9466 9467

9467

9466

Diag. Cht. No. 9400

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-28 (47) Office No. T-9466 T-9467

LOCALITY

State Alaska

General locality Kotzebue Sound

Locality Baldwin Peninsula

1948-51

CHIEF OF PARTY

A.N.Stewart, Chief of Field Party
H .A. Paton, B'more Photo. Office
~~L.J.Reed, Div. of Photo. Wash.,D.C.~~

LIBRARY & ARCHIVES

DATE June 25, 1958

8-1870-1 (1)

DATA RECORD

T-9466 and 9467

Project No. (II): Ph-28(47)

Quadrangle Name (IV): T-9466 = KOTZEBUE ASTRO AZ
T-9467 = NIMIUK POINT

Field Office (II): Portland, Oregon

Chief of Party: A. Newton Stewart

Photogrammetric Office (III): Baltimore, Md
Washington, D.C.

Officer-in-Charge: Radial Plot Hubert A. Paton
Compilation Louis J. Reed, Chief, Stereo-map Section

Copy filed in Division of Photogrammetry (IV)

Instructions dated (II) (III):

(II) = 21 Apr 48
(III) = 23 Oct 50

Method of Compilation (III): Reading Plotter "B"

Manuscript Scale (III): 1:20,000

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

Scale Factor (III): 1:1

Date received in Washington Office (IV): NOV 20 1952

Date reported to Nautical Chart Branch (IV): NOV 28 1952

Applied to Chart No.

Date:

Date registered (IV): 23 april 1957

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): NA 1927 (Unadjusted)

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):

Lat.:

Long.:

Adjusted
~~Unadjusted~~

Plane Coordinates (IV):

State:

Zone:

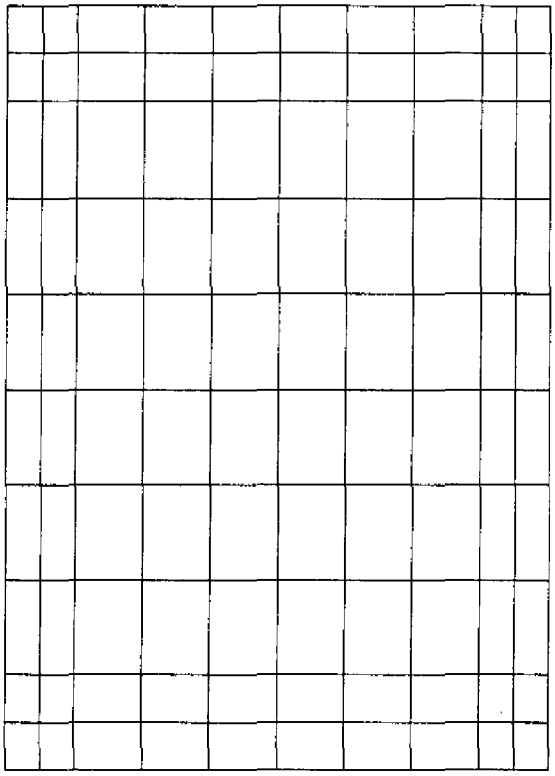
Y=

X=

MILITARY GRID: UTM Zone 3, 2500 meter intervals.

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.



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

100% compiled on the Reading Plotter
model "B" by the team of

Louis Levin and
Arthur B. Zimmerli

DATA RECORD

Field Inspection by (II): A. Newton Stewart Date: 1948

Planetable contouring by (II): None Date:

Completion Surveys by (II): None Date:

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

MHWL on these quads is dated 1948. It was compiled on the Reading Plotter model "B" using the 1948field inspection shoreline on photographs as a guide during delineation on the instrument.

Projection and Grids ruled by (IV): Jack Allen on the Ruling Mach. Date: 27 S ep 51

Projection and Grids checked by (IV): Howard D. Wolfe Date: 3 Oct 51

Control plotted by (III): Ruth Hartley Date: 1 Nov 51

Control checked by (III): Gilbert B. Torbert Date: 10 Dec 51

Radial Plot ~~MSStereoscopic~~ Control extension by (III): Gilbert B. Torbert Date: 14 Dec 51

Verified by Frank J. Tarcza

Stereoscopic Instrument compilation (III): Planimetry and Contours Louis Levin and Arthur B. Zimmerli Date: 3 Jun 52.

Manuscript delineated by (III): A rthur B. Zimmerli and John B. McDonald Date: 6 Nov 52

Photogrammetric Office Review by (III): Louis J. Reed Date: 19 Nov 52

Elevations on Manuscript checked by (II) (III): Louis J. Reed Date: 19 Nov 52

Camera (kind or source) (III): USC&GS 9-lens camera, Model "B", f = 8.25 inches

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
33923-8		14:46-52		
33938-9	27 Jun 51	15:08-09	20,000	no appreciable tide ~~No tide~~
33944-8		15:17-21		

Note: Mr. Disney of Tides and Currents states (7 May 1951) that for all practical purposes no tide exists in this area.
L.J.R.

Tide (III)

Reference Station: ~~Icy Cape~~
Subordinate Station:
Subordinate Station:

Ratio of Ranges	Mean Range	~~Spring~~ diurnal Range
		~~.6~~

Washington Office Review by (IV): Date:

Final Drafting by (IV): 9467 J.H. FRAZIER Date: August 26, 55
9466 P. Tech December 1955

Drafting verified for reproduction by (IV): Date:

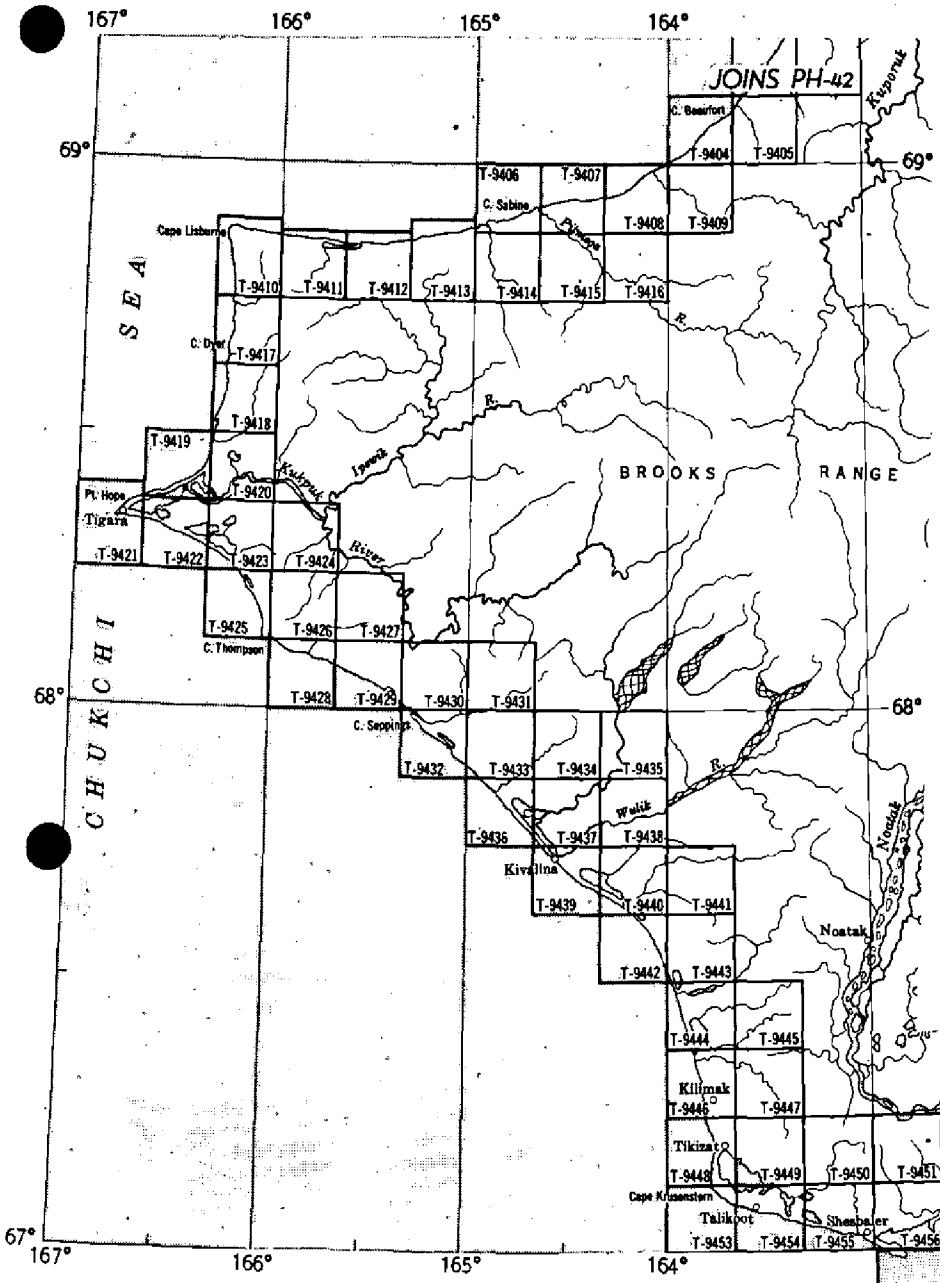
Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): T-9466 = 53 sq mi; T-9467 = 49 sq mi
Shoreline (More than 200 meters to opposite shore) (III): 9 mi and 12 mi
Shoreline (Less than 200 meters to opposite shore) (III): none
Control Leveling - Miles (II): None
Number of Triangulation Stations searched for (II): Recovered: Identified: 2
Number of BMs searched for (II): None Recovered: Identified:
Number of Recoverable Photo Stations established (III): 5
Number of Temporary Photo Hydro Stations established (III): 5

Remarks:

TOPOGRAPHIC MAPPING PROJECT PH-28

ALASKA, Chukchi Sea, Kiwalik to C. Beaufort



OFFICIAL MILEAGE FOR COST ACCOI

Sheet No's.	Sq. St. Miles	Sheet No's.	Sq. St. Miles	Sheet No's.
T-9404	28	T-9434	21	T-9466.
T-9405	66	T-9435	1	T-9467.
T-9406	14	T-9436	23	T-9468.
T-9407	33	T-9437	74	T-9469.
T-9408	53	T-9438	50	T-9470.
T-9409	68	T-9439	36	T-9471.
T-9410	52	T-9440	68	T-9472.
T-9411	66	T-9441	41	T-9473.
T-9412	63	T-9442	11	T-9474.
T-9413	72	T-9443	73	T-9475.
T-9414	75	T-9444	46	T-9476.
T-9415	68	T-9445	40	T-9477.
T-9416	55	T-9446	30	T-9478.
T-9417	53	T-9447	75	T-9479.
T-9418	64	T-9448	11	T-9480.
T-9419	8	T-9449	66	T-9481.
T-9420	70	T-9450	78	T-9482.
T-9421	3	T-9451	75	T-9483.
T-9422	21	T-9452	60	T-9484.
T-9423	56	T-9453	2	T-9485.
T-9424	61	T-9454	25	T-9486.
T-9425	15	T-9455	50	T-9487.
T-9426	74	T-9456	54	T-9488.
T-9427	67	T-9457	77	T-9489.
T-9428	11	T-9458	59	T-9490.
T-9429	40	T-9459	66	T-9491.
T-9430	74	T-9460	69	T-9492.
T-9431	26	T-9461	1	T-9493.
T-9432	28	T-9462	31	T-9494.
T-9433	60	T-9463	1	T-9495.
		T-9464	15	T-9496.
		T-9465	60	TOTA

Compiled at 1:20,000 scale, from 1:20,000 scale nine-lens photographs taken July, 1950 and June, 1951. For additional nine-lens photography refer to: Air-photo Index A-38 (1:20,000 scale, taken September 1947) Air-photo Index B-3 (1:28,000 scale taken Sept. 1947) Air-photo Index B-13 (1:20,000 scale, taken September 1947 and August 1948)

For single-lens photography on which some field work was done refer to: Air-photo Index A-11 (1:27,500 scale, taken August 1948) Air-photo Index A-23 (1:27,500 scale, taken August, 1948, and 1:40,000 scale, August, 1950) Air-photo Index A-24 (1:27,500 scale, August, 1948) Air-photo Index A-36 (1:40,000 scale, August, 1950)

For photography of other agencies on which some field work was done refer to: Alaskan WAC 64 Index (1949 Naval Petroleum Reserve photography, scale 1:20,000 and 1946 Air-Force TRI-MET photography, scale 1:24,000)

Summary to Accompany T-9466 and T-9467

Ph-28(47) covers the eastern shore of the Chukchi Sea in Alaska and runs from Candle on the Kiwalik River on the south to Cape Beaufort to the north.

~~Seventy-three of the quadrangles (T-9402 to T-9374) of~~ This project ~~are~~ consists of 94 topographic surveys ~~and twenty-two~~ (T-9402 to T-9342 ~~are planimetric~~ and T-9436 through T-9496).

T-9466 and T-9467 are topographic surveys extending from Kotzebue Sound across the Baldwin Peninsula near its northern portion to Hotham Inlet.

Each map manuscript consists of one sheet, 7½-minutes in latitude and 20 minutes in longitude, at a scale of 1:20,000, with a contour interval of 50 feet. A cloth-backed lithographic print of each map at the compilation scale will be registered with the descriptive report in the Bureau Archives.

FIELD INSPECTION REPORT

2-20:

See separate report entitled:

PROJECT REPORT

AERIAL PHOTOGRAPH CONTROL AND INSPECTION

KOTZEBUE SOUND, ALASKA

Project Ph-28(47) July to Sept 1948

A. Newton Stewart, Chief of Party

PHOTOGRAMMETRIC PLOT REPORT

PROJECT PH-28(47)

Surveys T-9462, T-9463, T-9466, T-9467
T-9470, T-9471, T-9475

21. AREA COVERED

This radial plot covers the areas of Surveys T-9462, T-9463, T-9466, T-9467, T-9470, T-9471 and T-9475. These are topographic surveys situated on the northern half of Baldwin Peninsula, Kotzebue Sound, Alaska.

22. METHOD-RADIAL PLOT

Map Manuscripts

Vinylite sheets with polyconic projections in black and Universal Transverse Mercator grids in red, at a scale of 1:20,000, were furnished by the Washington Office. No base sheets were required.

All control stations and substitute stations were plotted using beam compass and meter bar.

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

Photographs

All photographs used are nine lens metal mounted photographs at a scale of 1:20,000. Twenty-two (22) photographs were used in this radial plot numbering as follows:

33923 thru 33931 incl.
33937 thru 33949 incl.

The symbols used on the photographs were given in special instructions for all radial plots using nine lens photographs which will be used later with a Reading Plotter.

Templets

Vinylite templets were made from all photographs using a master templet furnished by the Washington Office to adjust for error due to chamber displacements. Radial lines were scratched on the templets with a sharp needle point and the scratches filled in with china marking pencils. Red pencil was used for all shoreline (rectification) pass points and black pencil was used for all other radial lines.

Closure and Adjustments to Control

The radial plot was constructed directly on the map manuscripts. A preliminary plot was constructed to determine whether there were any badly tilted photographs. The amount of tilt can be estimated by observing the displacements of the image points, indicated by red dots on the templets, of shoreline points and points of known elevations. Five of the photographs were found to be slightly tilted but not enough to seriously affect the plot.

The final plot was started at the northern edge of Baldwin Peninsula where the only fix was available and extended southeasterly holding all control points.

Transfer of points

The positions of all centers, pass points and control stations were pricked on the top templets and circled with 3 mm blue circles. The positions were established on the remaining templets and map manuscripts by drilling down through them with a small (.01 inch) jeweler's drill. All points were circled on each templet as it was removed and on the map manuscript.

23. ADEQUACY OF CONTROL

There was adequate control for a satisfactory plot. It is believed all points are within the desired accuracy. However, one additional control station in the center of the peninsula, where it was necessary to bridge three flights and tie into a single control station at the end of each flight, would have considerably strengthened the plot. BLOSSOM, 1949, was pricked direct and held. There was a discrepancy between the computed substitute point and CAPE BLOSSOM LIGHT, 1949

24. SUPPLEMENTARY CONTROL

No graphic control surveys were used in this radial plot.

25. PHOTOGRAPHY

Photographic coverage, definition, and overlap between flights were adequate. Photographs 33923, 33937, 33943 were tilted. These photographs are at the beginning of the three flights and do not affect the plot.

26. VERTICAL CONTROL

There were several discrepancies noted during the computations of elevations following the establishment of their position in the radial plot. The horizontal angles, observed for identification purposes in the field were set with a steel protractor on the manuscripts to verify the identification. The following discrepancies were noted:

V 1128-V1128 A, V1146-V1146A, (Survey T-9471); V1147-V1147A (Survey T-9467)- it was noted that the angle to the nearest point to the observing stations had the smaller vertical angle as recorded. It is believed these angles were reversed and the elevations were computed with the angles reversed. A good check was obtained at each lake.

V 1116-V 1116A (Survey T-9466). These water surface points, although they agree within .10 meter were computed to be 31 meters below sea level. It is believed a wrong angle was observed by the field party. This elevation should be rejected.

V1121-V1121A (Survey T-9467). The elevations of these two points on the same lake did not agree by 2.3 meters. A check of the horizontal angles revealed a similar point of land in the lake could have been the point observed on at V1121A. It is believed this is a case of misidentification. The new point was pricked and computed and checked within .60 meter.

V1123-V1123A (Survey T-9462). The elevations of these two points on the same lake did not agree by 1.2 meters. It is believed to be a case of misidentification. A check of the horizontal angle revealed a similar point of land in the lake could have been the point observed on at V-1123A. The new point was pricked and computed and checked within .02 meter.

27. CAPE BLOSSOM LIGHT

The light was used as a substitute point for station BLOSSOM, 1949. The computed position of the Sub. Pt. did not agree with the geographic position by about 4 meters.

Further investigation revealed an apparent error in the field position furnished on Pg. 12 G-8695. The distance to BLOSSOM is given as 5.1 meters. The distance computed from the two geographic positions furnished is 1.1 meters.

Respectfully submitted

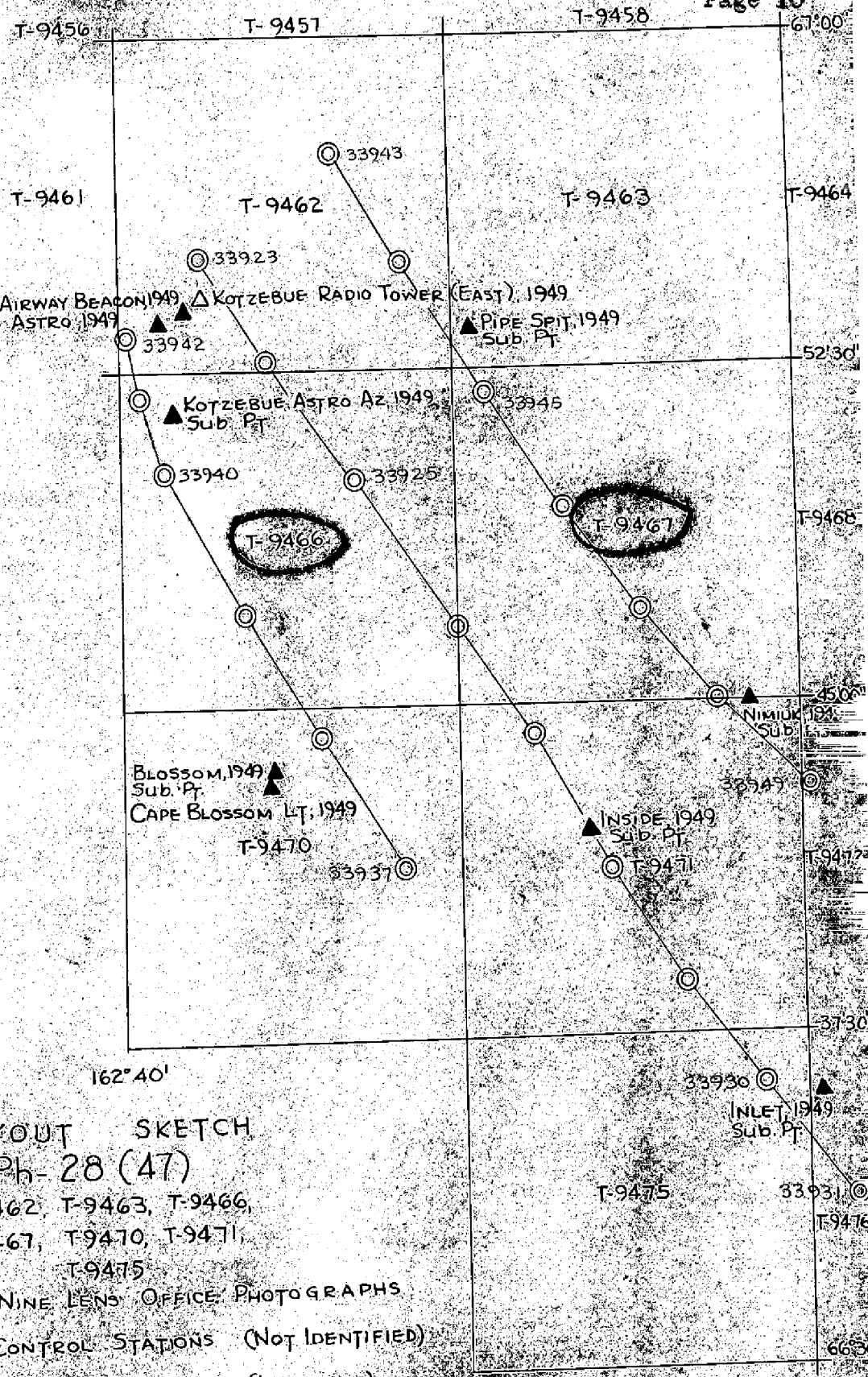
Grover B. Torbert

Grover B. Torbert
Carto. Photo. Aid

Approved and forwarded

Hubert A. Paton

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



LAYOUT SKETCH

Ph-28 (47)

T-9462, T-9463, T-9466,
T-9467, T-9470, T-9471,
T-9475

◎ NINE LENS OFFICE PHOTOGRAPHS

△ CONTROL STATIONS (NOT IDENTIFIED)

▲ CONTROL STATIONS (IDENTIFIED)

COMPILATION REPORT

31. Delineation:

The complete area of the two quads of this report was delineated on the Reading Plotter, model "B", contours and cultural features being delineated simultaneously.

32. Control:

Horizontal control was adequate; refer to side-heading 23 on page 8 of this report.

The vertical control was also adequate. Note in side-heading 26, page 8, that several discrepancies were found during elevation computation following the laying of the radial plot. During instrument delineation V-1117 and V-1147 were found to be in agreement and were held to, both on T-9467. However, both V-stations on T-9466 were found ~~to~~ not to agree and the computed elevations have been discarded for instrument elevations; V-1116 was found to be off as discovered and reported in side-heading 26, and V-1122 was found to be so low as to cause a nearby sea-level stream to flow uphill. A flight of photos falling down along the backbone of the Baldwin Peninsula, and reaching both shores, made rectification and contouring possible by using a combination of sea-level shoreline points, sea-level stream points, and field established elevation points. Another field elevation point on T-9467 was found in error during instrument work, and discarded. It was V-162 which was described as being on the top of a ridge, but which fell off on the side instead. If properly identified and positioned, the correct distance would no doubt have produced a correct elevation value for it.

33. Supplemental Data:

a. Elevation Computations: One bound volume covering the area of Plot "F" entitled: "TABULATION OF ELEVATIONS AND COMPUTATIONS OF ELEVATIONS BY MAP MANUSCRIPTS FOR VERTICAL CONTROL STATIONS IN THE AREA OF MAP MANUSCRIPTS T-9462, T-9463, T-9466, T-9467, T-9470, T-9471, T-9475"

b. Field Inspection Photographs: 20568, 815, 816, 817, 898, 899.

34. Contours and Drainage:

Photographic quality was good and no areas of questionable contours exist.

35. Shoreline and Alongshore Details:

~~Shoreline~~ There ~~inspection~~ was a minimum of shoreline inspection, ~~but~~ It was all that was necessary because the shore was very similar thruout. No low-water or shoal lines were indicated, field or office.

36. Offshore Details: Not applicable.

37. Landmarks and Aids: None recommended - None exist.

38. Control For Future Surveys:

Five hydro and five topo stations were located by the radial plot, either directly or by the sub-point method, as follows:

T-9466 = GORE, 1948; DEEP, 1948; 757, 757A, 758, 759, 760.

T-9467 = BALE, 1948; BARK, 1948; ADAR, 1948; no hydro.

39. Junctions: Refer to page 10; all are in agreement.

40. Horizontal and Vertical Accuracy:

Horizontal accuracy is considered to meet the requirements for a 20,000 scale compilation, and the vertical accuracy meets the standards for 50ft contouring. The area of these quads is so low that supplemental (25ft) contours have been delineated thruout, but the accuracy of the map is still based on the 50ft interval even though All the contours are thought to meet 25ft accuracy.

46. Comparison with Existing Maps: The following map is so much smaller in scale that no reasonable comparison can be made: "KOTZEBUE, Alaska, Alaska Reconnaissance Topographic Series, Second Judicial Division, USGS, 1:250,000, 1951 ed."

47. Comparison with Nautical Charts: The chart listed below is the only one covering the area of this compilation but it is so much smaller in scale that no comparison has been made:
"ARCTIC COAST, Alaska, No 9400, 1:1,587,870, May 1946, 6th edition, last correction date of 27 Nov 1950.

48. Geographic Name List: See separate numbered page.

49. Notes for the Hydrographer: See separate unnumbered page.

50. Compilation Office Review: See page 14, following.

Submitted by:

Orvis N. Dalbey

Orvis N. Dalbey,
Cartographer-Photogrammetric

Approved by:

Louis J. Reed

Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

49. Notes for the Hydrographer:

T-9466

a. Topo Stations:

DEEP, 1948 -- identified on photo 20899 -- see 524 card
GORE, 1948 -- identified on photo 20900 -- see 524 card

b. Hydro Stations:

No 757 -- identified on photo 20900 and described there as:"NW gable small red house, with another house in poor repair just NE of it."

No 757A - identified and described on photo 20900 as: "W gable of small house in ruins with E end sunk in ground up to eaves and W gable 9ft above surface of ground."

No 758 -- identified and described on photo 20900 as: "S tip of the top of a sharp bluff on the N side of a large gully that runs at an angle to the shoreline."

No 759 -- identified and described on photo 20900 as: "Center of the top of three bare bluffs on the E side of the mouth of a stream."

No 760 -- identified and described on photo 20898 as: "NW tip of small pond in the mouth of gully that runs in NE'ly direction."

T-9467

a. Topo Stations:

ADAR, 1948 -- identified on photo 20815 -- see 524 card
BALE, 1948 -- identified on photo 20816 -- see 524 card
BARK, 1948 -- identified on photo 20816 -- see 524 card

b. Hydro Stations: None (Hotham Inlet side of Peninsula).

GEOGRAPHIC NAMES

Survey No.

T-9466 & T-9467

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
T-9466										1
BALDWIN PENINSULA										2
KOTZEBUE SOUND										3
										4
										5
										6
										7
										8
T-9467										9
BALDWIN PENINSULA										10
HOTHAM INLET										11
NIMIUK POINT										12
					Names approved 10-6-53		L. Heck			13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T-9466 & 67

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 N
9. Plotting of sextant fixes N 10. Photogrammetric plot report ✓ 11. Detail points N

✓ = checked
N = non-existent

ALONGSHORE AREAS
(Nautical Chart Data)

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary lines N 32. Public land lines N

MISCELLANEOUS

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

Reviewer

Supervisor, Review Section or Unit

Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

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 T-9466 and T-9467
Topographic Maps
6 October 1953

62. Comparison with Registered Topographic Surveys.- None

63. Comparison with Maps of other Agencies.-

USGS Alaska Map, Kotzebue 1:250,000 1951 edition

Comparison not feasible due to great difference in scale.

64. Comparison with Contemporary Hydrographic Surveys.-None

65. Comparison with Nautical Charts.-

9400	1:1,587,870	June 1952
9402	1:750,000	May 1950

Scale difference precludes a satisfactory comparison.

66. Adequacy of Results and Future Surveys.-These maps comply with project instructions and are adequate as bases for hydrographic surveys and the construction of nautical charts.

Reviewed by:

B. J. Colner

B. J. Colner

APPROVED

L C Lande

Chief, Review Branch
Div. of Photogrammetry

Max Ricketts

Chief, Nautical Chart Branch
Division of Charts

Chief, Div. of Photogrammetry

Chief, Div. of Coastal Surveys