5438

Diag. Cht. Nos. 9104 and 9302.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric

Field No. Ph-41(49) *Office No.* T-5438

LOCALITY

State Alaska

General locality Kuskokwim River

Locality Akulurak and Kinal River

1949-50

CHIEF OF PARTY

C.LEFever, Chief of Field Party
C. W. Clark, Portland Photo. Office

LIBRARY & ARCHIVES

DATE July 11, 1958

B-1870-1 (1)

5438

DATA RECORD

T-5438

Project No. (II): Ph-41(49)North Quadrangle Name (IV):

Field Office (II): Bethel, Alaska Chief of Party: Curtis LeFever

Photogrammetric Office (III): Portland, Oregon Officer-in-Charge: Charles W. Clark

Instructions dated (II) (III): 5 April 1949 (field)
26 October 1950 (office)

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): None

Date received in Washington Office (IV): JAN 2 1959 Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date: Date registered (IV): 3/5/58

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

Geographic Datum (III): N.A. 1927 Vertical Datum (III): Mean ~~Sea~~ High Water Level

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): See Paragraph 12 of Office Instructions. (All GPS & h. controlled)

Lat.: Long.: Adjusted
Unadjusted —

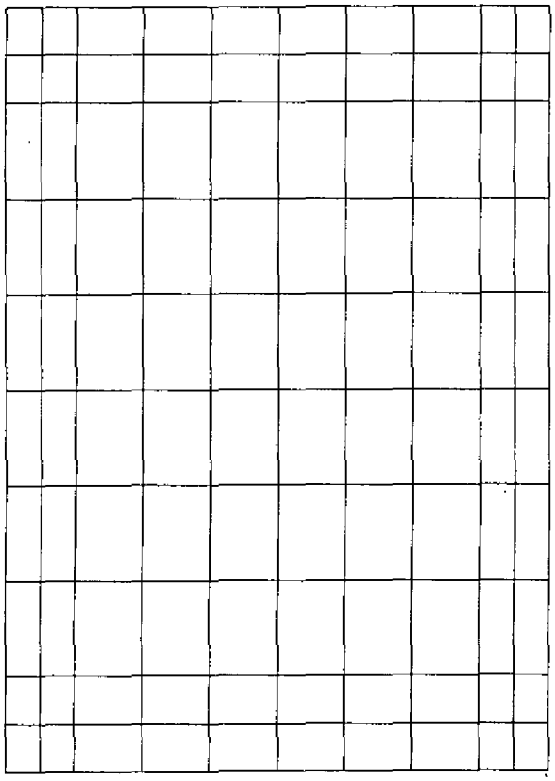
Plane Coordinates (IV): State: Zone:

Y= X=

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

M-2618-12(4)



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

DATA RECORD

Field Inspection by (II): Shoreline and shoreline stations by: C.H. Bishop and E.T. Ogilby
Inland horizontal control by: R.A. Bryce and G.S. Jackson
Date: July 1949

Planetable contouring by (II): None in 1949
Date:

Completion Surveys by (II):
Date:

Mean High Water Location (III) (State date and method of location): Located in 1949 by field inspection on photographs taken in 1945.

Projection and Grids ruled by (IV):
Date:

Projection and Grids checked by (IV):
Date:

Control plotted by (III): Helen Laube
Date: 7/6/51

Control checked by (III): Marie B. Elrod
Date: 7/7/51

Radial Plot or Stereoscopic Control extension by (III): James L. Harris and J.E. Deal
Date: 8/7/51

Stereoscopic Instrument compilation (III):
Planimetry
Date:
Contours
Date:

Manuscript delineated by (III): Helen Laube
Date: 9/19/51

Photogrammetric Office Review by (III): Ree H. Barron
Date: 10/10/51

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

M-2618-12(4)

Camera (kind or source) (III): U.S.C.& G.S., 9-lens, 8.25 inch focal length.

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Apokak Stage of Tide
28266 thru 28268	8/8/50	11:12	1:20,000	4.7 6.0 ft. above M.L.L.W.
28308	"	12:24	"	3.3 4.0 ft. " "
28343 thru 28345	"	13:24	"	2.1 2.5 ft. " "
28366 thru 28368	"	13:57	"	1.7 1.9 ft. " "

Field Photographs, 1948:
22989
22990
22990 A
22991
1943 Trimet: 13-L-10 13-L-11
13-L-13 13-L-14

Kodak, 620: Field Party Photographs (for identification of control stations) pp. 13, 17, 47, 51, 64, 70

Tide (III)

Reference Station: Matarani, Peru
Subordinate Station: Proportioned between Apokak & Bethel, Alaska
Subordinate Station:

	Ratio of Ranges	Mean Range	Diurnal Range
		2.1	
4:7 high 1.7 low		9.4	12.0

Washington Office Review by (IV): Lena J. Stevens Date: 19 Dec. 1956

Final Drafting by (IV): Date:

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

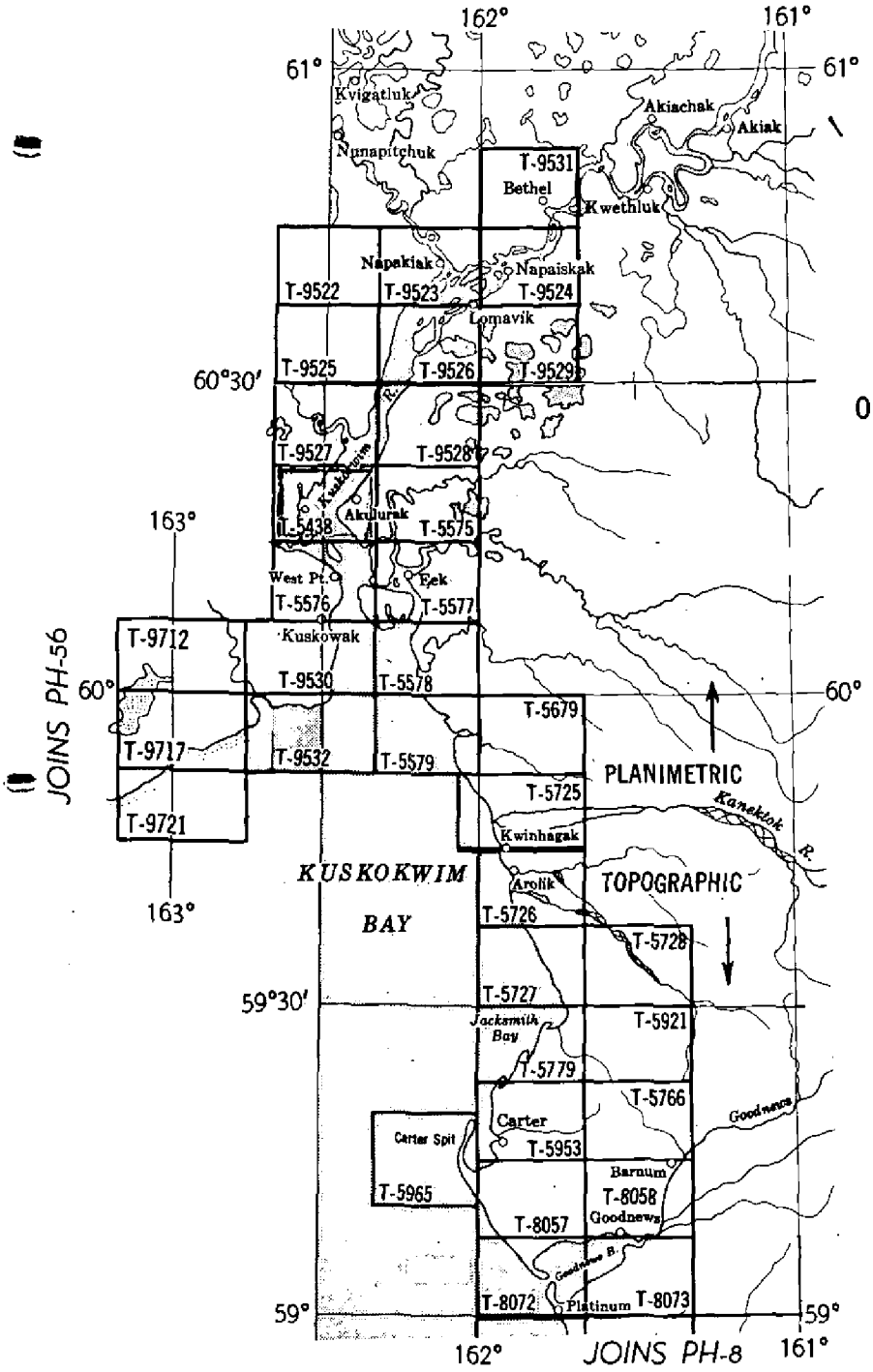
Land Area (Sq. Statute Miles) (III): 75.8
Shoreline (More than 200 meters to opposite shore) (III): 68.0
Shoreline (Less than 200 meters to opposite shore) (III): 73.0
Control Leveling - Miles (II): None
Number of Triangulation Stations searched for (II): Recovered: 3** Identified: 3
Number of BMs searched for (II): Recovered: Identified:
Number of Recoverable Photo Stations established (III): 4
Number of Temporary Photo Hydro Stations established (III): 7*

Remarks: * Photo Hydro stations were selected by the field inspection party by office examination of the photographs.

** Field computation for station SKI has been voided in accordance with letter from The Director.

PLANIMETRIC AND TOPOGRAPHIC MAPPING PROJECT PH-41

ALASKA-BERING SEA, Kuskokwim Bay to Goodnews Bay



OFFICIAL MILEAGE FOR COST ACCOUNTS

PLANIMETRIC Sheet No's.	Sq. St. Miles	TOPOGRAPHIC Sheet No's.	Sq. St. Miles
T-5438	55	T-5726	80
T-5575	54	T-5727	40
T-5576	65	T-5728	104
T-5577	80	T-5779	45
T-5578	45	T-5921	104
T-5579	35	T-5953	90
T-5679	108	T-5965	15
T-5725	104	T-5766	104
T-9522	18	T-8057	104
T-9523	65	T-8058	104
T-9524	76	T-8072	20
T-9525	65	T-8073	90
T-9526	65	TOTALS	900
T-9527	54		
T-9528	45		
T-9529	82		
T-9530	88		
T-9531	100		
T-9532	18		
T-9712	80		
T-9717	91		
T-9721	6		
TOTALS	1399		

PLANIMETRIC MAPS: Maps T-5438, T-5575 to T-5579, T-5725, T-9522 to T-9532, T-9712, T-9717 and T-9721.
TOPOGRAPHIC MAPS: Maps T-5726 to T-5728, T-5766, T-5779, T-5953, T-5965, T-8057, T-8058, T-8072 and T-8073

Compiled at 1:20,000 scale, from 1:20,000 scale nine-lens photographs taken August 1950 and 1:27,000 scale single-lens photographs taken August 1948.
(Refer to Air-photo Index B-52-53 and E-1-2).

For field work done on 1945 photography (See Air-Photo Index E
For field work done on Tri-Met photography (See Tri-Met Index).

Summary to Accompany T-5438

Project Ph-41 (49), Kuskokwim Bay and River, has two sections: Ph-41 (S) consists of twelve topographic maps, extending from Platinum (59°00') to Kwinhagak (59°45'); and PH-41 (N), twenty-two planimetric maps, extending from Kwinhagak to the vicinity of Bethel (60°52½').

The field work was carried out as a combined operation between Photogrammetry and Geodesy (Project G-949) during the season 1949 and was a continuation of the Bristol Bay Project, 1948.

T-5438 extends northward 7½ minutes from 60°15', along the Kuskokwim River. It includes Helmick Point on the east shore, and the lower portion of Tagayarak River and Kinak River on the west wide of the river.

When the project has been completed, ~~a cloth-backed lithographic~~ CRONAR print of the manuscript at manuscript scale, and the descriptive report will be registered and permanently filed in the Bureau Archives, and a Project Completion Report will be written. It will include a brief summary of the project, a listing of the various records and reports, and a set of project instructions.

FIELD INSPECTION REPORT
Map Manuscript No. T-5438
Project Ph-41(49) North

Refer to: "PROJECT REPORT, KUSKOKWIM BAY AND RIVER,

Project Ph-41(49) North, June-July 1949".

Curtis LeFever, Chief of Party.

PHOTOGRAMMETRIC PLOT REPORT
Map Manuscripts Nos. T-5438, T-5575,
T-5576, T-9530 and T-9532
Project Ph-41(49) North

21: AREA COVERED:

This photogrammetric plot covers an area in Alaska along the west shoreline of the Kuskokwim River, from its mouth to a point about 7 miles north of Kinak and an area along the east shoreline of the Kuskokwim River from Eek Island to a point about 6 miles north of Akulurak. It comprises Map Manuscripts Nos. T-5438, T-5575, T-5576, T-9530 and T-9532.

22: METHOD:

All paragraphs, except paragraphs 6 and 9 of Item 22: "METHOD" of the Photogrammetric Plot Report for T-5577 through T-5579, T-5679 and T-5725, Project Ph-41(49) North are applicable to this report.

The radial plot was run without any unusual difficulties.

Refer to letter to The Director, dated 3 August 1951 Subject: "Geographic Position SKI, 1949 Project Ph-41(49) North" and letter 63-vw dated 14 August 1951 same subject.

There was an adequate number of horizontal control stations identified for use in controlling this radial plot. The plot was extended to include stations TUCKER and VICTOR on the north and stations SHELTER and ILKEVIK on the west.

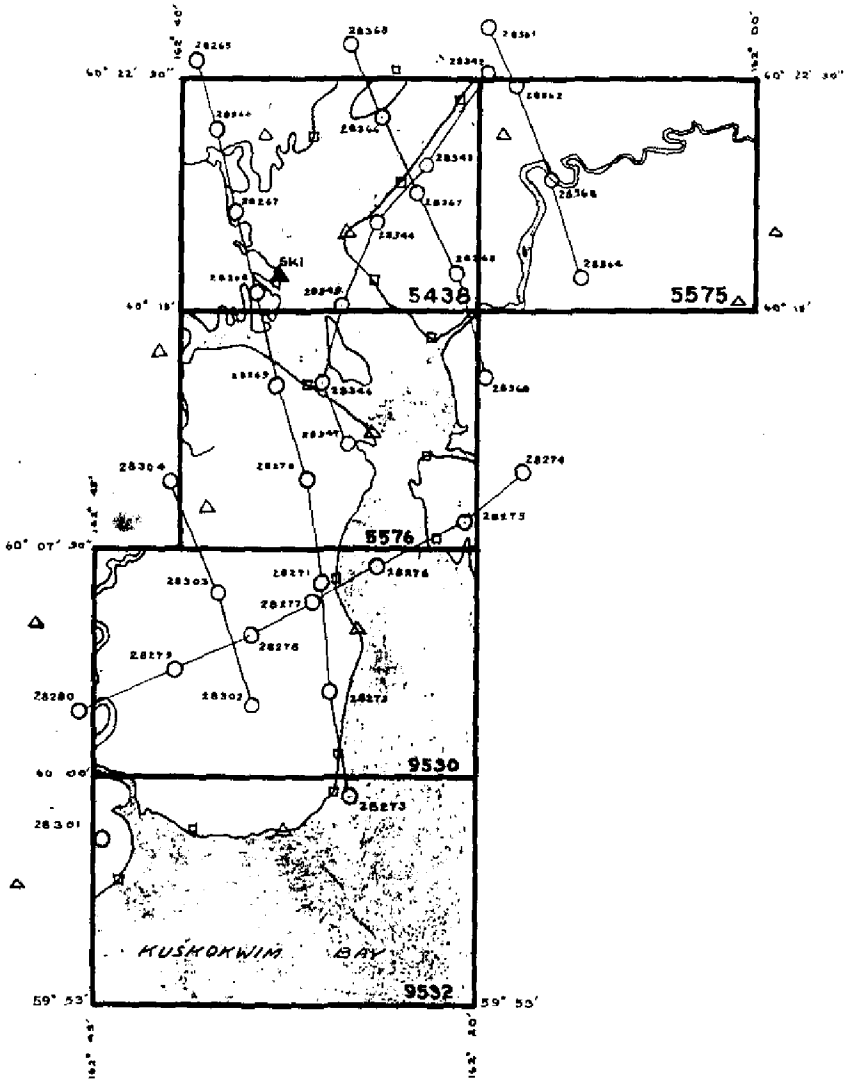
23: ADEQUACY OF CONTROL:

Paragraph 1 of Item 23 "ADEQUACY OF CONTROL" of the Photogrammetric Plot Report for Map Manuscripts Nos. T-5577 through T-5579, T-5679 and T-5725 is applicable to this report.

Items 24, 25, and 26 of the above mentioned photogrammetric report are applicable to this report.

Approved:
Charles W. Clark
Charles W. Clark
Officer-in-Charge

Respectfully submitted:
J. Edward Deal Jr.
J. Edward Deal, Jr.
Cartographer



△ Horizontal Control
▲ Horizontal Control Discussed in descriptive report
□ Topographic Stations
○ 1950 Nine Lens Photographs

PH-41(49) NORTH
RADIAL PLOT "B"
KUSKOKWIM RIVER - ALASKA

COMPILATION REPORT
Map Manuscript No. T-5438
Project Ph-41(49) North

31: DELINEATION:

Graphic methods were used for the compilation of this map manuscript.

Field inspection delineation and notes were entered on the trimetrogen photographs and the 1948 nine lens photographs. It consisted for the most part of spot locations of the mean high water line and photo interpretation of shoreline features.

Planimetric details have been shown to the extent of photograph coverage.

32: CONTROL:

Refer to side headings 22 and 23 of the Photogrammetric Plot Report which is included in this descriptive report.

33: SUPPLEMENTAL DATA:

There were none furnished for the area of this map manuscript.

34: CONTOURS AND DRAINAGE:

Contours are not applicable.

In general the drainage has been delineated by stereoscopic examination of the photographs.

35: SHORELINE AND ALONGSHORE DETAILS:

The mean high water line was indicated on the field photographs at a sufficient number of places to enable the compiler to adequately delineate this feature throughout the area.

All of the alongshore details indicated by field inspection or visible by office examination of the photographs have been detailed.

The limits of mud flat areas have been shown as they appeared on the photographs. It is believed that an accurate determination of the stage of tide at the time the photographs were taken could not be computed from tide data available to this office.

36: OFFSHORE DETAILS:

Several mud and sand bar areas, which are believed covered at high water, are shown.

37: LANDMARKS AND AIDS:

There are none in the area of this map manuscript.

38: CONTROL FOR FUTURE SURVEYS:

Forms 524 are being submitted for the following recoverable topographic stations:

EVEN	GAL
FOOT	SKI*

* Refer to letter to The Director relative to triangulation position of station SKI.

Station TWIN 1949 is now gone because of bank erosion and could not be located on the 1950 photographs.

These stations along with the radially plotted photo-hydro stations are listed under side heading 49: "NOTES TO THE HYDROGRAPHER".

The photo-hydro stations were selected and described by the field party by office examination of the field photographs. The number given for each of these stations was assigned at the Photogrammetric Office.

39: JUNCTIONS:

Complete and satisfactory junctions have been made with adjoining map manuscripts.

40: HORIZONTAL AND VERTICAL ACCURACY:

Vertical accuracy is not applicable.

There are no areas believed to be of sub-normal horizontal accuracy.

46: COMPARISON WITH EXISTING MAPS:

None were available to the photogrammetric office for comparison purposes.

47: COMPARISON WITH NAUTICAL CHARTS:

A visual comparison was made with Nautical Chart No. 9104, Oct. 1918 (3rd edition) last printed 12/27/48, Scale 1:100,000.

The planimetric details common to the map manuscript and charts are in general disagreement.

Items to be applied to nautical charts immediately:

None

Items to be carried forward:

None

Approved:

Charles W. Clark

Charles W. Clark
Officer-in-Charge

Respectfully submitted:

J. Edward Deal Jr.

J. Edward Deal, Jr.
Cartographer

48: GEOGRAPHIC NAME LIST:

Final geographic names were furnished this office on copies of the following maps:

Aeronautical Chart: - Bethel (1196) Alaska
U.S.G.S. Alaska Reconnaissance Topographic Series Map, Bethel, Alaska
U.S.G.S. Alaska Map 18: - Goodnews District Alaska
Nautical Chart (Kuskokwim Bay) No. 9103

T-5438

* Akulurak Summer Camp
Helmick Point
Kinak River
Kuskokwim River
~~Tagarayak River~~ Tagayarak River (according to two names reports)

* The village of Akulurak is shown in the location indicated by the field inspection party on the field photographs. Upon consultation with Mr. Charles Bishop of the field party it is believed that the location shown on the final name sheet is incorrect. The field location is 55 seconds east and 3 minutes south of the final name sheet location.

The project names report was the basis of the final name sheet, but the new location of Akulurak appears to be correct.

Names approved
5-5-54
L. Heck.

49: NOTES FOR THE HYDROGRAPHER:

T-5438

Recoverable topographic stations falling in the area of Map Manuscript No. T-5438 are as follows:

EVEN, 1949
FOOT, 1949
GAL, 1949
SKI, 1949

Photo hydro points, which were selected in the office by the field party, falling in the area of Map Manuscript No. T-5438 are as follows:

22990	120	-	S.W. tip of brush at jog in brush line
Ph. Photo 22990A	121	-	E. tip of brush
	122	-	N. tip of brush
	123	-	S. tip of brush
	124	-	Center of isolated clump of bushes
	145	-	S. tip of bank at fork in slough
	146	-	N. tip of bank at S.W. side of small ditch

The numbers for these photo hydro points were assigned to the stations by the Portland Photogrammetric Office.

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T-5438

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 ✓ 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. Rue N. Barron — Reviewer

J. Edward Deal Jr — 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 T-5438
Planimetric Map
19 December 1956

62. Comparison with Registered Surveys:

No earlier topographic surveys were made for this map-area.

63. Comparison with Maps of Other Agencies:

USGS Baird Inlet (Recon.) 1:250,000 1951

The Kuskokwim Bay and River portion of this quadrangle utilized advance prints of the maps in project Ph-41 except for the trails on the east and the west side of the river on the quadrangle.

64. Comparison with Contemporary Hydrographic Surveys:

The latest hydrographic surveys were made in 1914 and 1915. No comparison was made.

65. Comparison with Nautical Charts:

9104 1:10,000

This chart was discontinued December 1955 because it was obsolete.

66. Accuracy:

This map complies with project instructions and meets the National Standards of Accuracy.

Reviewed by
Lena T. Stevens

Approved by:
H C Lande
H W Swanson
7 July 1958