, its probable location, to within less than a foot, was readily determined and the station was identified for photo control.

Two stations, BLUE 1903 and ROUND 1903 were searched for but not found. Because of unfavorable surf conditions, station BLACK 1903 was identified from offshore by description and was not recovered.

-8- 13C

(f) The following fifty-six stations were identified for photo control and entered on Control Identification Cards

Station	Map No.	Photo. No.	Station	Map No.	Photo. No.
ALCOA 1946	D	41451	MINE 1946	D	41446
BEAR 1903	E	41492	NEW 1922	T-9624	41543
BEND 1922	T-9627	41540	NUTT 1937	T-9626	41476
BILL 1938-55	T-9627	41512-13	ON AUG 1937	W. of A	41314
BLACK 1903	S. of A	41317	*LITTLE POLE ANCHORAGE		
BLUFF 1886	T-9626	41475	OUTER LIGHT, 1937	T-9630	41330
BUSH 1922	T-9627	41541	PERK 1937	T-9627	41499
CAMP 1937	T-9629	41473	PHIL 1937	T-9627	41501
CENTER 1955	T-9624	41543	PIES 1937	T-9629	41442
CHAN 1937	T-9630	41314	PINK 1903	D	41492
DARTS 1946	D	41453	PLAY 1938-1955	T-9627	41497
DEAD 2 1955	T-9625	41607	POLE 1886	T-9630	41312
DIVIDE 1955	T-9624	41541	QUARRY 1955	T-9625	41608
EDNA 1946	D	41451	QUARTZ 1903	A	41326
GILLE 1946	F	41451	RED 1903	D	41451 & 41687
GRAZE 1955	T-9624	41541	REEF 1922	T-9624	41511
GREEN 1903	F	41447	ROS (4th order)	T-9624	41511
GRIM 1937	T-9627	41500	RUINS 1937	T-9626	41476
HALI 1937	A	41315	SCRAB 1937	T-9630	41332
HAMILTON ID. DAY-			SHAKAN STRAIT		
BEACON, 1954	T-9624	41510	DAYBEACON, 1955	T-9624	41541
HIP (4th order)	T-9624	41511	SHAKE 1955	T-9624	41542
HOLBROOK 1903	C-	41515	SICKLE 1938-1955	T-9627	41512
INNER 1955	T-9623	41565	SLEEPY 1938-1955	T-9627	41512
ISLE 1922	T-9624	41540	STATE 1922	T-9624	41510
LEDGE 1922	T-9625	41541	STRAW 1903	A	41327
LICHEN 2 1937	W. of A	41315	TWIST 1955	T-9624	41543
LONE 1922	T-9625	41606	UPPER 1955	T-9625	41609
MIDDLE 1955	T-9624	41608	VENT 1937	T-9627	41501
			WOLF 1903	D	41687

*This light is described under the name of OUTER LIGHT on Triangulation Index, Alaska No. 41, and FISHERMANS HARBOR OUTER LIGHT in the Coast Guard LIGHT LIST.

Paragraph 4, 5, & 6 Inapplicable.

7. SHORELINE & ALONGSHORE FEATURES

- (a) The mean high water line was adequately compiled on the preliminary Manuscripts and exceptions duly noted on field photos.
- (b) Inasmuch as the foreshore area was usually very steep, delineation of the low-water line was relatively unimportant, and no extra time was taken to make a low-water inspection of any area.
- (c) The foreshore was usually very steep and composed of solid bedrock. Exceptions were noted on field photos.

- (d) Bluffs and cliffs were noted on field photos. The only prominent cliff encountered was on the east side of Bluff Island.
- (e) The pier indicated on the west side of Fontaine Island (Shakan Strait) was deleted, and the adjoining buildings abandoned. The only other structure encountered was the site of an abandoned logging camp (clearly visible on photos) located at the head of a small bight $\frac{1}{4}$ mile southeast of triangulation station PIES, 1937. Adequate notes were made on the field photos.

8. OFFSHORE FEATURES

Delineation of foul areas was well done on the Preliminary Manuscripts, this opinion having also been expressed by the Hydrographer. Additional notes were during the field inspection and all important offshore rocks and heavy kelp areas were located by either the field inspection or the concurrent hydrography.

9. LANDMARKS AND AIDS

Information regarding landmarks and aids was covered by the concurrent hydrographic phase of the project. A copy of Form 567 is submitted as supplemental data.

10. BOUNDRIES, ETC., INAPPLICABLE

11. OTHER CONTROL

Reference may be made to plane table survey T-6589, Bluff Island to Hard-scrabble, 1937.

One recoverable topo station, ERV, was established during the 1955 Field Season. This station was marked in 1954 but no position determined at that time. During the 1955 Field Season, a fourth-order theodolite position was determined and the appropriate data recorded on Form 524.

All station names were inked on the field photos on which they were pricked. At no time was it necessary to refer to or use the office photos. When a direct prick was not possible, a substitute station was selected and the necessary data recorded on C.S.I. Cards.

The following photo-hydro stations were established:

Map T-9624

<u>Station</u>	<u>Photo. No.</u>
Car	41502
Dum	41509
Elk	41502
Fir	41509
Got	41509
Ill	41509
Jeb	41502
Key	41510
Let	41501
Mow (Sub pt)	41501
Nob (Sub pt)	41501
Sip	41501

Map T-9626

<u>Station</u>	<u>Photo. No.</u>
Ina (Sub pt)	41476
Jit	41475
Kid	41475
Kip (Sub Pt)	41477
Lam	41475
Liz (Sub Pt)	41476
Mag	41500
Own (Sub Pt)	41476
Pod	41475

Map T-9627

<u>Station</u>	<u>Photo. No.</u>
Caf	41475
Rev	41475
Sag	41499
Tax	41499
Use	41499

Map T-9629

<u>Station</u>	<u>Photo. No.</u>
Air	41333
Bad	41333
Dan	41442
Doc	41474
Ecn	41472
Flo	41473
Gob	41333
Hag	41442
Hut	41474
Lux	41441
Ned	41473
Obi	41333
Ova (Sub pt)	41473
Pil	41473
Rap	41473
Pub (Sub pt)	41473
Neo	41473
Tea (Sub pt)	41473
Wac (Sub pt)	41442
Zam (Sub pt)	41442
End (T-9630)	41332

The above stations are listed under the Manuscript Numbers indicated in the new Map-Photo Index sent to this party at the beginning of the 1955 field season.

12. Interior Features. Not applicable.
13. Geographic Names. None recommended during the 1955 field season.

- 12 -
13 F

14. SPECIAL REPORTS & SUPPLEMENTAL DATA

<u>Item</u>	<u>Date</u> <u>Trans. Ltr.</u>	<u>Package No.</u>
Photo Data	30 July 1955	1, 2, 3, 4
Triangulation Data	31 July 1955	5, 6
Triangulation Data	28 September 1955	11, 12
Photo Data	30 September 1955	13, 14, 15
Field Inspection Report & Miscellaneous Data	1 October 1955	16

Reference may also be made to the following applicable data:

Plane Table Survey T-6589, 1937, Bluff Island to Point Hardscrabble.

Graphic Control Sheets, LJ-A-55 and LJ-B-55.

The 1955 Hydrographic Surveys. Boat Sheets were forwarded to the Washington Office and prints are available.

Respectfully submitted,

/s/ P. A. Stark
Lt. USC&GS

Approved and Forwarded,

/s/ George A. Nelson,
Comdr., USC&GS
Chief of Party

U.S. DEPARTMENT OF COMMERCE
DESCRIPTIVE REPORTCOAST AND GEODETIC SURVEY
CONTROL RECORD

1 of 2

MAP T. 9623

PROJECT NO. Ph-87

SCALE OF MAP 1:10,000

SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR μ -COORDINATE LONGITUDE OR x -COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
				FORWARD	(BACK)	FORWARD	(BACK)	
CALDER MOUNTAIN	G-609	N.A.	56 13 55.53			1717.8	(198.3)	
CALDER MOUNTAIN HIGHEST POINT, 1915	P. 214	1927	133 35 30.95			533.2	(500.4)	
BAN, 1915	G-609	"	56 13 45.69			1413.2	(1442.6)	
	P. 214	"	133 37 47.64			820.8	(213.0)	
NAN, 1915	"	"	56 13 20.578			636.5	(1219.3)	
	"	"	133 40 11.420			196.8	(837.1)	
FLY, 1886 -1937		"	56 12 37.950			1173.8	(682.0)	
	P. 204	"	133 40 41.264			711.2	(323.0)	
PEAK X, 1922	P. 310	"	56 11 50.664			1567.0	(288.8)	Does not fall on this survey
ASPEN, 1954	G-10728	"	133 29 28.345			488.8	(545.8)	
	P. 5	"	56 12 02.436			75.3	(1780.5)	
RAVEN, 1954	"	"	133 38 58.406			1007.0	(27.5)	
	"	"	56 11 33.682			1041.8	(814.0)	
	"	"	133 36 38.166			658.2	(376.5)	
SHELL, 1954	"	"	56 12 01.157			35.8	(1820.0)	
	"	"	133 38 16.108			277.7	(756.8)	
PLOVER, 1954	"	"	56 12 37.495			1159.7	(696.1)	
	"	"	133 38 07.586			130.8	(903.5)	
WOLF, 1954	G-10728	"	56 13 20.975			648.8	(1207.0)	
	P. 7	"	133 40 11.193			192.9	(841.0)	
NAY, 1954	"	"	56 13 18.448			570.6	(1285.2)	
	"	"	133 38 31.813			548.2	(485.7)	
NAT, 1954	"	"	56 14 02.809			86.9	(1768.9)	
	"	"	133 37 44.947			774.3	(259.3)	

1 FT. = 3048006 METER
COMPUTED BY: H. R. Rudolph
L. A. SenasackDATE 3 December 1954
19 January 1954CHECKED BY: F. M. Wisiecki
J. C. CreganDATE 12/9/54
1/21/54

COMM-DC-57043

MAP T. 9623

PROJECT NO. Ph-87

SCALE OF MAP 1:10,000

SCALE FACTOR

[illegible]

1 FT. = .3048006 METER

COMPUTED BY: H. R. Rudolph

DATE _____

3 December 1954

CHECKED BY: F. M. Wisiacki

DATE 9 December 1954

COMM-DC-57843

8 16

PHOTOGRAMMETRIC PLOT REPORT
PROJECT Ph-87
Surveys T-9622, T-9623, and T-9624

21. AREA COVERED

This radial plot covers all the area of Shoreline Survey T-9623 and part of Survey T-9622, and T-9624.

It extends from the southern point of the entrance of Labouchere Bay in the northwest portion of Prince of Wales Island southerly along Sumner Strait to Shakan Strait.

22. METHOD - RADIAL PLOT

Map Manuscripts:

Vinylite sheets with polyconic projections in black at a scale of 1:10,000 were furnished by the Washington office.

All the control was plotted on the vinylite sheets using a meter bar and beam compass.

A sketch showing distribution of control and photograph centers is attached to this report.

Photographs:

All photographs used were nine-lens prints on positype paper, scale approximately 1:10,000.

Twenty (20) photographs were used, numbered as follows:

41503 thru 41510
41542 thru 41553

Templets:

Vinylite templets were made from all photographs. A master templet was used to correct for errors due to paper distortion and chamber displacements.

Closure and Adjustment to Control:

The radial plot was constructed on vinylite base sheets to which all control had been transferred from the map manuscripts.

The plot was laid starting with photograph 41506 and then laying the rest of that flight. The flight to the east was then laid starting in the north with photograph 41553. The position of photograph 41553 had been established in a previous plot for Surveys T-9621 and T-9622.

The problems arising in laying a plot with control identified direct instead of by substitute points were fully discussed in the radial plot report for Surveys T-9621 and T-9622. In the plot for Surveys T-9621 and T-9622 many of the control stations could not be held, but a very rigid plot was laid. In this plot for Surveys T-9622, T-9623 and T-9624, all but two of the control stations identified in the field were held; however, the plot was not as rigid as was the plot for T-9621 and T-9622. The plot is satisfactory, nevertheless.

22. METHOD - RADIAL PLOT

Transfer of Points:

The vinylite map manuscripts were placed over the finished plot and oriented by holding the control and some intersections of the manuscript projection which had been transferred to the base sheets. Then the pass points and centers were picked off on the map manuscript.

23. ADEQUACY OF CONTROL

There was adequate control as far south as latitude ⁵⁴36° 10' 30". This was as far south as field inspection and hydrographic signal identification were completed and as far as compilation will be done at this time.

The stations not held in the plot are:

EAT, 1954. The radially plotted position is 0.5 mm. south of the geographic position. No pricking card was available in this office for this station. The field man's identification on photographs 41504 and 41505 seemed to more nearly fit the description of the station; Therefore, all the photographs were so pricked.

OAK, 1954. The radially plotted position is 0.9 mm. west of the geographic position. No pricking card was available in this office for this station. The fieldman's identification on photograph 41507 was accepted and all the photographs were so pricked.

CALDER MOUNTAIN CAIRN, 1915. This had been identified from Geological Survey photographs for the original plot laid in 1953. No satisfactory intersection could be obtained chiefly because of the large relief displacements and consequent errors arising from tilted photographs.

24. SUPPLEMENTAL DATA

None.

25. PHOTOGRAPHY

The photographic coverage and definition of the photographs used in the plot were good.

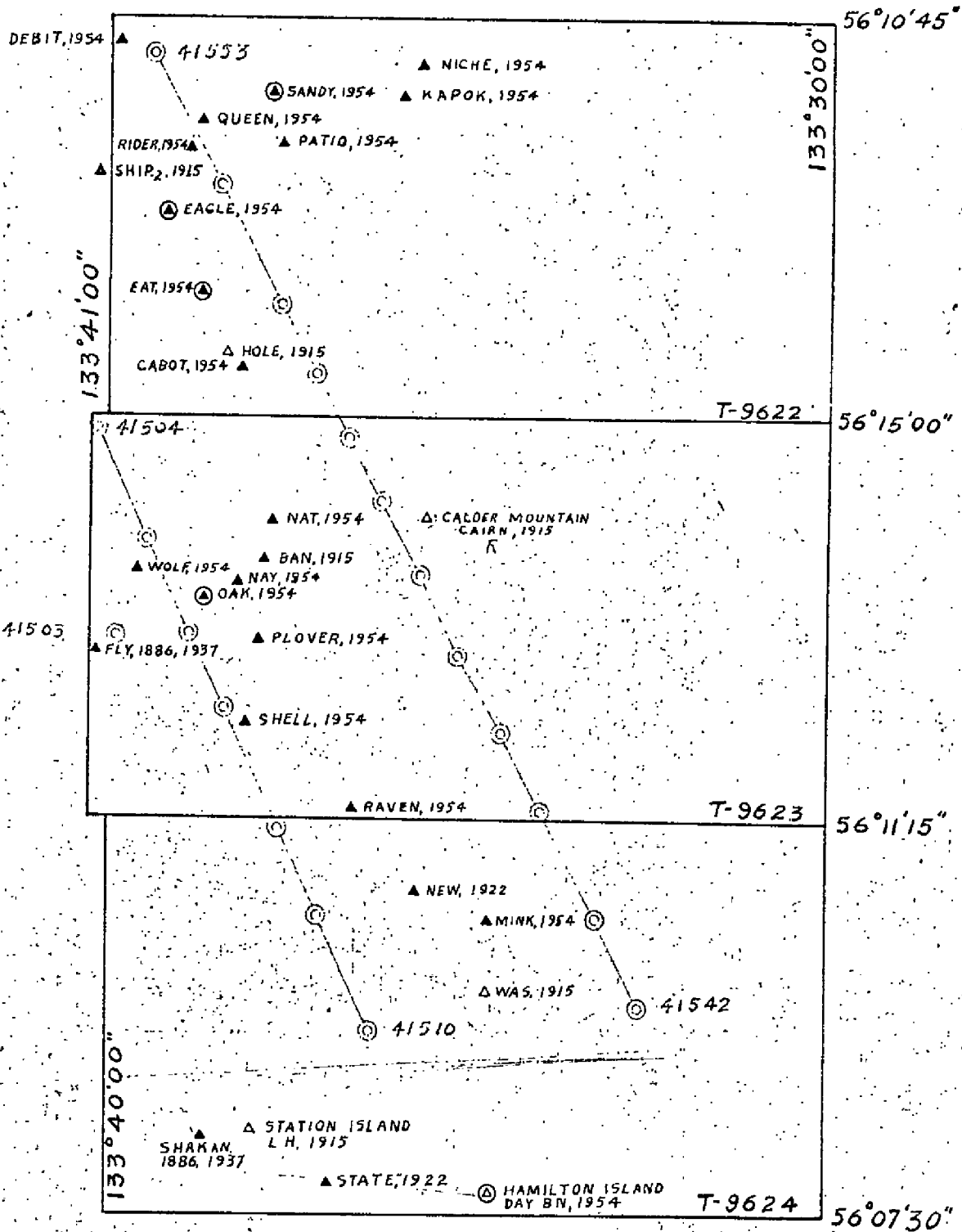
Respectfully submitted,
21 December 1954

Approved and Forwarded

E. H. Kirsch
E. H. Kirsch,
Comdr. USC&GS
Officer in Charge
Balto. Photo. Office

E. L. Williams
E. L. Williams,
Carto. Photo. Aid

1018



LAYOUT SKETCH PROJECT PH 87

- ⊙ 9 Lens office Photographs
- △ Control not identified
- ▲ Identified Control held in Plot
- ⊙▲ Identified Control not held in Plot
- ⊙▲ Office identified Control held in Plot
- ⊙▲ Office identified Control not held in Plot

- 13 - 19

COMPILATION REPORT
Project Ph-87
Survey No. T-9623

Field Inspection Report: Refer to field report for Project CS-347 (Ph-87), Ship LESTER JONES, 1954 season, submitted by Curtis LeFever. *See page 15 24*

31. DELINEATION

This manuscript was delineated by graphic methods. The delineation of Calder Bay was not required at this time. *See page 15 24*

32. CONTROL

Refer to the Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA

A copy of the boat sheet for survey No. H-8150, covering the area north of Barrier Islands, was available for purposes of comparison. *See page 15 24*

34. CONTOURS AND DRAINAGE

Contours: Inapplicable.

Drainage: No comment.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline inspection was adequate. The MLLW lines are based on data furnished by the field party. There were very few areas where the foreshore between the MHW and the MLLW lines were classified by the field party. *See page 15 24*

With reference to paragraph 7(a) of the field report, it was noted that wherever there was a note concerning the MHWL on the boat sheets, there was inspection furnished on the field photographs.

a Rock awash at Lat. 56° 14.225, Long 133° 38.24' is deleted, see H-8150 (1954) Verifiers Report. DJK.

36. OFFSHORE DETAILS

The outlines of the kelp areas were furnished by the field party.

37. LANDMARKS AND AIDS

None.

38. CONTROL FOR FUTURE SURVEYS

Copies of Forms 524 were available for stations NAT, 1954, NAY, 1954 and ERV, 1954. No form was available for OAK, 1954. Stations NAT, NAY and OAK were shown with a triangle because a third-order position was available. No position or identification was available for station ERV, 1954 and the station is not shown on the manuscript. 21 See page 75

The photo-hydro stations were not named or labeled on the field photographs, which caused delay in locating the field identification of the signals. The field pricking on the office photographs was verified to insure identical pricking on all photographs and the signals were cut in on the manuscript. In some cases a description of the point pricked would have been helpful. (See also, par. 38 of the Descriptive Report for Survey No. T-9622).

A list of the photo-hydro stations located on the manuscript is included in paragraph 49.

39. JUNCTIONS

Junctions to the north with survey T-9622 and to the south with survey T-9624 were made and are in agreement.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

46. COMPARISON WITH EXISTING MAPS

None were available in the compilation office.

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 8172, scale 1:40,000, published March 1937, corrected to 9/8/52.

Items to be applied to nautical charts immediately: None.

Items to be carried forward: None.

Respectfully submitted
11 January 1955

Bernard Kurs

Bernard Kurs
Carto. Photo. Aid

Approved and forwarded

E. H. Kirsch
E. H. Kirsch, Comdr. USC&GS
Officer in Charge
Balto. Photo. Office

SUPPLEMENTARY COMPILATION REPORT
Project 6087
T-9623

Field Inspection Report: Refer to the Preliminary Field Inspection Report, Maps T-9623 thru T-9627, May - July 1955, Combined Operations, USC&GS, Ship LESTER JONES, Project CS-347 - Ph-87, dated 30 July 1955.

Refer to 1955 Photogrammetric Plot Report which is part of the Descriptive Report for Survey No. T-9624.

31. DELINEATION

The delineation of Calder Bay and the shoreline east of Longitude 133° 34' was added to the map manuscript.

32. CONTROL

Refer to the 1955 Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA

Copies of boat sheets LJ-1354 and LJ-1155 were available for purposes of comparison. Due to the high stage of tide on the photographs several rocks awash indicated on boat sheet LJ-1354 in the vicinity of the Barrier Islands were not visible.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline inspection was adequate. No low water line was shown across the head of Calder Bay. There was no image on the photographs in the vicinity of the line determined by the hydrographic party.

38. CONTROL FOR FUTURE SURVEYS

No location data was furnished for the hydrographic signals shown on the boat sheet in the area delineated at this time.

Graphic control sheet LJ-A-55 was received after the manuscript was sent to the Washington office.

Topographic station ~~ERV~~, 1954 was recovered during the 1955 season and a position furnished which should be added to the original Form 524. The station was plotted on the manuscript. LOST

Theodolite cuts from survey stations in T-9624, observed during the 1955 season, verified the positions of several photo-hydro signals south and east of the Barrier Islands. Photo-hydro signal ORA was found identified on field photograph 41508 by prick mark without a note or label. It was located photogrammetrically and verified by theodolite cuts.

Approved and Forwarded

E. H. Kirsch
E. H. Kirsch, Comdr. C&GS
Baltimore District Officer

Respectfully submitted
28 October 1955

Jacqueline B. Phillips
Jacqueline B. Phillips,
Carto. Photo. Aid

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-87 (Sumner Strait, Alaska)

T-9623

Barrier Islands

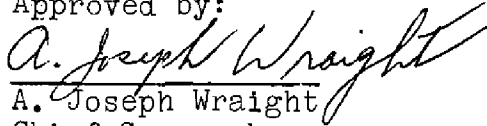
Calder Bay

Prince of Wales Island

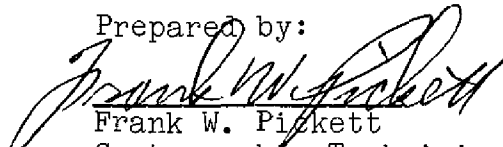
Shakan Bay

Sumner Strait

Approved by:


A. Joseph Wraight
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

49. NOTES FOR HYDROGRAPHER

The following sixty-five (65) photo-hydro stations are located on the manuscript:

ABE	CUE	GAM	MAW	RIP	TAX
ADD	DOG	GEO	MAX	ROY	VET
AGO	DUD	HOP	NIT	SAX	VEX
AMP	DUN	HOW	NUL*	SIN	VIM
ANT	EEL	HUB	OFF ^{FORA}	SIS	WAX
ART	EGG*	ION	OUT	SOL	WED
BAN	ELF	JIM	PAD	SOW	WHO
BIB	EMO	LAD	PEG	SOX	WHY
BON	FIG	LAM	PEP	SUB	YAK
BUS	FRY	LEG	PTE	SUM	ZIG
COW	GAL	MAR	RAG	STY	

*EGG - was pricked on only the office photos.

"NUL - was cut in using the identification on the office photographs.

There is a prickhole on field photo. 41506, 2.5 mm to the NW.

Several signals were noted on the boat sheet that are not located on the manuscript. It is assumed that data for these will be found in the hydrographic records.

Stations NAT, 1954; NAY, 1954 and OAK, 1954 were shown on the manuscript with a triangle because a third-order position was available. No position was available for station ERV, 1954 - and the station is not shown on the manuscript.

Topographic station ERV, 1954 was recovered and located during the 1955 season and was plotted on the manuscript. (Form 52 & lost)

T. 9623

4a. Classification label ✓

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

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

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

~~27. Roads~~ _____ ~~28. Buildings~~ _____ ~~29. Railroads~~ _____ ~~30. Other cultural features~~ _____

~~31. Boundary lines~~ ~~32. Public land lines~~

33. Geographic names ✓ 34. Junctions ✓ 35. Legibility of the manuscript ✓ 36. ~~Discrepancy~~
~~overlay~~ 37. Descriptive Report ✓ 38. Field inspection photographs ✓ 39. Forms ✓
 40. E. Glass

Supervisor, Review Section or Unit

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

Supervisor

M-2623-12

24

REVIEW REPORT T-9623
SHORELINE
June 5, 1968

61. GENERAL STATEMENT:

See Summary accompanying the Descriptive Report. (PAGE 6)

There is no Field Edit Report or Field Edit Sheet for this survey. Field Edit consisted of minor revisions to the shoreline made by the hydrographic party. These were applied to the manuscript by the Final Reviewer.

All rocks located by the hydrographer were searched for on the photographs by the Final Reviewer. The photography was obtained near the time of high water, this along with large areas of kelp prevented verification of a large percentage of the rocks.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Comparison was made with a copy of Registered Survey 3536, 1:20,000 scale, made in 1915. The two surveys are not in good agreement even after correcting for the difference in datum. The disagreement is too extensive to attempt to show on the Comparison Print.

Survey T-9623 supersedes survey 3536 for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Comparison was made with USGS quadrangles PETERSBURG (A-5), ALASKA, 1:63,360 scale, edition of 1953 and PETERSBURG (A-6), ALASKA, 1:63,360 scale, edition of 1948. The comparison was favorable, the USGS quadrangles being more generalized due to the smaller scale.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with copies of H-4243 (unreviewed) and H-8150 and H-8151 both reviewed. The differences in the surveys have been noted on the Comparison Print.

Special attention is called to two rocks at latitude $56^{\circ} 14' 13''$, longitude $133^{\circ} 38' 14''$. The field inspector noted two rocks at this position on field photograph 41505. A thorough search for these rocks, made by the final reviewer, using all photographs which cover the area failed to reveal an image. These rocks are not shown on the hydrographic survey or chart. It is possible that kelp was mistaken for rocks by the field inspector or they are obscured by kelp and/or high tide at the time of photography.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with nautical chart 8172, 1:40,000 scale, 5th edition, November 23, 1964. The difference between the chart and this survey has been noted on the Comparison Print.

The height of the tide at the time of photography plus large areas of kelp prevented positive identification of some rocks and ledges photogrammetrically.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

67. PHOTOGRAPHY:

The following field and office photographs were examined during Final Review:

FIELD
41505 thru 41508
41565
41609 and 41610

OFFICE
41503
41505 thru 41508
41544 thru 41548
41550 and 41551
41609 and 41610

Reviewed by:

Leo F. Beugnet
Leo F. Beugnet

Approved by:

For P. A. Stark
J. Bull, RADM, USESSA
Director, Atlantic Marine Center

Approved by:

Everett V. Ramsey
Chief, Photogrammetric Branch, JSSB

R. H. Houlton
Chief, Photogrammetry Division

Chief, Nautical Chart Division

G. SHORELINE AND TOPOGRAPHY:-

Shoreline and topographic details are from manuscripts T-9623, T-9624, T-9625 and T-9627 compiled by photogrammetric methods based on 1954 and 1955 field inspection data. There is a small amount of shoreline and topographic details on graphic control sheet LJ-A-55. Location of some offshore rocks were duplicated by the hydrographer and others were located which are not on the manuscripts. Kelp areas defined by the hydrographer should be given preference over those indicated on the manuscripts. Shoreline indicated by dashed line on the manuscripts is partially obscured by trees and shadows on the photographs. However it is essentially correct for charting as shown.

The low water line was not defined by soundings except in limited areas of flat bottom such as in Calder Bay. Steep foreshore prevented sounding in to the low-water line along most of the shoreline.

All stations outside the high-water line are on rocks or islets.

Shoreline on the boat sheet is from preliminary manuscripts T-9623, T-9624, T-9625 and T-9627 compiled without projections. Shoreline was transferred to the boat sheet to fit established control.

H. SOUNDINGS:-

All soundings on sounding lines were measured in fathoms with 808 fathometer No. 102-S. Soundings on some rocks and shoals were measured with a hand lead.

All sounding was routine. No unusual methods were used and no unusual corrections were applied.

Bar checks were taken when weather conditions permitted to a depth of 10 fathoms. Bar checks to 10 fathoms were in agreement with the 2 fm. bar checks, and the correction is entered in the sounding records as part of a combined phase-draft correction. All fathometer soundings are on A scale for which the phase correction is zero.

The fathometer initial was set on zero and any variation from this setting was entered in the sounding records as an index correction.

I. CONTROL OF HYDROGRAPHY:-

All hydrography was controlled by visual sextant fixes on shore stations. No unusual methods were used.

J. ADEQUACY OF SURVEY:-

The survey is considered complete and adequate to supersede all prior surveys of the area.

All parts of the survey are equally reliable and comply with the Project Instructions and the Hydrographic Manual.

Soundings of adjoining sheets transferred to the boat sheet indicate that junctions are satisfactory and depth curves can be adequately drawn.

There are no holidays.

Desc. Report

H-8150

-(2)-

27

The Port Protection gage was used for the reduction of soundings in that bay except at times when it refused to operate. On those days Point Baker gage was used with a range ratio correction as furnished in Director's letter No. 36-25-9821J being applied.

The Hole in the Wall gage was used for all other areas on this sheet except on days when it was inoperative. On those days the gage at Point Baker was used with a range ratio correction furnished in the Director's letter No. 36-25-9821J, being applied.

No time corrections were applied.

No current stations were observed on this project.

E. SMOOTH SHEET:-

The smooth sheet projection was made in the Washington Office by ruling machine. Shoreline and signals are to be transferred by the processing office. This work is not yet begun as of the date of this report.

F. CONTROL STATIONS:-

Triangulation control was obtained from surveys by L.O. Colbert in 1915 and by this party in 1954. Positions for all recoverable topographic stations which were located by theodolite cuts are computed. All triangulation and recoverable topographic stations are pricked on the photographs and shore line details are tied to them by field inspection.

The majority of non-recoverable hydro stations are located by photogrammetric methods on manuscript T-9621, T-9622 and T-9623 from 1954 field data. The positions of many of these are strengthened by theodolite cuts.

Other non-recoverable topographic stations are located by computed geographic positions, graphically from theodolite cuts and sextant angles. All theodolite directions observed on control signals are recorded in the list of directions. All sextant cuts are indexed in volumes 1 and 25 of this sheet.

Hydrographic stations were located by conventional methods. Data is indexed in sounding volume 1.

G. SHORELINE AND TOPOGRAPHY:-

Shoreline and topographic details are from advanced photogrammetric compilations of manuscripts T-9621, T-9622 and T-9623 from 1954 field inspection data.

Isolated revisions to the shoreline based on the hydrographer's interpretations were made during the hydrography, while running close inshore. The changes are sketched in, in black india ink, distinguishable from the rest of the shoreline which is delineated in yellow ink.

Rock symbols transferred to the boat sheet from bromoil prints were investigated and their positions verified. See verifications notes concerning the transferring of contemporary topography to the smooth sheet.

H. SOUNDINGS:-

All soundings on sounding lines were measured with echo sounding equipment listed in side heading C. Vessels and Equipment. See the report of fathometer corrections attached at the end of this report.

Hand lead and wire soundings were obtained at detached positions on shoal and at the times bottom samples were taken.

A fifth phase was installed on 808 depth recorder No. 75, which recorded depths from 155 to 196 fathoms. This phase was used in those depths on this sheet.

PROCESSING OFFICE NOTES - H-8151

8150

SMOOTH SHEET ✓

The smooth sheet projection was made in the Washington Office by the ruling machine. The shoreline and signals were transferred and plotted by the Seattle Hydrographic Processing Unit, using standard of transfer, plotting and checking.

SHORELINE AND TOPOGRAPHY ✓

The computed theodolite locations of signals FED, GAB, GOB and HEX were used instead of those on the manuscript. These locations along with hydro locations of high water rocks, showed that the shoreline between signals FED and MAW was misplaced. A shift of the manuscript shoreline to those computed positions cleared all sounding lines. Signal ICE was shifted to agree with this move. *Shoreline affected by the shifting of these signals was left in pencil by the processing office to be subsequently verified, adjusted and inked by the Verifier, DSK.*
Except for the above mentioned change the shoreline and topographic signals were transferred from blue line tracings of T-9622 and T-9623 with some changes of shoreline transferred from the Boat Sheet.

All changes in shoreline have been left in pencil for verification in the Washington Office. *Shoreline adjusted and inked DSK.*

CONTROL OF HYDROGRAPHY ✓

All of the hydro sounding lines were plotted by L. W. Eason who apparently made some attempt to follow the instructions in C&GS General Circular 53 - 2, with innovations of his own. He made no attempt to space the positions for odd intervals of time, changes of course or speed changes of the launch; nor were the "spaced" positions indicated in the sounding volumes.

In penciling the soundings at least 20% of the positions were replotted and about 10% changed. The numerous erasures and replotting have roughened the paper surface of this sheet and made legibility difficult. - *was made to compare all of*

OFFICE OF CARTOGRAPHY
REVIEW SECTION -- NAUTICAL CHART DIVISION
REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8150

FIELD NO. LJ-1254

S. E. Alaska, Sumner Strait, N. W. Coast Prince of Wales Island

SURVEYED: July - Sept. 1954

SCALE: 1:10,000

PROJECT NO. CS-347

SOUNDINGS: 808 Depth Recorder
Hand lead & wire

CONTROL: Sextant fixes
on shore signals

Chief of Party ----- C. LeFever
Surveyed by ----- C. LeFever; C. A. Schoene; H. A. Garcia
Protracted by ----- L. W. Eason, II
Soundings plotted by ----- H. C. Parsons
Verified and inked by ----- D. J. Kennon
Reviewed by ----- I. M. Zeskind
Inspected by ----- R. H. Carstens

DATE: 6-26-61

1. Description of the Area

This is a survey of Sumner Strait, the lower part of Protection Harbor, Labouchere Bay and Hole in the Wall, all of which are located on the west side of Prince of Wales Island, Alaska. The bottom is very irregular. Inshore, the bottom lies adjacent to mountainous land areas. Here in depths less than 50 fms. submarine features such as ledges, reefs, pinnacles, deeps and ridges are found. In the offshore area, knolls and ridges rising from depths greater than 100 fms. are found. On Calder Rocks pinnacles uncover or rise to about 1 fm. depths.

2. Control and Shoreline

The source of the control is given in the Descriptive Report.

The shoreline originates with unreviewed photogrammetric surveys T-9621 and T-9622 of 1953-54 and T-9623(1953-54-55).

Hydrography

Depths at crossings are in good agreement. The usual depth curves were adequately delineated, except close inshore where the foul character of the bottom generally prevented development to the low-water line. The least depths on shoals and the bottom configuration were adequately developed.