9444 9445
9446 9447

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-9444 thru T-9447

LOCALITY

State Alaska

General locality Kotzebue Sound

Locality Coastal Area North of Cape Krusenstern

194 50

CHIEF OF PARTY

L.G.Taylor, Chief of Field Party
H.A.Paton, Balto. Photo. Office
~~L.J.Reed, Div. of Photo.,Wash.,D.C.~~

LIBRARY & ARCHIVES

DATE May 15, 1958

S-1870-1 (1)

9445 9447

9444 9446

DATA RECORD

T-9444 thru 9447

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

Quadrangle Name (IV):
T-9444 =KOTLIK LAGOON
T-9445 =UPPER ISINGNOK RIVER
T-9446 =TASAYCHAK LAGOON
T-9447 =UPPER KILIGMAK RIVER

Field Office (II): Kotzebue Sound, Alaska

Chief of Party: Lorne G. Taylor

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

Officer-in-Charge: Hubert A. Paton
Louis J. Reed, Chief, Stereoscopic Mapping Sec
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

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) OCT 19 1951

Date reported to Nautical Chart Branch (IV): OCT 29 1951

Applied to Chart No.

Date:

Date registered (IV): 21-June 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:

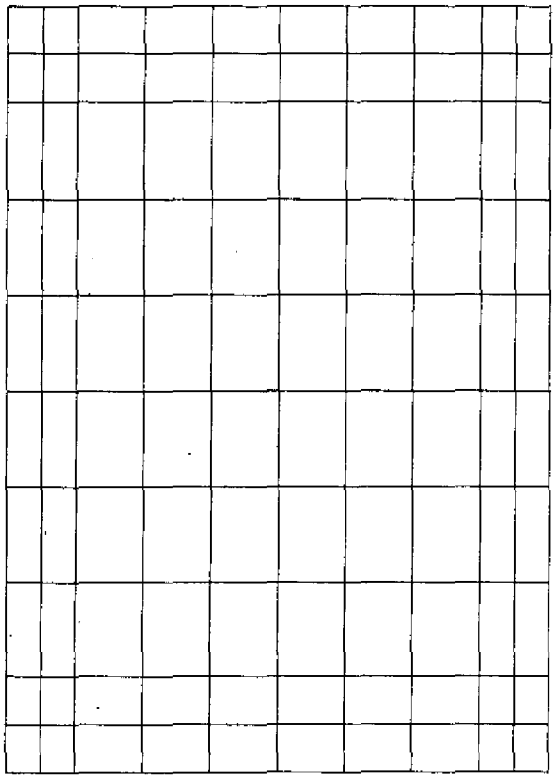
Y=

X=

MILITARY GRID = Universal Transverse Mercator, Zone No 3.

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)
(XI) (III)

100% by Louis Levin

M-2618-12(4)

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

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
27750 thru 27757	22 Jul 50	1507 - ~~10:50~~ 1514	20,000	none ~~appreciable~~ tide
27609 thru 27615		1206 - ~~12:10~~ 1213		

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

Tide (III)

	Ratio of Ranges	Mean Range	Spring Range
Reference Station: ~~Icy Cape~~			~~.6'~~
Subordinate Station:			
Subordinate Station:			

Washington Office Review by (IV): P. Lach T-9944 F. Johnson T-9945 Date: 5-22-56 9-17-56

Final Drafting by (IV): John H. Fagus T-9446 John H. Fagus T-9447 Date: April 13, 1956 " 18, 1956

Drafting verified for reproduction by (IV): W.O. Hallein Date: 7-17-56

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): See remarks below

Shoreline (More than 200 meters to opposite shore) (III): See remarks below

Shoreline (Less than 200 meters to opposite shore) (III): None

Control Leveling - Miles (II): None

Number of Triangulation Stations searched for (II): Recovered: Identified: 56

Number of BMs searched for (II): None Recovered: Identified:

Number of Recoverable Photo Stations established (III): 4

Number of Temporary Photo Hydro Stations established (III): None

Remarks:

	T-9444	T-9445	T-9446	T-9447
AREA =	46 sq mi	40 sq mi	30 sq mi	75 sq mi
Shoreline =	38 miles	none	24 miles	none

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

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
27750 thru 27757	22 Jul 50	1507 - ~~10:50~~ 1514	20,000	none appreciable tide
27609 thru 27615		1206 - ~~12:10~~ 1213		

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

Tide (III)

	Ratio of Ranges	Mean Range	Spring Range
Reference Station: ~~Icy Cape~~			~~.61~~
Subordinate Station:			
Subordinate Station:			

Washington Office Review by (IV): P. Lach T-9444 F. Johnson T-9445 Date: 5-22-56 9-17-56

Final Drafting by (IV): John H. Hayes T-9446 Date: April 13, 1956
John H. Hayes T-9447 " 18, 1956

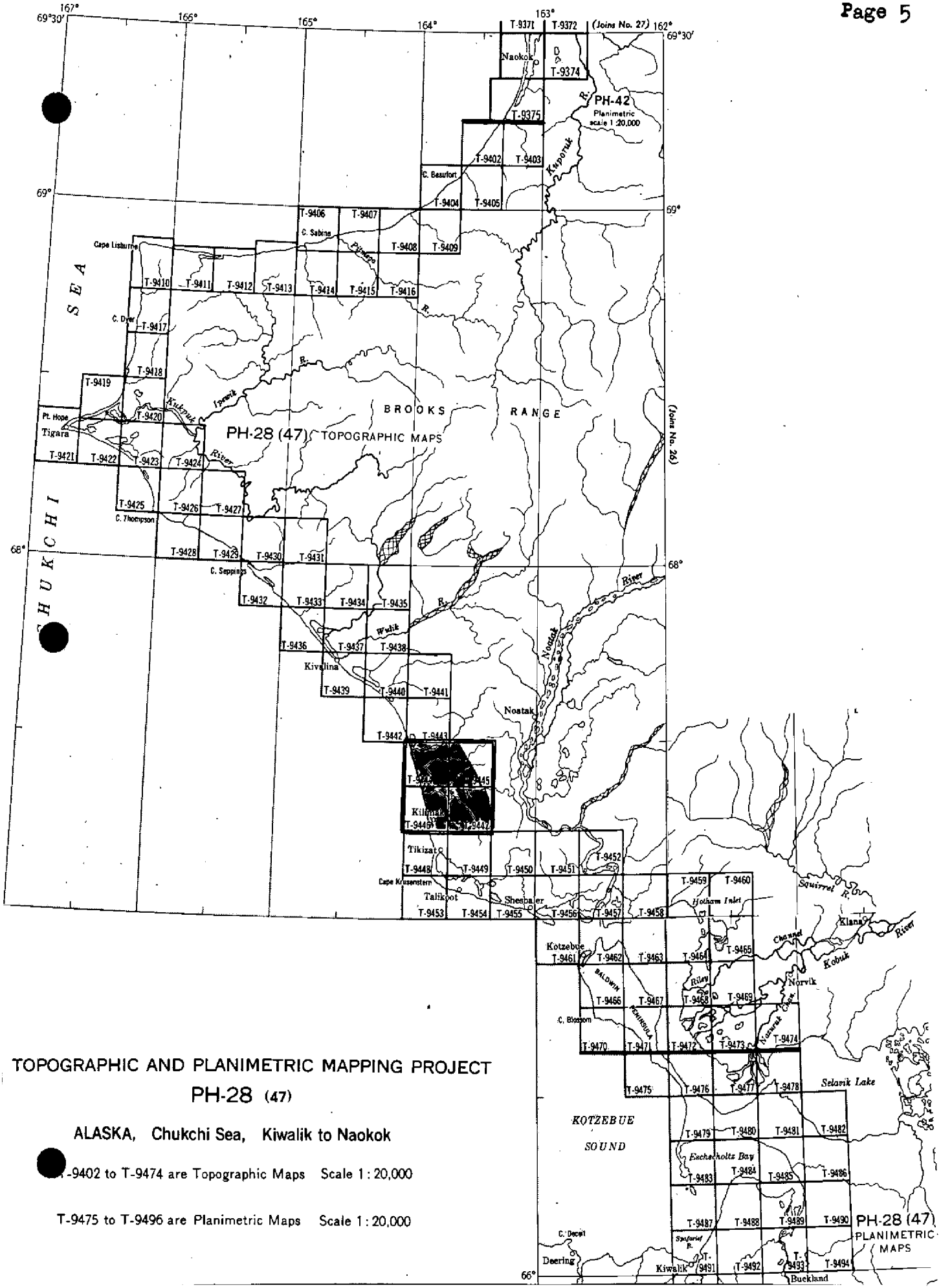
Drafting verified for reproduction by (IV): W.O. Hallin Date: 7-17-56

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): See remarks below
Shoreline (More than 200 meters to opposite shore) (III): See remarks below
Shoreline (Less than 200 meters to opposite shore) (III): None
Control Leveling - Miles (II): None
Number of Triangulation Stations searched for (II): Recovered: Identified: 56
Number of BMs searched for (II): None Recovered: Identified:
Number of Recoverable Photo Stations established (III): 4
Number of Temporary Photo Hydro Stations established (III): None

Remarks:

	T-9444	T-9445	T-9446	T-9447
AREA =	46 sq mi	40 sq mi	30 sq mi	75 sq mi
Shoreline =	38 miles	none	24 miles	none



TOPOGRAPHIC AND PLANIMETRIC MAPPING PROJECT

PH-28 (47)

ALASKA, Chukchi Sea, Kiwalik to Naokok

T-9402 to T-9474 are Topographic Maps Scale 1:20,000

T-9475 to T-9496 are Planimetric Maps Scale 1:20,000

Summary to Accompany T-9444 through T-9447

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

T-9444 through T-9447 are in about the middle of the project and contain the Isingnok and Kiligmak Rivers and the Kotlik and Tasaychek Lagoons.

These map manuscripts consist of four sheets, each $7\frac{1}{2}$ 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 reports entitled:

PROJECT REPORT

AERIAL PHOTOGRAPH CONTROL AND INSPECTION

KOTZEBUE SOUND, ALASKA

Project Ph-28(47) July to Sep 1948

A.Newton Stewart, Chief pf Party

and,

PROJECT REPORT

AERIAL PHOTOGRAPH CONTROL AND INSPECTION

CAPE KRUSENSTERN TO POINT HOPE, ALASKA

Project Ph-28(47) June to Sept 1950

Loren G.Taylor, Chief of Party

Louis J. Read, Chief
Stereoscopic Plotting
Photogrammetry

RADIAL PLOT REPORT

PROJECT Ph-28(47)

PLOT "C"

21. AREA COVERED:

This radial plot covers the areas of Surveys T-9442 thru T-9447. All are topographic surveys situated along the eastern shore of the Arctic Ocean immediately north of Cape Krusenstern.

22. METHOD-RADIAL PLOT:

Map Manuscripts

Vinylite sheets, with polyconic projections and Universal Transverse Mercator grids at a scale of 1:20,000 were furnished by the Washington Office. The radial plot was constructed on the map projection sheets serving as base sheets. It was found that the scale of the map manuscript for Survey T-9443 was too large to use in the radial plot. A new map manuscript was ruled in this office.

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

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

Photographs

All photographs used were nine-lens, metal-mounted photographs, scale 1:20,000. Twenty-five photographs were used in this radial plot. They are numbered as follows:

27602 to 27605 inclusive
27609 to 27618 inclusive
27747 to 27757 inclusive

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

Templets

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

Closure and adjustment to control

The radial plot was constructed directly on the map manuscripts. A preliminary plot was run to determine whether there were any badly tilted photographs. The relative amount of tilt was noted by observing the displacement of image points, represented by red dots on the templets, of shoreline points and points of known elevation. One photograph, No. 27609, was apparently tilted considerably but could be by-passed and was placed on top of the completed plot so that the positions of all points could be pricked and circled thereon. Photographs 27610 and 27611 were also tilted but they were used in the radial plot without any further correction.

The final plot was started at the southern end of this area where points had been established in a previous radial plot making this merely an extension of the first plot (Plot B). As the plot was extended northward it was found difficult to hold both control and pass point intersections. There appeared to be a constant shortening of scale in the plot as it was extended. This was probably due to some error in Chamber No. 8 as noted in the report for the previous radial plot. It was found necessary to permit small triangles in pass points which fall within Chamber No. 8. When this was done, a satisfactory plot was obtained holding all control stations.

Transfer of points:

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

23. ADEQUACY OF CONTROL:

Control was adequate along the shoreline. However, in interior areas, especially Surveys T-9442 and T-9445, there was no control in the eastern areas. Stations AGAROK, 1950 and THIRD, 1950 had been identified on the field photographs taken in 1947, scale 1:30,000 but do not appear on the 1950 office photographs. Since the eastern side of the easternmost flight is uncontrolled, many positions near the edge of photography are marked with green circles although they are believed to be within the desired accuracy.

All control stations were held in this radial plot.

24. SUPPLEMENTAL DATA:

No graphic control surveys were used.

25. PHOTOGRAPHY:

Photograph coverage was adequate for all of the surveys except the eastern areas of T-9442 and T-9445. The definition of the photographs was good.

No tilt determination was made but photograph No. 27609 showed evidence of tilt. However, it could be bypassed and placed on top. As noted in the report for the previous radial plot, Chamber No. 8 appears weak in most photographs and this was considered when laying the plot. This chamber has one collimation mark missing so that proper adjustment could not be made. Chamber No. 3 also has one collimation mark missing on all the photographs, but this did not seem to introduce serious errors in the radial plot.

26. VERTICAL CONTROL:

During the computations of elevations for peaks following the radial plot, several discrepancies were found. The single horizontal angles, observed for identification purposes in the field were turned with a protractor on the map manuscripts to verify the identification. The following discrepancies were found:

PEAK 556 (T-9447): - The elevation computed from TALIKOOT, 1949, did not check those from the other two stations. The observations to this peak and to PEAK 557 were found to be reversed in field observations. The vertical angle for PEAK 557 was used for computing and the elevation then checked.

PEAK 557 (T-9447): As stated above, the observations to this peak and to PEAK 556 were reversed in the field observations. The vertical angle for PEAK 556 was used for computing and the elevation then checked.

PEAK 632 (T-9447): The two observations gave elevations which did not check. The horizontal angles did not check either. The observation from V-212 was evidently to another peak about 1000 meters south of the one pricked. PEAK632 is outside the survey limits and should be disregarded as it is not suitable for vertical control.

PEAK 637 (T-9443): Although the three observations to this peak resulted in a maximum difference of elevation of only 3.4 meters, the horizontal angles did not check. They did, however, intersect 135 meters to the northeast. The west end, as described by the field party, did not appear to be the highest point of the ridge. The highest point appeared to be to the northeast, approximately where the horizontal angles intersect. The elevation of this peak may be fairly accurate because it is a flat-topped ridge.

PEAK 639 (T-9443): This peak was observed from only two stations; the field party rejected the observation from station RABBIT, 1949. The remaining elevation should be used with caution.

PEAK 641 (T-9443): - the elevation obtained from the observations at station THIRD, 1949 did not check the elevations from the other two stations. The horizontal angle from THIRD, 1949 did not check this peak and it is believed that some other peak was observed. The elevation from THIRD, 1949 has been rejected.

PEAK 644 (T-9443): The elevations from V-212, 1949 did not check the elevations from the other three stations; the horizontal angle was not to this peak but to PEAK 730. It is believed the vertical angle should also be to PEAK 730. The elevation from this station was rejected.

PEAK 645 (T-9443): The two observations gave elevations which did not check. The horizontal angle from THIRD, 1949 does not check this peak. This peak appeared on only two photographs. The elevation of this peak from THIRD, 1949, should be rejected and the elevation from IGARICH, 1950 should be used with caution.

PEAK 648 (T-9443): The three observations gave elevations which did not check. The horizontal angles checked the observation from IGARICH, 1950 only. From OELIK 1950, and KIVALINA SE 1950, it appears that PEAK 638 was mistaken for this peak. The vertical angles were used to compute peak 638 and found to be within 3.0 meters. The elevation of PEAK 648 therefore has no check and should be considered weak.

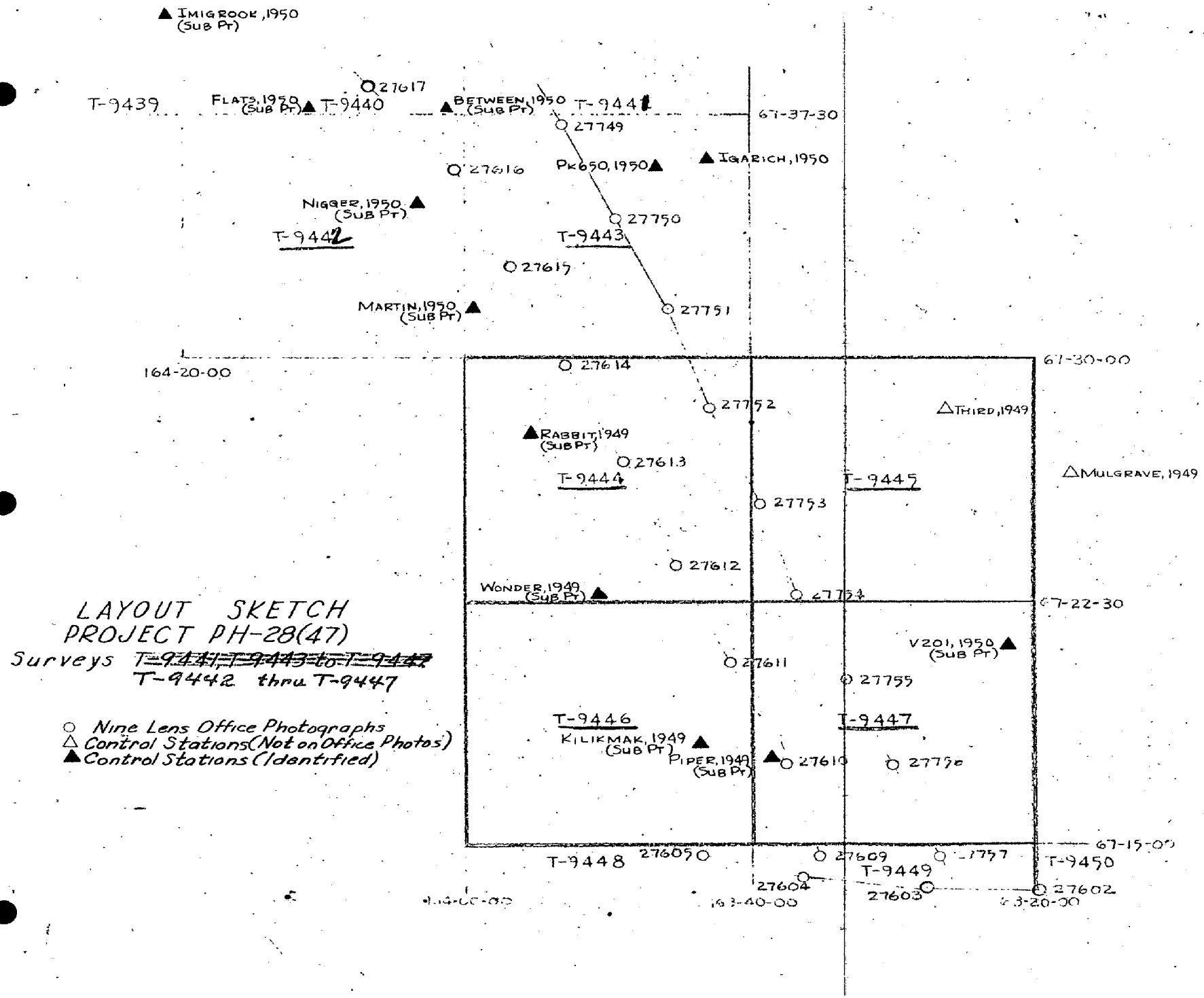
V-2152 and V-2152A (T-9447): Although the two observations gave a maximum difference of only 3.2 meters, the horizontal angle does not check the plotted position of V-2152A. These are rounded points, not very definite, and it is possible they may have been misidentified in the field. The elevations should be used with caution.

Respectfully submitted

Frank J. Tarcza
Cartographic Engineer (Photo.)

Approved and forwarded

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



LAYOUT SKETCH
PROJECT PH-28(47)
Surveys ~~T-9441, T-9443 to T-9447~~
T-9442 thru T-9447

○ Nine Lens Office Photographs
△ Control Stations (Not on Office Photos)
▲ Control Stations (Identified)

COMPILATION REPORT

31. Delineation:

Contours and cultural features were delineated simultaneously on the Reading Plotter, model B.

The entire land area of T-9444 and T-9446 has been mapped but the other two quads were not totally covered; T-9447 lacks about two sq mi in the NE corner and T-9445 is about half completed, the west half. A lack of photo coverage and necessary control is the reason it was not mapped.

32. Control:

Refer to side-heading 23 of the radial plot report, page 9 of this report, where adequacy of horizontal control is discussed. It was considered to be satisfactory.

Vertical control for contouring purposes was supplied by a combination of sea-level datum along the coastline plus elevations on inland peaks furnished by field party observations. A shortage of vertical control existed in the area covered by the inland half of the inland flight of photos but this deficiency was overcome by extnding verticals across about four models to the end that sufficient vertical control was available to maintain the desired accuracy.

33. Supplemental Data:

a. Graphic Control Surveys: None.

b. Hydrographic Surveys: None.

c. Plotting Instrument Photos (metal-mounts):

27611 thru 27617 and 27748 thru 27755

d. Field Inspection Photos:

20579 thru 20583

e.

e. Vertical Control Book:

"Tabulation of Elevations by Surveys and Computations of Elevations by Map Manuscripts for Vertical Control Stations in the Areas of Map Manuscripts T-9442 thru T-9447,"

34. Contours and Drainage:

Photograph quality was very good for contouring purposes except for a few small cloud-covered areas. One such areawas on T-9445, three on T-9447, but the clouds were thin in all cases and the contouring has been completed thruout their shadows. However, these particular contours are symbolized as doutful in accuracy. Otherwise, no areas of doubtful contours exist.

35. Shoreline and Alongshore Details:

, Shoreline existsonly on T-9446 and T-9444. Field inspection was adequate; a very regular shoreline made this chore much easier than usual. No low-water or shoal lines have been mapped.

36. Offshore Details: None exist.

37. Landmarks and Aids:

See Project Report, Lorne G. Taylor, Ph-28, 1950.

38. Control for Future Surveys:

a. Photo-hydro Stations: None

b. Photo-topo Stations: RAIL, BEAT, and MIKE, all of 1950, are on T-9446, and COLD 1950 is on T-9444. None exist on the two inland quads, T-9445 and T-9447. The five that are shown were selected and identified in the field and have been positioned by the radial plot.

39. Junctions:

All junctions are in agreement. The four junctions within the block of four quads of this report have been made to agree during compilation. Match edges were transferred from T-9448 and T-9449 to T-9446 and T-9447 respectively while the former were in compilation, and the edge~~s~~ ha~~ve~~s been transferred from the north edge~~s~~ of T-9444 ~~and T-9445~~ at this time to T-9443 which will be compiled in the near future.

40. Horizontal and Vertical Accuracy:

a. Horizontal:

Standard. Refer to side-heading 23 of the Radial Plot Report on page 9 of this report.

b. Vertical:

All contours better than meet the standards set for a 50ft interval, and the 25ft contour is thought to meet 25ft interval accuracy because of its nearness to sea-level which is so well identifiable.

46. Comparison with Existing Maps:

ALASKA RECONNAISSANCE TOPOGRAPHIC SERIES SECOND JUDICIAL DIVISION; NOATAK; ALASKA, 1:250,000, USGS, Edition of 1951.

47. Comparison with Nautical Charts:

a. ARCTIC COAST, Alaska, No 9400, 1:1,587,870, May 1946, 6th edition, last correction date of 27 Nov 50.

b. Provisional Chart, CAPE PRINCE OF WALES TO POINT BARROW; CHUCKCHI SEA; Alaska-Arctic Coast, No 9402, 1:750,000, May 1950, 1st edition.

48. Geographic Name List:

See separate numbered page, following.

49. Notes for The Hydrographer:

See separate unnumbered page, following.

50. Compilation Office Review:

See T-2 form, numbered page, following.

Submitted by:

Orvis N. Dalbey
Orvis N. Dalbey
Cartographer-Photogrammetric

Approved and Forwarded by:

Louis J. Reed
Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

Review Report T-9444 through T-9447
Topographic Maps
June 30, 1953

62. Comparison with Registered Topographic Surveys.- None

63. Comparison with Maps of other Agencies.-

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

Comparison not satisfactory because of great scale difference.

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

Comparison not possible with these charts because of the great scale difference.

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:

R. C. Lande
Chief, Review Section
Division of Photogrammetry

Chief, Nautical Chart Branch
Division of Charts

Chief, Div. Photogrammetry

Chief, Div. Coastal Surveys

GEOGRAPHIC NAMES

Survey No.

T-9444,5,6,7.

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-9444										1
CHUKCHI SEA										2
ISINGNOK RIVER										3
KOTLIK LAGOON										4
RABBIT CREEK										5
RABBIT MT										6
										7
										8
T-9445										9
ISINGNOK RIVER										10
										11
										12
T-9446										13
CHUKCHI SEA										14
KILIGMAK RIVER										15
KOTLIK LAGOON										16
KUGAKRUK MTS										17
NAGLUTOOK MT										18
TASAYCHAK LAGOON										19
										20
										21
T-9447										22
AHNGAURUKTOOVIK MT										23
KILIGMAK RIVER										24
KUGAKRUK MTS										25
										26
										27

Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

Names approved
6-30-53

49. Notes for the Hydrographer:

a. Photo-hydro Signals: None.

b. Photo-topo Stations:

T-9444	COLD 1950 on photo	20582	plus	524 card
T-9445	None			
T-9446	BEAT 1950 on photo	20581	plus	524 card
	MIKE 1950 "	20580	"	
	RAIL 1950 "	20581	"	
T-9447	None.			

Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T-9444, 5, 6, 7.

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. N 15. Bridges N 16. Aids to navigation N 17. Landmarks ✓ 18. Other alongshore physical features N 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 ✓ 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