

9143

9143

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey SHORELINEField No. _____ Office No. T-9143

LOCALITY

State ALASKAGeneral locality PRINCE WILLIAM SOUNDLocality PORT BAINBRIDGE19 50-57

CHIEF OF PARTY

G. A. Nelson Field

L. W. Swanson Office

LIBRARY & ARCHIVES

DATE _____

DATA RECORD

T - 9143

Project No. (II): **PH-152(office)** Quadrangle Name (IV):
Ph-39(48))
CS-277) Field

Field Office (II): **Ship LESTER JONES**Chief of Party: **George A. Nelson**Photogrammetric Office (III): **Washington, D. C.**Officer-in-Charge: **L. W. Swanson**

Instructions dated (II) (III):

16 March 1951 (field)**31 December 1954 (office) 731 mkl****11 February 1955 (office) 732 mkl**

Copy filed in Division of

Photogrammetry (IV)

Office filesMethod of Compilation (III): **Graphic**Manuscript Scale (III): **1:10,000**

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): **1.0**

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):

**Preliminary plot laid on NA 1927
 control which was identified on
 1:40,000 scale photographs by the
 30th Engrs.**

Vertical Datum (III):

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): **BRID, 1927**

Lat.: **60-08-19.81 613.1 m.**
(1243.8)

Long.: **148-20-37.56 579.7 m.**
(346.4)

Adjusted
~~Unadjusted~~

Plane Coordinates (IV):

State:

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

T-9143

Field Inspection by (II): Ross A. Gilmore) Icy Bay
David F. Romero)

Date: 30 June 1951 to
24 Sept. 1951

Planetable contouring by (11):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location):

(1) (Date of Photography
(Office interpretation

(2) Icy Bay (Field inspection) 8-28-51 and 8-29-51

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

Date: 1-7-55

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

Date: 1-10-55

Control plotted by (III): **B. Hale**

Date: May 1955

Control checked by (III): J. Amburn

Date: May 1955

Radial Plot or Stereoscopic Control extension by (III): S. G. Blankenbaker and R. J. French

Date: **May 1955**

	Planimetry	
Stereoscopic Instrument compilation (III):	Contours	--

Date:

Date:

Manuscript delineated by (III): **G. S. Amburn**

Date: June 1955

Photogrammetric Office Review by (III): **K. N. Maki**

Date: **July 1955**

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

Date:

Camera (kind or source) (III):

USCGS Single-lens "W" Camera, 6" focal length

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
54-W-2498 thru 2501	26 July 1954	14:49-14:50	1:10,000 (Ratio)	3.4 ft. above MLLW
54-W-2427 thru 2430	26 July 1954	14:10-14:12	1:10000 (ratio)	3.6 ft. " "

Air Force M383

121VV

11 Aug. 1950

1:20,000 (Ratio) Not known

Tide (III)

Reference Station: Cordova, Alaska
 Subordinate Station: Hogg Bay, Port Bainbridge
 Subordinate Station:

Atlantic Marine Center
 Washington Office

Review by (IV): C. H. Bishop

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

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

Shoreline (More than 200 meters to opposite shore) (II): 9

Shoreline (Less than 200 meters to opposite shore) (II): --

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

Recovered: 0 Identified: 0

Number of BMs searched for (II):

Recovered: 0 Identified: 0

Number of Recoverable Photo Stations established (III): 0

Number of Temporary Photo Hydro Stations established (III): 7

Remarks:

Diurnal

Ratio of Ranges	Mean Range	Mean Range
1.0	10.0	12.4
.8	8.3	10.6

Date: 1-21-71

Date:

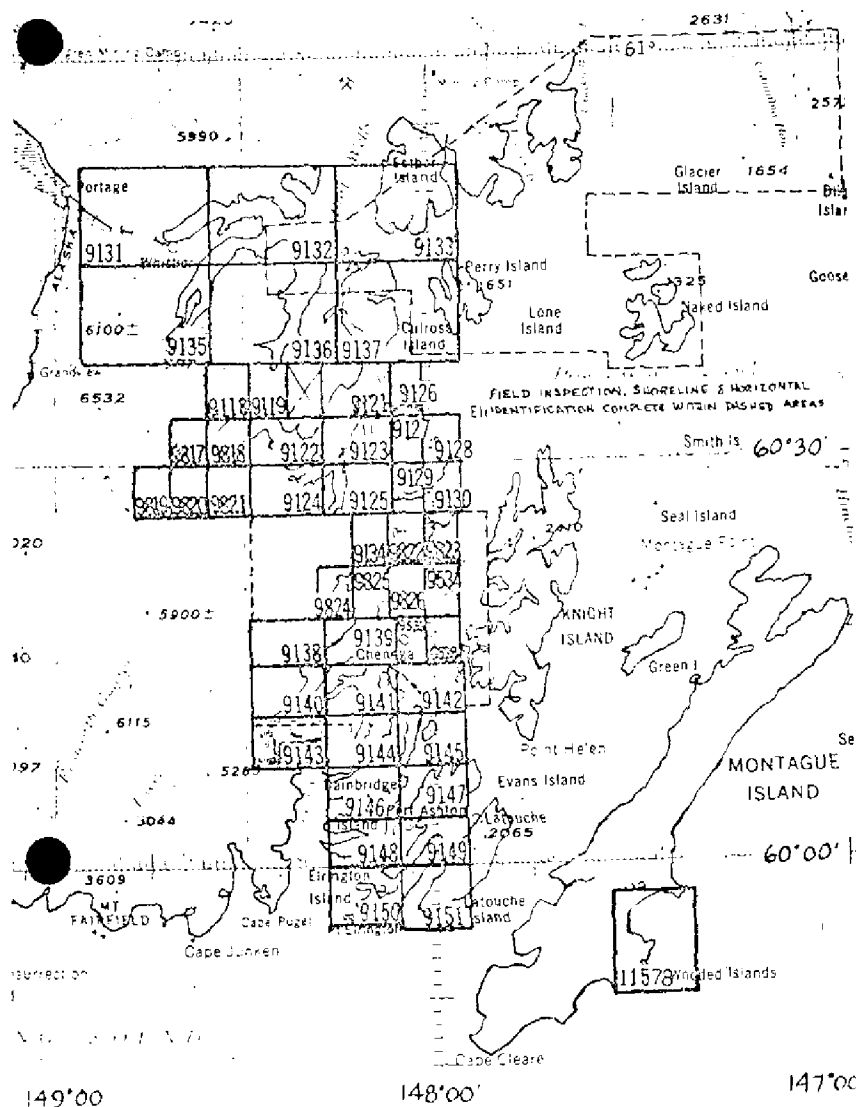
Date:

Date:

T-9143

COMPILATION RECORD	COMPLETION DATE	REMARKS
Shoreline compiled	June 1955	Superseded
New radial plot, Field Edit applied, manuscript revised	Oct.-Nov. 1957	
Final review	Jan. 1971	

Prince William Sound, Alaska



OFFICIAL MILEAGE FOR COST ACCOUNT
 LIN. MI. AREA
 SHEET NO. SHORELINE MILES

9113	3	13
9119	9	11
9121	11	10
9122	23	7
9123	17	3
9124	7	5
9125	15	6
9126	5	3
9127	6	3
9128	5	3
9129	7	8
9130	14	6
9131	12	95
9132	48	50
9133	36	45
9134	5	11
9135	24	90
9136	26	85
9137	68	48
9138	10	7
9139	13	5
9140	12	8
9141	24	12
9142	10	3
9143	9	4
9144	26	9
9145	19	8
9146	18	8
9147	24	9
9148	25	9
9149	19	7
9150	24	8
9151	15	8
9534	6	4
9536	6	6
9538	4	1
9817	9	10
9818	11	6
9819	3	9
9820	7	5
9821	2	10
9822	9	9
9823	7	4
9824	9	10
9825	11	6
9826	10	8
11578	19	21

TOTALS

702

726

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-9143

Several years have elapsed between the compilation and final review of this map. None of the compilation photographs were available at the time of final review. The compilation record was added by the final reviewer.

This shoreline manuscript, scale 1:10,000, is one of 43 maps that comprise Project PH-152, which is in the western part of Prince William Sound. T-9143 includes the southwest tip of Icy Bay and the north end of Port Bainbridge.

Compilation was by radial plot in 1955, using ratio prints of 1:30,000 scale photographs taken in 1954. Field inspection was available for Icy Bay only.

Field edit was accomplished in the summer of 1957. In the fall, a new radial plot was laid, using additional control established and identified since the original compilation, and the manuscript was revised.

Final review was done at the Atlantic Marine Center in January, 1971.

The compilation manuscript was a vinylite sheet 3 minutes 45 seconds in latitude by 11 minutes 15 seconds in longitude.

A cronaflex copy of the final reviewed manuscript and a negative have been forwarded for record and registry.

FIELD INSPECTION REPORT
 PRINCE WILLIAM SOUND, ALASKA
 Project Ph-39(48); OS-277, 1951 Season
 Ship LESTER JONES, George A. Nelson, Commanding

2. Areal field inspection.---In general, the 1951 photogrammetric field surveys of the Ship LESTER JONES for Project Ph-39(48) consisted of all of item (a) and part of item (b) of paragraph 2. of the project instructions. A PROGRESS SKETCH showing the entire area of field inspection is attached to this report. In accordance with letter 71-jgh, dated 4 October 1951 (copy attached), the field data was compiled in the following order:

Area 1.-- Area east of Unakwik Inlet (part of item 2.
 (a) of project instructions).

Area 2.-- Remainder of item 2.(a).

Area 3.-- Area in vicinity of Chenega Island.

This arrangement was maintained in compiling control, topographic and peak station data and the various areas are indicated on the attached print of the PROGRESS SKETCH. All data and photographs for Area 1 were transmitted to the Washington Office on 15 November 1951 and the remaining two areas are being submitted as of the date of this report.

Field inspection consisted of (1) recovery and identification on aerial photographs of alongshore triangulation stations; (2) approximate identification of existing interior stations and establishment of a few new interior stations in Area 3; (3) shoreline inspection; and (4) selection and identification of phototopographic and photohydro stations.

In general, the coastline inspected is mountainous with little or no beach except at the heads of bays and larger indentations (usually glacial moraines). In most all cases the shoreline is vertical with trees growing to the immediate cliff edge or high water line. The mountainsides are generally covered with a thick growth of coniferous trees interspersed with patches of moss and grass and berry bushes. Alder is found in the glacial valleys and in patches along some of the side slopes, mostly in Area 3. The rock in the area inspected is a very hard granite, oftentimes polished smooth from glacial action. Numerous extensive crevices and faults were noted during the inspection and are very evident on the photographs.

Photographic coverage consisted of nine-lines photographs taken in 1948 and 1949 at a scale of 1:20,000 and single-lens photographs taken by the Air Force in 1950 at an approximate scale of 1:40,000. Ratio prints of the Air Force photographs were furnished on a scale somewhat larger than 1:20,000. Most of the nine-lens photographs were cut to a folded size of 18" x 24" for convenience in handling in the field. Considerable of the nine-lens photographs had been sent to the field in 1948 and had already been cut up in 12" x 12" squares. It was found that better efficiency could be maintained in the field if these squares were rejoined by scotch tape and folded on the cuts to suit the area

being inspected rather than to use them as individual 12" x 12" squares. Cutting the nine-lens photographs to this small size also creates a difficulty in that shoreline detail is often cut at a disadvantageous place. It was found that by cutting the photographs to a 18" x 24" size and making use of the central portion of the photograph that better results were obtained. All of Areas 1 and 2 with the exception of the Naked Island group and the west side of Perry Island (where single-lens photographs were supplied) were adequately covered by nine-lens photographs except for the main part of Perry Island. Here, the nine-lens coverage was such that extreme wing portions had to be used. This presented a problem in control identification. In general, the definition of the nine-lens photographs was good and were easier to interpret than the single-lens. Here, due to having been enlarged to twice their original scale, the inherent only fair definition of the single-lens photographs was amplified causing considerable trouble and excessive eye strain in making accurate identification. However, the single-lens photographs were more convenient to handle and use in the field than the folded nine-lens photographs. Poor coverage was had in parts of Area 3 due to the excessive width of the flight lines. In some instances there was no overlap in flights in this area.

All shoreline inspection was accomplished using the ship's 20 foot dories fitted with a small "dog house" across the gunwales to protect the photographs and instrumental equipment. However, it was generally necessary to take the photograph out into the daylight for close inspection, thus exposing it to the weather. All notes were made directly on the photographs with a soft lead pencil with leaders to the points pricked or detail noted. No inking was attempted in the field. All control and topographic station data was inked on the photographs in the evening of the same day the field work was accomplished, leaving other data to be inked at a latter date. Consequently, a maximum of field work could be accomplished and certainty assured that control data was complete before advancing to a new area.

Photographs were clipped to a piece of light plywood to facilitate handling and at most times the inspector could stand up in the boat and by using the top of the "dog house" as a plotting table carry on his shoreline inspection quite readily. In general, it is believed that sufficient notes have been made to aid the compiler in interpreting the photographs. No attempt was made to use a stereoscope in the dory. This is an impracticability. All stereoscope work was done aboard ship.

3. Horizontal control.---Sufficient alongshore horizontal control stations were recovered and identified. No new stations were established except in Area 3. Here, 4 peak stations were established by occupying recovered triangulation stations (see Geographic Positions, Form 28 b, submitted 15 November 1951). In a good many instances there is a plethora of identified control stations, especially in the Naked Island group and parts of Area 3. However, due to the fuzziness of detail sometimes on the single-lens photographs and overhanging trees, etc., most stations were recovered with the idea of identification if possible as it would not be

known until arriving at the next station which would be the best to identify. In as much as an attempt was made to recover all along-shore stations anyways, not too much additional time was used in actual identification. It is believed that the plethora of identification was justified in taking all things into consideration.

Station ROCK, 1912 and PERRY ISLAND LIGHT, 1948 were recovered prior to receipt of the single-lens photographs covering this area and inspection and identification had to be made on the outer wing portion of Photo No. 29842. It is possible that better results would have resulted here had better coverage been available at the time of field inspection.

The three control stations identified on single-lens photograph M-383, 28 VV(2) fall outside of the reported 1951 field inspection area. The control data is attached to the photograph and is submitted to assist in controlling the radio plot of Area 3.

A breakdown of recovered and identified horizontal control stations was made for each area and have been listed alphabetically, showing the photograph on which identified and the method of identification. In most cases identification was made by the substitute station method. The above lists are attached to this report. A separate list has been attached showing control stations recovered but not identified, also indicating LOST stations. All alongshore control stations were searched for and have been reported on Form 526, RECOVERY NOTE, TRIANGULATION STATION. All control stations recovered and identified have been shown on the PROGRESS SKETCH for the project.

Peak stations were spot identified as outlined in paragraph 10. of the project instructions. Stations for which a horizontal position is available have been indicated by a large green triangle on the photographs and those without position but having only a single direction and vertical angle have been indicated by a large green circle. All peak stations identified have been listed by areas and are attached to this report. A concerted effort was made to identify as many of these inland stations as practicable depending upon the location of the ship while in an area and also weather conditions at the time. Additional inland stations were determined in Area 3 as called for in paragraph 11. of the project instructions. From necessity, the locations determined depended upon thin intersections. Cuts and vertical angles were taken to additional identified peaks in this area.

4. Vertical control.---Vertical control for contouring by stereoscopic instruments can be obtained from the identified alongshore and inland control stations for which elevations are available. No attempt was made to abstract all stations with elevations as this data is available on the geographic position lists. However, an abstract of new elevations determined was made and is attached to this report. The

vertical angles for stations for which no horizontal position has been determined can be obtained from the ABSTRACT OF ZENITH DISTANCES, Form 29, submitted with other triangulation data on 15 November 1951. Standard methods were used in locating additional peaks and obtaining elevations.

5. Contours and drainage.---

Inapplicable.

6. Woodland cover.---Woodland cover exists in almost the entire area of the project and in most cases is right to the waters' edge. See paragraph 2. of this report for further information regarding this subject.

7. Shoreline and alongshore features.---Shoreline inspection was accomplished in the entire area indicated by cross hatching on the attached PROGRESS SKETCH. The mean high-water line has been indicated on the photographs and no difficulty should be experienced by the compiler in its delineation. In a great many cases the high-water line is at the immediate bluff edge which is also the tree and grass or tundra line. In some cases the approximate low-water line is indicated on the photographs but generally only the limits of shoal or reef areas are shown. All shoreline inspection was done from a 20 foot dory by skirting along the shore and also by actually going ashore at appropriate places where phototopographic stations were to be selected or horizontal control stations were being recovered and identified. It is believed that sufficient notes have been made to give the compiler a good idea of shoreline and alongshore features. However, it should be pointed out that a lot of shoreline information not specifically shown can be gleaned from reading the short descriptions of the photohydro stations inked directly on the face of the photographs. There are a few piers, landings and buildings alongshore in the area field inspected. These have been indicated on the photographs and all buildings considered worth delineating have been shown.

8. Offshore features.---An attempt was made to indicate all offshore high-water rocks and rocks awash on the photographs. In some instances a 3 point sextant fix was taken on offshore rocks which could not be readily identified. These fixes have been shown directly on the photograph. In some cases where a spot of some nature appeared on the photograph but no actual feature was found a note was made (generally by the letters NE) indicating the feature or spot was not evident upon visiting the area. In a few instances notes were made requesting fur-

ther investigation by the hydrographer.

9. Landmarks and aids.---There are two buildings in the area inspected which have been submitted on Form 567 as LANDMARKS. Also, there are 3 fixed aids to navigation which have been submitted on Form 567, two having been previously located by triangulation and the third has been identified as a phototopographic station. Conditions at the time did not warrant locating the latter by triangulation. The above forms 567 accompany this report.

10. Boundaries, monuments and lines.---Generally speaking, this paragraph is inapplicable. However, a General Land Office marker was found on the most northerly extremity of Naked Island and was referenced to triangulation KELSO, 1949 and classified as topographic station USIM S2454 1939 (GLO). Form 524 has been submitted for this station.

11. Other control.---Recoverable topographic stations were established along the shoreline in accordance with paragraph 13. of the project instructions. In many parts of the project no topographic stations had to be established due to the plethora of triangulation stations. Practically all phototopographic stations established were marked stations. A complete listing of all phototopographic stations by areas is attached to this report indicating the photograph upon which the station was identified. Form 524 has been submitted for each station.

Photohydro stations were selected and identified for future hydrographic surveys. A particular effort was made to select stations that could be re-identified and used by the hydrographer. Each station was assigned a temporary field number and indicated on the photograph. From necessity, due to two inspectors working in close proximity to each other, oftentimes using the same photograph another day, or even parts of the same photograph the same day, the numbering system became somewhat jumbled but in no case is there a duplication of numbers on the same photograph. A short description of each photohydro station has been inked directly on the face of the photograph upon which it was pricked. In some instances where the shoreline was too badly shadowed by overhanging trees or bluff, photohydro stations could not be pricked; but generally, very good hydro station coverage is available. As a matter of fact in some cases where the shoreline is considerably broken there is almost a plethora of stations and it will be up to the discretion of the hydrographer which stations to eliminate.

Photohydro stations were selected for the entire area inspected. In the Naked Island group where graphic control had been executed in 1949 and hydrographic stations had been built but no hydrography done, an attempt was made to identify the same stations indicated on the copies of the graphic control surveys furnished. In a good many cases this was possible and they have been indicated on the photographs in the photohydro station descriptions. A number was assigned to the pricked photohydro station in the usual manner and then the graphic control survey station name was shown in parentheses to indicate that it was the same station originally located in 1949. In some cases the original whitewashes were still evident and in others a railroad spike was found driven into a crack in the rock approximately midway of where the whitewash had been.

12. Other interior features.---There are no bridges or known cable areas in the area field inspected, nor are there any airports or landing fields. Air transportation is all done by float planes in this area. The CAA station in the Dutch Group and the village at Chenega are the most outstanding habitations. Most of the other habitations indicated on the photographs are abandoned fox farms except for the one on the south side of Parry Island. Here the buildings are kept up and residence maintained the year around.

The village of Chenega has about 90 residents and has a Bureau of Indian Affairs school and post office (both in the same building). There is a Russian Orthodox Church here and a native store. There is a long narrow pier here which was in bad repair at the time of inspection. There are no marine facilities here but water can be obtained by hose at the end of the pier.

13. Geographic names.---A special report on geographic names has been prepared and was forwarded to the Washington Office on 14 November 1951.

14. Special reports and supplemental data.---In addition to the data contained in this report, the following data obtained during the 1951 season by the Ship LESTER JONES is pertinent to the photogrammetric work accomplished in Prince William Sound.

<u>TITLE</u>	<u>DATE FORWARDED TO WASHINGTON OFFICE</u>
SEASON'S REPORT	4 January 1952
BEACH REPORTS (3), Prince William Sound	18 August 1951

<u>TITLE</u>	<u>DATE FORWARDED TO WASHINGTON OFFICE</u>
BEACH REPORT (1), Prince William Sound	19 October 1951
COAST PILOT NOTES, Prince William Sound	10 October 1951
GEOGRAPHIC NAMES REPORT, Prince William Sound	14 November 1951
SKETCH to accompany GEOGRAPHIC NAMES REPORT	15 November 1951
TRIANGULATION RECORDS and SKETCH (see tran- smittal letter)	15 November 1951
AREA 1, Ph-39(49), FIELD DATA (see transmittal letter)	15 November 1951
AREAS 2 and 3, Ph-39(48), FIELD DATA (see transmittal letter)	15 January 1952
PROGRESS SKETCH, to accompany SEASON'S REPORT (tracing)	15 January 1952

Ross A. Gilmore
 Ross A. Gilmore
 Commander, C&GS

Approved and Forwarded:

George A. Nelson
 George A. Nelson
 Cmdr., C&GS
 Comdg., Ship LESTER JONES

PH-152
PHOTOGRAPHIC PLOT REPORT
FRANCE WILLIAM SOUND, ALASKA
Scale 1:10,000

21. AREA COVERED:

The radial plot embraces eight sheets in the vicinity of Knight Island Passage, Whale Bay, Chenega Island, and Icy Bay on the west side of Prince William Sound:

T-9138, T-9139, T-9140, T-9141, T-9142, T-9143, T-9144 and T-9145

22. METHOD:

The radial plot was laid on vinylite manuscripts on which the polyconic projection and the UTM grid were ruled. The eight sheets and the adjoining tabs and manuscripts (T-9146 and T-9147) were joined together in one unit using the grids for junctioning. The attached sketch shows the layout and photographs used and the distribution and density of horizontal control. Ratio positype paper prints of 3X enlargement from the "W" camera were used on the western part of the plot, and Air Force photography of 4X enlargement (positype) were used on the eastern side where "W" coverage was not available.

The photographs were prepared in the conventional manner choosing shoreline pass points where possible at intervals of about 3 inches and points in the interior at a density of about 6 inches.

Vinylite templet stock was used throughout, and a calibration templet was used to correct for paper distortion errors.

Rays have been drawn on the photographs through those pass points that were used in the radial plot. Certain of the photo-hydro points were pricked as pass point control, and only those that have rays drawn through the point on the photographs were in the main radial plot, and were the points held to in raying in additional detail and photo-hydro points.

The compiler's judgement was used in locating a map position for all the remaining photo-hydros and detail points. A combination of (1) drawing the remaining rays on the templates and relaying them into the plot, (2) graphic manual intersection, and (3) scale check where expedient, were the techniques used to locate the remaining points. All points were located prior to compilation of the shoreline.

Inasmuch as the field identification of control was done on 1:20,000 by the USC&GS on Air Force photography, and on 1:40,000 by the 30th Engineers, a reasonable tolerance was expected in holding to control in the final closure and adjustment. The attached sketch and tabulated list of stations with the resultant tolerances show the relative accuracy obtained in the 1:10,000 plot.

In general, better closures were obtained where the sub-point method of recovery was used. Almost without exception, the 30th Engineers picked the home station direct, which allowed the radial plot considerable discretion in the closure and adjustment. Most of the stations held well within an accepted tolerance of not in excess of ± 0.5 mm. of true position. Manuscripts T-9139, T-9141 and T-9144 are perhaps the most accurate in position. T-9138, T-9140, T-9142 and T-9143 are next best in horizontal position, and T-9145 is considered the least accurate of the entire group.

The plot was drilled through the various thicknesses of templates through the manuscripts, and the points were circled in red ink where the position was determined by three or more cuts, green if by two cuts only.

This plot should be verified on the east and west sides upon receipt of further field identified control, and it is advisable to use the stereoplani-graph as the bridging instrument since bad tilts and crab in the flight pattern are noticeably evident.

23. ADEQUACY OF CONTROL:

Horizontal control is adequate for those sheets in the middle of the plot, but more accurately identified control is needed on both the east and west sides, and a better plot is anticipated when the field identified control becomes available. Trouble was encountered in the extreme W and NW sides of the plot on T-9138 in Nassau Fiord and on T-9140 in Icy Bay.

It is suggested that topographic stations 418 (MIND, 1951), and 420 (SAND, 1951) in Nassau Fiord, and either 422 (IDOL, 1951) or 423 (JOWL, 1951) in Icy Bay be located by triangulation methods to give a comparison with the existing preliminary plot positions and thereby justify whether a new radial plot should be laid for smooth sheet plotting. No. 177 (Nassau, 1933) did not hold and the identification is considered to be in error. It is requested that it be re-identified for subsequent work.

24. SUPPLEMENTAL DATA:

T-4308	1:20,000	1927
T-4810	1:20,000	1933
T-4803	1:20,000	1933
T-3093	1:20,000	1910

25. PHOTOGRAPHY:

The W camera coverage is better in general as concerns definition and quality of detail than is the Air Force photography on the east side of sheets T-9142 and T-9145. Tree overhang and displacement, and resulting shadows are factors which hindered the accurate recovery of control alongshore,

- 2 -

and will necessitate compiling such shoreline with the dashed line approximate high water line symbol. Fixing a control point direct is subject to inaccuracies under the circumstances this photography presents, and hence the plot is weak in the areas mentioned in 23 above. The scale was not good on the "A" 3X enlargements, but was surprisingly good on the 4X Air Force enlargements.

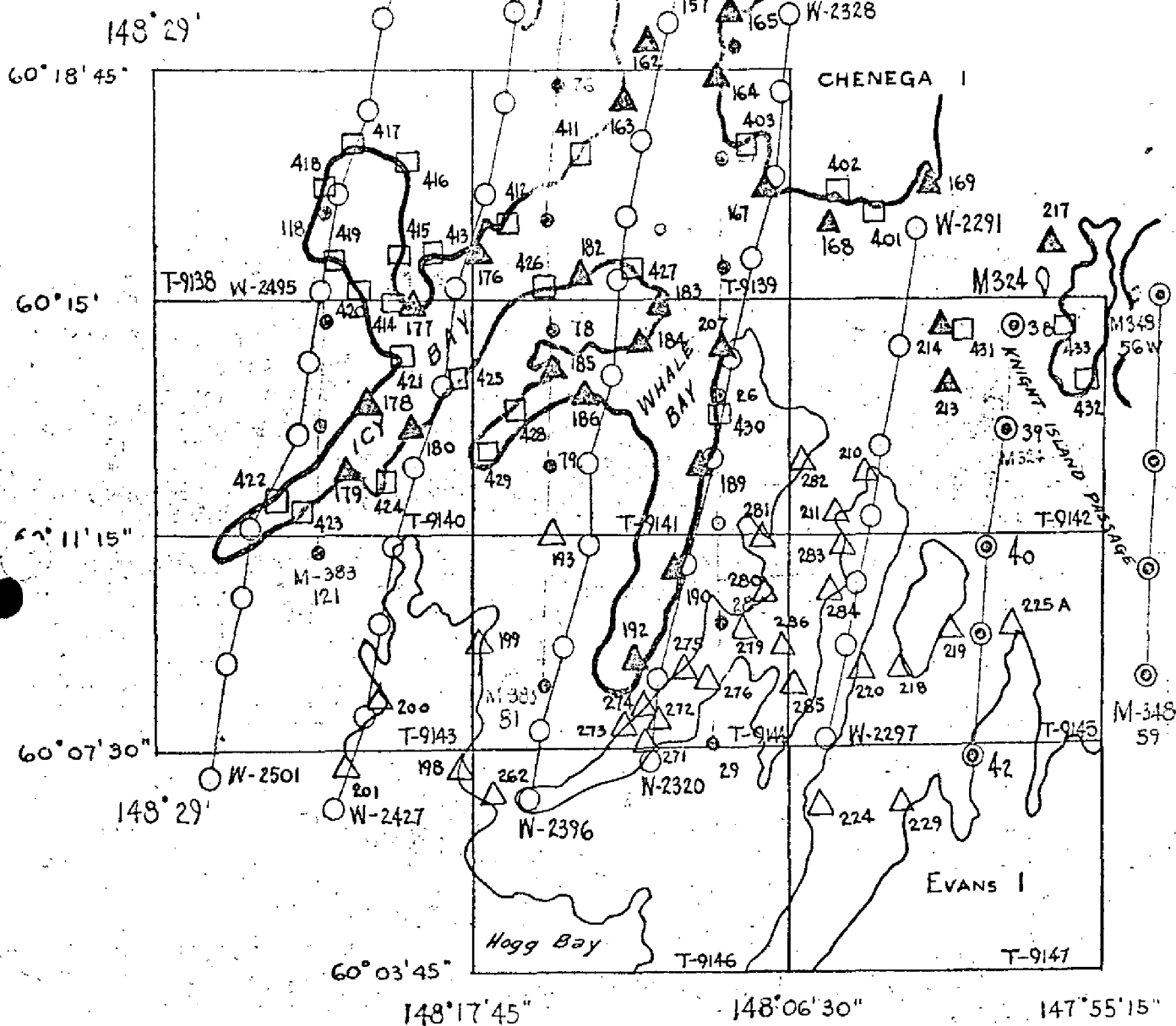
Flight lines should have followed the general NE-SW alignment of these islands in order to afford the radial plot stronger azimuth transfers across the more narrow straits, and thus avoid as many water azimuths as possible.

Approved by:

Respectfully submitted:

S. V Griffith
Chief, Cartographic Branch

Roscoe J. French
Roscoe J. French
Supervisory Cartographer



RADIAL PLOT SKETCH PH 152

- 1954 W Ratio prints (3 x to 1 : 10,000)
- ⊙ Air Force (4x)
- ⊙ Field inspection Air Force photos 1 : 20,000
- ▲ Horizontal control field inspected by US CGCS 1 : 20,000
- △ Horizontal control field inspected by 30 th Bgr. 1 : 40,000
- Topographic stations located by radial plot
- ~ Field inspected shoreline 1 : 20,000 Air Force photography; photo hydr

Includes

Ph-152

HORIZONTAL CONTROL STATIONS IN RADIAL PLOT No. 2 (1:10,000)
 T-9138, T-9139, T-9140, T-9141, T-9142, T-9143, T-9144, T-9145

157 Jackal, 1933 Sub. pt. 0.2mm.
 160 Wagon, 1933 0.6mm.
 161 Precip, 1933 Sub. pt. Held
 162 Cener, 1933 0.6mm.
 163 Icy, 1933 Sub. pt. Held
 164 Nigger, 1933 Held
 165 Bend, 1933 Sub. pt. Held
 167 Shale, 1933 Held
 168 Village, 1933 Sub. pt. Held
 169 Chenega, 1907 Sub. pt. Held
 176 Duke, 1933 Held
 177 Nassau, 1933 1.0 mm.
 178 Fiord, 1933 Sub. pt. A 0.2mm.
 179 Thor, 1933 Held
 180 Zeus, 1933 0.2mm.
 183 Baron, 1933 0.2mm.
 184 Belt, 1933 Sub. pt. Held
 185 Olga, 1933 Held
 186 Tina, 1933 Sub. pt. Held
 189 Vega, 1933 Sub. pt. Held
 190 Bebe, 1933 Sub. pt. Held
 192 Kit, 1933 Sub. pt. 1.0mm. (Held to home Station)
 198 Wat, 1927 Held
 199 Goat, 1927 Held
 200 Brid, 1927 Held
 201 Glac, 1927 0.2mm.
 207 Orion, 1933 Sub. pt. 0.2mm.
 210 Bain, 1933 2.4mm.
 211 Tate, 1948 0.3mm.
 213 Pleiades, 1933 Held
 214 Sister Rock, 1907 Held
 215 South, 1907 Held
 217 Squire, 1933 Held
 218 Rot, 1910 0.4mm.
 219 Ship, 1910 0.2mm.
 220 Horn, 1910 0.8mm.
 224 Ded, 1910 Held
 225A Pas, 1910 Held
 229 Guguak, 1910
 262 Hydro, 1948
 271 Plain, 1948 Held
 272 Cross, 1948 0.2mm.

273 Clear, 1948 Held
274 Half, 1948 0.2mm.
275 Fass, 1948 Thin cuts
276 Age, 1948 Held
279 Ruth, 1948 Held
280 Nub, 1948 Sub. pt. Held
281 Low, 1948 Held
282 Sage, 1948 Held
283 Babe, 1948 0.3mm.
284 Dana, 1948 Held
285 Inner, 1948 0.2mm.
286 Sip, 1948 Held

NOTE: All stations that have sub-pts. listed were field identified by USC&GS on 1:20,000 Air Force photography. All others were field identified direct by 30th Engineers on 1:40,000 photographs.

FD-152

TOPOGRAPHIC STATIONS LOCATED BY RADIAL PLOT No. 2 (1:10,000)
Field Identified on 1:20,000 Air Force photography

401 RICH, 1951	421 IEIS, 1951
402 NEAT, 1951	422 IDOL, 1951
403 OATH, 1951	423 JOWL, 1951
411 GARB, 1951	424 TRAM, 1951
412 PULL, 1951	425 DOLT, 1951
413 QUAD, 1951	426 NIPY, 1951
414 YANK, 1951	427 PAWN, 1951
415 WILL, 1951	428 KIVA, 1951
416 LULU, 1951	429 FINI, 1951
417 EDDY, 1951	430 WINE, 1951
418 MIND, 1951	431 FLEIADES I. LT., 1955
419 ULNA, 1951	432 NILE, 1951
420 SAND, 1951	433 ZEST, 1951

Project PH-152
Photogrammetric Plot Report
(T-9138 through T-9147) Supplement I
November 1957

21. Area Covered:

This radial plot covers three sheets T-9138, T-9140, T-9143 and the western limits of T-9139 and T-9141. The plot was originally laid in May 1955 and covered eight T-sheets. The sheets covered in this plot comprise the western end of the original plot. (See plot sketch)

22. Method:

Additional control was established and identified in 1957 by the field party in the above-mentioned area. This plot was begun in the area to the east (Whale Bay area), which was well-controlled originally. It was extended northwesterly into the area of the new control. The plot was laid on the original manuscripts utilizing the same templates with the additional control added.

The new control established a rigid plot for the area with good closures on control pass points and azimuths. In general there was a shift in datum of 1.0 mm N-NW in this area because of the stronger fix in datum obtainable by the new control. (See item 23 - control below)

23. Adequacy of Control:

As noted under item 23 of the original plot report, trouble was encountered in the area of this plot. With the additional control established in 1957, an accurate fix in datum was obtained. Horizontal control stations used to control this plot are shown on the attached sketch.

Triangulation station "ZEUS 1933" was reported as held in the prior plot. The sub. station was identified on two photographs and erroneously held in the plot to the home station. The sub. station is 2.3 mm SW of the home station, and was held in this plot. This will effect a shift in detail of approximately 2 mm in SW direction.

- 2 -

Except as discussed below all control was held in this plot:

"FLORD 1933" -- Sub. Sta. B held. Sub. Sta. A was missed by 0.4 mm but was reported as missed by 0.2 mm in the original plot.

"NASSAU 1933" -- Missed by 1.0 mm in original plot; missed by 0.5 mm in this plot. Only two radials on station. Other control held nearby.

ULNA 1951-1957 -- (topographic station - position established by theodolite directions) 0.5 mm S of plotted position, two radials only. Four triangulation stations held nearby.

JOWL 1951-1957 (topographic station - position established by short traverse) 0.6 mm NE of plotted position. A point on the photographs that fits the description falls 0.6 mm S of the point used in the plot. This point would have held in the plot. Other triangulation stations held nearby.

24. Supplemental Data:

Inapplicable (see original report).

25. Photography:

See original plot report.

Submitted by:

J. P. Battley Jr.

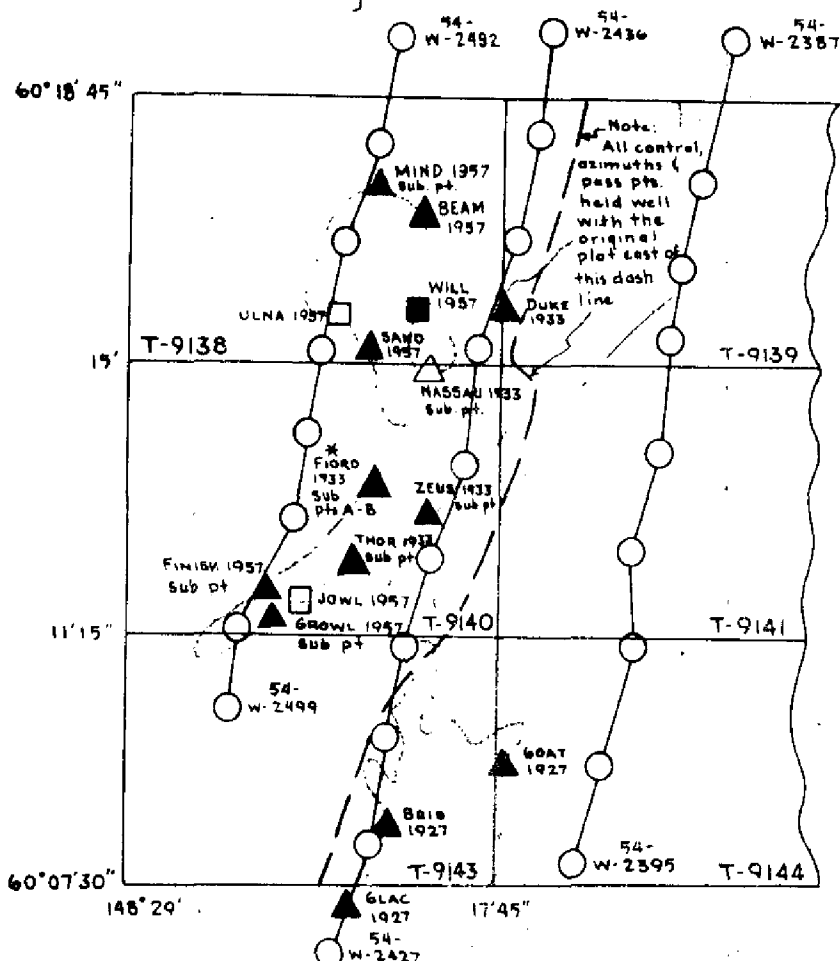
J. P. Battley, Jr.
Cartographer

Approved by:

Everett H. Ramey

E. H. Ramey, Chief
Graphic Compilation

Project Ph-152



November 1957

Radial Plot Sketch

(Supplement #1 to original plot)

- ▲ indicates control held in the plot (topographic or triangulation)
- indicates control not held
- * Fiord sub pt B "Held", sub pt A fell 0.4 mm S of the plotted position.

SCALE FACTOR.

1 FT. = .3048006 METER COMPUTED BY: C. O. DeMarr	DATE 18 March 1955	CHECKED BY: S.P. Blankenkaker	DATE 7 April 1955	M. 2388-12
---	--------------------	-------------------------------	-------------------	------------

COMPILATION REPORT T-9143

31. DELINEATION:

Shoreline and all detail were compiled by the work sheet method. Transparent vinylite material was placed over the photograph of most nearly true scale and shoreline detail was drawn while using the stereoscopic model. Graphic methods were then used to adjust the detail into the manuscript and, where scale was beyond using a graphic adjustment, the work sheet detail was projected with the small vertical projector.

Field inspection notes from 1:20,000 photographs were applied in Icy Bay. No field inspection was available for the shoreline of Port Bainbridge.

The shoreline is complete and the photographs are adequate except for a few small areas where the dashed shoreline (approximate high water) symbol is used. Overhanging trees and shadows made viewing those areas impracticable.

32. CONTROL:

One horizontal control station, Brid, 1927, was held. See Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA:

None.

34. CONTOUR AND DRAINAGE:

Only the larger drainage has been shown back from the shoreline a short distance as an aid to the hydrographer in identifying his position by this type of feature.

35. SHORELINE AND ALONGSHORE DETAILS:

The detailing in Port Bainbridge was done by stereoscopic interpretation. Due to shadows and overhanging trees, portions of the shoreline in Port Bainbridge was dashed (approximate MHWL). There was no field inspection in this area. There should be field verification in this area before charting.

The shoreline of Icy Bay was field inspected. Photographs of the area were quite clear, and stereoscopic study easily revealed shoal areas and alongshore details.

36. OFFSHORE DETAILS:

No comment.

37. LANDMARKS AND AIDS:

None.

- 2 -

38. CONTROL:

There were no topographic stations on this manuscript (T-9143).

Eight more photo-hydros were field inspected that are not located on the manuscript. The compiler has shown only those that could be reliably identified by descriptions and stereoscopic study, and were considered to be worthy of location. The compiler assumed the liberty to include those stations that appeared doubtful of exact transfer from the 1:20,000 to 1:10,000 scale photographs.

39. JUNCTIONS:

Junctions were made with T-9140 on the north and T-9144 on the east. There are no contemporary surveys on the west and south.

40. HORIZONTAL AND VERTICAL ACCURACY:

Vertical accuracy not applicable. Horizontal accuracy subject to additional field verification of control. Refer to the Photogrammetric Plot Report.

41 thru 45. Not applicable.

46. COMPARISON WITH EXISTING MAPS:

Seward (A-4), Alaska, 1:63,360, 1952

47. COMPARISON WITH NAUTICAL CHARTS:

855	1:200,00	10th edition	1952 - 54-5-31
8528	1:81,436	1st edition	1930 - 51-8-27

Submitted by:

Garnett S. Amburn
Garnett S. Amburn
Cartographic Photogrammetric Aid

Approved by:

K. N. Maki
K. N. Maki
Supervisory Cartographer

SUPPLEMENT TO COMPILATION REPORT
T-9143

November 1957

31. Delineation:

Reference: Compilation Instructions-Supp. 4,
Prince William Sound, Alaska
dated 23 October 1957

Manuscript T-9143 was revised in October-November 1957 to incorporate a shift in datum in the area of Icy Bay and new hydrographic stations positions obtained by radial plot.

The shift in datum is discussed in the Photogrammetric Plot Report Supp. 1, filed as part of the Descriptive Report for T-9144. This shift in detailing was effected by holding the pass point on the vinylite impression of the previous compilation to the new positions of the manuscript and tracing the detail.

New positions for the photo hydro stations which resulted from the shift in datum were added to the vinylite impression of the original manuscript for use in processing hydrographic surveys.

The manuscript is now in its final form, but subject to change by verification or final office review.

Henri Lucas
Henri Lucas

October 19, 1970

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-152 (Alaska)


T-9143

Icy Bay

Port Bainbridge

Tiger Glacier

Approved by:


A. Joseph Wraight
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

49. NOTES TO THE HYDROGRAPHER:

The following photo-hydro stations were field identified, and are located on the manuscript for the use of the hydrographer:

192 - Corner point of low sloping rock with small niche to north.
(There is a waterfall at huge rock to NE)

193 - More southerly of 2 corner points. (Station point has alder bushes just behind and continuing up the mountainside. Rock bluff at station is caved on the SW side)

194 - Boulder in slide at stream.

195 - Outer end of ledge (3) at HWL.

198 - Pyramid-like rock in bight at double falls.

203 - Nobby corner. (There is a low (2') ledge behind)

205 - Outer point of light grey-colored low ledge. (There is a cave to the NE)

T-9139 and T-9143

19. Notes to the Hydrographer:

Manuscripts for these surveys were revised in December 1957 to incorporate a shift in datum for segments of shoreline and photo-hydro stations as determined by radial plot. Also segments of shoreline were redelineated to show 1957 plane table locations and to change approximate areas to definite.

New photo-hydro positions have been added to the vinylite impressions of the preliminary manuscripts to facilitate processing hydrography. The manuscripts are now in final form subject to correction by final office review.

The photogrammetric plot report for these surveys is filed as part of the Descriptive Report for T-9144.

Everett H. Ramey, Chief
Graphic Compilation Unit
9 December 1957

FORM 1002(T-2) PHOTOGRAMMETRIC OFFICE REVIEW

MAP T- 9143

PROJECT PH-152

No Form 1002(T-2) was available at the time of final review and none is bound with this Descriptive Report.

DESCRIPTION REPORT
Project HY-150
Prince William Sound

The shoreline for all hydrography accomplished during the 1957 field season is derived from shoreline manuscripts compiled on a 1:10,000 scale from aerial photographs. Signals for visual hydrography were derived by radial plot in the field, by recovery of previously selected photo-hydro stations when available, by intersection from triangulation, by plane-table, and by sextant cuts and fixes. All signals located by radial plot in the field are indicated on the manuscripts by a red circle with the signal name alongside. A few signals located by plane-table and by triangulation cuts are indicated in the same manner. In a few instances, sextant cuts and fixes were plotted on the manuscripts and the signal locations were indicated by blue circles with the name alongside.

Shoreline revisions and unusual methods of hydrographic signal location are summarized below:

PRELIMINARY SHORELINE MANUSCRIPT T-9145

The north shore of Fleming Island appeared on this manuscript as a dashed line labeled "APPROXIMATE LINE". Five signals, VAL, VAD, VAN, ZAG and ACN, were located by theodolite cuts from triangulation stations. These five signals and nearby triangulation stations were used as control to locate the LINE by plane-table and stadia distances. The approximate LINE was removed from the black line impression of the manuscript and the correct shoreline was added. One rock wash between ACN and ZAG and a small islet between BUT and ACN were located during the plane-table work.

Since this is a preliminary manuscript, this portion of the shoreline, the rock wash and the small islet should be held fixed when the rest of the shoreline is adjusted to the correct datum.

The approximate LINE in the vicinity of PIN 1942, PIN and on around the small island was located by plane-table. Station BUT was located by plane-table and stadia distance. For this portion of the work, photo-hydro points were used exclusively for control. When the rest of the shoreline in the vicinity is adjusted to the correct datum this portion of shoreline and signal PIN should receive the same adjustment.

ADVANCE SHORELINE MANUSCRIPT T-9141

The approximate LINE between topographic signal WCN and triangulation station SPICW 1933 was located by plane-table. The plane table was set up on WCN, oriented on SPICW 1933, and the LINE was located by stadia distances to several points. The approximate LINE was removed from the black line impression and the correct LINE added.

The same method was used to obtain the true MHWL between FIV and SOB and between TAT and FUP. TAT is on the highest point of an islet which was originally indicated by a reef of coral. The black-line impression was corrected, on the basis of arc distances by plane-table.

PRELIMINARY SHORELINE MANUSCRIPT T-9139

On Verdict Island the approximate MHWL between TAT and FAK was resolved by plane-table, using the manuscript as the field sheet. Stations COB, BOF and FBO were located by plane-table lines on photo-tyro points, and all shorelines were controlled by photo-tyro points.

The approximate MHWL between TAT and FAK 1951 was resolved by plane-table, using photo-tyro stations in the vicinity for control and the black-line impression as the field sheet. The same method was used between LOG and FUG, near GAD, between XOP and LIX and between TIF and PAS. Stations MET and ROC were located by plane-table.

In all the above work only photogrammetric control was used. When the rest of the shoreline is adjusted to the correct datum the newly located shoreline should receive the same adjustment, also the signals located by plane-table.

The approximate MHWL at latitude $60^{\circ} 15' 19''$, longitude $148^{\circ} 17' 16''$ was carefully field inspected and the true MHWL is indicated on photographs 54W2433 and 54W2434. The true MHWL in the small bay at latitude $60^{\circ} 16' 13''$ and longitude $148^{\circ} 17' 15''$, and in the vicinity of topographic station PULL 1951 is indicated on photograph 54W2434. The true MHWL between stations LOW and NIPY 1951 is indicated on photographs 54W2390 and 54W2391. The true MHWL between stations NIPY 1951 and AID is indicated on photograph 54W2391.

PRELIMINARY SHORELINE MANUSCRIPT T-9144

The approximate MHWL between JOE and NOD (T-9146), in the vicinity of stations BMD, FRY, and in the vicinity of LAX and PLAIN 1943 was resolved by plane-table, using photogrammetric control. Stations BMD, FRY and FOG were located by plane-table. Station ACT was located by plane-table. All this work should be adjusted to the correct datum on the final manuscript.

Stations WAX and NOO were located by plane-table cuts using photogrammetric control. They should be adjusted to the correct datum on the final manuscript.

ADVANCE SHORELINE MANUSCRIPT T-9138

The approximate MHWL in the vicinity of signal FAR was field inspected and the true MHWL is indicated on photograph 54W2433.

The approximate MHWL northwest of photo point 316 was resolved by plane-table. The correct MHWL is now shown on the black-line impression.

ADVANCE SHEET FOR MANUSCRIPT 1-6116

The approximate MHW at the following locations was received by plane-table and the correct MHW is now shown on the black-line impression:

1. Vicinity of stations VAT and GAT.
2. Vicinity of station TUB, latitude $60^{\circ} 12' 12''$, longitude $188^{\circ} 21' 12''$.
3. Vicinity of JWS 1933 and ACT.

The approximate MHW in the vicinity of topographic station BOLE 1951 was field inspected and the true MHW is indicated on photograph 54W2432.

No additional shoreline discrepancies were noted during hydrography and signal building. All signals appear to plot in their correct location with respect to the MHWL.

Special sheets were not prepared for any of the plane-table work. Some of the field work was done directly on the black-line impressions. In the remaining cases the field work was done on tracings of the black-line impressions. In each case, a tracing was used in the field only one day, and results transferred to the black-line impressions the same evening. There was no detectable distortion.

The following triangulation stations were identified this year:

<u>NAME</u>	<u>PHOTOGRAPH</u>
GROVE 1957	54W2490
TUNISH 1957	54W2492
WYAN 1957	54W2494
KIND 1957	54W2496
PLAIN 1948 (210)	54W2320
WYFF 1948 (204)	54W2396
TRAT 1948 (210)	54W2396
GLAC 1927 (200)	54W2427
PRID 1927 (200)	54W2428
VAT 1927 (195)	54W2396
GOAT 1927 (194)	54W2395

In addition, the following topographic stations marked in 1951 and located by radial plot, were re-located by triangulation cuts or short traverse from triangulation stations: WILL 1957, WYFF 1957, JOWL 1957, SAND 1957.

Lorin F. Woodcock
Lorin F. Woodcock
LCDR, USN

Approved and forwarded:

Fred Matella
Fred Matella
CDR, USN
Commanding Ship BOVIE

REVIEW REPORT T-9143

SHORELINE

JANUARY 21, 1971

61. GENERAL STATEMENT:

See Summary on page 6 of this Descriptive Report.

An ozalid comparison print, (pages 35 through 39), with differences noted in Items 62, 63, and 65 is bound with the original of this report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

A comparison was made with Survey No. T-4810, scale 1:20,000, dated Sept.-Oct. 1933 (Icy Bay), and Survey No. T-4308, scale 1:20,000, dated July-Aug. 1927 (Port Bainbridge). Differences between these surveys and T-9143 are shown in blue on the comparison print.

Shoreline on T-4810 is shown as approximate, and is not a good comparison.

Shoreline in Port Bainbridge compares well, considering the date of the old survey and the difference in methods used.

An offshore rock mapped on T-4308 at latitude $60^{\circ}09.7'$, longitude $148^{\circ}17.9'$ is not visible on the photographs and is not mapped on T-9143. This rock is also mapped on SEWARD (A-4) and Charts 8523 and 8528.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A visual comparison was made with U.S.G.S. Quadrangle SEWARD (A-4), ALASKA, scale 1:63,360, dated 1952. Four offshore rocks appear on this map that are not visible on the photographs and are not mapped on T-9143. One is the same rock mentioned in Item 63 above; the other three are noted on the comparison print in brown.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

A comparison was made with H-8390, scale 1:10,000, dated 1957. Icy Bay is the only area of T-9143 that is covered by H-8390. No differences were noted.

No contemporary hydrographic surveys of the Port Bainbridge area were available for comparison.

65. COMPARISON WITH NAUTICAL CHARTS:

A visual comparison was made with Chart 8523, scale 1:40,000, 4th edition, dated Oct. 10, 1966, and with Chart 8528, scale 1:80,000, 43th edition, dated Nov. 25, 1968. Differences between these charts and T-9143 are shown in red on the comparison print.

Three of the rocks discussed in Item 63 above are also charted.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This survey complies with Job Instructions, Bureau standards, and the National Standards for Map Accuracy. No accuracy tests were run in the field.

Reviewed by:

Charles H. Bishop

Charles H. Bishop
Cartographer
January 21, 1971

Approved:

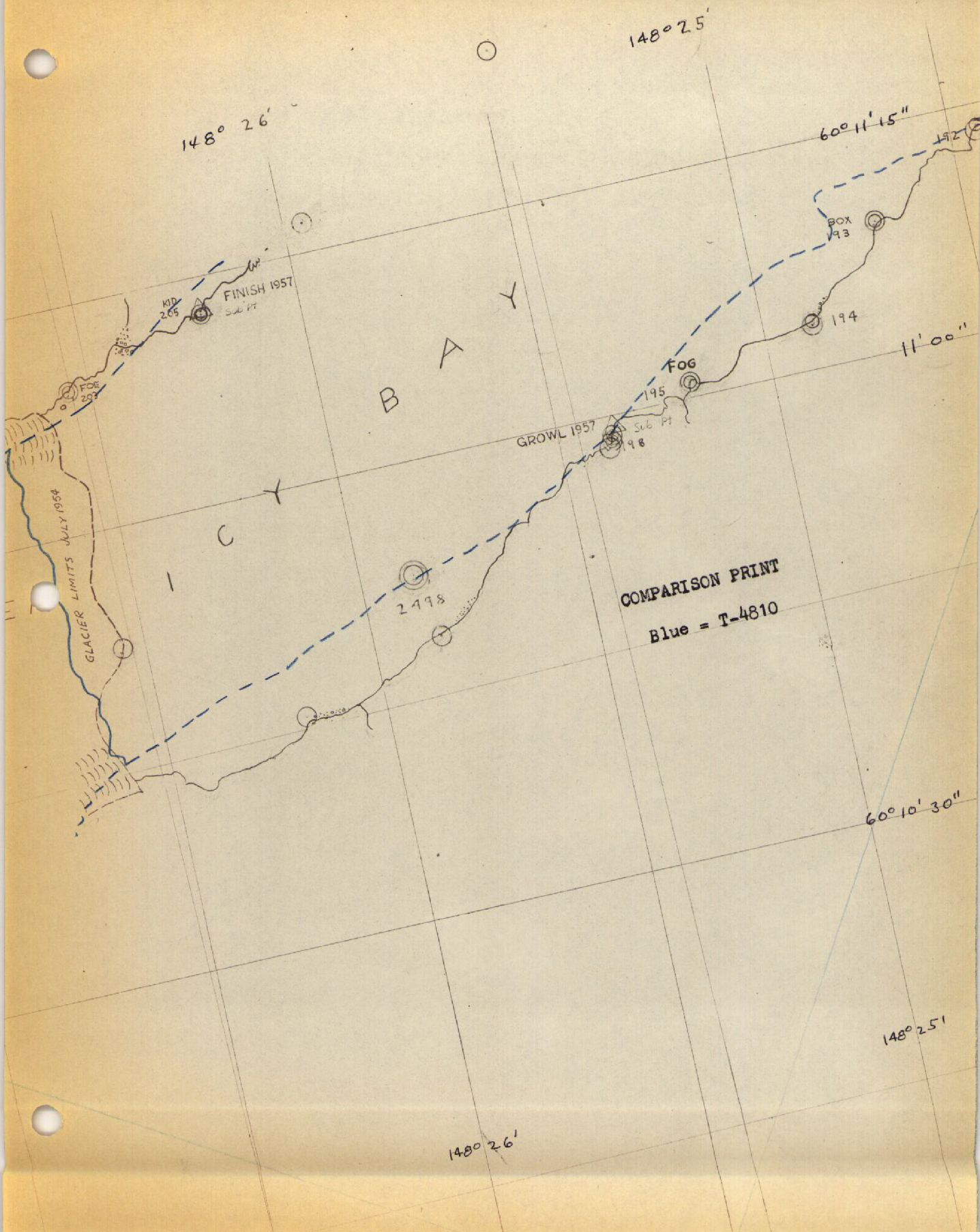
Allen L. Powell

Allen L. Powell, RADM, NOAA
Director, Atlantic Marine Center

Approved:

Charles H. Bishop
Chief, Photogrammetric Branch

Jack E. Luth
Chief, Photogrammetry Division



148° 21'

148° 20'

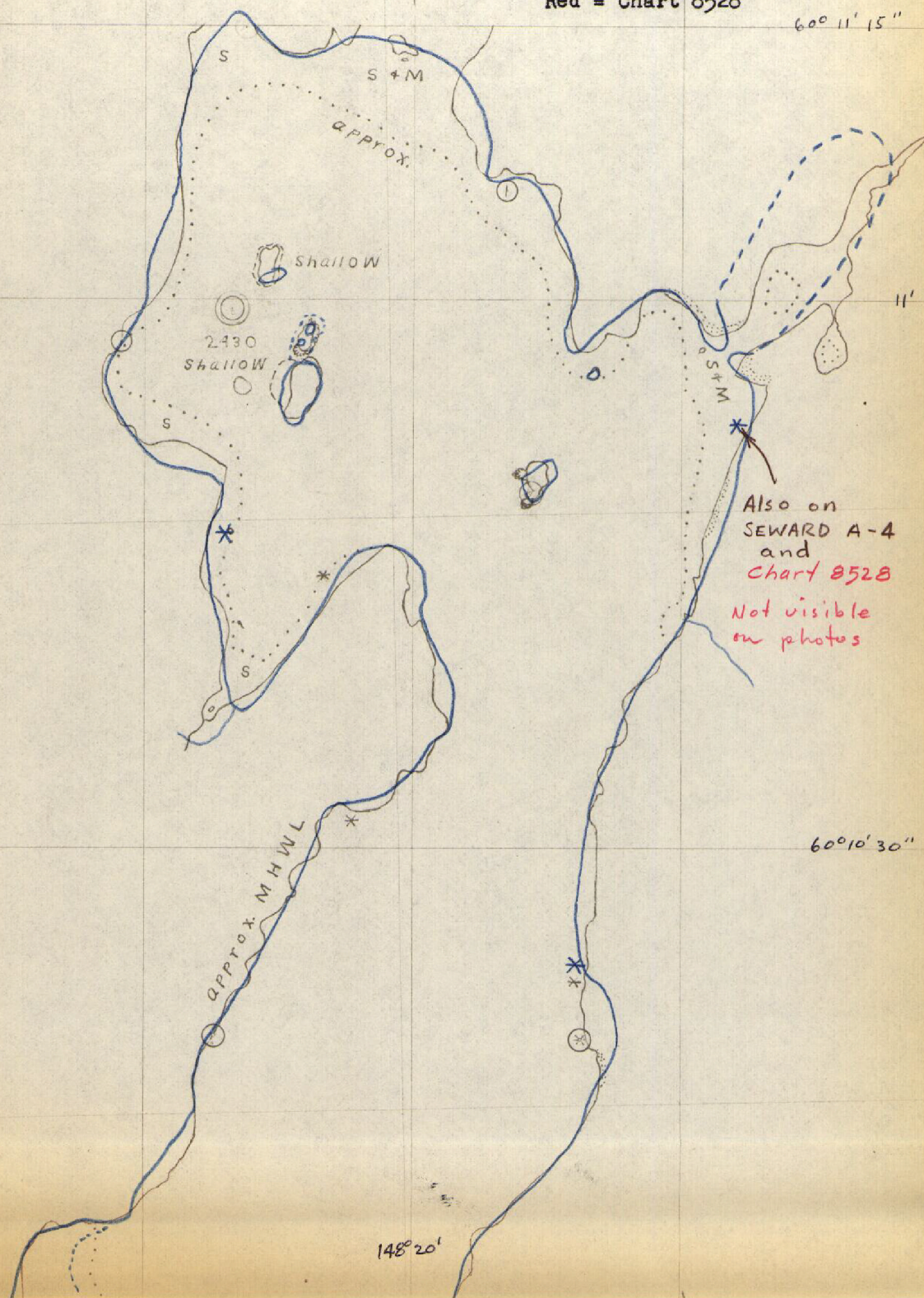
COMPARISON PRINT

Blue = T-4308

Brown = SEWARD (A-4)

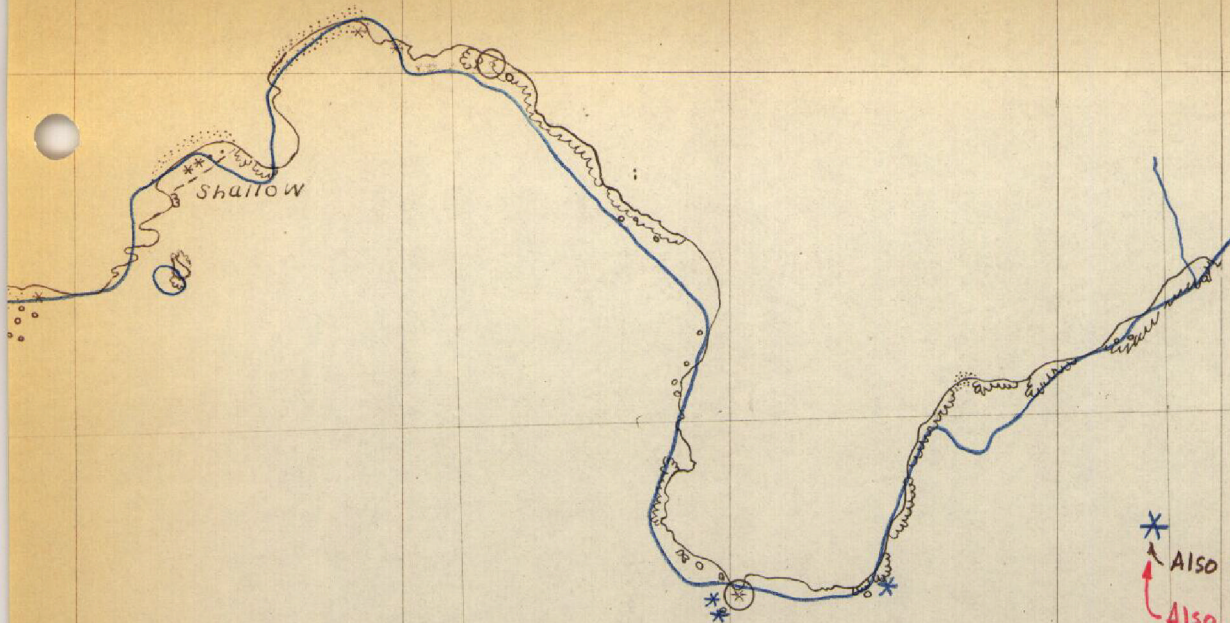
Red = Chart 8528

60° 11' 15"



87

60° 10'



* ALSO on SEWARD (A-4)
 * ALSO on Charts 8523 & 8528
 * Not visible on photos
 09'30"

COMPARISON PRINT

Brown = SEWARD (A-4)
 Red = Charts 8523 & 8528
 Blue = T-4308

JOINS SURVEY

E

G

D

I

R

B

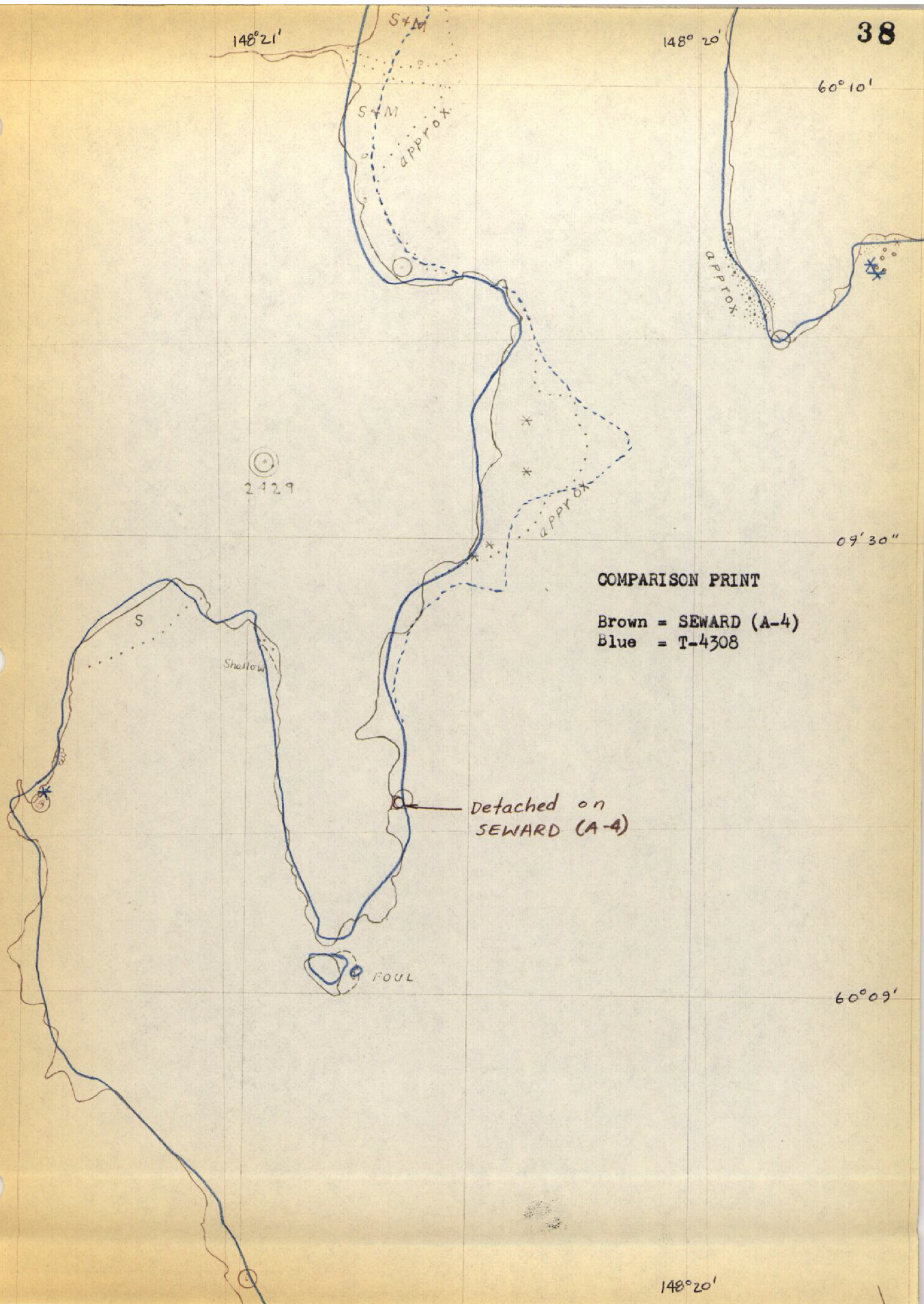
N

60° 04' ○

148° 19'

18' 30"

148° 18'



148° 22'

148° 21'

60° 08' 30"

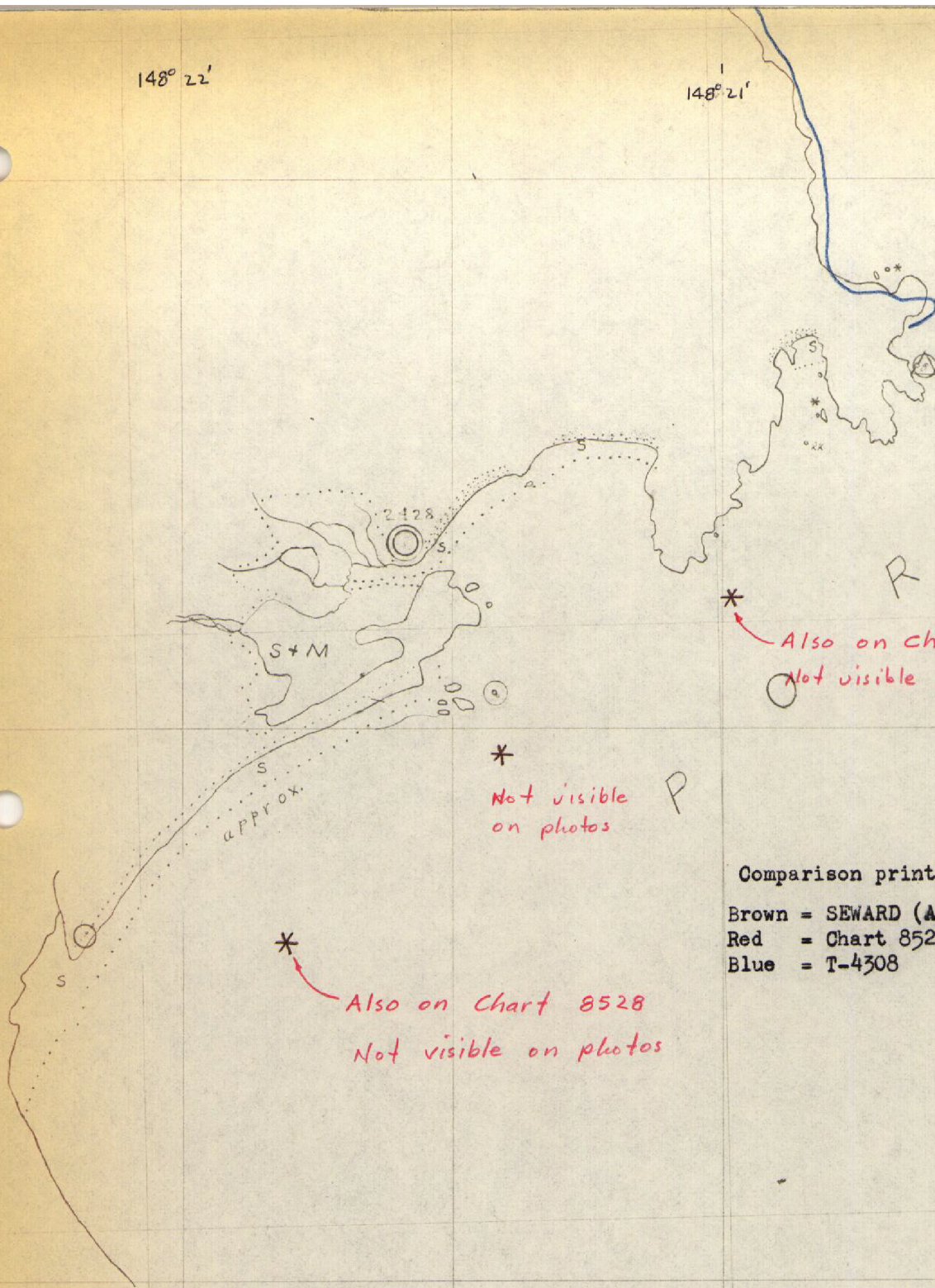
BRID 1921

60° 08'

60° 07' 30"

148° 22'

148° 21'



Comparison print

Brown = SEWARD (A-4)
 Red = Chart 8528
 Blue = T-4308

Also on Chart 8528
 Not visible on photos

Also on Chart 8528
 Not visible on photos

*
 Not visible
 on photos

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO.

T-9143

3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

USCOMM-DC 8568-P63