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Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Shoreline (Photogrammetric)
Field No.	1117 Office No. T-9903
LOCALITY	
State	Alaska
General locality	Cordova Bay
Locality	Hetta Inlet and Nutkwa Inlet
1953-1955	
CHIEF OF PARTY	
F. R. Gossett, Chief of Field Party	
J. C. Partington, Chief of Field Party	
E. H. Kirsch, Baltimore District Officer	
LIBRARY & ARCHIVES	
DATE	

DATA RECORD

T_ 9903

Project No. (II):

^{PH}
6117

Quadrangle Name (IV):

Field Office (II): U.SC&GS Ship HODGSON
U.SC&GS Ship PATTON

Chief of Party: F.R. Gossett, J. Bowie
J.C. Partington

Photogrammetric Office (III): Baltimore, Md.

Officer-in-Charge: E. H. Kirsch

Instructions dated (II) (III):
Field Office
3-17-53 12-7-53
1-8-54 10-11-54
1-7-55 1-24-56

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): CEDAR 2, 1908

Lat.: 55° 06' 39.816" (1231.3m) Long.: 132° 37' 37.926" (672.3m)

Adjusted
~~Horizontal~~

Plane Coordinates (IV):

State: Alaska

Zone: 8

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.

[illegible]

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

DATA RECORD

Field Inspection by (II): D.L. Campbell
A.M. Legako, J.J. Dermody
W.C. Russell, F.J. Tucker

1953 Field Season
Date: 1954 Field Season
1955 Field Season

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location): 1954, date of photography
field inspection

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

Date: 12/23/53

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

Date: 12/23/53

Control plotted by (III): J. C. Cregan
J. E. Tolodziecki

Date: 1/19/54
2/2/56

Control checked by (III): R. Glaser
E. L. Williams

Date: 2/3/54
2/6/56

Radial Plot ~~on Stereoscopic~~ H. R. Rudolph
~~Control extension~~ by (III): E. L. Williams

Date: 2/19/54, 2/27/56
3/8/55

Planimetry
Stereoscopic Instrument compilation (III):

Date:

Contours

Date:

Manuscript delineated by (III): J. Y. Council
J. B. Phillips

Date: 3/6/54
3/6/56

Photogrammetric Office Review by (III): R. Glaser
H. R. Rudolph

Date: 3/13/54, 3/29/56,
1/28/55

Elevations on Manuscript
checked by (II) (III):

Date:

Camera (kind or source) (III): U.S.C. & G.S. nine lens and single lens camera "Q"

Number	Date	Time	Scale	Stage of Tide
41002	7/8/53	1631	1:10,000	5.1' above MLLW
41048 thru 41053	7/8/53	1709	1:10,000	5.1' above MLLW
54-0-64	6/4/54	1102	1:10,000	1.6' below MLLW
54-0-182 thru 184	6/4/54	1558	1:10,000	11.6' above MLLW
45387 thru 45389	6/4/54	1100	1:20,000	1.6' below MLLW

Tide (III)
from predicted tide tables

Reference Station: Sitka, Alaska
Subordinate Station: Keete Inlet
Subordinate Station:

Diurnal		
Ratio of Ranges	Mean Range	Spring Range
	7.7	9.9
1.4	10.4	12.9

Washington Office Review by (IV): D. M. BRANT

Date: July 1970

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 5
Shoreline (More than 200 meters to opposite shore) (III): 25
Shoreline (Less than 200 meters to opposite shore) (III): 1
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): 4
Number of BMs searched for (II):
Number of Recoverable Photo Stations established (III): 4
Number of Temporary Photo Hydro Stations established (III): 50

Recovered: 3
Recovered:

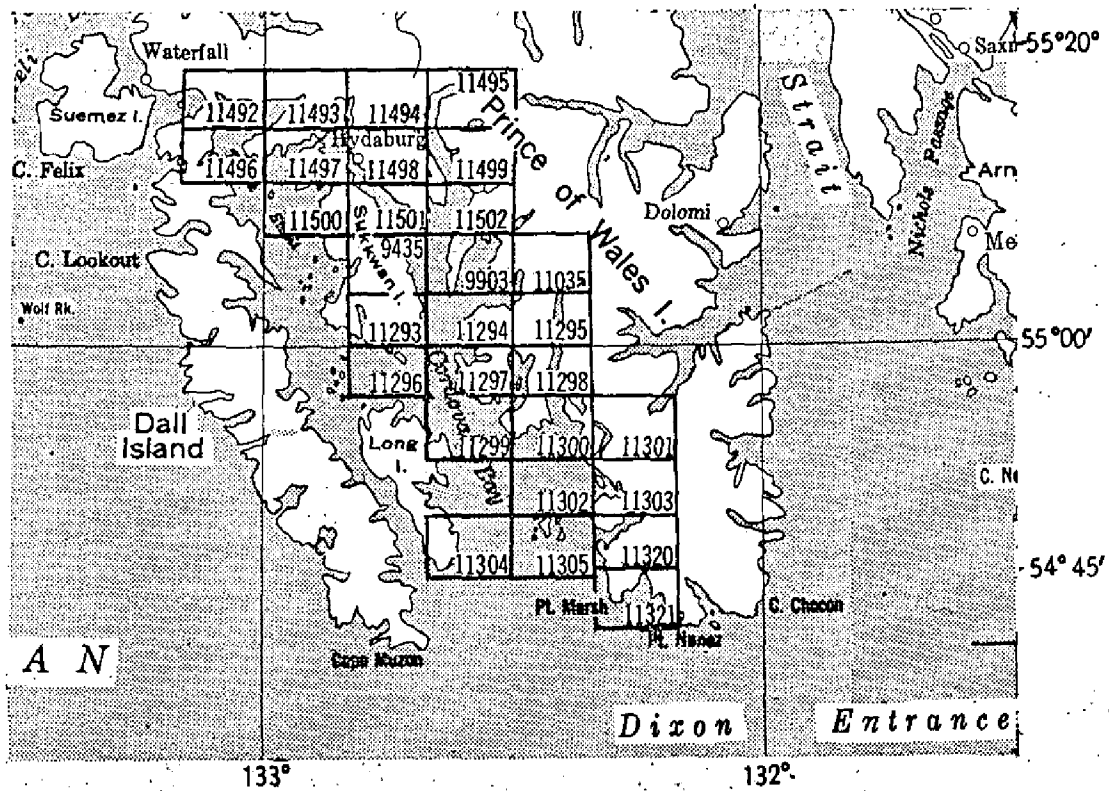
Identified: 2
Identified:

Remarks:

SHORELINE MAPPING PROJECT PH - 117

Cordova Bay & Vicinity of S.E. Alaska

-5-



OFFICIAL MILEAGE FOR COST ACCOUNTS							
SHEET NO.	AREA SQ.	LINE MI.	SHORELINE				
	MILES						
9435	13	13		11304	12		12
9903	21	21		11305	37		37
11035	9	9		11320	24		24
11293	20	20		11321	20		20
11294	15	15		11492	24		24
11295	13	13		11493	12		12
11296	14	14		11494	2		2
11297	21	21		11495	16		16
11298	23	23		11496	17		17
11299	16	16		11497	26		26
11300	31	31		11498	8		8
11301	7	7		11499	11		11
11302	18	18		11500	27		27
11303	14	14		11501	17		17
				11502	15		15
				TOTALS	503		503

Summary to Accompany
Descriptive Report
All T-Numbers
PH-117

September 1970

This project is comprised of twenty-nine shoreline surveys compiled at 1:10,000 scale. It covers an area in the vicinity of Cordova Bay in southeast Alaska. The purpose for the compilation of these shoreline surveys was to provide a base for hydrographic survey operations and to update marine charts of the area.

The shoreline area was covered with single-lens and nine-lens photography. Field inspection prior to compilation consisted only of recovery and identification of control. Control was extended by radial plot method in the Baltimore District Office prior to graphic compilation. The shoreline was delineated from office interpretation of the photographs.

Copies of the manuscripts and the ratio photographs were sent to the hydrographic parties (ships HODGSON and PATTON) for hydro support use. Hydro signals were identified and described. Corrections and additions to the shoreline and offshore details were made from field annotated photographs. This has been treated as field inspection throughout this project, but actually it is field edit.

The application of field inspection and photogrammetric office review was done in the Baltimore District Office.

Map Accuracy

The extension of control (radial plots) for the subject maps was considered to be sub-standard in accuracy (refer to radial plot reports). However, the maps were used to provide shoreline and control for hydrographic surveys and were found by the hydrographer to be generally satisfactory for this purpose. A new project is planned for this area.

(Continued)

Differences Between Contemporary Hydrographic and Topographic Surveys

Field inspection was done during hydrography (refer to the field inspection report). Where the application of field inspection (additions and corrections) was not applied to the hydrographic surveys, they were called to the attention of the hydrographic verification and review activities by the following means:

1. For an unverified smooth sheet a "Notes to the Verifier" page was inserted in the Hydrographic Survey Descriptive Report.
2. For an unreviewed smooth sheet a "Notes to the Reviewer" page was inserted in the Hydrographic Survey Descriptive Report.
3. For reviewed hydrographic surveys the Chief, Hydrographic Data Branch was notified.

The remaining discrepancies were disposed of in conference with the Hydrographic Review Branch.

Rock Elevations

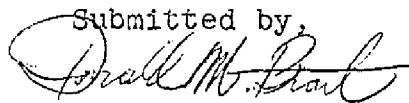
Differences in some rock elevations were found during final review between a number of the photogrammetric surveys and the contemporary hydrographic surveys. It was decided in conference with the Hydrographic Review Branch that since the rock elevations were from predicted tides they would be removed in most cases from the photogrammetric surveys and the elevations on the hydrographic surveys would be used because of more accurate tide data. An ozalid copy of all manuscripts showing the rock elevations computed from predicted tides will be filed along with available field inspection photographs in the Federal Records Center.

A complete Geographic Names Investigation was made and a final names sheet is a part of this report.

Field records were incomplete at the time of final review. Available field data was used at this time.

A registration manuscript copy for all surveys, except T-11301 and T-11321 which are lost, will be registered in the Bureau Archives under their respective T-numbers.

Submitted by,



Donald M. Brant

2. AREAL FIELD INSPECTION

Control station identification was made in the main project area of Cordova Bay on the southwest side of Prince of Wales Island, and in three areas on the east side of Prince of Wales Island in accordance with instructions for Project CS-357. Shoreline inspection for this season was confined mainly to the area covered by this season's hydrographic surveys. In the areas north of Shipwreck Point, on the west side of Cordova Bay, and on the east side of Prince of Wales Island only very small amounts of shoreline inspection were done.

The Cordova Bay area is a large deep watered area with many inlets, arms, and bights that cut up the land areas. In the southern part, the Barrier Islands extend far out into the bay. The terrain in the Barrier Islands is very broken with numerous small islands and offshore rocks covering the area. A few small tidal lakes are found on several of the islands. Most of the islands are 100 to 200 feet in height. The land area in the rest of Cordova Bay is mostly rugged wooded mountains cut by deep valleys, bays and inlets.

The areas on the east side of Prince of Wales Island in which the instructions required control station identification were in or near long deep bays. These inlets have numerous small bays and arms that are in general very deep. The land areas are nearly all very mountainous with dense timber except near the summits of the highest peaks. The higher mountains inshore are very steep and rugged, and are usually bare near the summits.

There are very few cultural features in the areas covered by field inspection. In the Cordova Bay area there were only three cultural features. A small trapper's cabin was found at the old Klinkwan village site. The landmark and remains of the village have been destroyed and should be deleted from the chart. An old cannery site on the north shore of Hunter Bay is visible but no structures remain. At the northern end of the area opposite Sukkwan Strait there is an abandoned mine. This was charted as Copper City, but there are no buildings still standing.

Only control station identification was done on the east side of Prince of Wales Island. No detailed inspection of cultural features was made in this area.

The single lens photographs obtained from the Geological Survey were very poor which made field inspection difficult. These prints were very hazy and had very little contrast.

The nine lens photos were clear and had very good contrast except in areas where the sun's reflection blurred them. Usually a better print could be found in these areas, but on several photographs along the west side of Cordova Bay some difficulties were encountered.

Densities and tones were not inspected on the land areas. In water areas shoals and kelp areas were easily visible on the nine lens photographs.

3. HORIZONTAL CONTROL

(a) No supplemental triangulation control was established in connection with the field inspection. Since photo compilation had not been made for the area, graphic control sheets were surveyed to control the hydrography. These

sheets should be very helpful in making the compilation. The short sections of shoreline in the vicinity of many of the stations will probably be helpful to the compiler.

Three new main scheme triangulation stations were established during the survey. These are BLACK 2, 1953; EGG 2, 1953; and DEWEY 2, 1953.

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

(c) All control was established by the Coast and Geodetic Survey.

(d) No field inspection was done this season in the vicinity of Sukkwan Strait and South Pass. This section was deferred in expectation of receiving nine-lens photographs. Then near the close of the season, work on Project CG-357 was suspended to undertake the special wire drag survey at Hollis Anchorage. A better field inspection can be made when the remaining area is covered by nine-lens photographs. The single-lens photographs provided by the Geological Survey can be considered of very little value for field inspection in this area. *is this relevant?*

(e) In the Cordova Bay area the triangulation stations that were omitted in the photo identification were omitted in accordance with Paragraph 12 of Instructions dated 17 March 1953. For stations omitted in Sukkwan Strait and South Pass see Paragraph 3(d) of this report.

The stations on the east side of Prince of Wales Island that were omitted were in accordance with Paragraph 13 of Instructions dated 17 March 1953.

The following stations were reported as lost:

NEW, 1908	FRONT, 1909
GREEN, 1907	DOPE, 1909
H. W. CHURCH SPIRE, 1909	BAD, 1909
OUR, 1909	LIME, 1905-18
CAN, 1909	HUB, 1907
TOP, 1909	

Stations NEW, 1908 and GREEN, 1907 were the only two stations of the list that were photo identified. At NEW, 1908 the station mark was not found but the old blaze in tree and the rock pinnacle the station was on was found. The pinnacle is only about 4 feet in diameter which made positive identification possible. At GREEN, 1907 the old R. M. drill hole was found and identified. The station mark was not found.

For further information under this heading see Triangulation Reports, Ship HODGSON, 1953.

(f) The following horizontal control stations were identified:

STATION	PHOTO NO.	QUALITY OF IDENTIFICATION	REMARKS
<u>WEST OF PRINCE OF WALES</u>	<u>NINE LENS</u>		
ANCHOR, 1909	41015	Positive	Triangulation
ATA, 1918	41003	"	"
Axe	40991	"	Topo - 1953
BAN, 1925	40944	"	Triangulation
BARRIER, 1908	40992	"	"

STATION	PHOTO NO.	QUALITY OF IDENTIFICATION	REMARKS
BLACK 2, 1953	h0991	Positive	Triangulation
BOAT, 1909-25	h0985	"	"
CEDAR 2, 1908	h1048	"	"
CLEO, 1909	h1015	"	"
CLOVE, 1907	h0979	"	"
CON, 1925	h0984	"	"
COTTER 2, 1908	h1048	"	"
CREEK, 1909	h0993	"	"
Day	h0991	"	Topo - 1953
DEWEY 2, 1953	h0986	"	Triangulation
EGG 2, 1953	h0986	"	"
FAR, 1909	h0991	"	"
FLAT 2, 1908	h1002	"	"
FOG, 1908	h1002	"	"
GRASS, 1908-14	h1002	"	"
GREEN, 1907	h0977	"	"
HAS, 1918	h1004	"	"
HEN, 1907	h0977	"	"
Hip	h1011	"	Topo - 1953
HUNTER, 1909	h1035	"	Triangulation
JACK, 1907	h0978	Doubtful	"
Jar	h0992	Positive	Topo - 1953
KEET, 1918	h1045	"	Triangulation
KLINKWAN, 1909	h1035	"	"
LEDGE 2, 1908	h0998	"	"
LITTLE, 1909	h1033	"	"
MAB, 1918	h1005	"	"
MARBLE 2, 1925	h0983	"	"
M.D, 1918	h1045	"	"
MEX, 1909	h0990	"	"
NEZ, 1908	h1000	"	"
NICE, 1907	h0977	"	"
NING, 1925	h0943	"	"
NUT, 1918	h1002	Doubtful	"
PET, 1909	h1015	Positive	"
Ram	h1036	"	Topo - 1953
RUEA, 1909	h1034	"	Triangulation
ROUGH 2, 1908	h0982	"	"
Rut	h1036	"	Topo - 1953
SHIP 2, 1908	h0997	"	Triangulation
SHOE, 1907	h0978	"	"
SOUTH ROCK, 1909-53	h0945	"	"
TITAN, 1909	h1033	"	"
Tomb	h0989	"	Topo - 1953
TRIM, 1925	h0979	"	Triangulation
TURN, 1909	h1012	"	"
UP, 1918	h1053	"	"
Vim	h0991	"	Topo - 1953
WEST, 1909	h0989	"	Triangulation
Yam	h0991	"	Topo - 1953
Zag	h0991	"	Topo - 1953
Single Lens			
BRETT, 1908-14	SEA13-091	Doubtful	Triangulation
ROUND, 1908-14	SEA26-020	Positive	"

STATION	PHOTO NO.	QUALITY OF IDENTIFICATION	REMARKS
EAST OF PRINCE OF WALES ISLAND	Single Lens		
BAKE, 1924	SEA29-042	Positive	Triangulation
BUT, 1924	SEA22-119	"	"
BOB, 1924	X15,026	"	"
BLACK, 1912	SEA103-006	"	"
CHOC, 1924	SEA22-025	"	"
DRICK, 1912	SEA22-004	"	"
END, 1912	SEA22-009	"	"
HALLIDAY, 1912	SEA103-006	"	"
HEAD, 1922	SEA22-005	"	"
INGRAHAM, 1912-21	SEA103-004	"	"
KEN, 1921	SEA22-005	"	"
KNOB, 1924	SEA29-044	"	"
MOIRA ROCK, 1912	SEA22-135	"	"
NEST, 1912	SEA22-134	"	"
OUT, 1911	X15-026	"	"
PIT, 1924	X15,030	"	"
SCOTT, 1912	SEA15-065	"	"
SCRUB, 1924	SEA29-042	"	"
SUN, 1912	SEA103-005	"	"
TAG, 1924	SEA103-022	"	"
TIP, 1924	SEA22-025	"	"

Of the stations listed doubtful identification was made on stations: JACK, 1907; NUT, 1907; and BRETT, 1908-14. These stations are not required by the instructions since other stations in the immediate vicinity were used to meet the spacing requirements.

Station JACK, 1907 was marked doubtful because the glare of the sunlight on the photographs made positive identification difficult except to large objects.

Station NUT, 1907 was marked doubtful since overhanging trees and shadows eliminated all object that would have made good subpoints. The subpoint used was a bend in the high water mark that did not show clearly on the photograph.

Station BRETT, 1907 was identified on a single lens photograph furnished by the Geological Survey which was very dull and hazy. It was marked doubtful since the subpoints did not show clear or sharp on the photograph.

4. VERTICAL CONTROL

Not applicable.

5. CONTOURS AND DRAINAGE

Not applicable.

6. WOODLAND COVER

All land areas not covered by storm high waters were densely wooded with coniferous trees and underbrush except on very high mountains. A few offshore rocks to the south and west of the Barrier Islands were bare. A number of areas on the east side of Prince of Wales and a few areas in the Cordova Bay area had been logged out. These areas were easily seen on the nine lens photographs.

7. SHORELINE AND ALONGSHORE FEATURES

(a) Shoreline was inspected from a boat running as close to shore as was safe. The mean high water line shows clearly on the nine lens photos where shadows or overhanging trees do not obscure it. In most areas not opened to the sea the mean high water line is at the tree line. In some areas where the land protrudes up steeply from the shoreline the trees overhang it as much as 4 to 5 meters. In other areas, those open to the sea, it is usually visible on the photographs but may be as far as 50 meters from the tree line.

The mean high water line is indicated at random interval on photographs or where it is not clear.

(b) The low water line is not indicated on the photographs, although, a number of areas were marked foul when it was considered too shoal to investigate with a motor whale boat. In some cases where a number of submerged rocks were grouped together the area would be marked foul out to the kelp line.

(c) The foreshore in the vicinity of the Barrier Islands was mostly very rocky with numerous rock ledges and reefs that cover at high water. There are also many small bights with boulder, rock or gravel beaches in this area. Just north of the Barrier Islands there are many bights and small bays which have some sand beaches formed by streams that run into them.

(d) There were a few bluffs and cliffs seen over the area. None of these were marked on the photographs. However, most of them are readily identifiable on the photographs due to the lack of vegetation. They should be obvious in a stereoscopic model.

(e) In the project area where shoreline inspection was done no shoreline structures were noted other than the permanent fish trap at the mouth of Hessa Inlet. This structure was used by small fishing craft as a mooring. It was permanently secured to the beach, and had not been used as a trap for many years. It is indicated on the photograph.

8. OFFSHORE FEATURES

In the hydrographic survey area covered by field inspection important offshore features and possible dangers to navigation were indicated on the photographs. Many of the offshore rocks were located by hydrographic and/or topographic means.

In two places in the area inspected this season there were rocks that were indicated that did not show clearly on the photographs.

The first is a sunken rock in Eureka Channel about 1.1 mile NE of Far Point. In the vicinity of this rock there is a kelp area about 30 meters in diameter that appears to show on the photo. A hydrographic fix was taken on the rock and a check on its location can be obtained from the hydrographic sheet.

The second rock not clearly visible on the photographs was a rock awash about 200 meters SSE of triangulation station BIRD, 1909-53. This rock was not located by the hydrographic party, but it was noted on the photograph. It may show a little clearer on the office print. However, if a positive location cannot be made using the office prints, further hydrographic investigation is necessary.

Since the field inspection was done in conjunction with the hydrographic survey, some of the offshore features were omitted from the photographs if previously located by other methods. Although, an attempt was made to field inspect all offshore features whether they had been previously located or not.

Heights of rock were estimated in all cases. All rocks were visited, but in most cases a landing was not made. When the field inspection was made a pencil notation of the time, date, and estimated heights was made on the photographs. At the close of the day heights of rocks awash were reduced to MLLW and all notes were inked.

9. LANDMARKS AND AIDS

(a) The only landmark noted was an abandoned light on Turn Point. It is station Ram identified on photograph Number 41036. Since it is a recoverable topographic station no photo location is needed.

(b) No interior landmarks will be listed since no interior inspection was done.

(c) Inapplicable.

(d) The following fixed aids to navigation are indicated on the photographs:

AID	PHOTO NOS.	HYDROGRAPHIC NAME	REMARKS
TELEVAK STRAIT LIGHT	410978		
MELLEN ROCK LIGHT	411003		
MOUND POINT LIGHT	SEA29-044		
CENTER ISLAND DAYBEACON	410991	Zag	Topo signal
GUIDE ROCKS DAYBEACON	411033	Cab	" "
TURN ISLAND DAYBEACON	411012	TURN, 1909-53	Triang. Station
HUNTER BAY DAYBEACON	411036		
EUREKA CHANNEL DAYBEACON	410992	Jar	Topo signal

The four aids listed above that were not located should be located by photogrammetric methods. No identification cards were made for these. All four were pricked direct.

The other aids listed have been located but were identified to be used in the control of the radial plot. Guide Rocks Daybeacon was identified but no card was submitted since it is not needed for control of the plot.

(e) Inapplicable.

10. BOUNDRIES, MONUMENT, AND LINES

Inapplicable.

11. OTHER CONTROL

A number of topographic stations were identified on the photographs that were not listed as recoverable topographic stations. When these were identified no pricking cards were submitted.

The specified spacing for recoverable topographic stations was complied with in the area covered by the hydrographic survey. Listing covered under

side heading 3(C).

12. OTHER INTERIOR FEATURES

Covered under side heading 2.

13. GEOGRAPHIC NAMES

Geographic names will be covered in a separate report.

Only charted names were used in connection with records and reports.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

Supplemental data includes other phases of field work - triangulation data, topographic data, hydrographic data and coast pilot notes.

Photogrammetric data forwarded separately:

Field photographs

Control Station Identification Cards

Data to be forwarded:

Descriptive Reports for Hydrographic Sheets:

HO-1153

HO-1353

HO-1253

HO-2153

Triangulation Report - Cordova Bay - 1953

Descriptions of Triangulation Stations

Descriptions of Recoverable Topographic Stations

Recovery Notes, Triangulation Stations

Report on Landmarks and Fixed Aids

Geographic Names Report *WEEK 05/1*

Coast Pilot Notes *

Respectfully submitted,

Donald L. Campbell

Donald L. Campbell,

Ens., USC&GS

Approved and forwarded:

F. R. Gossett

F. R. Gossett,

CDR, USC&GS

Comdg., Ship HODGSON

FIELD INSPECTION REPORT
FOR
NUTKWA INLET, CORDOVA BAY
S. E. ALASKA
PH-117

2. Areal Field Inspection

The area covered in this report is known as Nutkwa Inlet, located on the west side of Prince of Wales Island, and directly east and north of Lime Point. For purposes of this report, the junction with Keeto Inlet and its approaches is a line drawn from triangulation station HAS, 1918 to triangulation station LIT, 1918, thence to the islet NW of Keeto Entrance.

There are no cultural features in the area. The only natural feature is that the land area is densely wooded.

This field inspection is standard.

The area was covered by standard nine-lens photographs (1/10,000) which gave adequate coverage except in the area obscured by trees in all photos.

Densities and tones were not inspected on the land areas. In the water areas, shoals were easily discernable.

3, 4, 5. Inapplicable

6. Woodland Cover

All land area not covered by high water is densely wooded with coniferous trees, with the further exception of a few bare mountain tops.

7. Shoreline and Alongshore Features

(a) The shoreline was inspected from the beach at photo-hydro signal locations and from the boat in all other areas.

The mean high water line is at the bottom of the black band (one or two meters in width) which runs along the shore below the tree line.

(b) Where pertinent, the water line at MLLW was sketched on the field photos.

(c) The foreshore is rocky with boulders, with a few areas of sand and gravel at stream mouths, and at the head of small bights.

8. Offshore Features

All apparent offshore features were visited. The heights and depths, times and dates pertaining to each feature were noted on the field photos. All heights were estimated, all depths were measured.

There were no rocks which did not show on the photos, altho some had not

NUTKWA (FROM SIGNAL GUM TO SIGNAL BLUE, 1954)

HYDRO SIGNAL	MANU- SCRIPT	PHOTO NO.	METHOD OF LOCATION
Aid	T-9903	41050	Angle and dist. from off. p.p.
Beg	T-9903	41050	Angle and dist. from off. p.p.
Big, 1954	T-9903	41046	Angle and dist. from off. p.p.
Bob	T-9903	41046	Angle and dist. from off. p.p.
Bos	T-11294	41003	Angle and dist. from off. p.p.
Cad	T-9903	41050	Angle and dist. from off. p.p.
Cot	T-9903	41050	Angle and dist. from off. p.p.
Cow	T-11294	41003	Angle and dist. from field p.p.
Dam	T-9903	41003	Angle and dist. from field p.p.
Dug	T-9903	41050	Angle and dist. from off. p.p.
Ezy	T-9903	41050	Angle and dist. from off. p.p.
Fag	T-9903	41003	Angle and dist. from off. p.p.
Fiz	T-9903	41050	Radial plot
Flus, 1954	T-9903	41003	Angle and dist. from off. p.p.
Gum	T-9903	41045	Direct transfer
Gun	T-9903	41050	Angle and dist. from off. p.p.
Hid	T-9903	41050	Angle and dist. from off. p.p.
Jot	T-9903	41050	Radial plot
Ken	T-9903	41046	Angle and dist. from off. p.p.
Mal	T-11294	41003	Off. p.p.
Neb	T-9903	41045	Angle and dist. from off. p.p.
Oat	T-9903	41003	Angle and dist. from off. p.p.
Owe	T-9903	41046	Angle and dist. from field p.p.
Pear, 1954	T-9903	41050	Angle and dist. from off. p.p.
Raz	T-9903	41050	Angle and dist. from off. p.p.
Sap	T-9903	41003	Angle and dist. from off. p.p.
Sop	T-9903	41046	Radial plot
Stu	T-9903	41050	Radial plot
Tik	T-9903	41003	Angle and dist. from off. p.p.
Tip	T-9903	41050	Angle and dist. from off. p.p.
Tom	T-9903	41046	Angle and dist. from off. p.p.
Tre	T-9903	41046	Direct transfer
Try, 1954	T-9903	41046	Angle and dist. from off. p.p.
Unc	T-9903	41050	Angle and dist. from field p.p.
Vex	T-9903	41050	Angle and dist. from off. p.p.
Wak	T-9903	41046	Angle and dist. from off. p.p.
Wik	T-9903	41050	Angle and dist. from off. p.p.
Yea	T-9903	41050	Angle and dist. from off. p.p.

been put on the MS. These were noted on the field photos.

9, 10. Inapplicable

11. Other Control

The following is the list of photo-hydro signals and the method used for their location. The information necessary for the location of the signals is on the back of the photos as listed.

<u>HYDRO SIGNALS</u>	<u>METHOD OF LOCATION</u>	<u>PHOTO NO.</u>
Ald	Angle and distance from off. pp	41050
Beg	Angle and distance from off. pp	41050
Big, 1954	Angle and distance from off. pp	41046
Bob	Angle and distance from off. pp	41046
Buz	Angle and distance from off. pp	41003
Cad	Angle and distance from off. pp	41050
Cot	Angle and distance from off. pp	41050
Cow	Angle and distance from field pp	41003
Dam	Angle and distance from field pp	41003
Dug	Angle and distance from off. pp	41050
Ezy	Angle and distance from off. pp	41050
Fag	Angle and distance from off. pp	41003
Fiz	Field radial plot	41050
Flue, 1954	Angle and distance from off. pp	41003
Gum	Direct transfer	41045
Gun	Angle and distance from off. pp	41050
Hid	Angle and distance from off. pp	41050
Jot	Field radial plot	41050
Ken	Angle and distance from off. pp	41046
Mol	Office pp.	41003
Nob	Angle and distance from off. pp	41045
Oat	Angle and distance from off. pp	41003
Owe	Angle and distance from field pp	41046
Pear, 1954	Angle and distance from off. pp	41050
Raz	Angle and distance from off. pp	41050
Sap	Angle and distance from off. pp	41003
Sep	Field radial plot	41046
Stu	Field radial plot	41050
Tik	Angle and distance from off. pp	41003
Tip	Angle and distance from off. pp	41050
Tom	Angle and distance from off. pp	41046
Tre	Direct transfer	41046
Try, 1954	Angle and distance from off. pp	41046
Uno	Angle and distance from field pp	41050
Vox	Angle and distance from off. pp	41050
Wak	Angle and distance from off. pp	41046
Wik	Angle and distance from off. pp	41050
Yea	Angle and distance from off. pp	41050

12. Inapplicable

13. Geographic Names

A special report will be forwarded at the end of the field season. Nutkwa Inlet, Nutkwa Lagoon, and Lime Point are the only charted names.

14. Special Reports and Supplemental Data

To be forwarded at a later date:

Hydrographic Survey Sheets 110-1854 and 110-1954
Hydrographic descriptive reports of same.
Tide Data
Sounding Records and Fathograms

Forwarded with this report:

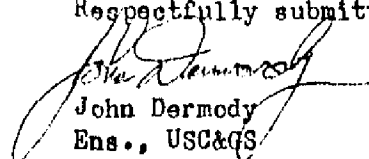
Office Photos
Field Photos
Advance Prints, Shoreline MSS of area.
Blue-line MSS of area

15. Notes to Compiler

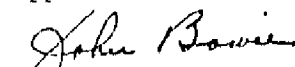
The mean MWL shown on the MSS is believed to be slightly too far in-shore in places. It is distinguished on the photos by the black band mentioned in Section 7 above.

The rocks and other offshore features have been appropriately noted on the field photos.

Respectfully submitted,


John Dermody
Ens., USC&GS

Approved:


John Bowie, CDR, USC&GS
Comdg., Ship HODGSON

2. AREAL FIELD INSPECTION:

The area inspected for boat sheet PA-1155 (covered by manuscripts T-11295 and T-11035) is in the upper half of Klakas Inlet on the east side of Cordova Bay (USC&GS Chart No. 8147). The shoreline inspection was started from the northern limits of the 1954 work to the north end of Klakas Inlet.

The area inspected for boat sheet PA-1255 (covered by manuscripts T-9903, T-9435, T-11501, and T-11502) is in Hetta Inlet and the southern end of Sukkwan Strait. The field inspection started from the northern limits of the 1954 work and continued north to a line running easterly from Eek Point, and into Sukkwan Strait to a north-south line at longitude 132 degrees, 44 minutes.

The area inspected for boat sheet PA-1355 (covered by manuscripts T-11498, T-11499, and T-11502) is in Hetta Inlet and extends northerly from junction with boat sheet PA-1255 to latitude 55 degrees, 14 minutes.

The area inspected for boat sheet PA-1455 (covered by manuscripts T-11494, T-11495, and T-11499) is in Hetta Inlet north of junction with boat sheet PA-1355 to the head of Portage Bay.

The field inspection was accomplished at various times throughout the current season, during the periods when hydrographic signals were built and located in advance of the hydrographic surveys. The entire shoreline was inspected from the water, close inshore.

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

The photographic coverage consists of single lens photographs at a scale of 1:10,000 and nine lens photographs at a scale of 1:10,000 and 1:20,000. The single lens photographs were used throughout with the exception of the identification of two hydro signals, PIE and YET, which could only be identified on one nine lens 1:10,000 photograph numbered 41002 (manuscript T-9903).

The photography was generally good, but due to shadows and overhanging trees along the shoreline, some difficulty was experienced in interpreting features.

3. HORIZONTAL CONTROL:

(a) Horizontal control established by second order triangulation:
TALON 1955, HETTA 1955, PARKA 1955, ANTON 1955, and SIMON 1955.

Horizontal control established with third order accuracy, for location of hydrographic signals (manuscripts T-9903, T-11499, and T-11502):

Ida	Sign*	Yan	Fig
Amo	Bat*	Ado*	Dog*
Eva*	Era*	Hex	Lax*
Pod*	Ice	Gas*	Mar

Horizontal control established by theodolite and sextant cuts from triangulation stations and whose positions were computed, for location of hydrographic signals and the adjustment of radial plot of manuscripts (manuscript T-9903):

Bib, Oat 1954, Ply, and Abe.

All of the above hydrographic signals, except those marked with an asterisk, have been field inspected and also located on the photographs. Their photo locations were used on the boat sheets. It is recommended that the triangulation positions of the above hydro signals be used on the smooth hydrographic sheet.

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

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

(d) An attempt was made to recover and identify on photographs all previously established triangulation stations, together with identifying on photographs all newly established triangulation stations within the area field inspected.

(e) The following triangulation stations were searched for but could not be found, and are presumably lost:

HIGH 1908-14, REEF 1908-14, NEAR 1908-14

(f) The following twelve stations were identified for photo control and entered on Control Identification Cards:

<u>Triangulation Station</u>	<u>Map No.</u>	<u>Photo No.</u>
COPPER 2, 1908	T-11502	54-0-184
POINT 1908	T-11502	54-0-76
BRETT 1908-14	T-11501	54-0-76
EASY 2, 1908	T-9435	54-0-75
FOG 1908, 1954	T-9435	54-0-73
LIME 2, 1954	T-11294	54-0-181
GRASS 1905, 1954	T-11293	54-0-72
LOG 1908-14	T-11501	54-0-60
CLOSE 1908-14	T-11501	54-0-60
TALON 1955	T-11502	54-0-76
HETTA 1955	T-11502	54-0-186
SIMON 1955	T-11499	54-0-78

4. VERTICAL CONTROL:

No vertical control was established.

5. CONTOURS AND DRAINAGE:

Not investigated.

6. WOODLAND COVER:

The area is heavily covered with spruce, hemlock, and some cedar. The only deciduous trees are small birches and alders growing sparsely in small areas which have been cut over for mining installations and are now in ruins. Along the major portion of the shoreline, the heavy growth of trees extends to the high water line, and in many cases overhang into the water. This condition made it impossible in several instances to identify triangulation stations on the photographs.

7. SHORELINE AND ALONGSHORE FEATURES:

(a) The mean high water line was adequately compiled on the manuscripts. A few exceptions were noted on the field photos.

(b) The low water line, where it existed, was delineated on the boat sheet. In general, it agreed with the offshore dotted line shown on the manuscripts.

(c) The foreshore was usually steep. The delineation as shown on the manuscripts is adequate.

(d) There were no prominent bluffs and cliffs of importance within the area inspected.

(e) There are no shoreline structures within the area inspected. The one dock in Copper Harbor is now in ruins and does not show on the photographs outside of the high water line.

8. OFFSHORE FEATURES:

Islands, rocks, reefs, ledges, and foul areas, offshore from the high water line, were well defined on the manuscripts. All offshore information was transferred from the manuscripts to the boat sheets and investigated during the hydrographic surveys. Information from these investigations was noted on the boat sheets.

9. LANDMARKS AND AIDS

There were no landmarks or aids within the area field inspected.

10. BOUNDARIES, MONUMENTS, AND LINES:

NOT INVESTIGATED.

11. OTHER CONTROL:

Recoverable topographic stations were established in accordance with project instructions and are being submitted on Form 524. Two topographic stations were established in Klakas Inlet and two in Hetta Inlet.

The following photo-hydro stations were established:

Map T-9903

<u>Station</u>	<u>Photo No.</u>
Abe *1	54-0-182
Add	183
Bib 1	182
Big	183
Car	183
Cod	183
Don	183
Ear	183
Era *1	184
Fox	183
Gin	183
Oat 1954 (Rec.)	182
Pie	41002
Ply *1	54-0-181
Roy	182
Sal *	182
Try *	182
Van *	182
War *	182
Yet *	41002

* Located also by
sextant cuts.

1 Located also by
triangulation.

Map T-11035

<u>Station</u>	<u>Photo No.</u>
Ida	54-0-280
Nig	280
Out	279
Pet	279
Quo (Marked)	279
Rev	279
Sis	279
Tan	279
Use	279

Map T-9435

<u>Station</u>	<u>Photo No.</u>
Ace	54-0-74
Cut	42
Dip	74
Ego	42
Gal	42
How	42
Ivy	42
Jib	42
Key	75
Kim	42
Low	42
Mag	42
Max	74
Ned	73
Nut	42
Oak	72
Oil	42
Pal	42
Hat	42
Sip	42
Tan	42
Val	73
Vet	42
Wig	73
Yak	42
Zig	74

Map T-11293

<u>Station</u>	<u>Photo No.</u>
Lag	54-0-72
Pot 1954 (Rec.)	72
Quo	72
Rag	72
Sam	72
Toy	72

COPY

- 12 -
12Map T-11495

<u>Station</u>	<u>Photo No.</u>
Alp	54-0-216
Art	216
Amp	216
Bum	216
Bus	216
But	216
Cab	215
Cat	216
Cop	216
Dog	216
Dot	215
Duo	216
Eat	228
Ego	216
Emo	216
Era	216
Fez	216
Fin	228
Fry	216
Gad	217
Gin	216
Gum	216
Hoe	216
Hop	217
Hut	216
Ice	216
Irk	216
Ivy	217
Jar	217
Job	215
Jut	216
Ked	217
Kin	215
Lad	214
Leo	217
Lug	217
Low	216
Mag	215
Man	217
Mop	217
Mug	216
Ned	215
Nip	216
Now (Marked)	217
Nut	217
Oak	216
Odd	215
Ohm	217
Oil	217
Pet	216

Map T-11495 (Cont.)

<u>Station</u>	<u>Photo No.</u>
Pin	54-0-217
Pup	215
Rag	217
Rat	216
Rig	215
Rio	217
Sal	215
Sol	228
Sop	216
Tax	215
Tub	216
Val	217
Vet	215
Wag	215
War	217
Was	216
Yam	216
Yes	216
Zoo	216

Map T-11295

<u>Station</u>	<u>Photo No.</u>
Add	54-0-282
Art	282
Bag	282
Bob	282
Cab	282
Cob 1954 (Rec.)	282
Cry	282
Day	282
Dig 1954 (Red.)	282
Dip	282
Ear	282
Egg	281
Fix	282
Gal (Marked)	281
Her	281
Jay	280
Kim	280
Leo	280
Mop	280
Sam 1954 (Rec.)	282
Marked)	282
Val	282
Wag	282
Yes	282
Zoo	282

COPY

Map T-11502

COPY

<u>Station</u>	<u>Photo No.</u>
Alp	54-0-76
Bob	76
Cow	76
Day	76
Eat	76
Fig *	77
Fly	76
Gag	76
Hat	76
Hex *	76
Irk	76
Ice *	76
Job	76
Ked	76
Key	187
Lay	76
Lug	187
Mal	76
Moe	186
Nat	76
Nip	186
Oak	186
Old	76
Pad	186
Rev	186
Sol	186
Tub	186
Use	186
Wed	186
Wag	76
Yam *	76
Zoo	76

* Located also by triangulation.

Map T-11498

<u>Station</u>	<u>Photo No.</u>
Ado	54-0-227
Bob	227
Cow	227
End	78
Fat	79
Gas	228
Hex	228
Ida	227
Joy	227
Set	227
Tom	228
Use	227
Van	227
Who	227
Yak	227
Zig	227

Map T-11499

<u>Station</u>	<u>Photo No.</u>
Ace	54-0-228
Ask	78
Arm	78
Bag	78
Bib	228
Box	78
Cab	78
Cod	228
Cut	78
Day	228
Dip (Marked)	228
Don	79
Dot	78
Ebb	78
Eva	228
Fog	79
Fun	78
Gus	78
How	78
Jug	78
Mar *	78
Yum	78
Zoa	78

* Located also by triangulation.

Map T-11501

<u>Station</u>	<u>Photo No.</u>
Hod	54-0-76
Jap	76
Ken	60
Mid	59
Nod	60
Ora	60
Rio	61

Map T-11494

<u>Station</u>	<u>Photo No.</u>
Key	54-0-228
Peg	217
Toy	228

COPY

12. OTHER INTERIOR FEATURES:

There are no buildings, docks, bridges, cables, roads or airports in this area.

13. GEOGRAPHIC NAMES:

The area field inspected is all inclusive on Chart No. 8147.

On 22 July 1955, Mr. James Edenso, whose address is Hydaburg, Alaska, was interviewed by CDR. J. C. Partington. Mr. Edenso was then employed as a watchman at Eek Inlet for the U. S. Fish and Wildlife Service. Mr. Edenso, a member of the Indian race, was born at Howkan village in Kaigani Strait, and is about 60 years old. He has fished most of his life in and around Cordova Bay. He is an intelligent man with probably a grammar school or possibly a high school education. Mr. Edenso stated that the following geographic names are in local use:

Blanket Island - The island at the southeast entrance to Suk-Kwan Strait whose northeast point is charted as Round Point. No specific reason was given for this name.

Y Bay - The small bay on the west side of Hetta Inlet and just south of the above Blanket Island. The name Y Bay is used to denote this body of water because of a slide at the head of the bay shaped like the letter Y.

Mud Bay - On the east side of Hetta Inlet, about 2½ miles north of Lime Point. The Coast Pilot mentions this name although the name is not charted. Local fishermen call this Mud Bay. because of its usefulness as an anchorage.

The sites of Copper City, Coppermount, Corbin Mine, and Sulzer no longer exist. They are abandoned and in complete ruins. The aerial tramway and pipeline shown on the chart at Coppermount, together with the aerial tramway leading to Copper Mt., and the flume at Sulzer, are no longer in existence and should be removed from Chart No. 8147.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA:

<u>Item</u>	<u>Transmitting Letter Date</u>
Triangulation Data, Cordova Bay Hetta Inlet, S.E. Alaska, Project 1357	12 August 1955

Reference is made to the following applicable data:

The 1955 Hydrographic Surveys. Boat sheets of the Ship PATTON were forwarded to the Washington Office and prints are available.

Copies of the transmittal letters showing the photogrammetric records transmitted with this report, are attached.

COPY

- 25-
14

Respectfully submitted,

\$ William C. Russell

William C. Russell,
CDR., USC&GS

Approved and forwarded:

\$ J. C. Partington

J. C. Partington,
CDR., USC&GS,
Comdg., Ship PATTON

COPY

Notes for the Compiler

Manuscript T-9903

During hydrography, when shifting fixes from one side to the other side of Hetta Inlet, slight jumps occurred in the lines, indicating that the signals were slightly out of relation. Theodolite cuts and a sextant cut were obtained to compute the positions of photo-hydro signals Bib, Oat 1954, Abe, and Ply. It is recommended that the computed positions of these signals be used for their location on the smooth hydrographic sheet, and could possibly be used in the adjustment of the radial plot.

PHOTOGRAMMETRIC PLOT REPORT

PROJECT NO. Ph-117

Surveys Nos. T-9435, T-9903, T-11035 & T-11293 thru T-11298

21. AREA COVERED

This radial plot report covers the entire area of Surveys Nos. T-9435, T-9903, T-11293, T-11294, T-11295, T-11297 and T-11298, that portion of Survey No. T-11296 that lies north of Tlevak Strait, the southwestern corner of T-11035. These are all shoreline surveys located along Cordova Bay, the north side of Tlevak Strait, Hetta Inlet and Nutkwa Inlet and extends northward from Kassa Inlet to the entrance to Sukkawn Inlet. That part of Klakas Inlet covered by photography was also included. ~~misrepresented~~

22. METHOD - RADIAL PLOT

Map Manuscripts:

Vinylite sheets with polyconic projections in black and Universal Mercator, Alaska, Zone 8, grids in red, at a scale of 1:10,000 were furnished by the Washington office. Base sheets were prepared in this office.

The positions of all control and substitute stations were plotted using the beam compass and meter bar.

A sketch showing the layout of the surveys and the distribution of control and photograph centers is attached to this report. A list of control is also attached to this report.

Photographs:

Unmounted photographs taken 8 July 1953, with the U.S.C. & G. S. nine-lens camera, focal length $8\frac{1}{4}$ inches, at a scale of 1:10,000 and unmounted single lens photographs taken during 1948 at a scale of 1:40,000 and ratioed to a scale of 1:10,000 were used in this plot.

Thirty-seven nine-lens and fifteen single lens photographs were used in this plot. They are numbered as follows:

Nine-lens photographs

40954 thru 40958
40977 thru 40979
40998 thru 41007
41009
41038 thru 41040
41042 thru 41051
41053
41055 and 41056
41058 thru 41062

Single lens photographs

SEA 26-018 thru SEA 26-022
SEA 117-108 thru SEA 117-111
SEA 117-139 thru SEA 117-144

Standard symbols were used on the photographs.

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22. METHOD - RADIAL PLOT (cont'd)

Templets:

Vinylite templets were made for all photographs. The master templet was used to make adjustments for film and paper distortion and chamber displacements on the nine-lens photographs. No adjustments for film or paper distortion could be made on the templets for the single lens photographs because there were no fiducial marks.

Closure and Adjustment of Control:

Vinylite base sheets were prepared in this office. Since junctions of grid lines between several of the manuscripts could not be made, the base sheets were prepared by transferring several projection intersections, including all manuscript corners, along the neat limits of the manuscripts to the base sheet. The projection intersections for Surveys T-11299, T-11300 and T-11301 as established by the first radial plot for this project were used as a base to continue northward to the limits of the project.

All control was transferred to the base sheets at the same time that the projection intersections were being transferred.

All pass points and photograph centers established, on Surveys Nos. T-11299, 11300 and 11301, by the first plot were transferred to the base sheets for this plot.

The radial plot, actually a continuation of the first plot, was then constructed on the base sheets.

The templets for those photographs which are within the limits of surveys Nos. T-11299, T-11300 and T-11301 were relaid. Templets for 40998 to 41001 were laid next and it was found that control station NEW R.M. 1, 1908 could not be held with the other control. Templets for 41003 to 41009 were laid and control stations NEW R.M. 1, 1908 and NUT, 1918 could not be held. Templets for photographs 41044 to 41048 were then laid and again control station NUT, 1918 could not be held, however, a tie-in was made with station CEDAR 2, 1908. Templets for 41049 to 41056 were laid. Control station GULL, 1918 which had been identified in this office could not be held, however, a tie-in was made with station COPPER 2, 1908. All other templets for photographs on the east side of Cordova Bay were then adjusted in place. That part of the plot east of Cordova Bay was then complete except for the flight of single lens photographs numbered 26-018 to 26-022 which were then laid with the result that control stations FOG, 1908 and FLAT 2, 1908 could not be held.

Templets for photographs 40977 to 40979 and 40954 to 40956 were used. All control was held on these templets except SHOE, 1907-25. Then the templets for the remaining nine-lens and single lens photographs were laid and readjusted several times until the best possible result was obtained.

-17-

22. METHOD - RADIAL PLOT (cont'd)

Transfer of Points:

The positions of all photograph centers and pass points were transferred to the manuscripts by superimposing the manuscripts on the templets and matching common projection intersections and control points.

23. ADEQUACY OF CONTROL

243 The positions of photograph centers and pass points in Survey T-11193 may be weak due to extension of the plot beyond control and due to the poor quality of single lens photography.

In surveys T-11295 and T-11298, the two easternmost flights had no control, requiring a long bridge between the control stations at Hunter Bay (southern edge of T-11300) and control in Keete Inlet (northwest corner of T-11295). Positions of pass points in Klakus Inlet and at the head of Kassa Inlet may be quite weak due to this long bridge of 10 nine-lens photographs between control stations.

As previously stated several control stations could not be held in the radial plot.

Sub Pt. SHOE, 1907 - 25: Radially plotted position of the sub point falls 0.9 mm southeast of its computed position. Believed to be incorrectly identified by the field party. There is another "white spot" approximately 0.9 mm northeast of the "white spot" identified as the Sub Pt.

Sub Pt. NEW R.M. 1, 1908 - The radially plotted position of the Sub Pt. falls 1.5 mm north of its computed position. This may be due to either an error in computation of the position of the Sub Pt. or in the identification. First it was necessary to compute the position of NEW R.M. 1. The only information available was a bearing and distance from R.M. 1 to NEW, 1908. This bearing was assumed to be the magnetic bearing at the time the station was established.

Sub Pt. NUT, 1918 - The radially plotted position of the Sub. Pt. falls 2.4 mm WSW of its computed position. This may be due to incorrect identification as there is another point of ledge approximately in correct location that is visible on the photographs.

GULL, 1918 - The radially plotted position of this station falls 0.6 mm southeast of its geographic position. Probably due to misidentification in the compilation office. This station was not identified in the field.

FLAT 2, 1908 - No definite intersection obtained due to inability to identify accurately on the single lens photographs. A shadow point was identified on a photograph taken during 1953.

FOG, 1908 - The same conditions apply for this station as for FLAT 2, 1908.

24. SUPPLEMENTAL DATA

No graphic control surveys were used in this plot.

25. PHOTOGRAPHY

All nine-lens photographs have large light struck areas on the western side. Many have deep shadows, trees and relief displacement obscuring the shore line.

All of the single lens photographs have very poor definition and were taken five years prior to the nine-lens photographs making it almost impossible to find the points, that are common to both types of photographs.

No tilt determinations were made.

The definition is good on the nine-lens photographs except in the deep shadow and light struck areas.

The definition is very poor on the single lens photographs.

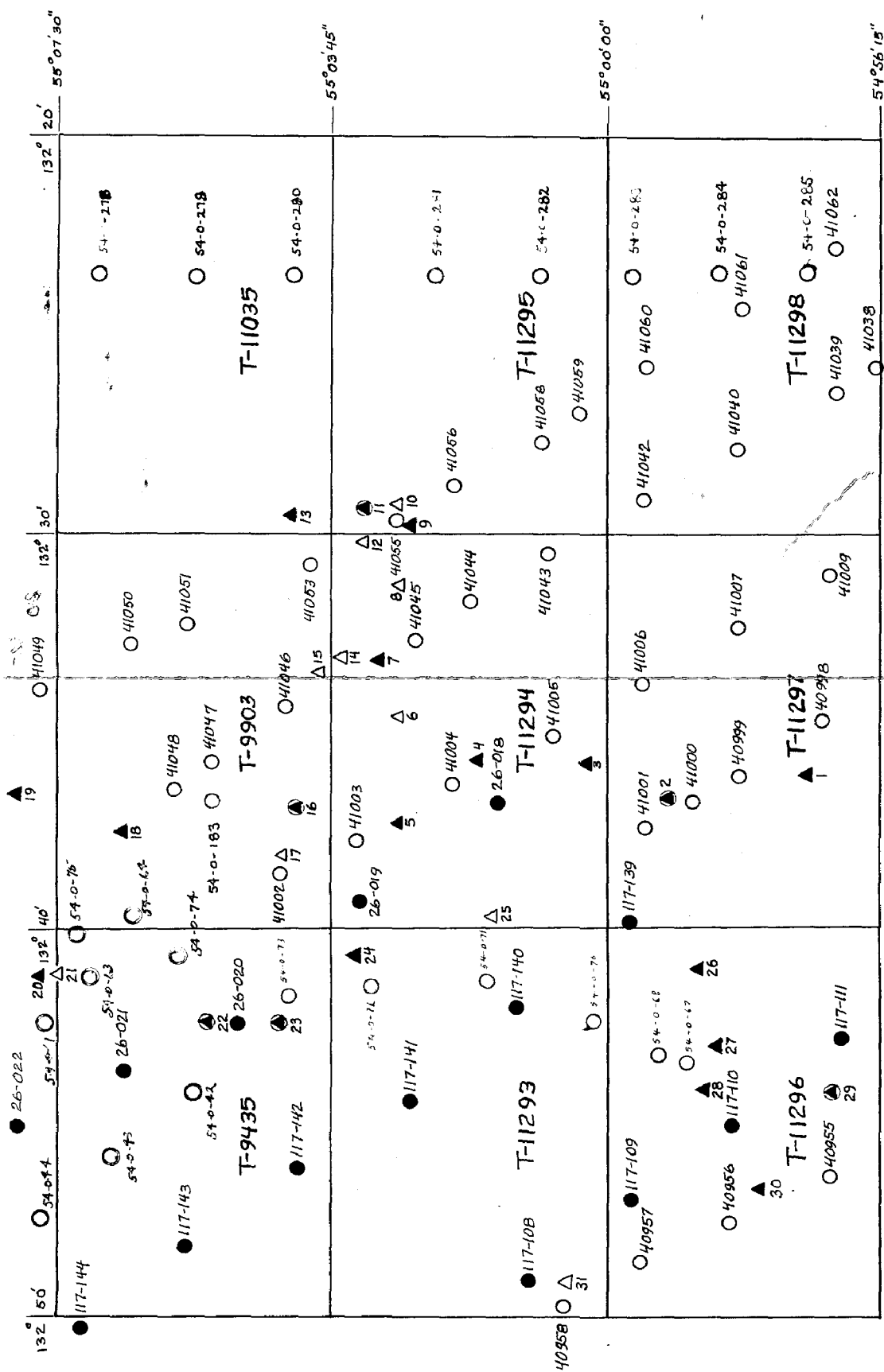
Respectfully Submitted
19 February 1954

Harry R. Rudolph
Harry R. Rudolph
Carto. Aid (Photo)

#-31-

LIST OF CONTROL

No.	Name of Station	Identification
1	CLUMP, 1907-25	Sub Pt.
2	NEW R.M. 1, 1908	Sub Pt.
3	MAB, 1918	Sub Pt.
4	HAS, 1918	Sub Pt.
5	ATA, 1918	Sub Pt.
6	LIT, 1918	None
7	KEET, 1918	Direct
8	END, 1918	None
9	MED, 1918	Sub Pt.
10	COS, 1918	None.
11	GULL, 1918	Ident. in Office
12	TREE, 1918	None
13	UP, 1918	Direct
14	IN, 1918	None
15	BOY, 1918	None
16	NUT, 1918	Sub Pt.
17	FLAG, 1908	None
18	CEDAR 2, 1908	Sub Pt.
19	COPPER 2, 1908	Sub Pt.
20	ROUND, 1908-14	Sub Pt.
21	EASY 2, 1908	None
22	FLAT 2, 1908	Sub Pt.
23	FOG, 1908	Sub Pt.
24	GRASS, 1905-18	Sub Pt.
25	FOOD, 1918	None
25	MELLOW ROCK, 1908	None
26	GREEN R.M. 1907-18	Sub Pt.
27	JACK, 1907	Sub Pt.
28	HEN, 1907	Sub Pt.
29	SHOE, 1907-25	Sub Pt.
30	NICE, 1907	Sub Pt.
31	LUCK, 1907	None



LAYOUT SKETCH
PH-117

PH-117
SURVEYS NOS T-9435, T-9903, T-11035 and

T-11293 to T-11298 inclusive

Q NINE LENS PHOTOGRAPHS

SINGLE LENS PHOTOGRAPHS

▲ CONTROL STATIONS (identified)

CONTROL STATIONS (not held in plot)

Δ CONTROL STATIONS (not identified)

1954 SINGLE LENS RATIOED PHOTOGRAPHS

PHOTOGRAMMETRIC PLOT REPORT
Project Ph-117
Surveys Nos. T-11494, T-11495,
T-11498, T-11499,
T-11502 & T-9903

21. AREA COVERED

This radial plot report covers the entire area of Surveys Nos. T-11495, T-11499, T-11502; the eastern portions of T-11494 and T-11498, and part of T-9903. These are all shoreline surveys located along Hetta Inlet, north of Cordova Bay, Prince of Wales Island, Alaska.

22. METHOD - RADIAL PLOT

Map Manuscripts:

Vinylite sheets with polyconic projections in black and Universal Transverse Mercator, Alaska, Zone 8, grids in red, at a scale of 1:10,000 were furnished by the Washington office.

The position of all control and substitute stations were plotted using the beam compass and meter bar.

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

Photographs:

Single lens photographs taken 4 June 1954, with the "Q" camera at a scale of 1:27,500 and ratioed to a scale of 1:10,000 were used in this plot.

The twenty (20) single lens photographs used are numbered as follows:

54-0-75 through 79
54-0-183
54-0-185 thru 188
54-0-191 and 192
54-0-214 through 218
54-0-227 through 229

Templets:

Vinylite templets were made for all photographs. The master templet was used to make adjustments for film and paper distortion.

Closure and Adjustment of control:

Vinylite base sheets were prepared in this office. All control was transferred to the base sheets from the manuscripts.

Pass points already established on manuscripts T-9435 and T-9903 from previous plots were also transferred to the base sheets. Additional pass points, established in a 1:20,000 scale plot with nine-lens photographs, were transferred graphically to the 1:10,000 base sheets. This was done by means of transparent templets made for each point to be transferred. Four rays were drawn radially from the point through grid intersections on the 1:20,000 scale base sheets. The templet was oriented over the corresponding grid intersection on the 1:10,000 base sheets and the point pricked through to the base sheet.

22. METHOD--RADIAL PLOT (CONT'D)

Closure and Adjustment of Control: (cont'd)

For additional information about this supplementary control see the photogrammetric plot report for the 1:20,000 radial plot of Surveys T-11492 thru T-11502. The report for that plot is made a part of Descriptive Report for Surveys T-11492 thru T-11494, T-11496 thru T-11498 and T-11500 thru T-11502.

The plot was laid starting with the templates for photograph 54-C-183, and proceeding northward to photograph 54-C-188. Then the templates for photographs 54-C-75 through 54-C-79 were laid. It was found that the template for photograph 54-C-184, could not be held in this plot because of excessive tilt. With this template left out it was possible to lay these two flights in a tight plot holding the control; the pass points established in previous plots; and the supplementary control established in the 1:20,000 plot. Then flights 54-C-227 through 229 and 54-C-214 through 54-C-218, which depended almost wholly for control on the supplementary points established in the 1:20,000-plot were adjusted. Lastly, the templates for photographs 54-C-191 and 192 were fitted into the plot.

The following conditions greatly affected this plot: (1) Between photographs 54-C-77 and 78 there was a definite break in the plot because of insufficient overlap along the flight line. (2) A break, also, occurred on the east side where photographs 189 and 190 were left out of the plot, because no shoreline was on these photographs which showed a mountainous and snow-covered area. These were omitted because in tilted photographs any points of extreme elevation hinder the development of a plot rather than aid it. (3) Photographs 193, 219, 230, 231 and 232 were not used in the plot because little or no shoreline appeared on them and they also would not materially strengthen the plot.

led Breaks in the flight lines and photographs omitted from the plot lead to the creation of many two-radial intersections. In most cases this could not be avoided because of poor overlap on the photographs. However, most of the photographs were fixed by supplementary control points from the 1:20,000 plot.

Transfer of Points:

The positions of all photograph centers and pass points were transferred to the manuscript by superimposing the manuscripts on the plot and matching common grid intersections. All the supplementary control points were treated as pass points; i. e., where the positions of the points established in the 1:20,000 scale plot could not be held, only the positions established in this 1:10,000 scale plot were shown on the manuscript.

23. ADEQUACY OF CONTROL

As the plot was started it was necessary to hold to pass points established in previous plots of the area. Of the three control points in the area it was possible to hold only BRETT, 1908. CEDAR 2, 1908 was not held in any plots of the area and in this plot fell 18 meters north of the true position. COPPER 2, 1908 was very difficult to identify and was not held where identification was attempted.

23. ADEQUACY OF CONTROL (cont'd)

As the plot was extended northward the only control available was those points established in a previous plot of the area at a scale of 1:20,000.

Positions in the northern part of Hetta Inlet are probably weak and may be in error 1 mm, or more, in geographic position.

24. SUPPLEMENTAL DATA

Supplementary control established in a 1:20,000 scale radial plot was used as control for this radial plot. Reference should be made to the 1:20,000 scale radial plot report for surveys in this area.

25. PHOTOGRAPHY

In certain areas the definition was very good, but in others, possibly due to the process of enlarging the photographs, it was poor. The photograph coverage was inadequate in that breaks occurred in the flight lines because of insufficient overlap. This, was evident throughout photography in this area.

Photograph 54-0-184 was too badly tilted to be used in the radial plot.

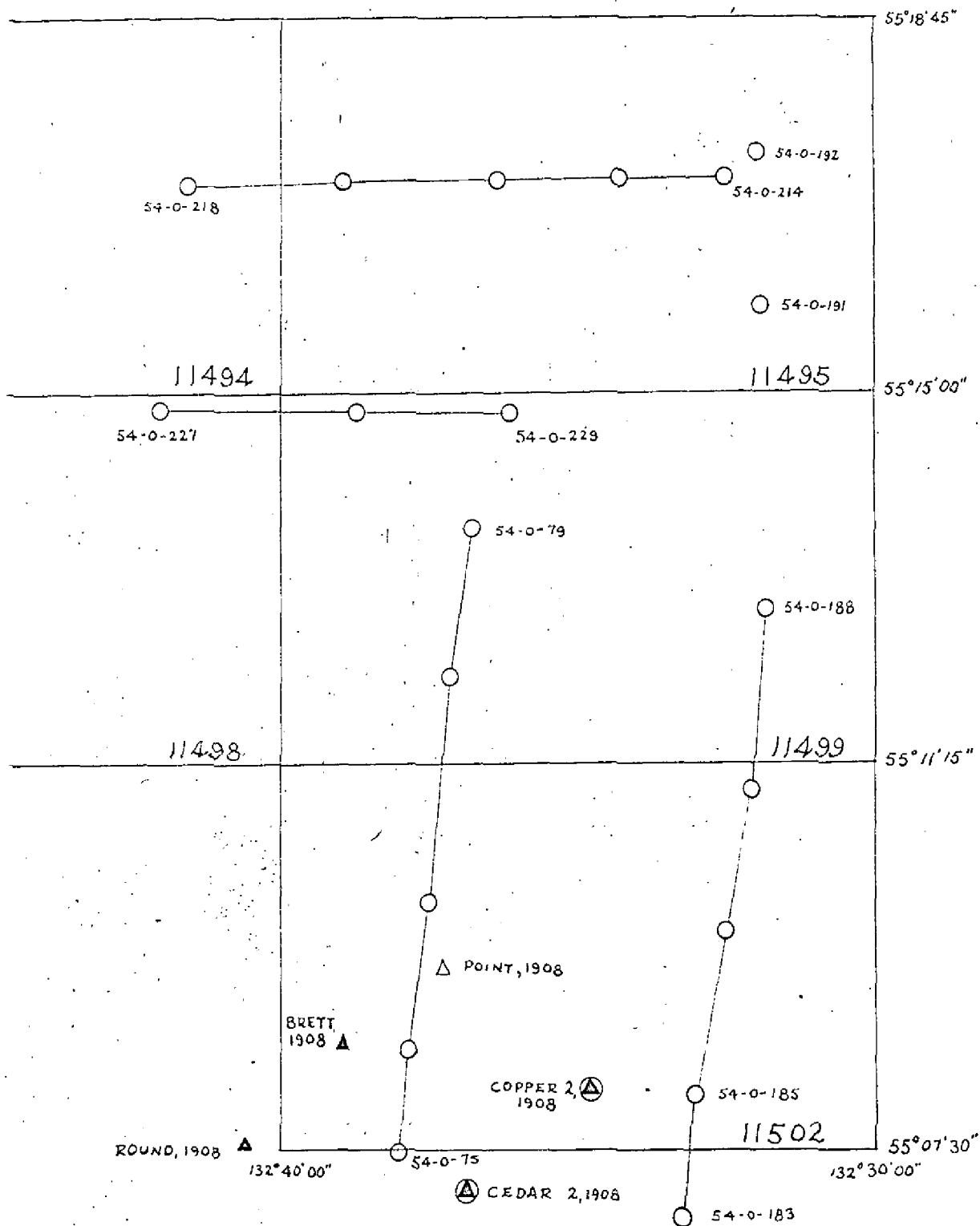
Respectfully submitted
8 March 1955

E. L. Williams

E. L. Williams,
Carto. Photo. Aid

~~4~~ 35-

SURVEYS-11494, 11495, 11498, 11499, & 11502



- Single lens office photographs
- ▲ Control stations (identified)
- △ Control stations (not identified)
- ⊗ Control stations not held in plot

SUPPLEMENTARY
PHOTOGRAMMETRIC PLOT REPORT
Project 6117,
Surveys No. T-9435, T-9903,
T-11499, T-11501
and T-11502

21. AREA COVERED

This radial plot covers the entire area of surveys No. T-9435, T-11502; the eastern half of survey No. T-11501; the southern half of Survey No. T-11499; and the western part of T-9903. These are shore-line surveys located along Hetta Inlet and Sukkwan Strait. This radial plot was reconstructed in accordance with instructions dated 24 January 1956.

22. METHOD - RADIAL PLOT

Map Manuscripts:

Vinylite sheets with polyconic projections in black and Universal Transverse Mercator, Alaska, zone B, grids in red at a scale of 1:10,000 were furnished by the Washington Office. These surveys were compiled as incomplete manuscripts during 1954 and 1955. Black line impressions of each of the incomplete manuscripts were furnished in 1956, by the Washington Office.

The positions of all hydrographic signals, computed by the hydrographic party, five new control stations, and an additional substitute station for triangulation station BRETT, 1908-14, were plotted on the manuscripts using the beam compass and meter bar.

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

Photographs:

One unmounted nine-lens photograph, No. 41002, taken 8 July 1953, at a scale of 1:10,000 was used in the plot.

In addition to this nine-lens photograph, twenty (20) single lens photographs taken 4 June 1954, with the "O" camera at a scale of 1:27,500 and ratioed to scale of 1:10,000 were used in the plot. They are numbered as follows:

54-0-42 and 54-0-43
54-0-59 thru 54-0-61
54-0-63 and 54-0-64
54-0-72 thru 54-0-78
54-0-182 and 54-0-183
54-0-185 thru 54-0-188

Single lens photograph No. 54-0-184 was not used in the plot because of excessive tilt. Single lens photograph No. 54-0-62 was not used in the plot because of the very close spacing in line of flight between 54-0-61, 54-0-62 and 54-0-63.

Standard symbols were used on the photographs.

22. METHOD - RADIAL PLOT (CONT'D)

Templets:

Vinylite templets were made for all photographs. The master templet was used to make adjustments for paper and film distortion on all single lens photographs except No. 54-O-182 which did not have fiducial marks. The master templet was used to make corrections for paper and film distortion and chamber displacement on the nine-lens photograph.

Closure and Adjustment of Control:

The blackline impressions of incomplete manuscripts No. T-11499, T-11501 and T-11502 were used as base sheets. Vinylite base sheets were prepared in this office for surveys No. T-9435 and T-9903, because of scale difference and distortion in the blackline impressions.

Since there was discrepancy between the grids as shown on surveys No. T-9435 and T-11501 and between surveys No. T-9903 and T-11502, the projection intersections along the southern limits of surveys No. T-11501 and T-11502 were transferred to the base sheets holding the grid intersections on blackline impressions of T-11501 and T-11502.

All control, pass points, and photograph centers on surveys No. T-9435 and T-9903; control stations ATA, 1918 and LIME 2, 1954 located on survey No. T-11294; control station GRASS, 1905 - 18; and photograph center 54-O-72 were then transferred to the base sheets by matching common projection intersections.

The radial plot was then reconstructed on the base sheets.

The templets for photographs 54-O-182 thru 54-O-188 were laid but photograph No. 54-O-184 was tilted and could not be used in the plot. The flight 54-O-72 to 54-O-78 was then laid. Neither of these two flights could be held to all of the newly established control. After several adjustments to the templets in each flight, satisfactory intersections were made at the points which were common to both flights.

The templet for 41002 was laid and verified the points as established by the two flights of single lens photographs.

The templets for photographs 54-O-59 thru 54-O-64 were then laid starting with 54-O-64. Finally the templets for photographs 54-O-42 and 54-O-43 were laid and a satisfactory plot made. The following control could not be held in the plot:

Hydrographic stations ABE, BIB, FIG and ICE.

Triangulation stations LOG, 1908-14; CLOSE, 1908-14; POINT, 1908; and EASY, 1908-14.

Transfer of Points:

The positions of all photograph centers and pass points, which were moved by this plot, were transferred to the manuscripts by superimposing the manuscripts on the templets and matching common projection intersections and control points.

23. ADEQUACY OF CONTROL

The positions of the photograph centers and pass points in Survey T-11499 may be weak because there are only two identified control points in this survey. These stations appear only on photograph No. 54-0-78.

These two control points, MAR and SIMON, 1955; controlled the north-south movement of photograph No. 54-0-78, but not the movement in the east-west direction. Therefore, since all of the pass points that had been established by the previous plots could be held with the control, they were used to orient the photograph. However, when the photograph was oriented beneath the manuscript hydro MAR, as identified by the Hydrographic Party, fell about 0.5 mm east of its computed position when the pass points were held in adjustment. The pricking of Hydro Station MAR was examined and the point repricked on another rock farther inshore, that also answered the description of the signal.

As previously stated, several other control stations could not be held in the plot. They are:

Hydro signal ABE, 1955: The radially plotted position of the signal falls 0.9 mm northeast of its geographic position. Several other control points in the area were held on all of the photographs along with the pass points as previously established. Either the identification or the position of the signal is in error.

Hydro Signal BIE, 1955: The radially plotted position of this signal falls 1.0 mm east southeast of its geographic position. The position of this signal is believed to be in error. The radially plotted location is radial along the theodolite azimuth from FOG, 1908.

EASY 2, 1908-14: The radially plotted position of this station falls 0.2 mm north of its geographic position. The identification is probably in error as this station was identified in a wooded area along the shoreline. Sub Pt. A ROUND, 1908-14 was held instead of EASY 2-1908 - 14.

Hydro signal ICE, 1955: The radially plotted position of the signal, as identified by the Hydrographic Party, falls 1.5 mm south of its geographic position. Several other control points in the area were held in the plot. The photographs were carefully examined and another point, which agrees with the description, was identified in the compilation office. This office identification holds in the plot.

POINT, 1908: The radially plotted position of the station as identified by the hydrographic party, falls 1.4 mm southwest of its geographic position. Only two photographs show this station. The hydrographic party identified the station on photograph 54-0-76 and their identification held radially in the plot. However, when their identification was transferred to photograph 54-0-77 it was found that the identification was in error radially. The point was re-identified according to its description. The office identification now holds in the radial plot.

23. ADEQUACY OF CONTROL (cont'd)

Hydro signal FIG, 1955: This signal falls on only one photograph. The signal was identified by the Hydrographic party falls approximately 3.0 mm northeast of its geographic position. It was identified in a wooded area and the identification is believed to be incorrect. No radially plotted position could be shown. The field position was accepted.

CEDAR, 2, 1908: A substitute station was identified in 1954. A radially plotted position of the substitute station was established 2.7 mm north of its position by the previous plot. The Hydrographic Party identified the station direct in 1955. However, the radial lines for the new identification of the station held the same radially plotted position of the substitute station. This station was identified among trees the "layover" of which completely obscure the shoreline.

LOG, 1908-14: The radially plotted position of this station falls 0.2 mm west of its geographic position. ROCK, 1908-14 was given preference.

CLOSE, 1908-14: The radially plotted position of this station falls 0.6 mm northeast of its geographic position. The identification of this station is probably incorrect.

BRETT, 1908-14: This station was identified by sub. pts. A and B in 1954. The hydrographic party identified sub. pt. C in 1955. Sub. pt. C was held in this plot and a radially plotted position of sub. pt. B was established 0.2 mm west of its computed position with the result that some changes occurred in the pass points located along the northern shoreline of Sukkwan Strait between BRETT, 1908-14 and ROCK, 1908-14.

New positions were established for a few of the pass points and photograph centers. The maximum movement of any pass point or center was approximately 0.5 m.m. There were no changes large enough to cause the jumps in hydrography. Those were probably due mainly to accumulative effects of errors in identification and position.

24. SUPPLEMENTAL DATA

None.

25. PHOTOGRAPHY

The overlap between flights on the east and west sides of Hetta Inlet was mostly in the water area with very few identifiable points common to the two flights.

The overlap in line of flight between photographs 54-0-77 and 54-0-78 was approximately 20 percent. The side lap between the 54-0-77 to 54-0-78 flight and the 54-0-186 to 54-0-188 flight was also only about 20 percent which made it very difficult to get any common points in the overlap areas.

25. PHOTOGRAPHY (cont'd)

Photograph 54-O-184 was tilted to such an extent that it could not be used in the plot. The photograph was oriented under the manuscript holding to the shoreline points along the east shoreline of Hetta Inlet and an approximate center was then located on the manuscript.

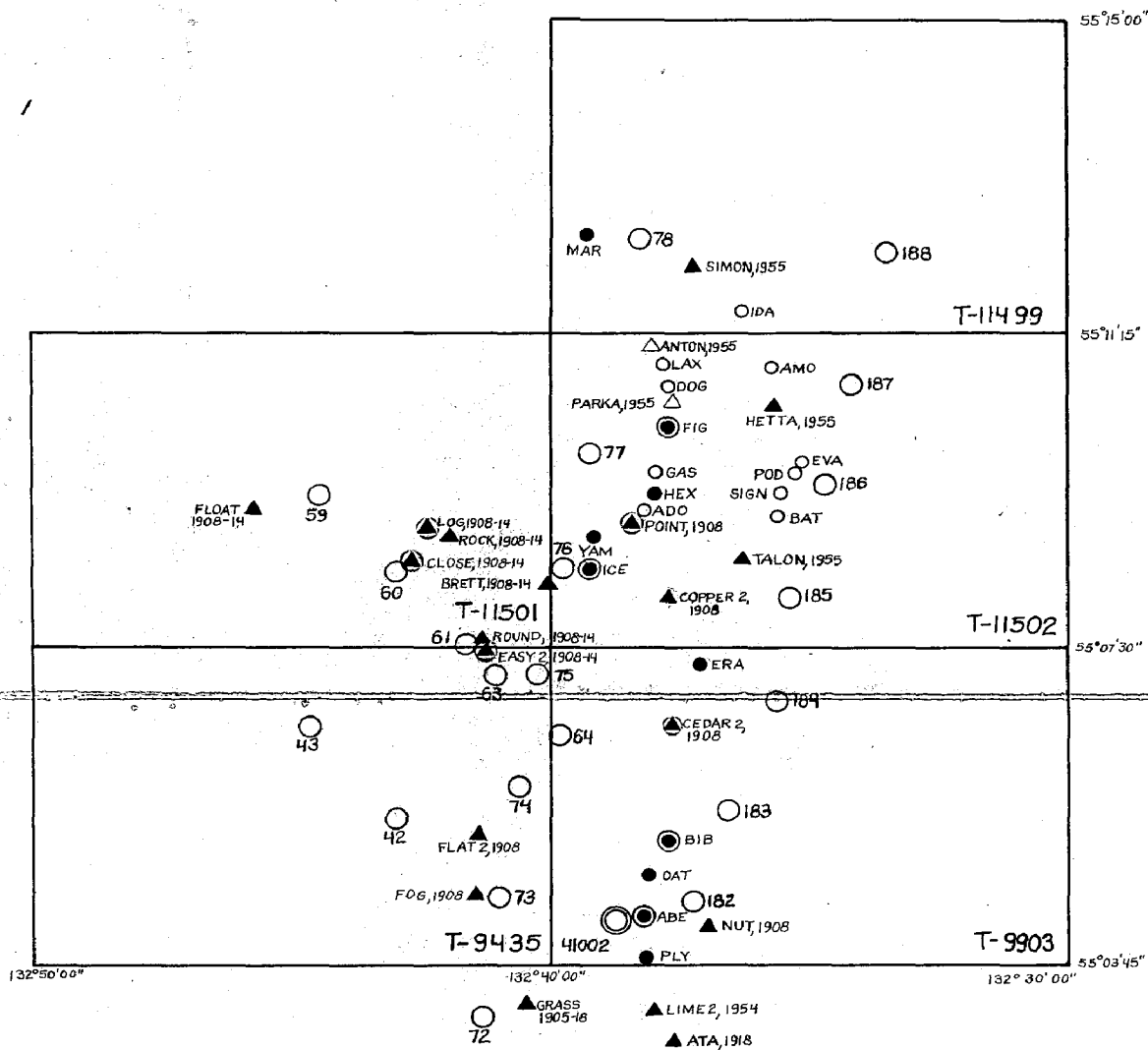
The office photograph No. 54-O-182 was unavailable to this office. The field photograph was used in the plot. This field photograph did not contain any fiducial marks.

Respectfully submitted
27 February 1956

H. R. Rudolph

H. R. Rudolph
Carto. Photo. Aid

21.1 on 76.4 0.840



LAYOUT SKETCH
PROJECT NO. 6117
SURVEYS NOS. T-9435, T-9903, T-11499, T-11501
AND T-11502

- NINE LENS PHOTOGRAPH
- SINGLE LENS PHOTOGRAPH
- △ TRIANGULATION STATION (Not identified)
- ▲ TRIANGULATION STATION (Identified)
- ▲ TRIANGULATION STATION (Not held in plot)
- HYDRO SIGNAL (Not identified)
- HYDRO SIGNAL (Identified)
- HYDRO SIGNAL (Not held in plot)

COMPILATION REPORT
Project 6117
Survey T-9903

Field Inspection Report:

1. Photogrammetric Field Inspection Report, S. E. Alaska, Cordova Bay Prince of Wales Island, 1953, U.S.C. & G.S. Ship HODGSON, F. R. Gossett, commanding.
2. Photogrammetric Field Inspection Report, S. E. Alaska, Cordova Bay, (T-9903 and T-11294, T-11295, T-11035) 1954, U.S.C. & G.S. Ship HODGSON, J. Bowie, commanding.
3. Photogrammetric Field Inspection Report, S. E. Alaska, Cordova Bay, 1955, U.S.C. & G.S. Ship PATTON, J. C. Partington, commanding. (Part of this report).

Photogrammetric Plot Report:

1. Photogrammetric Plot Report (1954) for surveys T-9435, T-9903, T-11035, T-11293 thru T-11298 which is part of this report.
2. Photogrammetric Plot Report (1955) for surveys T-11494, T-11495, T-11498, T-11499, T-11502 and T-9903 ~~which is part of the descriptive report for survey T-11502.~~
3. Photogrammetric Plot Report (1956) for surveys T-9435, T-9903, T-11499, T-11501 and T-11502 which is part of this report.
4. Also see 1:20,000 scale plot report for project 6148 (4-25-55)
This report is not available at this time.

31. DELINEATION

Graphic methods were used to delineate this manuscript. Originally the 1953 nine lens photographs were used. The west shoreline of Nutkwa Inlet was redelineated from 1954 nine lens photography, scale 1:20,000, using the vertical projector. The east shoreline of Hetta Inlet was redelineated from 1954 single lens photographs.

As a result of the radial plot which was reconstructed in 1956, the positions of some pass points were changed slightly, and the delineation was changed where necessary.

The delineation of Nutkwa Inlet was extended beyond the north limits of the manuscript for convenience in the preparation of the boat sheet. This area has been transferred to the manuscript for survey T-11502.

32. CONTROL

Refer to paragraph 3 of the field report and the photogrammetric plot report. Signals ABE, BIB, ERA, OAT, and PLY are shown with circles because they are not monumented or described, and recovery may be doubtful.

33. SUPPLEMENTAL DATA

The boat sheets for the following surveys were available for purposes of comparison:

H-8132 (1954)
H-8133 (1954)
PA-1255
PA-1355

34. CONTOURS AND DRAINAGE

Contours:- Inapplicable

Drainage:- No comment

35. SHORELINE AND ALONGSHORE DETAILS

No shoreline inspection was furnished except some information in connection with the descriptions of the photo-hydro signals.

The shoreline was delineated by office interpretation. Where the shoreline was obscured by shadows or relief displacement, it was shown with a broken line.

The low water line and the foul lines were delineated by office interpretation.

36. OFFSHORE DETAILS

All offshore details visible on two or more photographs were delineated. Field inspection data on rocks in Nutkwa Inlet was applied.

37. LANDMARKS AND AIDS

None

38. CONTROL FOR FUTURE SURVEYS

NO forms 524 were furnished for four recoverable topographic stations located on this manuscript. Compilation office data was submitted on blank forms for these stations. See Par. 49.

Forty-five photo-hydro signals were located on this manuscript. They are listed in Par. 49.

39. JUNCTIONS

Junctions have been made with surveys T-11502 to the north, and T-11294 to the south. There is no junction to be made with surveys T-11035 to the east and T-9435 to the west.

40. HORIZONTAL AND VERTICAL ACCURACY

See Photogrammetric Plot Reports.

41 - 45 Inapplicable

46. COMPARISON WITH EXISTING MAPS

The information shown on the USGS Craig quadrangle, scale 1:250,000, edition of 1952, is based on USC&GS charts in this area.

47. COMPARISON WITH NAUTICAL CHARTS

Chart 8147, scale 1:40,000 published August 1931, corrected to 5/12/52.

Items to be applied to nautical charts immediately: None.

Items to be carried forward: None.

Respectfully submitted
9 March 1956

J. Y. Council
J. Y. Council
Carto. Photo. Aid

Approved and Forwarded

E. H. Kirsch
E. H. Kirsch,
Capt. USC&GS
Baltimore District Officer

August 6, 1970

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-117 (Alaska)

T-9903.

Alder Cove

Hetta Inlet

Keete Inlet

Mud Bay

Nutkwa Falls

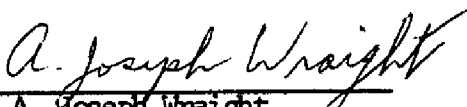
Nutkwa Inlet

Nutkwa Lagoon

Nutkwa Point

Prince of Wales Island

Approved by:


A. Joseph Wraight
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

T-9903

49. NOTES FOR HYDROGRAPHER

The following are the recoverable topographic stations located on this manuscript:

BIG, 1954	PEAR, 1954
FLUE, 1954*	TRY, 1954*

*FLUE, 1954 : Station GRASS, 1905-18 had to be used as the initial station instead of GREEN, 1907-18 in order to agree with the field position on the blackline impression.

*TRY, 1954 : Initial station was not given. NOB was used, which checks the field position for TRY, 1954.

The following are the photo-hydro signals located on the manuscript:

1954 Season

AID	FAG	OWE	TUN
BEG	FIZ	RAZ	TRE
BOB	GUM	REK	UNC
CAD	HID	SAP *	VEX
COT	ILE	SOP	WAK
DAM *	KEN	TIK	WIK
DUG *	NOB	TIP	YEA
EZY	OAT *	TOM	

* DAM : Field identification pricked direct. Position doubtful even on field photo. Office position falls about 0.5 mm NW of field position.

* DUG : Office position 2.3 mm NW of field position. Shoreline was redelineated to fit office position. Field position was questioned on the blackline impression.

*OAT : Signal recovered, reidentified and located by triangulation in 1955. The field computed position is shown on the manuscript. The 1954 position is available on the blackline impression.

* SAP : Plots offshore. The field position is above MHW, but was not plotted according to the angle given.

NOTES FOR HYDROGRAPHER (continued)

1955 Season

Discrepancies from boat sheet PA-1255 are listed:

ADD : 1.0 mm NW. Field pricking was in the layover of trees. No image visible. Identified on photo 64 to agree with the sketch and pricked direct.	FOX : 1.0 mm NW
	GIN : 1.0 mm S
	PIE : 1.3 mm E. Visible only on the nine lens photos.
BIG : 0.8 mm S	ROY : 0.5 mm S
CAR : 0.7 mm S	SAL : 0.5 mm SE
COD : 1.6 mm S	TRY : 1.5 mm NE
DON : 1.0 mm W, pricked direct from photo 41002	VAN : 1.4 mm NW, no image visible; field pricking used.
EAR : 0.6 mm W, no image visible, field pricking used.	WAR : 0.7 mm NW
	YET : 0.9 mm N

Signals ABE, BIB, ERA, OAT and PLY were plotted from the field positions and used as control. They are shown with circles because they are not monumented or described.

Refer to the 1956 Photogrammetric Plot Report item 23, regarding these signals, the jumps in the sounding lines, and the adjustment of the radial plot.

29 March 1956

Form T-2
-49-

PHOTOGRAMMETRIC OFFICE REVIEW

T. 9903

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

CONTROL STATIONS

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 ☒

ALONGSHORE AREAS

(Nautical Chart Data)

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 ☒

PHYSICAL 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 ☒

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary lines ☒ 32. Public land lines ☒

MISCELLANEOUS

33. Geographic names ☒ 34. Junctions ☒ 35. Legibility of the manuscript ☒ 36. Discrepancy overlay ☒ 37. Descriptive Report ☒ 38. Field inspection photographs ☒ 39. Forms ☒

40. R. J. Glaser
Reviewer

Joseph Steinberg
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. *Information is not available.*

Compiler

Supervisor

43. Remarks:

M-2661-12

Review Report T-9903
Shoreline Mapping

August 1970

61. General Statement

Differences in some rock elevations were found between photogrammetric survey T-9903 and hydrographic survey 8132 (refer to Summary, "Rock Elevations"). These elevations were removed from T-9903. *~ page 7*

62. Comparison with Registered Topographic Surveys

Comparison was made with the following topographic surveys:

T-2331, 1:80,000 scale, dated 1905
T-2788, 1:20,000 scale, dated 1905
T-3717, 1:10,000 scale, dated 1918

These surveys are superseded for charting by T-9903.

63. Comparison with Maps of Other Agencies

Comparison was made with USGS Craig (A-2), Alaska, Quadrangle, dated 1951, 1:63,360 scale. No differences of importance were found in the comparison.

64. Comparison with Contemporary Hydrographic Surveys

Survey T-9903 was used as a base for new hydrography. The following hydrographic surveys were used for comparison:

H-8132, 1:10,000 scale, dated 1955
H-8133, 1:10,000 scale, dated 1955
H-8134, 1:20,000 scale, dated 1954
H-8230, 1:10,000 scale, dated 1955

The agreement is good.

65. Comparison with Nautical Charts

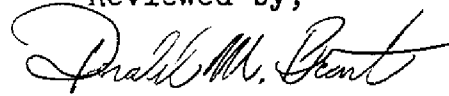
Comparison was made with Chart 8147, 1:40,000 scale, 5th Edition, corrected to July 3, 1967. No significant differences were found in the comparison.

-2-

66. Adequacy of Results and Future Surveys

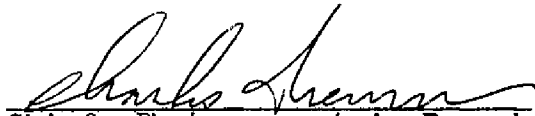
(Refer to Summary, "Map Accuracy".) — page 6

Reviewed by,

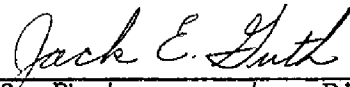


Donald M. Brant

Approved by,



Chief, Photogrammetric Branch



Chief, Photogrammetry Division