9468 9469

9468 • 9469 • 9468 • 9469

Diag. Cht. No. 9400. ORIGINAL.

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-9468 T-9469

LOCALITY

State: Alaska

General locality: Kotzebue Sound

Locality: Kobuk River Delta

1948

CHIEF OF PARTY

A.Newton Stewart, Chief of Field Party
Hubert A.Paton, Chief, B'more Photo Office
Div of Photogrammetry, Washington, D.C.

8-1870-1 (1)

DATA RECORD

T-9468 and T-9469

Project No. (II): Ph-28(47) Quadrangle Name (IV): T-9468 = RILEY CHANNEL MOUTH
T-9469 = UPPER RILEY CHANNEL

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, Chief.
Compilation Louis J.Reed, Chief,
Stereo-map Section

Instructions dated (II) (III):

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

Copy filed in Division of Photogrammetry (IV)

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): DEC 1 1952 Date reported to Nautical Chart Branch (IV): DEC - 8 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:

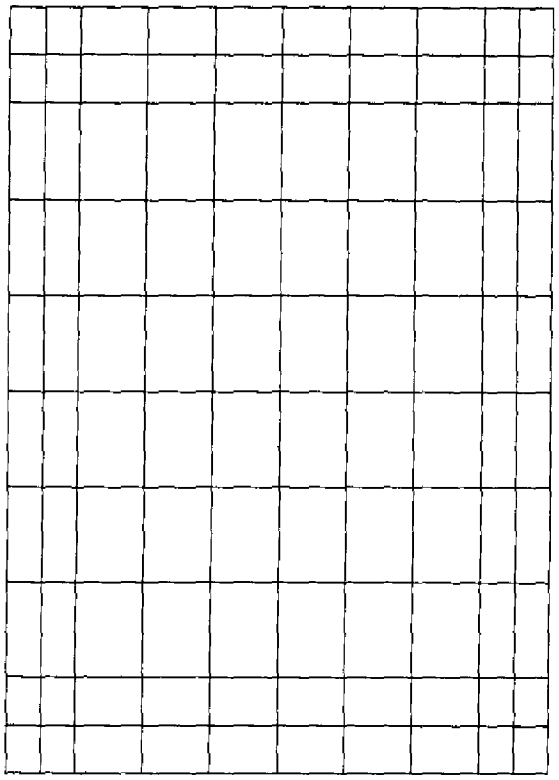
Y= X=

MILITARY GRID: UTM Zone 4, 2500 meter interval.

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)

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 two quads is dated 1948 because they were compiled using 1948 field location on photographs. However, it was compiled using 1951 photographs and therfore could be considered as a 1951 MHWL for all practical purposes.

Projection and Grids ruled by (IV): Jack Allen on the ruling Mach. Date: 2 Oct 51

Projection and Grids checked by (IV): Howard D. Wolfe Date: 5 Oct 51

Control plotted by (III): Ruth Hartley Date: 2 Nov 51

Control checked by (III): Frank J. Tarcza Date: 14 Feb 52

Radial Plot ~~Radial Plot or Stereoscopic~~ Control extension by (III): Gilbert B.Tarbert Date: 25 Apr 52

Stereoscopic Instrument ~~compilation~~ delineation (III): Planimetry and Contours Louis Levin and Arthur B. Zimmerli Date: 17 Jun 52 Date:

Manuscript ~~delineated~~ compiled by (III): Robert L. Sugden Date: 22 Oct 52

Photogrammetric Office Review by (III): Louis J. Reed Date: 1 Dec 52

Elevations on Manuscript checked by (II) (III): Louis J. Reed Date: 1 Dec 52

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

Instrument PHOTOGRAPHS (III) Number	Date	Time	Scale	Stage of Tide
33979-82	27 Jun 51	1354 through 1358	20,000	appreciable
33887-90		1403 through 1406		No tide

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)

diurnal

Ratio of Ranges	Mean Range	Spring Range
		.6

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

Washington Office Review by (IV): BERNARD J. COLNER Date: 10-21-53

Final Drafting by (IV): F. Johnson T-9468 Date: 8-24-55
P. Lach T-9469 10-5-55

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

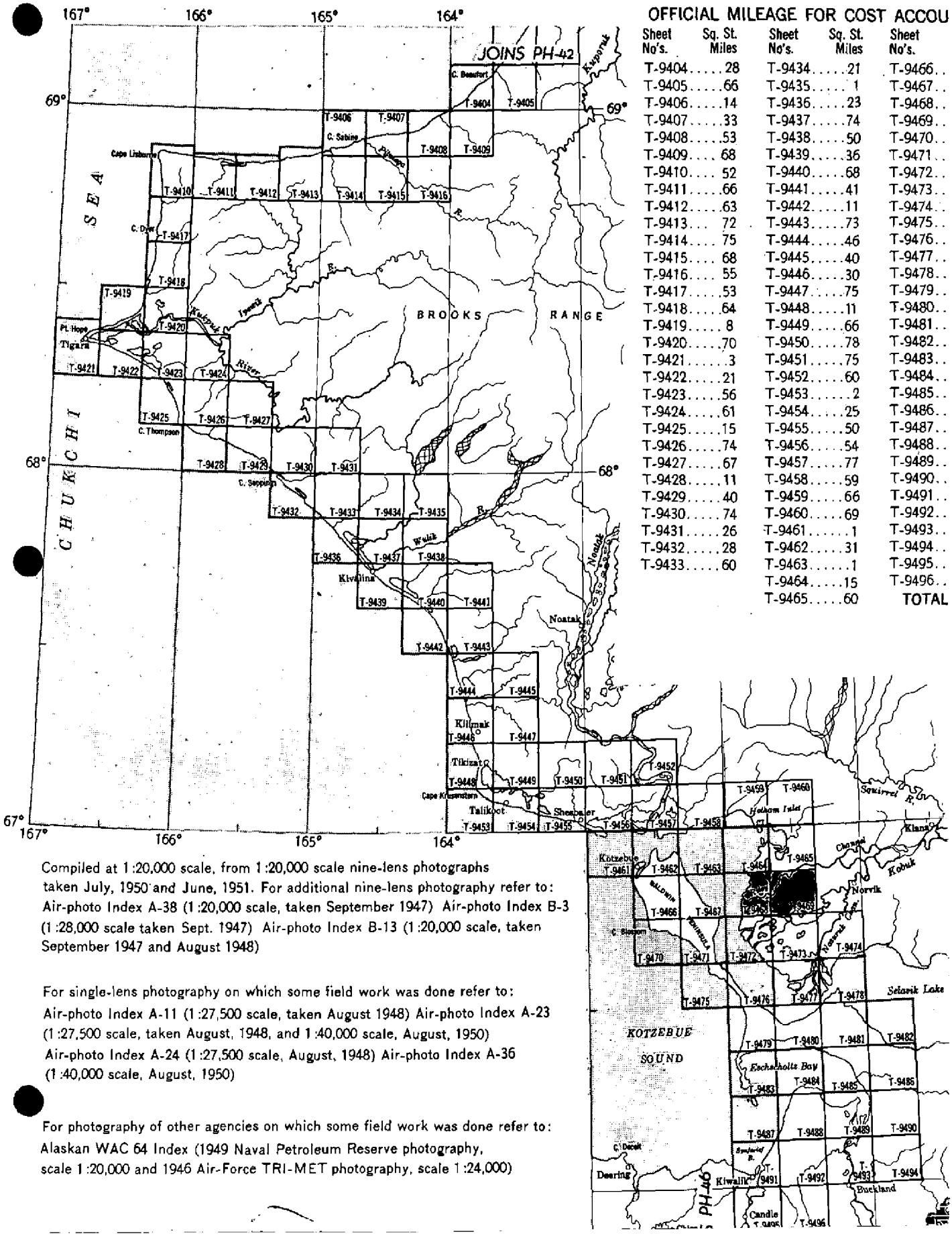
Land Area (Sq. Statute Miles) (III): T-9468 = 41 sq mi; T-9469 = 79 sq mi
Shoreline (More than 200 meters to opposite shore) (III): 14 and 2 miles
Shoreline (Less than 200 meters to opposite shore) (III): 47 and 177 miles
Control Leveling - Miles (II): none
Number of Triangulation Stations searched for (II): Recovered: Identified: ~~3~~ three
Number of BMs searched for (II): none Recovered: Identified:
Number of Recoverable Photo Stations established (III): one
Number of Temporary Photo Hydro Stations established (III): none

Remarks:

M-2618-12(4)

TOPOGRAPHIC MAPPING PROJECT PH-28

ALASKA, Chukchi Sea, Kiwalik to C. Beaufort



OFFICIAL MILEAGE FOR COST ACCOU

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	TOTAL

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-9468 and T-9469

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 9474) of~~ This project consists of 94 ~~are~~ topographic surveys and twenty-two (T-9402 to 9434 and T-9436 through T-9496).

T-9468 and T-9469 are topographic surveys of the area containing the upper portion of the Riley Channel and the mouth of Riley Channel where it flows into 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-9464, T-9465, T-9468, T-9469,
T-9472, T-9473, T-9474.

21. AREA COVERED

This radial plot covers the areas of surveys T-9464, T-9465, T-9468, T-9469, T-9472, T-9473, and T-9474. These are topographic surveys situated at the mouth of the Kobuk River, Hotham Inlet, 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 the beam compass and the 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. Forty-eight (48) photographs were used in this radial plot numbering as follows:

27585 thru 27587
33844 thru 33847
33855 thru 33861
33882 thru 33892
33896 thru 33904
33975 thru 33983
33986 thru 33990

The symbols used on the photograhs 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 displacement. Radial lines were scratched on the templets with a sharp needle point and the scratches were filled in with china marking pencil. Red pencil was used for all shoreline (rectification) pass points and black pencil was used for all other radial lines.

Closure and Adjustment 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 displacement of the image points indicated by red dots on the templets, of shoreline points and points of known elevations. Three (3) of the photographs were found to be slightly tilted but not enough to seriously affect the plot.

The final plot was started at the north end of this area where points had been established in a previous radial plot, making this merely an extension of the first plot. This plot was then extended southerly to a fix on photograph 33980. There was only one other fix in the plot, on photograph 33884. This fix fell on another flight to the east and considerable adjustment had to be made in order to tie the flight of photographs between these two fixes and still obtain a satisfactory plot.

Due to the scarcity of control, all control stations were held in the plot. This may be the reason why so much adjustment was necessary between the flights.

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 then established on the remaining templets and the 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 to the east of Station RILEY, 1949, would have provided a fix for the end of three flights. This additional station would have greatly strengthened the plot in this area.

The positions for stations ~~DASH, 1948,~~ EDGE, 1948, and MOUTH, 1948, were established using CAPE BLOSSOM LIGHT, 1949 as an azimuth. Since there is some question as to the correct position of this LIGHT, a letter was written to the Washington Office requesting a check on the computations of these stations. A copy of this letter is attached to this report.

24. SUPPLEMENTARY CONTROL

No graphic control surveys were used in this radial plot.

25. PHOTOGRAPHY

Photographic coverage, definition, and overlap between flights were adequate.

No tilt determination was made but at least three photographs showed evidence of tilt, Nos. 33858, 33896, 33980. These photographs had no serious effect on the plot.

26. VERTICAL CONTROL

There were two 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 protractor on the manuscripts to verify the identification. The following discrepancies were noted:

V-1120 and V-1120-A - These two points are on the same lake. The elevations did not agree by 4.0 meters. Since this point is on a lake in the Kobuk Delta the elevation can safely be assumed to be near zero. The computation for V-1120 was rejected.

V-1115 and V-1115-A; these water surface points do not agree by 2 meters; they were computed to be 4.5 meters below sea level. It is believed a wrong angle was observed by the field party. Since this lake is in the Kobuk Delta the elevation can safely be assumed to be near zero. Therefore, this elevation was rejected.

Respectfully submitted

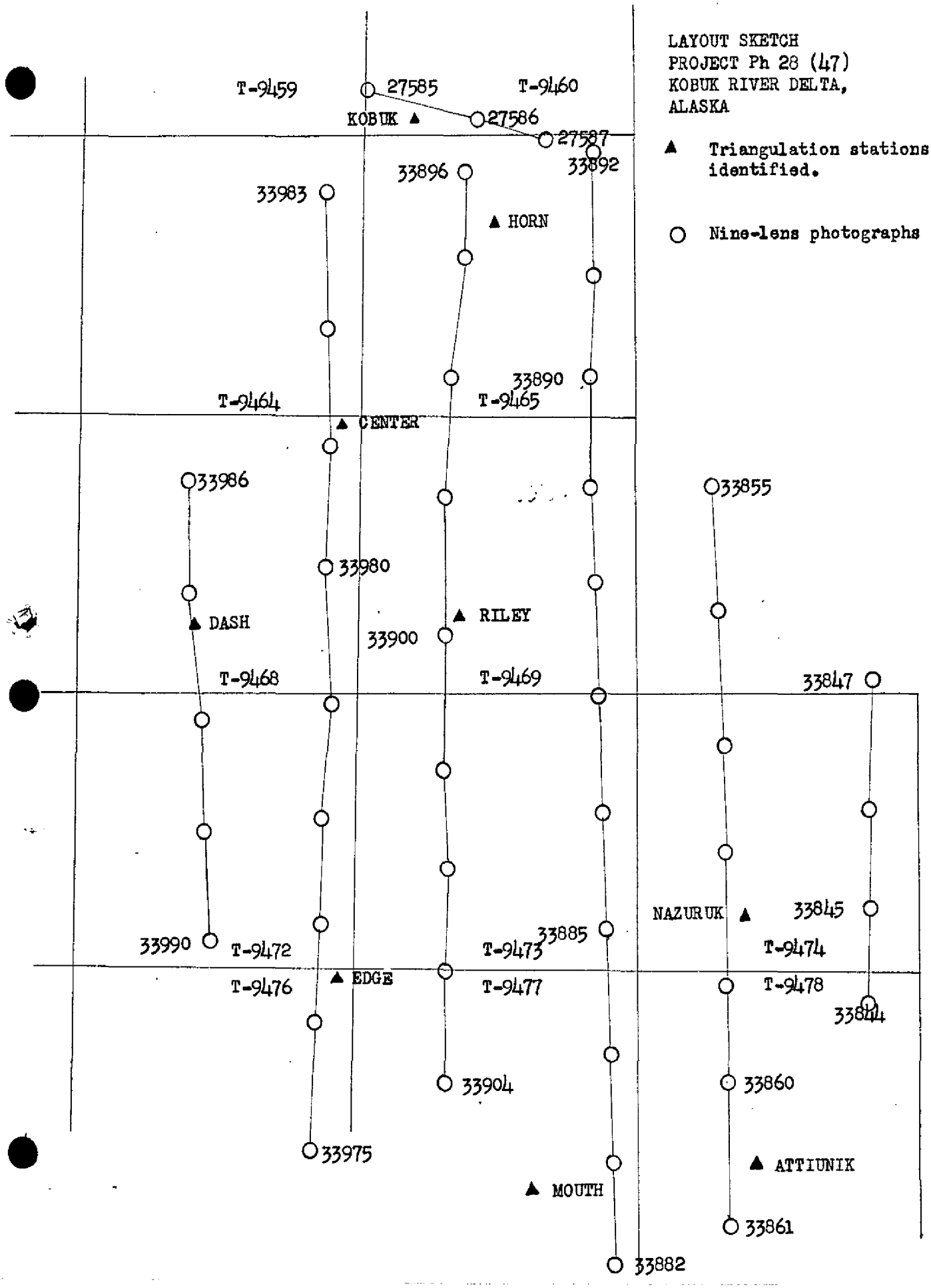
Grover B. Torbert

Grover B. Torbert
Carto. Photo. Aid

Approved and forwarded
28 April 1952

Hubert A. Paton

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


LAYOUT SKETCH
PROJECT Ph 28 (47)
KOBUK RIVER DELTA,
ALASKA
▲ Triangulation stations identified.
○ Nine-lens photographs
T-9459
27585
T-9460
KOBUK ▲
27586
27587
33892
33896
33983
▲ HORN
33890
T-9464
T-9465
▲ CENTER
33986
33855
33980
▲ DASH
▲ RILEY
33900
T-9468
T-9469
33847
33990
T-9472
T-9473
33885
NAZURUK ▲
33845
T-9474
T-9476
▲ EDGE
T-9477
T-9478
33844
33904
33860
33975
▲ ATTIUNIK
▲ MOUTH
33861
33882

COMPILATION REPORT

31. Delineation:

Contours and cultural features were delineated simultaneously on the Reading Plotter, model "B". The total land area of both quads has been mapped.

32. Control:

Adequate horizontal control existed for a satisfactory radial plot of an area including the area of the two quads of this report. For details, see side-heading 23, page 9.

Vertical control was more than adequate thruout the area; rivers with sea-level shoreline meander from end to end of it. In addition, three V-stations were established by the field party, located and an elevation computed for each of them during radial plot, V-1114 on T-9468, and V-1115 and V-1119 on T-9469. V-1115 was rejected; see page 10.

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, and T-9475."

b. Field Inspection Photos: 20690, 20691, 20851, 20852, 20853.

34. Contours and Drainage:

The photographic quality of the instrument photographs was good and no areas of questionable contours are left.

35. Shoreline and Alongshore Details:

The shoreline on Hotham Inlet, which falls only in quad T-9468, has been shown on the manuscript in proper symbol as indicated by the field inspection as definate or apparent.shoreline. Accompanying shoal lines are instrument delineated. River banks thruout the delta have been shown as shoreline also and are instrument delineated.

36. Offshore Details: None.

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

38. Control for Future Surveys:

Two topo stations were selected and photo-identified by the sub-station method in the field, and located by the radial plot; SLOP, 1948 and DASH, 1948. Both are on T-9468; none exist on T-9469. No hydro stations were field-selected; none were office selected.

39. Junctions:

Refer to diagram page 11 for junctions; all existing are in agreement having been compiled simultaneously. No quad exists to the east of T-9469, and the junction ~~with~~ between T-9468 and T-9467 is a water junction.

40. Horizontal and Vertical Accuracy:

These two 1:20,000 scale maps meet the requirements established by National Map Standards for maps of that scale. The contour interval of these maps is 50ft and the maps meet the requirements specified for such an interval, a half interval tolerance. Because the terrain of these quads is everywhere very close to sea-level datum, the 25ft supplemental contours have been compiled thruout. And even though these 25ft contours are considered to meet accuracy standards for 25ft contours, the compilations are still to be considered as 50ft maps in the interest of consistancy with the other maps of this project.

46. Comparison with Existing Maps:

No maps of comparable scale exist; the following is the only one found of the same area:

SELAWIK, Alaska, Alaska Reconnaissance Topographic Series, Second Judicial Division, USGS, 1:250,000, 1951 Ed.

47. Comparison with Nautical Charts:

The following chart is not comparable because of the great scale difference:

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 page 14, following.

49. Notes for the Hydrographer: See next page, unnumbered.

50. Compilation Office Review: See page 15, 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-9468

a. Topo Stations:

SLOP, 1948 - identified on photo 20852 - see 524 card
DASH, 1948 - identified on photo 20584 - see 524 card

b. Hydro Stations: None

T-9469

None

GEOGRAPHIC NAMES

Survey No.

T-9468 & T-9469

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	
										1
T-9468										2
HOTHAM INLET										3
RILEY CHANNEL										4
										5
										6
										7
										8
										9
										10
T-9469										11
Riley Channel										12
										13
										14
										15
										16
										17
Alaska										18
Second Judicial Division										19
Kotzebue Sound										20
										21
										22
										23
										24
										25
										26
										27

} for titles.

Names approved 10-24-53. L Heck.

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T-9468-and 9469

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 N 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 ✓ 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 ✓ 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 ✓

40. _____
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-9468 and T-9469
Topographic Maps
October 21, 1953

62. Comparison with Registered Topographic Surveys.- None

63. Comparison with Maps of Other Agencies.-

USGS Alaska Map, Selawik 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 1950
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

Chief, Review Branch
Div. of Photogrammetry

Chief, Nautical Chart Branch
Division of Charts

Chief, Div. of Photogrammetry

Chief, Div. of Coastal Surveys