9229 9230

9230

9229

Diagram Chart No. 8802

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey TOPOGRAPHIC

Field No. Ph-SB (46) Office No. T-9229 and T-9230

LOCALITY

State ALASKA

General locality BRISTOL BAY AREA

Locality T-9229- NW TOGIAK BAY WEST
T-9230- NW TOGIAK BAY

1947

CHIEF OF PARTY

A. Newton Stewart, Chief of Field Party
Charles W. Clark, Chief Portland Photo O.
~~Division of Photogrammetry, Washington, D. C.~~

LIBRARY & ARCHIVES

DATE APRIL 27, 1955

B-1870-1 (1)

DATA RECORD

T -9229 and T-9230

Project No. (II): Ph-8B(46)

Quadrangle Name (IV): T-9229 = NW TOGIAK BAY WEST
T-9230 = NW TOGIAK BAY

Field Office (II):

Chief of Party: A. Newton Stewart

Photogrammetric Office (III): Portland Photo.O. Washington, D.C.

Officer-in-Charge: Charles W. Clark
Louis J. Reed, Chief, Stereoscopic Mapping Section

Copy filed in Division of Photogrammetry (IV)

Instructions dated ~~(II)~~ (III):

4 Feb 49 (Radial Plot)

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): 6 July 51

Date reported to Nautical Chart Branch (IV): JUL 13 1951

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): NA 1927 (Unadjusted)

The difference between Unadjusted Datum and N.A. 1927 Datum is Lat. plus/~~minus~~ 11 m. and Long. ~~plus~~/minus 8 m.

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.:

~~XXXXXX~~
Unadjusted

Plane Coordinates (IV):

State:

Zone:

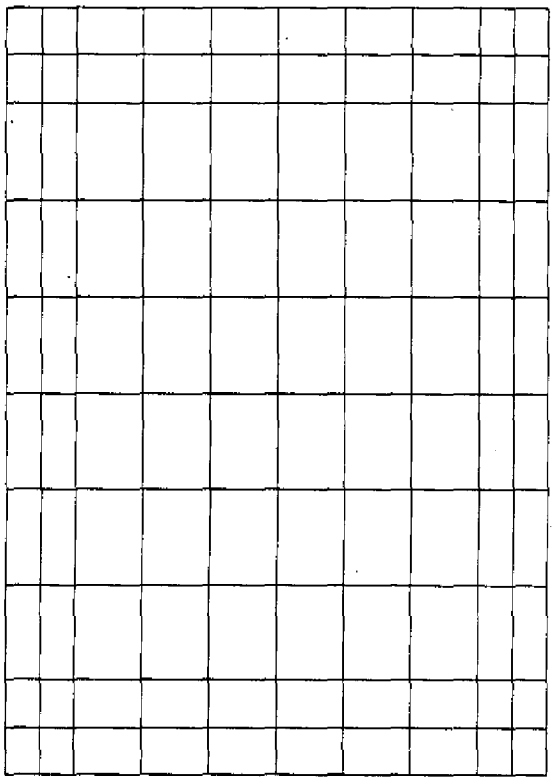
Y=

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)
(III)

100% by Clarence E. Misfeldt

DATA RECORD

Field Inspection by (II): A. Newton Stewart Date: 1947-48

Planetable contouring by (II): None Date:

Completion Surveys by (II): None Date:

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

Shoreline was established by field methods in 1947-48 and used as a guide during this compilation.

Projection and Grids ruled by (IV): Thedore L. Janson (Ruling Machine) Date: 30 Aug 50

Projection and Grids checked by (IV): Harland R. Cravat Date: 1 Sep 50

Control plotted by (III): James L. Harris (Portland O.) Date: 25 Sep 50

Control checked by (III): Carita Wiebe (Portland O.) Date: 25 Sep 50

Radial Plot ~~xxxxxxxxxx~~ ~~xxxxxxxxxx~~ by (III): James L. Harris and J.Edward Deal (Portland Office) Date: 21 Dec 50

delineation by:
Stereoscopic Instrument ~~xxxxxxxx~~ (III): Planimetry and Contours Clarence E. Misfeldt Date: 7 Jun 51

Manuscript delineated by (III): Frank J. Lesslie Date: 2 Jul 51

Photogrammetric Office Review by (III): Louis J. Reed Date: 6 Jul 51

Elevations on Manuscript checked by (~~II~~) (III): Louis J. Reed Date: 6 Jul 51

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
20462 thru 20464	24 Aug 47	*	20,000	
and 20501 thru 20508	24 Aug 47	*	20,000	

* Camera clock not functioning

Tide (III) ~~* See Remarks~~ Diurnal

Ratio of Ranges	Mean Range	~~Spring~~ Range
--	15.2	19.5
	6'	10'

Reference Station: Nushagak Bay
Subordinate Station: Black Rock, Walrus Islands
Subordinate Station:

Washington Office Review by (IV): B. J. Colner Date: 12-11-52

Final Drafting by (IV): M. J. Day M. J. Day Date: (9230) 6/22/53 (9229) 1/5/54

Drafting verified for reproduction by (IV): [illegible] 9230 - 7/28/53 [illegible] T-9229 Date: 6-30-53 (9230) 1-8-54

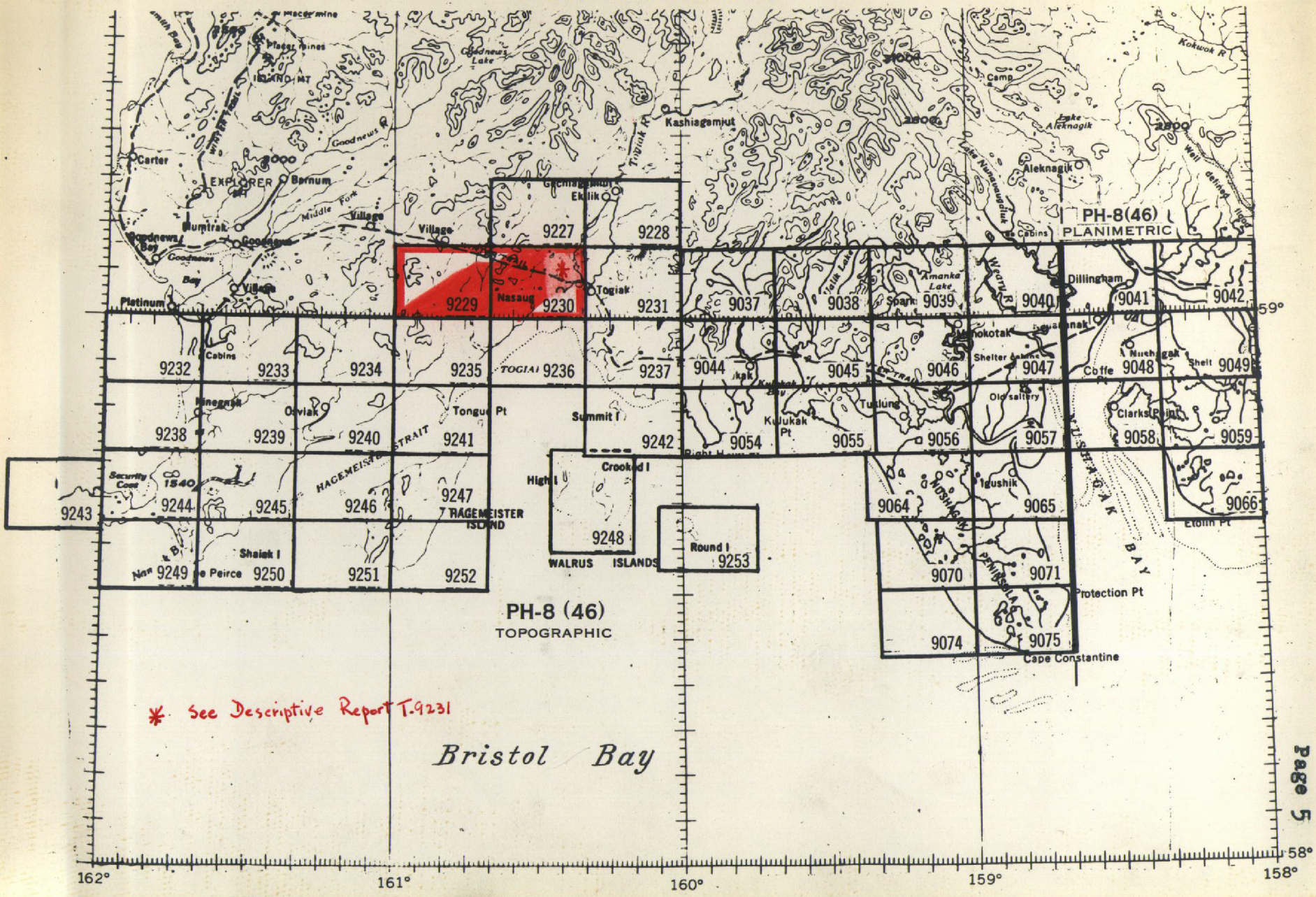
Proof Edit by (IV): [illegible] Date:

Land Area (Sq. Statute Miles) (III): T-9229 = 51 sq mi ; T-9230 =
Shoreline (More than 200 meters to opposite shore) (III): T-9229 = none; T-9230 =
Shoreline (Less than 200 meters to opposite shore) (III): none
Control Leveling - Miles (II): none
Number of Triangulation Stations searched for (II): Recovered: Identified: one
Number of BMs searched for (II): none Recovered: Identified:
Number of Recoverable ~~Photo~~ Topo Stations established (III): two
Number of Temporary Photo Hydro Stations established (III): one

Remarks: ~~Tide Predictions, Alaska were prepared by the Division of Tides and Currents for the more accurate prediction of tides at various points in this part of project Ph-8(46). Detatils Details for these maps are on the reverse side of this page.~~ Disregard; A better determination of the tide was obtained from Black Rock, Walrus Islands. L.C.L.

TOPOGRAPHIC MAPPING PROJECT PH-8 (46)

ALASKA, Vicinity of Bristol Bay



* See Descriptive Report T-9231

Summary to Accompany T-9229 and T-9230

Ph-8(46) covers the north shore of Bristol Bay in Alaska and runs from the Egegik River and Kvichak Bay on the East to Cape Newenham on the West.

It is divided into three parts as follows:

Ph-8(46) A includes 23 planimetric maps in the general area of Kvichak Bay and extends from Egegik Bay to Nushagak Bay.

Ph-8(46) B is composed of two shoreline surveys on the Egegik River between Egegik Bay and Lake Becharof.

Ph-8(46) includes 45 topographic maps covering the area from Nushagak Peninsula westward to Cape Newenham and north to Goodnews Bay. It includes offshore islands such as Hagemeister and the Walrus Islands.

T-9229 and T-9230 fall in the northwesterly portion of this project. The eastern part of T-9230 contains the mouth of ~~the~~ Togiak Bay. The area is bounded by Togiak Bay.

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 clothbacked lithographic print of each map at the compilation scale will be registered with the combined descriptive report in the Bureau Archives. These maps will not be published.

FIELD INSPECTION REPORT
Map Manuscript No. T-9229 & T-9230
Project Ph-8(46)R

Refer to PROJECT REPORT, AERIAL PHOTOGRAPH CONTROL and INSPECTION, BRISTOL BAY, ALASKA, Project Ph-8(46) May to July 1948. A. Newton Stewart, Chief of Party.

Refer to PROJECT REPORT, AERIAL PHOTOGRAPH CONTROL and INSPECTION, BRISTOL BAY, ALASKA, Project Ph-8(46) May to Sept. 1947. A. Newton Stewart, Chief of Party.

PHOTOGRAMMETRIC PLOT REPORT
Radial Plot D
Project Ph-8(46)

21: AREA COVERED:

This radial plot includes an area along the north shore of Hagemeister Strait and Togiak Bay from a point about 25 miles east of Cape Newenham to Togiak. It comprises Map Manuscripts T-9227, part of T-9228, T-9229, T-9230, part of T-9231, T-9234 to T-9236 incl., T-9240 and the northern part or mainland area of T-9241.

22: METHOD:

The radial plot was run from 9-lens metal-mounted photographs by the usual hand templet method. Nine map manuscripts of vinylite material, each ruled with a polyconic projection and a special grid system of 2500 meter squares, were used. In addition a map manuscript on Virginia Pak material, ruled with a polyconic projection only, for the area of T-9241 which showed the results of part of a radial plot made in the Washington office of Hagemeister Island was included.

In order that a satisfactory junction might be made with a previously completed radial plot, lying to the west of this radial plot, the results of the previous radial plot for the eastern part of T-9239 were transferred from the base grid for T-9239 to the western part of Map Manuscript T-9240.

In connection with this junction slight errors were noted in work on the previous radial plot to the west which were believed caused by neglecting to properly take into account the distortion of the acetate material previously used for map manuscripts. When a comparison was made with the location of stations VIRGO and ESTUS as shown on the base grid sheet for T-9239 with the plotted positions of these stations on the new map manuscript for T-9240 on vinylite material it was found that on the base grid sheet for T-9239, VIRGO is located about 6 meters east of its true position and ESTUS about 9 meters northeast of its true position. All map manuscripts on the previous radial plot are on acetate material and all map manuscripts on this radial plot or on vinylite material. When a comparison was made at the junction of T-9239 and T-9240 it was found that the acetate sheet for T-9239 had shrunk 1/8 inch in 25 inches in a north-south direction.

The reason for the error appears due to the fact that the base grid on the acetate material for Map Manuscript T-9239, with the distortion taken into account, was not extended into the east margin of that sheet and the stations then transferred to the base grid sheet for T-9239 by matching the proper grid squares.

It is believed however, that a good junction has been made, regardless of the above condition, without forcing the templets. Notes are lettered on Map Manuscript T-9240 referring to conditions at the junction.

All horizontal control stations and their substitute stations were plotted and checked on the map manuscripts.

Templets of the photographs were made on sheets of .005" clear vinylite.

Master calibration templet No. 21682 for the 1947 photographs and master calibration templet No. 22561 for the 1948 photographs were used for paper distortion corrections and for the correction of transforming errors. For additional details concerning photographs in this radial plot refer to side heading 25 of this report.

Craftint No. 111 red ink was used to draw the radials.

Since vinylite material was used for the map manuscripts separate sheets of base grids were not used.

The nine map manuscripts were joined together with cellulose tape and the templets were oriented to the horizontal control stations directly on these joined map manuscripts.

Paragraphs 7 to 17 incl. of side heading 22: "METHOD", of the Photogrammetric Plot Report for Map Manuscripts Nos. T-9238, T-9239, T-9243 to T-9245 incl., T-9249, and T-9250 which is attached to the Descriptive Report for T-9238 (1948), are applicable to this radial plot.

23: ADEQUACY OF CONTROL:

It is believed that there was not available a sufficient number of horizontal control stations to identify in order to adequately control this radial plot. There were seven stations available for identification in an area of approximately 900 square statute miles. The sub-station for one of these stations, namely, "AEOLUS" was definitely incorrectly identified in the field. One other station, namely, "TONGUE POINT" was considered very doubtfully identified by Comdr. A.N. Stewart who personally identified the station in the field. When these two stations were disregarded there was a stretch of 31 statute miles between station ESTUS and station NEMESIS, which was not controlled. Also for the same reason there were then seventeen nine-lens photographs in this area which were dependent on control at each end of two flights and the azimuth lines only for their orientation.

A detailed discussion of each horizontal control station used in the radial plot follows:

VIRGO:

The object selected for a sub-station was very indefinite on most photographs and pricking was difficult, especially in the outer chambers, due to relief displacement. The station was held to fairly well in the radial plot.

ESTUS:

The station was identified by four measurements from reference points and was held to in the radial plot.

SKID:

A geographic position is not available for this station. There is a horizontal direction taken in July 1948 on station SKID from VIRGO and this direction was plotted on the joined map manuscripts. A very good intersection of radials to the station was obtained through which the plotted direction passed.

TONGUE POINT:

The sub-station was identified and classed as doubtful by Comdr. Stewart. An intersection of radials was obtained approximately 35 meters southeast of the computed position for the sub-station.

AEOLUS:

The sub-station for this station was incorrectly identified on field photo #20466. An attempt was made to identify the object selected by office examination but this point could not be held to in the radial plot. An intersection of radials was obtained approximately 40 meters east of the computed position of the sub-station.

NEMESIS:

The sub-station was pricked on five photographs and was held to in the radial plot.

EKILIK:

The sub-station was pricked on all photographs on which it could be seen and was held to in the radial plot.

TOGIAK:

This station was identified by measurements from 3 reference points. A note on the reverse side of the pricking card questions the accuracy of these measurements and suggests using the direct pricking of the station as shown on the field photographs. This was done on all photographs on which it could be seen and the station was held to in the radial plot.

OWENS:

This station was identified by sub-stations and by direct pricking. The station was pricked on all photographs on which it could be seen and was held to in the radial plot.

The following stations are primarily vertical control stations but since geographic positions were computed from them by the triangulation party an attempt was made to utilize them for horizontal control.

PEAK "Z":

Geographic position (field computation) is probably in error on this peak. Investigation is in progress and the results will be the subject of a letter to The Director.

PEAK "T":

There is some doubt that the field identification for this peak is on the same point on the peak as that observed by the triangulation party. Peak 92 (1947) which is supposed to be the same as Peak "T" (1948) radially plots about 25 meters west of the field position of Peak "T". Upon stereoscopic examination it is believed that the field party could easily be incorrect on the point selected on field photograph 20469. However, the peak has a flat, round top and to select a point by office examination is not believed practical.

PEAK "Y":

This peak lies beyond the limit of photograph coverage.

24: SUPPLEMENTAL DATA:

There was no supplemental data for the area of this radial plot.

25: PHOTOGRAPHY:

The approximate tilt was determined for the following photographs:

Photograph No.	Approximate tilt from graph Page 36, Part II, Chapter 4 of the Topographic Manual
20462	1° 50'
20470	1° 37'
20502	1° 10'
20512	0° 50'

For the templets of the above listed photographs the midpoints were used as radial centers.

Radials on these photographs were originally drawn from the principal points and were not changed because the tilts determined were only approximate.

Refer to side heading 22 for additional data for photographs used in this radial plot.

26: VERTICAL CONTROL:

The suggested order for vertical control computation listed in Comdr. A. Newton Stewart's field reports, May to September 1947, Project Ph-8(46) and May to July 1948, Project Ph-8(46)B was very useful and was adhered to for the most part when this work was in progress.

A check was obtained on all elevations except those for Peaks 153, 189, 191, 197, 252, 253, 254, 255, 257, 258, 266, 267 and water surface elevations V-1085 and V-1086. In several cases the vertical abstracts had been forwarded to Washington, so, the record books were used to obtain the ZENITH DISTANCE.

In every case where difficulty was experienced in the computation of an elevation, the records were searched for possible errors and the horizontal directions from the instrument stations to the stations observed upon were plotted in an effort to determine the exact point that had been sighted. A detailed explanation of any errors that were found and the corrections that were made are shown on the Form 29-D for the particular station in question. This form is included in the tabulation of elevations and computation of elevations for the area of this radial plot which is being submitted under separate cover.

The pricking of the vertical control stations on the office photographs was preceded by a thorough stereoscopic examination of the field identification in conjunction with an analysis of all the data concerning each vertical point. When identification errors were suspected the personnel of the field party were consulted and an agreement reached as to the correct location of the point. When a change was agreed upon, it was noted on the field photograph.

Where vertical control ties between the instrument stations and substitute station or spot elevations were available, the elevations of the substitute station or spot elevations were computed and listed.

This office was able to compute the elevations of several stations falling east of the east limits of this radial plot in the areas of Map Manuscripts T-9228 and T-9231 and these have been included in the cahier entitled "Tabulation of elevations and computations of elevations by map manuscripts for vertical control stations in the area of Map Manuscripts T-9227, T-9229, T-9230, T-9234, T-9235, T-9236, T-9240 and T-9241 (Northern Half), Project Ph-8(46)R" which is being submitted.

Approved:

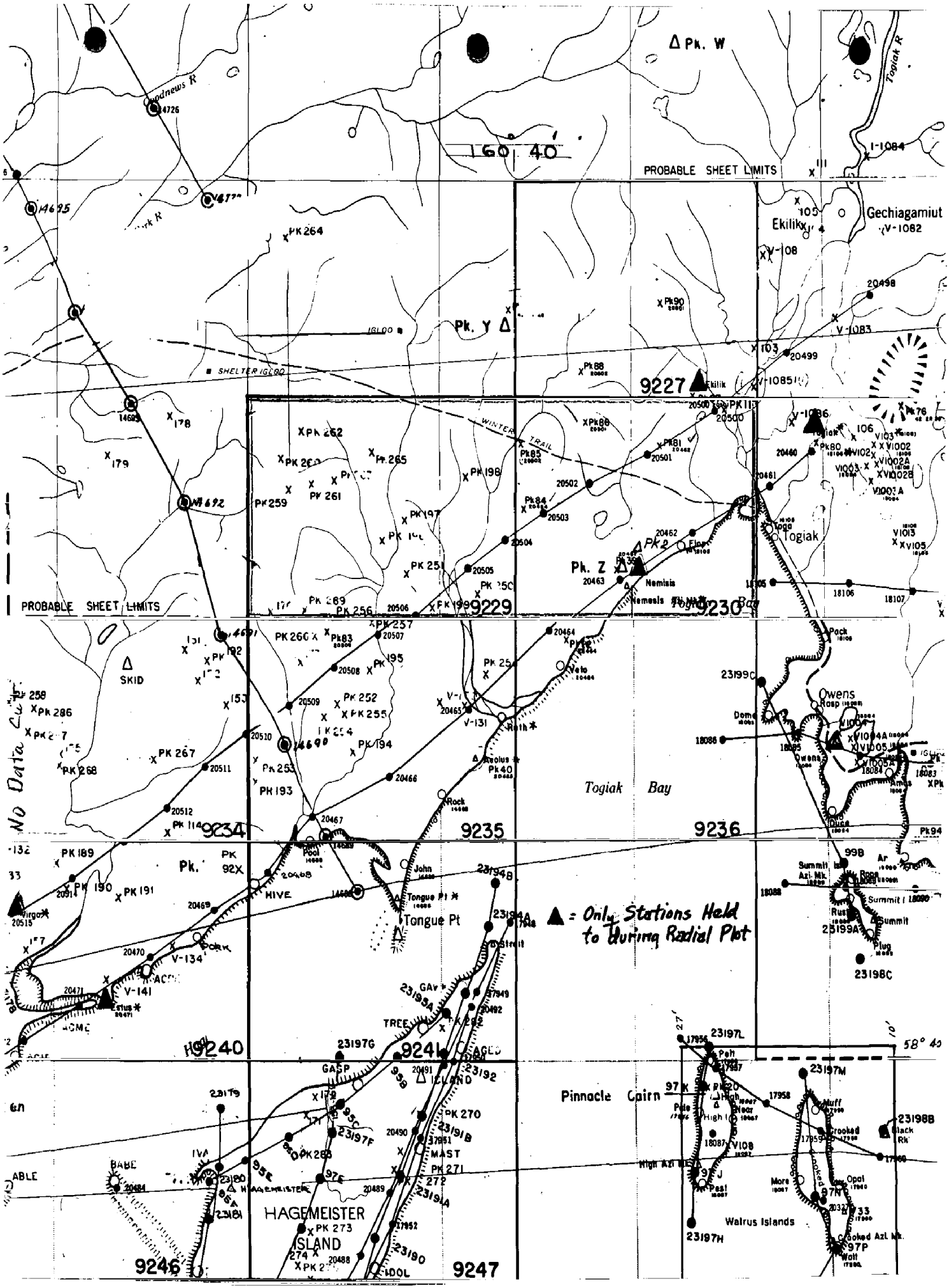
Charles W. Clark

Charles W. Clark
Officer-in-Charge

Respectfully submitted:

J. Edward Deal Jr.

J. Edward Deal, Jr.
Cartographer



Pk. W
Togiak R
Goodnews R
160 40
PROBABLE SHEET LIMITS
Gechiagamiut
Ekilik
Pk. Y
IGLOO
SHELTER IGLOO
9227
WINTER TRAIL
Togiak
Pk. Z
Nemisis
PROBABLE SHEET LIMITS
9229
9230
SKID
Owens
Togiak Bay
No Data Cut
9234
9235
9236
Pk.
HIVE
Tongue Pt
▲ = Only Stations Held to during Radial Plot
9240
9241
TREE
GASP
ICLAND
Pinnacle Cairn
Walrus Islands
HAGEMEISTER ISLAND
9246
9247

COMPILATION REPORT

31. Delineation:

Contours and all cultural features were delineated simultaneously on the Reading Plotter, Model A. Photo coverage was complete and shoreline inspection was adequate. Manuscript T-9229 was not completely mapped, only the SE half having photo coverage and the other half not included in plans for future photography. The land area of T-9230 is all photographed but not all mapped at this time, only the western part up to 160°28' has been delineated in this first radial plot, plot D; the balance of the map will be included in plot E in the near future. *

32. Control:

The status of the horizontal control for plot D is discussed in side-heading 23, page 9 of the radial plot report. For the control situation for the balance of the area refer to the same side-heading in the radial plot report for plot E, descriptive report for T-9227.

Vertical control for contouring purposes was furnished by a combination of sea level along the shoreline and elevations on inland peaks as shown on the control sketch, page 14, this report. Vertical control was adequate.

33. Supplemental Data:

a. Plotting instrument photos (metal-mounted):
20462 thru 20464 and 20501 thru 20508.

b. Field Inspection photos:
20462, 20464, 20501, 20502, 20503, 20504.

c. Graphic Control Surveys: None

d. Hydrographic Surveys: None

e. Vertical angle computations:
One bound volume entitled, "Tabulation of elevations and computations of elevations by map manuscripts for vertical control stations in the area of map manuscripts T-9227, T-9229, T-9230, T-9234, T-9235, T-9236, T-9240, and T-9241 (northern part), Project Ph-8R(46)", and a similar tabulation of computations for the area of Plot E covering the eastern half of T-9230 of this report.

* See Descriptive Report T-9231

34. Contours and Drainage:

The photographic quality of the instrument photos was satisfactory for contouring use and no areas of questionable contours remain.

35. Shoreline and Alongshore Details:

Shoreline inspection was very thin but not necessary in this area of very smooth and regular coastline; inspection was adequate and details have been incorporated into the resulting manuscript (shoreline exists on T-9230 only). Foul lines have been compiled directly from field inspection with none instrument-delineated.

36. Offshore Details: Not applicable.

37. Landmarks and Aids: Reference field inspection reports listed on page 7, this report.

38. Control for Future Surveys:

No hydro or topo stations exist on T-9229 since there is no shoreline either, but T-9230 has one hydro and two topo stations recoverable:

a. Hydro station: No.156
b. Topo stations: FLOP 1947 and NO NAME 1947.

39. Junctions:

All junctions are in agreement. The common edge between T-9229 and T-9230 has been matched, and the south edges of both have been matched to T-9235 and T-9236 respectively. Likewise, the north edge of T-9230 has been matched to T-9227. No manuscripts exist to the north and west of T-9229. A match-edge has been transferred to T-9231 from the east edge of T-9230.

40. Horizontal and Vertical Accuracy: Standard.

46. Comparison with Existing Maps: None exist.

47. Comparison with Nautical Charts: None exist.

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. Dabey

Orvis N. Dabey
Cartographer-Photogrammetric

Approved and Forwarded by:

Louis J. Reed

Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

GEOGRAPHIC NAMES

Survey No. T-9229
T-9230

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-9229										1
MATOGAK RIVER										2
QUIGMY RIVER										3
										4
										5
										6
										7
T-9230										8
KURTLUK RIVER										9
QUIGMY RIVER										10
NASAUGLUK (Village)										11
TOGIAK BAY										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

49. Notes for the Hydrographer:

T-9229

None.

T-9230

(a) Photo-Hydro Stations:

Number	Photo	Description
156	18105	The easterly gable of a cache built of 2" x 12" planks and elevated 6 ft on posts. It is the cache closest to the beach and its top and east side are tar-paper covered.

(b) Recoverable Topo Stations:

FLOP 1947 and NO NAME 1947

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

T- 9229, 9230

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

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy N ✓ 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) N 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-existant

ALONGSHORE AREAS
(Nautical Chart Data)

12. Shoreline ✓ 13. Low-water line ✓ 14. Rocks, shoals, etc. ✓ 15. Bridges N 16. Aids to navigation N 17. Landmarks N 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 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 ✓

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

HORIZONTAL DATUM ADJUSTMENT

Bristol Bay, Alaska

The subject maps were radial plotted on unadjusted (Field) datum which was subsequently adjusted to the North American 1927 datum by the Division of Geodesy. The datum correction has been computed for each sheet, and stamped into the Descriptive Report on page 1, and on the manuscripts and registered cloth-backed copies near the title block. However, as the title block of each clothback sheet contains the note, "1927 North American Datum", it was necessary to stamp the word, "(Unadjusted)" beside this datum note in the title block of each sheet.

See the special report, Horizontal Control Datum, Ph-8(46), Ph-8A(46), and Ph-8B(46), filed with the Completion Report for the project for details and lists of the maps, reports, and registration copies marked with this adjustment. The following is a list of the maps in the projects:

Ph-8(46), TOPOGRAPHIC	Ph-8A(46), PLANIMETRIC
T-9038 thru T-9040	T-9041 thru T-9043
9044 " 9047	9048 " 9053
9054 " 9057	9058 " 9063
9064,-9065,-9070	9066 " 9069
9071,-9074,-9075	9072,-9073
9227 thru 9253	9076,-9078

Ph-8B(46), SHORELINE

T-8873 (E&W) and T-8874