9371 THRU 9375

9375

9371 THRU 9375

Diag. Cht. No. 9400.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric

Field No. Ph-42(49) *Office No.* T-9371 thru T-9375

LOCALITY

State Alaska

General locality Chukchi Sea

Locality Kukpowruk River

1948-49

CHIEF OF PARTY

H.A.Paton, Chief of Field Party

LIBRARY & ARCHIVES

DATE January 7, 1958

B-1870-1 (1)

DATA RECORD

T - 9371 to T-9375 incl.

Project No. (II): Ph-42(49) Quadrangle Name (IV):

Field Office (II): Barrow, Alaska Chief of Party: H. A. Paton

Photogrammetric Office (III): Baltimore, Md. Officer-in-Charge: H. A. Paton

Instructions dated (II) (III): 16 Jan. 1950 (4 Feb 1948? 15 " 1950?)

(Field instructions - Project CS-320)

Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:20,000 Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): 1.000

Date received in Washington Office (IV): 8-18-50 Date reported to Nautical Chart Branch (IV): 8-22-50

Applied to Chart No. Date: Date registered (IV): 7 May 1957

Publication Scale (IV): Publication date (IV):

Geographic Datum (III): Barrow 1945
Corrections to N.A. 1927 (PRELIM.) available.
L.T.S. 1953

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

The difference between Point Barrow, 1945 Datum and ~~[illegible]~~ N.A. 1927 Datum is Lat. plus/~~minus~~ 38~~4~~ m. and Long. ~~plus~~/minus ~~162~~ 160 m.
L.C.L.

Reference Station (III): DORCAS, 1949

Lat.: Long.: ~~Adjusted~~ Corrected Unadjusted

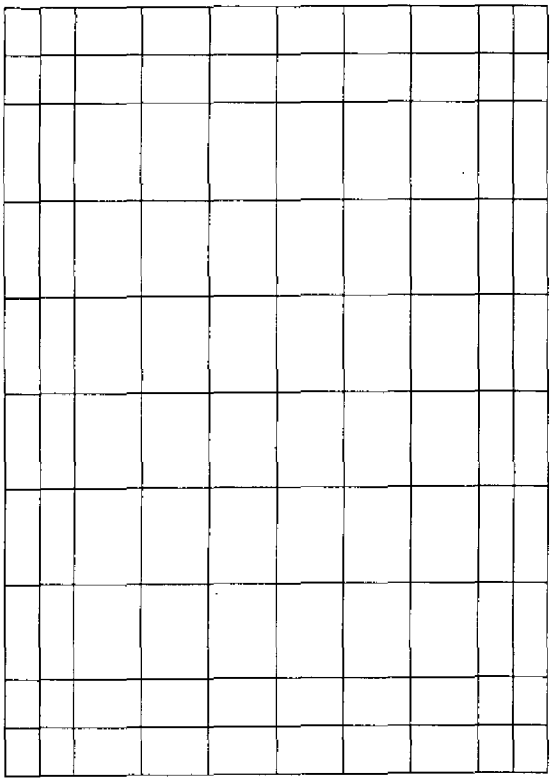
Plane Coordinates (IV): State: Zone:

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.

M-2618-12(4)



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

(Planimetric)

DATA RECORD

Field Inspection by (II): L. V. Woodworth — Date: June and July 1949 Control.

Planetable contouring by (II): — Date:

Completion Surveys by (II): — Date:

Mean High Water Location (III) (State date and method of location): Located stereoscopically at the compilation office from photographs exposed 8-23-48

Projection and Grids ruled by (IV): T. L. J. — Date: 2-19-50

Projection and Grids checked by (IV): H. D. W. — Date: 2-20-50

Control plotted by (III): F. J. Tarcza — Date: 2-20-50

Control checked by (III): Wayne L. Lineweaver — Date: 2-21-50

Radial Plot ~~or Stereoscopic~~ Control extension by (III): F. J. Tarcza — Date: 2-24-50

Stereoscopic Instrument compilation (III): Planimetry — Date:

Contours — Date:

Manuscript delineated by (III): B. Wilson, J. D. McEvoy, L. A. Senasack, M. F. Kirk, and R. Glaser — Date: 2-28-50 to 5-1-50 and 8-11-50

Photogrammetric Office Review by (III): R. Glaser — Date: 7-12-50 and 8-14-50

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

M-2618-12(4)

Camera (kind or source) (III): 1-USC&GS Single lens type O - focal length 6"
2-USC&GS Nine-lens camera-focal length 8¼"
3-US Navy Single lens camera-focal length 153.61 mm

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
48-0-266 to 283 incl	8-23-48	1445	1:20,000	-1.1 MLLW
48-0-288 to 303 "	"	1500	"	"
22772 to 22775 "	"	1440	"	"
22780A	"	1454	"	"
22784 to 22788 "	"	1458	"	"
BAR-145-006, 007, 065	6-16-49	unknown	"	Unknown

Also see attached sheet for list of photographs used in supplemental photogrammetric plot.

Tide (III)

Tide from actual observations.

Ratio of Ranges	Mean Range	Spring Range

Reference Station: Nevat Point, Kasegaluk Lagoon, Alaska
Subordinate Station:
Subordinate Station:

Washington Office Review by (IV): Lina T. Stevens Date: 22 Sept. 1953

Final Drafting by (IV): J.H. FRAZIER 9372 Date: 7-6-55
J.H. FRAZIER 9315 7-8-55

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): 223
Shoreline (More than 200 meters to opposite shore) (III): 104 statute miles
Shoreline (Less than 200 meters to opposite shore) (III): 43 statute miles
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): Recovered: 12 Identified: 12
Number of BMs searched for (II): Recovered: Identified:
Number of Recoverable Photo Stations established (III): 7
Number of Temporary Photo Hydro Stations established (III):

Remarks:

M-2618-12 (4)

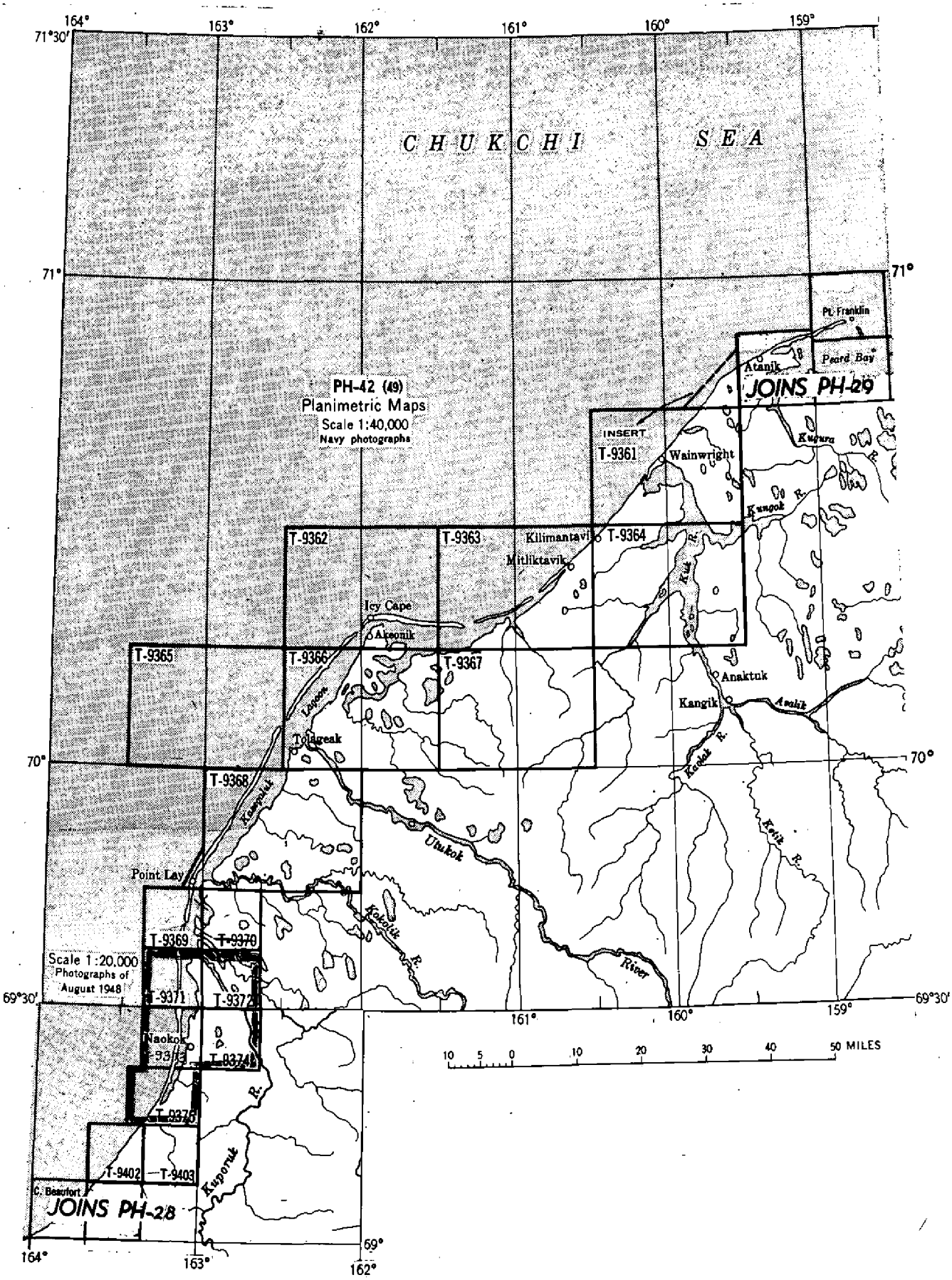
PHOTOGRAPHS USED IN SUPPLEMENTAL PHOTOGRAMMETRIC PLOT

CAMERA: U. S. Navy Single lens camera-focal length
153.61 mm

Number	Date	Time	Scale	Stage of Tide
BAR 143-065 thru 070	6-16-49	Unknown	1:20,000	Unknown
BAR 143-008 thru 014	"	"	"	"
BAR 144-150 thru 156	"	"	"	"
BAR 144-122 thru 128	"	"	"	"
BAR 144-054 thru 059	"	"	"	"
BAR 144-078 thru 084	"	"	"	"
BAR 145-147 thru 153	"	"	"	"
BAR 145-185 thru 190	"	"	"	"
BAR 146-076 thru 082	"	"	"	"
BAR 146-054 thru 060	"	"	"	"
BAR 158-028 thru 034	6-22-49	"	"	"

PLANIMETRIC MAPPING PROJECT PH-42

ALASKA, Chukchi Sea, C. Beaufort to Atanic



Summary to Accompany
Planimetric map T-9371 thru T-9375

Ph-42(49) is that part of continuing project CS-320 (which includes the whole Arctic Coast of Alaska) extending from 69° 07½' to 70° 49½'; i.e. from the north limit of Ph-28(47) to the south limit of Ph-27(47).

Ph-42(49) has 17 maps: T-9361-69; T-9371-75; and T-9402 and T-9403, the latter two being additions to the original southern limit. T-9371 thru T-9375 includes that part of Kasegaluk Lagoon from Kukpowruk River to Koocheok River,-i,e., the southern portion.

The field work consisted solely of control establishment in 1949 (except one station near the southern limit in 1950). The area was photographed by the Coast and Geodetic Survey in August 1948 by the O-camera and by the nine-lens camera. It was photographed by the Navy in July 1949, and these photographs were used to delineate the two interior maps (T-9372 and T-9374). Oblique photographs of control station sites by a K-20 camera at 1000 feet elevation were taken by the field party in August 1949. These were used to help identify control stations on the photographs used in the radial plot.

After all the maps in the project have been reviewed, reproduced, and registered, a Completion Report will be written and filed in the Bureau Library under the project number. This report will include a brief text describing the project; any important correspondence; copies of the various instructions and special reports; statestical data; and a list of the data or reports not bound with the Completion Report, but filed elsewhere.

PHOTOGRAMMETRIC PLOT REPORT

Project Ph-42(49)

Surveys T-9371 to T-9375, incl.

21. AREA COVERED

This photogrammetric plot covers the areas of Surveys T-9371 to T-9375, inclusive. These planimetric surveys extend southward along the Arctic Coast of Alaska from the mouth of Kukpowruk River which is just south of Point Lay.

22. METHOD - RADIAL PLOT

Map Manuscripts

The map projections furnished by the Washington Office are on acetate, ruled with polyconic projections in black, at a scale of 1:20,000. No base sheets were furnished.

All control stations and substitute stations were plotted on the map projection sheets using beam compass and meter bar.

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

Photographs

The photographs used in this radial plot are all single lens photographs (contact scale 1:27,500) ratioed to 1:20,000, taken with USC&GS, Type Q camera, focal length 152.37 mm (6 inches). Forty (40) photographs were used in the radial plot, numbered 48-0-265 to 48-0-304, inclusive.

Templets

Vinylite templets were made of all photographs used in this radial plot. The photographs were ratioed with collimating marks made by special glass plate in the enlarger. A master templet was used to correct for paper distortion. Very little distortion was found and in some photographs it was negligible.

Closure and Adjustment to control

Since no base sheets were furnished, the radial plot was laid directly on the map projection sheets. The map projection sheets for Surveys T-9369 and T-9370 were also furnished and were used in the radial plot. The area of surveys T-9369 and T-9370 are being compiled on the 1:40,000 scale projection for T-9369. Pass points established on Survey T-9369 by the 1:40,000 scale radial plot to the north were transferred to the 1:20,000 scale projection for T-9369 and held in this plot. The radial plot was laid in the unusual manner , holding the transferred pass points and control on T-9369, and extending the plot southward. The only difficulty encountered was at the south edge of T-9374. It was found necessary to extend the plot southward disregarding SUB. PT. No.1, TERN, 1949, but no immediate reason for the discrepancy was found. SUB. PT. SIRIUS, 1949, was also found to be in error. It was noticed that the radially-plotted position was exactly 2 minutes east of the geographic position. Assuming

See Heading 23, sub. 2

22. METHOD (continued)

Closure and Adjustment to control

an error of 2 minutes in longitude in the published position, the station was replotted and held in the radial plot. A radially-plotted position was established for SUB. PT. TERN, 1949. The plot was extended southward without further difficulty. There is no control in the south half of Survey T-9375 or in the area to the south of the survey. A hydrographic signal GUY, 1949, was held, in the absence of control stations, and the radial plot was extended southward to the southern limits of Survey T-9375 without control. Positions in the southern area of this survey are expected to be a little weak but since a good plot was obtained, they are believed to be within the required accuracy,

Transfer of Photogrammetric Points

The positions of photograph centers and pass points were established by pricking the intersection down through all templets to the map projection sheets on which the radial plot was completed.

23. ADEQUACY OF CONTROL

Except in the south half of Survey T-9375, the amount and distribution of control was adequate. Since no control stations have been established below SEDAN, 1949, except one hydrographic signal GUY, 1949, or in the area south of this survey, the radial plot was extended southward without control to the southern limits of the survey.

Three control stations could not be held in the radial plot.

1. SUB. PT. No. 3, SIRIUS, 1949—The radially-plotted position fell about 1300 meters east of the geographic position. This appeared to be an error of 2 minutes in longitude of the position of the station. Assuming this, the substitute point was replotted and the new position was held in the radial plot. Confirmation of this typographic error was requested in letter to the Washington Office. Error acknowledged in letter No.7312-rb, dated 14 March 1950.

2. SUB.PT. No. 1, TERN, 1949--The radially-plotted position falls 2.3 mm southwest of the geographic position. No error was found in computation or identification of the substitute point, and it was believed to be an error in angle in field establishment of the substitute station. However, when the error in position of SIRIUS, 1949, previously described, was found, a recheck of SUB. PT. No. 1, TERN, 1949, revealed that SIRIUS, 1949 was used as an azimuth station to establish the position of the substitute point. The azimuth to, and position of, the substitute point was recomputed using the new position for SIRIUS, 1949. When this recomputed position was plotted it fell on the radially-plotted position, proving both the accuracy of the radial plot and the assumption of the two minutes error in longitude.

23. ADEQUACY OF CONTROL (continued)

3. SUB.PT. No. 2, ELMER, 1949—The radially-plotted position falls 4.6 mm northeast of the geographic position. This position was established in a previous radial plot for Survey T-9369 at a scale of 1:40,000 and transferred and verified in this plot. As explained in the radial plot report for Surveys T-9361 to T-9369, incl., it is probably an error of one chain length (300 feet or about 90 meters) in establishing the position of the substitute position.

25. PHOTOGRAPHY

Photographic coverage was adequate for a satisfactory radial plot. The definition of photographs is good and no badly tilted photographs were found. The scale of the photographs, which were ratioed printed, was considerably smaller than 1:20,000, the scale of the map projections, but due to urgency of the work no attempt was made to determine the scale or reduce the projections to the scale of the photographs.

Respectfully submitted

Frank J. Tarcza

Frank J. Tarcza
Cartographer (Photo.)

PHOTOGRAMMETRIC PLOT REPORT

PROJECT Ph-42(49)

SURVEYS T-9372 and T-9374

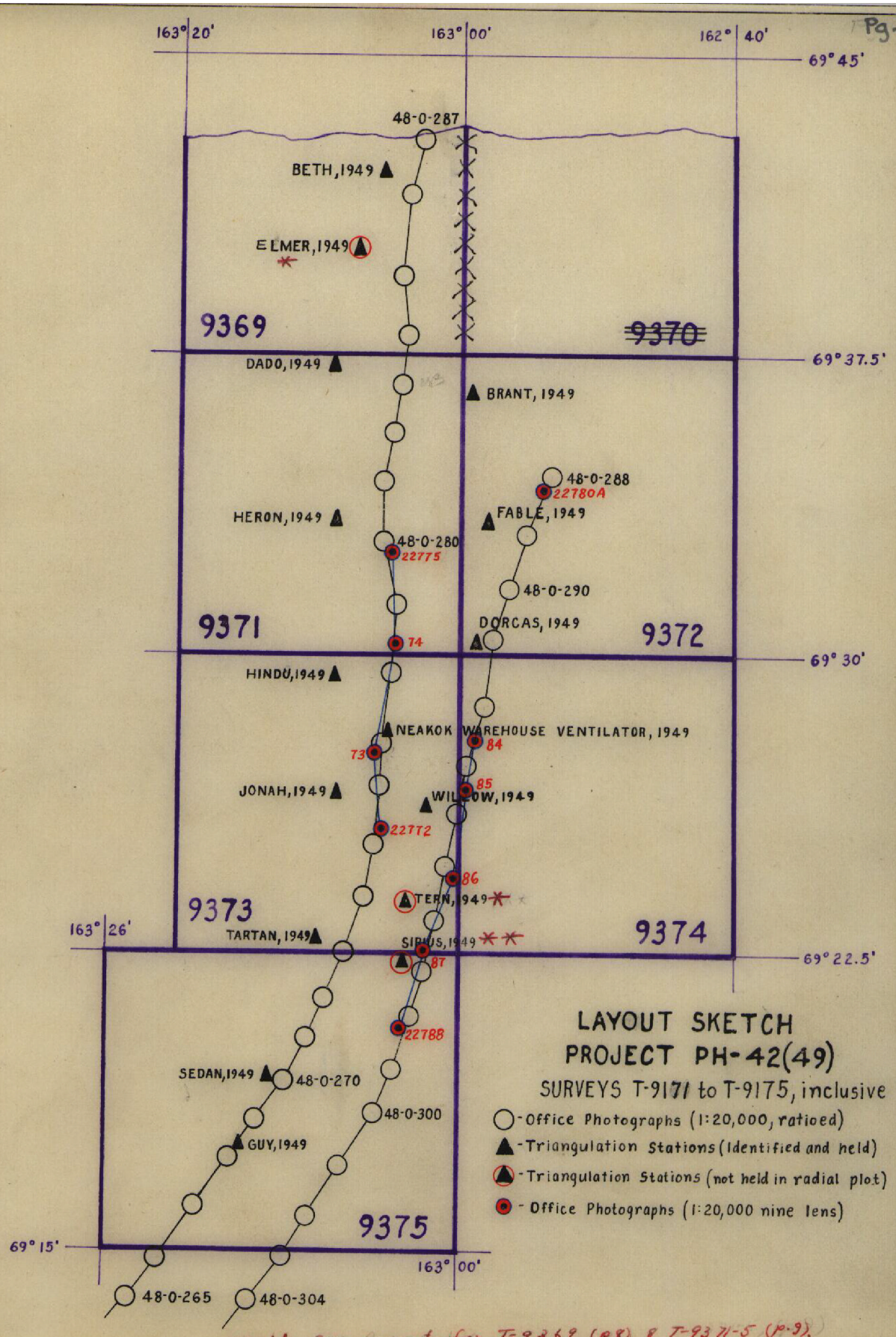
26. SUPPLEMENTAL RADIAL PLOT

Since the radial plot was completed on Surveys T-9372 and T-9374, additional photographs were furnished for coverage of interior areas on these surveys. There were ten unmounted nine-lens photographs, scale 1:20,000 furnished, numbered 22772 to 22775, incl;; 22780A; 22784 to 22788, incl. The westernmost flight of our photographs, 22772 to 22775, covered the same area as the single lens photographs previously used and was not prepared. All pass points used on single lens photographs were transferred to the nine-lens photographs. Vinylite templets were made of the six photographs prepared, using a master templet to correct for paper distortion and chamber displacement. The radial plot was laid on the map projection sheets, holding control stations and the pass points established in the single-lens plot. There is no additional control in the interior areas incuded in this radial plot. Since three of the six photographs used appear to be considerably tilted, the pass points established are probably weak on the eastern side of the surveys. No attempt was made to determine the amount of tilt or to correct for errors due to tilt. The purpose of this supplemental radial plot was to extend photogrammetric control to interior areas of Surveys T-9372 and T-9374. It is believed that the positions of the additional pass points established are within 1 mm of their true positions.

Respectfully submitted

Frank J. Tarcza

Frank J. Tarcza
Cartographer (Photo)



LAYOUT SKETCH
PROJECT PH-42(49)

SURVEYS T-9171 to T-9175, inclusive

- ○ - Office Photographs (1:20,000, ratioed)
- ▲ - Triangulation Stations (Identified and held)
- ▲ - Triangulation Stations (not held in radial plot)
- ⊙ - Office Photographs (1:20,000 nine lens)

* Held. See reports for T-9869 (p8) & T-9371-5 (p.9).

** Held. See Heading 23, sub. 1&2 (p.8) of this report.

SUPPLEMENTAL

PHOTOGRAMMETRIC PLOT REPORT

PROJECT Ph-42(49)

SURVEYS T-9372 and T-9374

21. AREA COVERED

This supplemental plot is extended from the previous photogrammetric plots on Surveys T-9372 and T-9374.

22. METHOD-RADIAL PLOT

Map Manuscript

The map manuscripts are the original ones furnished by the Washington Office for this project. No base sheets were used.

Photographs

The photographs used in this supplemental plot are all single lens, 9" x 9", photographs dated 6-16-49 and 6-22-49, taken by the Navy with a camera using a focal length of 153.61 mm, scale 1:20,000. Seventy-four (74) photographs were used; their numbers are as follows:

BAR 143 - 065 thru 070	BAR 145-147 thru 153
BAR 143 - 008 thru 014	BAR 145 - 185 thru 190
BAR 144 - 150 thru 156	BAR 146 - 076 thru 082
BAR 144 - 122 thru 128	BAR 146 - 054 thru 060
BAR 144 - 054 thru 059	BAR 158 - 028 thry 034
BAR 144 - 078 thru 084	

A sketch showing the layout of photograph centers in relation to the available control is attached to this report.

Templets

Vinylite templets were made for all photographs used in this radial plot.

Closure and Adjustment to control

The radial plot was laid directly on the map projections for Surveys T-9372 and T-9374. The Sub. Pts. for BRANT 1949, FABLE 1949, and DORCAS 1949, were pricked on the photographs. Pass points common to both sets of photographs were also pricked in the area where the previous plots ended. The tie-in to the above control stations was at the western edge of Survey T-9372. To the south, on T-9374 the only available tie was with pass points originally established from the outer edges of nine-lens photographs. The plot was extended without additional control to the the eastern edge of the two surveys. Positions in the eastern area of both surveys are expected to be somewhat weak, with the southeast corner of T-9372 and the northeast corner of T-9374 particularly weak.

Transfer of Photogrammetric Points

Since this supplemental plot was laid on the manuscripts of only two surveys, the entire assembly was turned over after the templets were securely fastened, and the photograph centers and pass points were circled directly on the back of the manuscripts.

23. ADEQUACY OF CONTROL

Except for the three control stations along the western edge of Surveys T-9372 no control was available for use in this radial plot.

24. SUPPLEMENTAL DATA

None.

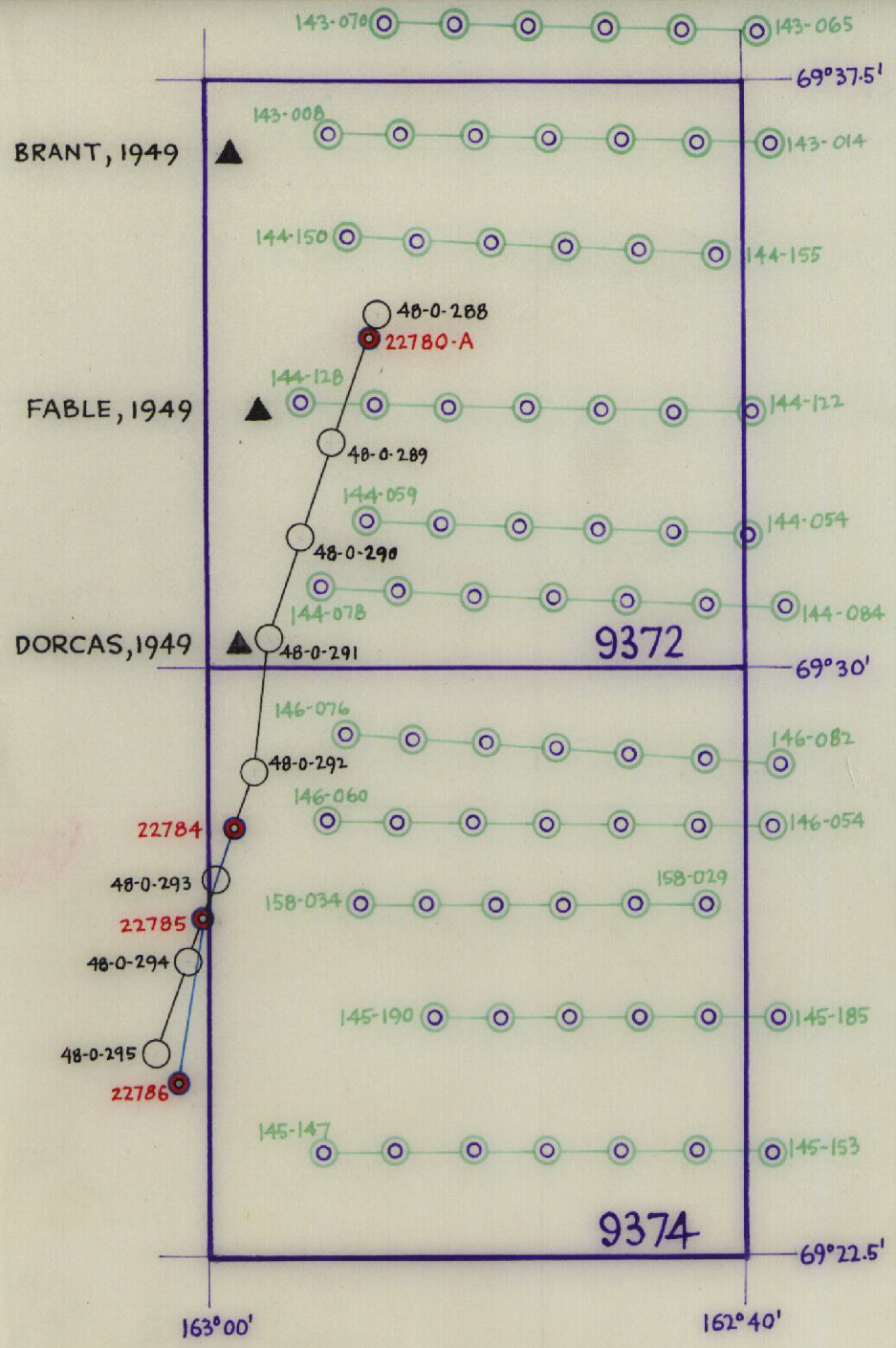
25. PHOTOGRAPHY

The coverage and overlap of the photography is entirely adequate. The definition of the photographs is excellent except where ice is found in ponds and streams as well as along the shore edge of these features. Where this occurred, only the approximate shoreline was readily distinguishable.

Respectfully submitted

Raymond Glaser

Raymond Glaser
Surveying Cartographic Aid



LAYOUT SKETCH

SUPPLEMENTAL PHOTOGRAMMETRIC PLOT

PROJECT PH-42 (49)

SURVEYS T-9372 & T-9374

- Office Photographs - 1:20,000, contact (Navy)
- Office Photographs - 1:20,000, ratioed (C&GS)
- Office Photographs - 1:20,000, nine-lens (C&GS)
- Triangulation Stations (identified and held)

COMPILATION REPORT

T-9371 thru T-9375

FIELD REPORT

Refer to field report, AIRPHOTO CONTROL IDENTIFICATION, ARCTIC COAST OF ALASKA, KASEGALUK LAGOON, PROJECT CS-320, 1949, submitted by Lt. Comdr. Karl B. Jeffers.

31. DELINEATION

These surveys were delineated by graphic methods.

Except for identification of horizontal control and several notes on photographs 48-0-273 and 48-0-274 there was no field inspection.

The stereoscopic delineation of much of the higher tundra is to be considered very approximate. When viewed stereoscopically, most of the higher tundra seems to rise gently and gradually to a relatively narrow ridge. The ridge itself is generally not sufficiently prominent to map, therefore, the higher tundra was delineated to include the slope from the approximate edge of the low swampy tundra.

32. CONTROL

This item is adequately covered in the radial plot reports.

33. SUPPLEMENTAL DATA

(1) U.S.G.S. Reconnaissance Map of Northwestern Alaska, scale 1:50,000.

(2) U.S.C.& G.S. Chart No. 9400, scale 1:1,587,870, published 1-16-50 and corrected to 2-13-50.

These maps were used for geographic names.

34. CONTOURS AND DRAINAGE

Contours - inapplicable.
Drainage - identified in the compilation office.

35. SHORELINE AND ALONGSHORE DETAILS

No shoreline inspection was furnished. All shoreline was delineated stereoscopically with the aid of several sketches on the control identification cards, form M-2226-12, and first hand information furnished by Comdr. H. A. Paton who has recently returned from a tour of duty as Chief of the field party in the area of this project.

36. OFFSHORE DETAILS

No offshore details were identified, nor were any evident on the photographs.

37. LANDMARKS AND AIDS

None.

38. CONTROL FOR FUTURE SURVEYS

Geographic positions and photostatic copies of forms 524 were furnished to the compilation office for six, 4th order horizontal control stations. Form 524 is being submitted for another 4th order station, the geographic position of which was furnished to the compilation office.

These stations are listed in item No. 49.

39. JUNCTIONS

All junctions between the five surveys which are the subject of this report, have been satisfactorily made and are in agreement.

Junctions between Surveys T-9371 and T-9369 (1:40,000) and between Surveys T-9372 and T-9369 (1:40,000) will be made when the 1:40,000 survey is completed.

40. HORIZONTAL AND VERTICAL ACCURACY

The horizontal accuracy of positions in the eastern area of Surveys T-9372 and T-9374 are expected to be weak. The southeast corner of T-9372 and the northeast corner of T-9374 are especially weak areas.

41 through 45

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

(1) U. S. Geological Survey Reconnaissance map of Northwestern Alaska, Map 47, Reprint of 1939, scale 1:500,000.

2) U.S.Geological Survey Naval Petroleum Reserve No. 4, Alaska No. 1-23, scale 1:48,000, August 1948.

47. COMPARISON WITH CHARTS

Nautical Charts

U.S.C. & G.S. Nautical Chart No. 9400, scale 1:1,587,870, published 1-16-50, corrected to 2-13-50.

Aeronautical Charts

U. S. C. & G. S. World Aeronautical Chart, Point Hope (64), scale 1:1,000,000, published October 1948, corrected to 8 December 1948.

Items to be applied to nautical charts immediately

None.

Items to be carried forward

None.

Respectfully submitted
15 August 1950

Raymond Glaser
Raymond Glaser
Surveying/Carto. Aid

Approved and forwarded
18 August 1950

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

48. GEOGRAPHIC NAMES

Chukchi Sea T-9375, T-9373, T-9371

Epizetka River T-9372

Kasegaluk Lagoon T-9375, T-9373, T-9371

Kukpowruk River T-9374, T-9372, T-9371

~~Naokok~~ Neakok T-9373

Geographic names were taken from the U.S.G.S. Reconnaissance Map of Northwestern Alaska and the U.S.C.& G.S. Nautical Chart No. 9400.

T-9375:

Koocheok River

Kuchaurak River

T-9373:

Kasegaluk Inlet

Names approved 9-22-53
L. Heck

Use Neakok Pass
pending decision - Heck 10/20/55

49. NOTES FOR THE HYDROGRAPHER

The following is a tabulation of recoverable topographic stations shown on Surveys T-9371 through T-9375. The positions of these stations are computed 4th order control. (945-672/G-8294

BEN, 1949	T-9371
COT, 1949	T-9375
END, 1949	T-9371
GUY, 1949	T-9375
MEX, 1949	T-9373
VENTILATOR, 1949	T-9373
WIG, 1949	T-9373

Form T-2

50.

PHOTOGRAMMETRIC OFFICE REVIEW

T-9371 through T-9375

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

CONTROL STATIONS

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 alongshore cultural features ✓

PHYSICAL FEATURES

20. Water features ✓ 21. Natural ground cover Tundra ✓ ~~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. Raymond 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.

Compiler _____ Supervisor _____

43. Remarks:

M-2623-12

Review Report
Planimetric Maps, T-9371 thru T-9375
22 September 1953

61. General.-This group of maps falls within an area of increasing elevation, from north to south, attaining an altitude of approximately 200 feet in T-9374 and T-9375. Because of the increased gradient and of the rock structure, the "wet tundra" is not only low, flat, and basin-shaped patches, but also areas on top of the divides and of soil flow extensions down-slope which have a similar appearance on the photographs to marsh areas in a more temperate climate.

In T-9373 rock outcrops are visible in the high banks of the larger streams; and in T-9375 regional structure is displayed by a series of concentric ridges. These ridges define drainage and soil flow pattern, and give indication of the hilly topography farther inland.

The area seems underlain by alternating hard and soft formations. The gently-sloping harder formations support a drainage system which is in harmony with slope and structure; the wide bands of flat softer formations beat numerous lakes and the familiar partially filled or partially drained ponds or "wet tundra".

62. Comparison with Registered Surveys.-No earlier surveys of this area have been made.

63. Comparison with Maps of Other Agencies.-

USGS Point Lay, Alas. (Recon.) 1:250,000, 1951, Astronomical Datum.

The general shapes of shoreline, drainage and large ponds are similar, but the small scale of the quadrangle precludes a detailed comparison.

64. Comparison with Contemporary Hydrographic Surveys.-

T-9372 and T-9374 are inland surveys to which hydrography does not apply.

H-7755 1:40,000, 1949-50 Kukpowruk Pass - Neakok Pass

The shoreline of the offshore bar was already applied from T-9371, T-9373, and T-9375.

Changes during review:

T-9371: No change to shoreline, but the approximate MLW line (or extent of mud flats) were added because the photographs were taken when the water was low and the line was prominently displayed, for the most part.

839
BHC

T-9373: The lagoon-side shoreline of the bar has been revised from triangulation station JONAH to Topographic station WIG.

Mud flat approximate MLWL have also been added to conform to the water stage of the photographs, because the pricking cards indicated "mud flats" or "tidal flats" instead of the "shallow" as on the unrevised map manuscript.

839 Additions made to H-7755 RHC

At Neakok Pass two small patches on the ocean side of the pass appear to be low-water sand islets. They have been put on the map manuscript. The 3-foot and 5-foot soundings on H-7755 fall just west of these low-water islets.

Pencil notes and lines were found on field inspection photographs 48-0-273, 274, and 278, which gave lagoon and channel depths. These notes and lines were added to the manuscript as of possible interest, inasmuch as no other hydrographic data is available for that locality

T-9375: The lagoon-side shoreline of bar from 69° 21' (vicinity of station Cot 1949) to 69° 22½' (north limit of T-9375).

839

Sirius, 1949 is plotted on ~~T~~ H-7755 two minutes west of its true position, because there was a typographic error in the original list. (see Heading 23, sub. 1 of Radial Plot Report).

Corrected RHC

H-7858 1:40,000, 1950 southern part of Kasegaluk Lagoon to Aumalik Lagoon.

The shoreline of T-9375 was already applied to H-7858. No changes were made during review.

65. Comparison with Nautical Charts.-

9400 1:1,587,870 at 70° ed. May 1947, rev. June 1952

The small scale of the chart affords little basis for comparison other than to note a general agreement.

66. Accuracy.-The offshore bar and a 2-mile strip of the mainland is well controlled and the shoreline and nearshore detail is as accurate as office interpretation gives. The eastern portions of T-9372, T-9374, and T-9375 are without control and can be accepted as reconnaissance mapping for interior charting.

Reviewed by:

Lena T. Stevens

Lena T. Stevens

APPROVED:

L. C. Lande
Chief, Review Branch
Div. of Photogrammetry

Max B. Ricketts
Chief, Nautical Chart Branch
Division of Charts

L. W. Swanson
Chief, Div. of Photogrammetry
2 Jan 1958

Chief, Div. of Coastal Surveys

HORIZONTAL DATUM ADJUSTMENT

CHUKCHI SEA, ALASKA

Corrections to Preliminary N.A. 1927 Datum from the various independent horizontal datums on the coast of the Arctic Ocean and Chukchi Sea in Alaska have been determined by the Division of Geodesy, being computed from field positions, allowing for closure in azimuth and length. This procedure was started at adjusted N.A. 1927 Datum stations at about the 63rd Parallel on the Canadian Boundary, following the 141st Meridian (IBC Datum) to the Arctic Ocean, thence westward through the Barter Island and Flaxman Island Datums, and southwestward through the Point Barrow 1945 Datum, to a connection with N.A. 1927 Field Datum in the area of Kotzebue Sound off Chukchi Sea. The position of the stations in this area is subject to further adjustment after more geodetic field work.

PLANIMETRIC MAPPING PROJECT

Ph-42(49)

Cape Beaufort to Atanik

T-9361 through T-9369
and
T-9371 through T-9375, T-9402 & T-9403

The correction from Point Barrow 1945 Datum to Preliminary N.A. 1927 Datum was computed for each map by miltiplying the correction in seconds to the value of one second in latitude and longitude at the latitude of the reference station of each map. This correction was recorded with the following stamp:

The difference between Pt. Barrow, 1945 Datum and preliminary N.A. 1927 Datum is Lat. plus/~~minus~~ 40 m. and Long. ~~plus~~/minus * m.

*The value of one second in meters varies from 11.030 m. (T-9402) to 10.276 m. (T-9361).

in the Descriptive Report on the first page of the data record, and on each manuscript near the title block.

See the Special Report on Corrections from the Point Barrow 1945 Datum to Preliminary N.A. 1927 Datum, filed with the completion report for Ph-42(49) for a Project Index showing the correction for each map in this project.

NAUTICAL CHARTS BRANCH

SURVEY NO. T9371-2-3-4-5

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
10/20/55	9456	J P Walker	~~Before~~ After Verification and Review Completely
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Topographic detail applied to Arctic Chart No 16 6/14/51 O.R. Wittman