

9238

T-9238

ORIGINAL

Diag. Cht. 9103

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. _____ Office No. T-9238

LOCALITY

State Alaska

General locality Kuskokwim Bay Area

Locality CHAGVAN BAY

194 8

CHIEF OF PARTY

A. Newton Stewart - Chief of Field Party
Charles W. Clark - Chief of Radial Phot Office
Div. of Photogrammetry, Wash., D.C.

LIBRARY & ARCHIVES

DATE _____

Orig.

DATA RECORD

T- 9238

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

Quadrangle Name (IV): CHAGVAN BAY

Field Office (II): Bristol Bay Area

Chief of Party: A. Newton Stewart

Photogrammetric Office (III): Portland, Ore. (Plot)
Washington, D.C.Officer-in-Charge: Charles W. Clark
Louis J. Reed, Chief,
Stereoscopic Mapping
Copy filed in Division of
Photogrammetry (IV) Sec.Instructions dated (II) (III): 21 April 1948 (Field)
4 February 1949 (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

Completed Sheet AUG - 7 1952

Completed Sheet AUG 20 1952
OCT 30 1950

Date received in Washington Office (IV): OCT 24 1950 Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

(Unadjusted)

Publication date (IV):

Geographic Datum (III): North American 1927

Vertical Datum (III):

The difference between Unadjusted Datum
and N.A. 1927 Datum is Lat. plus/minus 16 m.
and Long. minus 3 m. V.L.C.L.

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.:

(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.

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

Clarence E. Misfeldt
and
Louis Levin

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): The shoreline on this map is dated 1948, since it was indicated during 1948 field inspection. Between indications, the shoreline is as delineated by the plotting instrument operator.

Projection and Grids ruled by (IV): Ruling Machine

Date: 1 Sept. 1949

Projection and Grids checked by (IV): Theodore L. Jansen

Date: 1 Sept. 1949

Control plotted by (III): James L. Harris (Portland)

Date: 12 Dec. 1949

Control checked by (III): Marie B. Elrod (Portland)

Date: 27 Dec. 1949

Radial Plot of ~~STEREOSCOPIC~~ James L. Harris and J. E. Deal
~~COMPILED BY~~ (Portland)

Date: 20 June 1950

~~COMPILED BY~~ by (III):

PART II = L.C. LANDE (Wash.)

23 MAY '52

delineation Planimetry Clarence E. Misfeldt
 Stereoscopic Instrument ~~COMPILED BY~~ (III): and and
 Contours Louis Levin

Date:

15 Sept. 1950

Date:

2 July '52

compilation

Manuscript ~~COMPILED BY~~ by (III):

John B. McDonald

Date: 4 Oct. 1950

ROBERT L. SUGDEN

24 JULY '52

Photogrammetric Office Review by (III): Louis J. Reed

Date: 6 Oct. 1950

12 AUG '52

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

Louis J. Reed

Date: 6 Oct. 1950

12 AUG '52

Camera (kind or source) (III):

Number	Date	Time	Scale	Stage of Tide
20538 & 20541	24 Aug. 1947	*	1:20,000	--
23162-L	1 Sept. 1948	11:25	1:20,000	3 ft. below MSL

* Clock in camera not functioning

28448 ——— 8 Aug 50 — 15:40 — 1:20,000
 28449

2 ft. below MSL

Tide (III)

* See Remarks

Reference Station: Matarani, Peru

Subordinate Station: Goodnews Bay Entrance, Alaska

Subordinate Station:

Diurnal

Ratio of Ranges	Mean Range	Spring Range
* 2.8	6.2	8.9

* Ratio of rise for
Date: high waters

Washington Office Review by (IV):

Final Drafting by (IV):

Date: 2/8/54

Drafting verified for reproduction by (IV):

Date: 2-12-54

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): ~~(map not complete, 16 Sept. 1950)~~ 19 sq. mi.Shoreline (More than 200 meters to opposite shore) (III): ~~(map not complete, 16 Sept. 1950)~~ 25 Miles

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

Control Leveling - Miles (II): none

Number of Triangulation Stations searched for (II): 1

Recovered: 1

Identified: 1

Number of BMs searched for (II): none

Recovered:

Identified:

Number of Recoverable Photo Stations established (III): 3

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

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.
 Details for T-9238 are on reverse side of this page.

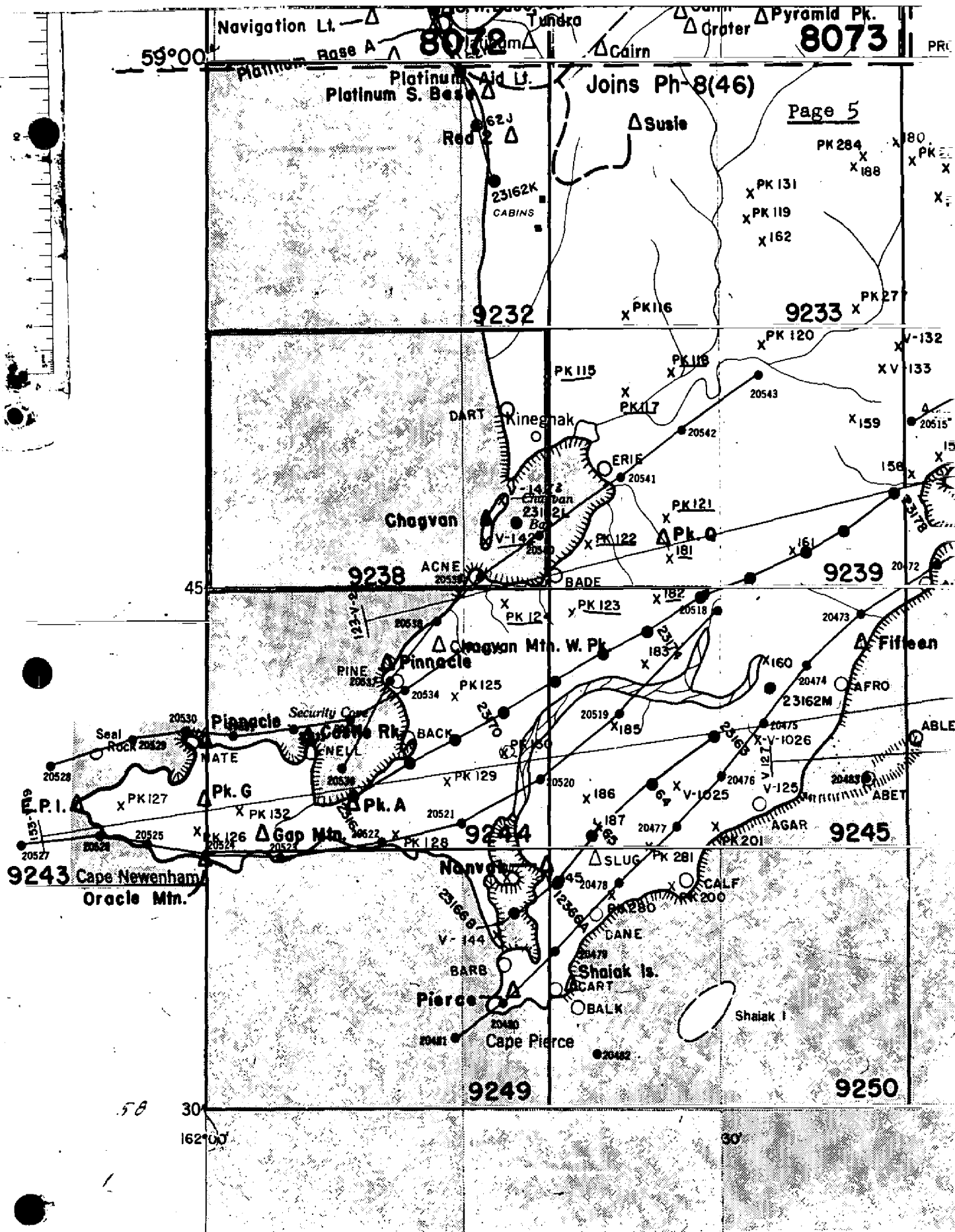
Tide Predictions, Alaska

Kuskokwim Bay

Reference Station Matarani
Time Meridian 150° W

Cape Newenham to Goodnew Bay:

Times of high and low waters subtract 10 minutes
Heights of high waters ~~times~~ multiply by ratio 2.8
Heights of low waters multiply by ratio 2.0
Subtract 3.7 feet to refer heights to MSL



Summary to Accompany T-9238

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 off-shore islands such as Hagemeister and the Walrus Islands.

T-9238 falls in the western portion of the project and contains the greater part of Chagvan Bay and the area is bounded by Kuskokwim Bay.

The map manuscript consists of one sheet, $7\frac{1}{2}$ 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 the map at the compilation scale will be registered with the Descriptive Report in the Bureau Archives. This map will not be published.

FIELD INSPECTION REPORT

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.

Library, No. 172

PART I
PHOTOGRAMMETRIC PLOT REPORT

PART II
SEE REPORT
T-9232

21: AREA COVERED:

This radial plot includes an area along the north shore of Hagemeister Strait (Bristol Bay), Alaska from Cape Newenham to a point about 25 miles eastward and from Cape Pierce northward to Chagvan Bay. It comprises Map Manuscripts No'd. T-9238, T-9239, T-9243 to T-9245 incl., T-9249 and T-9250.

22: METHOD:

The radial plot was run from 9-lens metal mounted photographs by the usual hand templet method. Seven map manuscripts, each ruled with a polyconic projection and a special grid system of 2500 meter squares and seven base grid sheets, which also contained a grid system of 2500 meter squares, were used.

The seven base grids were joined with cellulose tape and placed over the temporarily joined map manuscripts in order to obtain the best possible coverage of the area of the radial plot. The corresponding "X" and "Y" values of the special grid system of the map manuscripts were then lettered on the grid system of the base sheets.

The horizontal control stations which had been plotted on the map manuscripts were transferred to the base grids by matching grids common to each. Due to a slight difference in scale between the grids on the map manuscript and those on the base grids it was necessary to make an adjustment when matching each particular grid square in which a station was located.

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 ^{p. 16} 25 of this report.

Templets of the photographs were made on sheets of vinylite.

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

The area of each templet that served as a top templet has been outlined and indicated with blue wax crayon pencil, directly on the templet.

Symbols used are in accordance with the special instructions dated 4 February 1949 for this project.

The plot was laid numerous times in an effort to obtain the best possible closure and adjustment to the identified horizontal control stations. The fact that several sub-stations for horizontal control stations were incorrectly identified contributed to the difficulty of laying the plot. By office examination of the photographs and consultation with Comdr. Stewart and personnel attached to the 1948 field parties it is believed that horizontal control stations identification errors were corrected to a point where most of these erroneously identified stations could be considered nearly correct or otherwise slightly better than a doubtfully identified station. There were differences of opinion however among the personnel even after all facts were seriously considered and a final decision was reached. //

Due to large displacements caused by relief it was often difficult to secure a good stereoscopic model when pricking certain points in the office. By using the combination of a folded field print and a metal mounted office print with the Schneider, Gottingen portable stereoscope it was possible in most cases to get a fair stereoscopic model.

Additional difficulties were attributed to the photographs being taken in two different years and it was practically impossible in some instances to be sure that points had been transferred from one photograph flight to another either stereoscopically or otherwise within the required accuracy limits.

In many instances, because of relief displacement, the cliffs and bluffs completely covered rectification points which were common to photographs in adjacent flights.

The hydrographic points had been identified from a plane and these were difficult to identify in the office and to transfer to sufficient photographs to obtain an intersection of three or more radials.

It is believed that many of the photographs, for which tilt was not computed, are tilted greater than 1 degree. Since many of the elevations in the area are 10% or more of the flying height, these slightly tilted photographs probably added difficulty to laying of the radial plot. Refer to table 4.3, "Tolerated combinations of tilt with relief and scale" Page 34, Part II, Chapter IV of the Topographic Manual.

A listing of several photographs for which the approximate tilt has been computed by use of the graph shown on Page 36 of the above reference is contained in side heading 25 of this report.

An unusual amount of time and effort have been put into this radial plot by the personnel of the Photogrammetric Office and it is believed that most of the difficulties mentioned

above have been unraveled. The final accepted result is believed to be of sufficient accuracy for the rectification of photographs in the area and for the contouring with the Reading Plotter.

The intersection of radials were drilled as described in paragraph 8 of sub-heading 22 of the Photogrammetric Plot Report for Radial Plot No. 2, Project Ph-8B(46).

23: ADEQUACY OF CONTROL:

The number of stations identified for use in this radial plot was adequate but the personnel of the photogrammetric office are of the opinion that the selection of objects for the use of sub-stations and the accuracy of identification of these objects on the field photographs left much to be desired. Also, the sketches on the pricking cards were inadequate and omitted field data and measurements that would assist in the office identification of horizontal and vertical control stations. The writer, after several months association with a few of the Alaska field personnel, was left with the impression that during the 1948 field season many of the field personnel were not fully aware of the importance of accurate identification and they felt that regardless of how poor a station was identified in the field, by using the meager data obtained in the field, it could be correctly identified in the office during the running of the radial plot or by a stereoscopic study of the photographs in the office.

The personnel of the photogrammetric office have been in constant consultation with Lt. Comdr. Fred A. Riddel, Lt. Lorne Taylor and personnel of their respective 1950 field parties while they were assigned to the Portland Office during the latter part of 1949 and the early part of 1950. Past errors and the poor selection of objects for sub-stations have been brought to their attention, methods have been suggested and they have fully cooperated and are eager to do the best possible field work. It is believed that these people now have a good knowledge of the field inspection requirements, necessary to obtain accurate work at the photogrammetric office.

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

CHAGVAN, 1948:

The sub-station identified in 1948 by Mr. W. G. Ferris was either not identified correctly or the instrument work was in error. The point was rejected and a new sub-station identified by Mr. Hinely in 1949 was used and held to in the radial plot.

CHAGVAN AZIMUTH MARK, 1949:

The sub-station identified by Mr. B. Kurs in 1949 on field photo 20540 could not be held. From study of photographs and analysis of data in consultation with Comdr. Stewart another picture point was selected which is believed to be the point measured in the field. This point was held in the radial plot.

PEAK "Q", 1948 (Same as Peak 181):

This station which is presumed to be the highest point of the mountain was incorrectly pricked on field photograph 20541. A control station was needed in this part of the radial plot. Comdr. Stewart questioned the value of this station for use as horizontal control but by stereoscopic study of the photographs with him the high point was pricked and held to fairly well on most photographs.

VIRGO, 1949:

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

ESTUS, 1948:

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

E.P.I., 1948:

The sub-station was identified with certainty only on two or three photographs. The steep bluff hid the sub-station on many photographs. This was an important station and practically determined the azimuth of the radial plot at its west limits. The radials through the sub-station as pricked on the office photographs were held directly to the plotted position because no other horizontal control station was available in this area.

CAPE NEWENHAM PINNACLE, 1948:
PINNACLE ON SLOPE,

This station was identified as Hydro, Signal No. 398. It is a sharp pinnacle and although difficult to prick on the office photographs within the accuracy limits, is believed satisfactory for use in the radial plot because of the need of every available control station.

ORACLE MOUNTAIN, 1948:

This station was identified by office examination to use in the radial plot in place of the sub-station for GAP MOUNTAIN,

1948 which was incorrectly identified in the field. It is a sharp pointed peak and easily seen on most photographs.

PEAK "G", 1948 (Same as Peak 126):

It is believed that two different peaks were observed on when this intersection station was established. It appears from the radial plot that the observed direction from station CASTLE ROCK, 1948 is correct but the observed direction from station GAP MOUNTAIN, 1948 was on PEAK 132. This office was furnished a no check field computation position for this station but according to the triangulation sketch of Lt. Comdr. LeFever in 1948 an additional observed direction from station SLUG, 1948 to PEAK "G", 1948 is available for a check.

The field computation position is:

Lat.	58° 38'	1154.4 meters
Long.	162° 00'	922.0 meters

The position scaled from the radial plot is:

Lat.	58° 38'	488 meters
Long.	162° 01'	805 meters

CASTLE ROCK, 1948:

The point pricked on field photo 20532 by R.A. Pryce in 1948 is on a lower level of Castle Rock and believed to be about 160 meters southwest of the substitute station. After several hours study of the area with the use of the stereoscope and in consultation with Comdr. Stewart and Mr. Risvold, who had visited the station, a pinnacle was selected which was believed correct but it could be seen only on about four photographs and this point was held to in the radial plot. This pinnacle is obscured on several photographs due to the relief displacement of the high bluff on the northeast side of Castle Rock. The point used as a sub-station ~~is~~ the same as the point selected for Hydro Signal No. 357. The sketch and data on the pricking card contain very little information other than the measurements for the computation of the sub-station.

GAP MOUNTAIN, 1948:

The point pricked and identified on field photograph No. 20523 by R.A. Pryce in 1948 is apparently considerably lower than the flat top of the mountain and on the slope. It is not the point described or indicated by the sketch on the pricking card. Stereoscopic study of this station was made by all field and office personnel and a satisfactory selection of a point could not be determined. By making several assumptions the station might be identified in the office within 10 meters. The sub-station was rejected.

CHAGVAN MOUNTAIN, 1948:

It is believed that two different points of this mountain were observed on by the geodetic party from station CHAGVAN and from station CASTLE ROCK. From the radial plot it appears that the observed direction from CHAGVAN is on the point identified by the field part of Comdr. Stewart and the observed direction from CASTLE ROCK is on another point on the same mountain. The position furnished this office is a no-check field computation but according to the triangulation sketch of Lt. Comdr. LeFever, 1948 there is another observed direction on this peak from station E.P.I. which could be used as a check.

The field computation position is:

Lat.	58° 42'	1434.2 meters
Long.	161° 47'	940.5 meters

The position scaled from the radial plot is:

Lat.	58° 42'	1279 meters
Long.	161° 48'	44 meters

PINNACLE NORTHWEST OF SECURITY COVE, 1948:

This pinnacle was selected as hydro signal No. 356 and identified on Photo 20533. It was included in the horizontal control for use in the radial plot and was held to very well on most of the photographs on which the station appeared. //

SLUG, 1948:

Shortly before Comdr. Stewart left Portland for the 1949 Alaska field season he obtained from the Washington Office two field prints of photographs No's. 23165 and 23166A taken in 1948 and on which he made an office identification of the three sub-stations selected during the 1948 field season for station SLUG, 1948. Apparently these points could not be seen on the field photographs taken in 1947. The writer assisted Comdr. Stewart in this office identification and the assumptions he made seemed logical especially since Comdr. Stewart had visited the station. The stereoscopic transfer of these points to all office photographs was thoroughly studied and checked and it is believed the work was done accurately. The radials to these sub-stations would not pass through their plotted positions by 10 to 25 meters on most photographs. When a radial did pass through the plotted position it was believed that this was due to the direction of error being along the radial. After every attempt to use the sub-stations failed it was decided that the assumptions made during the 1949 office identification were not correct and the station was disregarded for use as horizontal control during the running of the radial plot.

ABLE, 1948:

The geographic position for this recoverable topographic station was computed in the Division of Photogrammetry, Washington Office and furnished this photogrammetric office with the notation "Computed with certain assumptions". The identification of the sub-station was satisfactory. (See notes for Station FIFTEEN, 1948).

FIFTEEN, 1948:

To obtain the initial selected in the field for use in establishing the sub-station for station FIFTEEN, 1948 it was first necessary to run a small radial plot in the area of SHAIK ISLAND and establish recoverable topographic station BALK, 1948. This field method for locating an initial for establishing a sub-station is questioned because station FIFTEEN, 1948 is a second order station and it is believed that both stations VIRGO and HAGEMEISTER ISLAND can be seen from FIFTEEN. Station ABLE 1948, discussed above and station FIFTEEN are located about four miles apart and are the only horizontal control stations available to hold the southeast area of this plot. For this reason any slight doubts concerning their accuracy as horizontal control stations were disregarded and they were held to in the radial plot.

PIERCE, 1948:

There were three sub-stations selected in the field for this station but only one was identified. From a stereoscopic examination of this field identification the point pricked on field photograph No. 20481 appears to be about 30 meters from the station instead of 12.5 meters shown on the pricking card. Also it appears that the point pricked is far down on the slope of the bluff. This assumption was further indicated when a study was made of a very clear closeup oblique furnished this office by Lt. Lorne Taylor which had been taken in 1949. Also it is believed that the stand over the actual station can be seen on this photograph. Other data and measurements shown on the pricking card could be identified on this oblique photograph and in the area, on the nine-lens photographs, where the oblique photograph indicated station PIERCE to be located.

After a very detailed study of the photographs it was decided that the points selected in the field were so minute that it was impracticable to attempt to prick them on the office photographs. In many instances they were obscured by relief displacement of the bluff. From measurements shown on the pricking card and the location of the apparent triangulation stand on the oblique photograph the actual station is believed to have been satisfactorily identified in the office and this identification was held to in the radial plot.

NANVAK, 1948:

The description of the direct field identification of this station is the highest point of a rocky hill. When the photographs were examined stereoscopically the sketch on the pricking card and the field identification on Photograph No. 20521 did not agree. A detailed study of the area of the station, using several stereoscopic pairs, was made with Mr. Risvold, who originally identified the station, and Comdr. Stewart. There was considerable difference of opinion as to where the highest point of the hill was located and Mr. Risvold did not entirely remember the exact conditions on the ground. After much discussion it was finally decided to use the field identification on field photograph No. 20521 and this point of the hill was held to in the radial plot. Comdr. Stewart and several of the personnel of this office were undecided and believed that the high point of this hill could possibly be at another point about 20 meters distant from the point used. This office does not have any stereoscopic instrument capable of measuring minor differences in elevation.

SHAIK ISLAND (Highest Point) 1948:

This station was selected and identified by Mr. Risvold as Hydro Signal No. 388 and was used for control in the radial plot. It is believed that the highest point of the island has been identified on all photographs on which the island appeared.

24: SUPPLEMENTAL DATA:

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

25: PHOTOGRAPHY:

The approximate tilt was determined for the following photographs.

<u>Photograph No.</u>	<u>Approximate tilt from graph Page 36, Part II, Chapter 4 of the Topographic Manual</u>
20520	1° 20'
20522	1° 30'
20523	1° 27'
20533	2° 50'
20534	2° 11'
20535	2° 00'
23165	2° 00'

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

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

It is believed that possibly photograph No. 20537 is not tilted since the flight line does not have a sharp turn and that photograph should have been used instead of tilted photograph No. 20534 which was furnished this office. It is thought that 20536 would have helped in laying this radial plot.

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

26: VERTICAL CONTROL:

The suggested order for vertical control computation listed in Comdr. A. Newton Stewart's field report May to July 1948, Project Ph-87(48) 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 182, 201, 281A and spot elevations V-1025 and V-1026.

This office did not determine an elevation for Peak 132 because a check elevation could not be obtained from stations V-144 and V-145. The horizontal directions listed at stations V-144 and V-145 for Peak 132, taken by Comdr. Stewart's party plotted on Peak 126. Also, when the vertical angles listed for Peak 132 at stations V-144 and V-145 were included in the computation of an elevation for Peak 126 two additional checks were obtained on Peak 126.

From examination of the results of the radial plot it is indicated that it might be possible to compute a no-check elevation for Peak 132 from double zenith distances obtained by the triangulation party at Gap Mountain 1948 to Peak "G", 1948 now on file in the Washington Office and the scaled distance (3187.5 meters) between Gap Mountain, 1948 and Peak 132, taken from the radial plot.

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 29D for the particular station in question. This form is included in the tabulation of elevations and computations 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 was reached as to the correct location of the point. A few of the points that were changed from the original field identification are Peaks 128, 129, 186 and 187.

In cases where the instrument station was not pricked directly, a nearby spot elevation was selected by the field party. This spot elevation was radially plotted, then the position of its instrument station was determined from horizontal ties listed on the pricking card. All distances were scaled from the instrument station. Where vertical control ties between the instrument stations and spot elevations were available, the elevations of the spot elevations were computed and listed.

This office was able to compute the elevations of several stations falling east of the east limits and north of the north limits of this radial plot, in the areas of Map Manuscripts T-9233, T-9234 and T-9240 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-9238, T-9239, T-9243 to T-9245 incl., and T-9249 and T-9250, Project Ph-8(46)B which is submitted with this report.

Approved:

Charles W. Clark
Charles W. Clark
Chief of Party

Respectfully submitted:

J. Edward Deal Jr.
J. Edward Deal, Jr.
Cartographer

Portland Photogrammetric Office
c/o Swan Island Postal Station
Portland 18, Oregon

COPY

To: The Director
U. S. Coast and Geodetic Survey
Washington 25, D. C.

Subject: Geographic Positions, Bristol Bay to Kuskokwim Bay,
Alaska

Geographic positions listed in list of geographic positions G 7798, Bristol Bay to Kuskokwim Bay, Alaska, of Chagvan Mountain, page 11, and Peak G, page 12, could not be held in the radial plot of sheets T-9238, T-9239, T-9243 to T-9245, and T-9249 to T-9250, Project Ph-8(46).

Chagvan Mountain is listed as a no-check position computed from CHAGVAN and CASTLE ROCK. The radial plot indicates that the observed direction from CHAGVAN is on the point identified by the photogrammetric field party and the observed direction from CASTLE ROCK is on another part of the same mountain. Comdr. Stewart has stated that there is no definite high peak on the mountain which would likely be observed from two different stations. The triangulation sketch shows a direction to this peak observed from EPI which apparently wasn't used in the field computations.

The triangulation position of Chagvan Mountain is:

58° 42'	1434.2 meters
161° 47'	940.5 meters

The radial plot position of Chagvan Mountain is:

58° 42'	1279 meters
161° 48'	44 meters

Peak G is also listed as a no-check position computed from CASTLE ROCK and GAP MOUNTAIN. The radial plot indicates that two different peaks were observed from these stations. The observed direction from CASTLE ROCK plots on the radial plot position of Peak G and the observed direction from GAP MOUNTAIN plots on the radial plot position of Peak 132. The triangulation sketch shows a direction from SLUG which apparently wasn't used in the field computations.

There is no peak at the geographic position listed for Peak G.

-2-

To: The Director - continued
23 June 1950

The triangulation position for Peak G is:

58° 38'	1154.4 meters
162° 00'	922.0 meters

The radial plot position of Peak G is:

58° 38'	488 meters
162° 01'	805 meters

The radial plot position of Peak 132 is:

58° 38'	969 meters
162° 00'	298 meters

The no-check elevations of Peak G and Chagvan Mountain are also in error.

Elevations computed from radial plot data are as follows:

Peak G	702.4 meters
Chagvan Mountain	485.7 meters

Charles W. Clark
Lt. Comdr., USC&GS
Officer-in-Charge

CWC/gr

COMPILATION REPORT

Stereoscopic Mapping Section
Washington Office31. Delineation:

Contours, shoreline, and all cultural features were delineated simultaneously on the Reading Plotter, Model A. Photo coverage was complete. Field inspection coverage was quite complete.

32. Control:

The radial plot report (Plot No.3) stated field selection and identification of control was very poor but that after considerable consultation with field personnel who did the work adequate stations to control the radial plot were identified. This office made a thorough study of the station identification and agrees with the Portland Office as regards the quality of the field work. However, no alteration of the plot was considered feasible and the plot was accepted. Actually, only ~~one~~^{two} horizontal control stations exist within the area of this manuscript, CHAGVAN, 1948, and CHAGVAN AZ MARK, 1949.

Vertical Control was furnished primarily by the surface of the sea and the waters of Chagvan Bay. In addition, elevations were furnished by the field party for six elevated points falling within the limits of this map, and for several other peaks located just outside. All peaks are underlined on the map layout and control sketch, page 5. Vertical control was adequate for contouring.

33. Supplemental Data:

- a. Plotting Instrument Photographs:
20538, 39, 40, and 41 (9-lens metal mounts)
~~28448, and 28449.~~
- b. Field Inspection Photographs:
20538, 39, 40, and 41 (9-lens field prints)
- c. Graphic Control Surveys:
 - (1) T-3310, "West Coast of Alaska - Bering Sea Security Cove", Explorer, R. S. Patton, 1912, 1:20,000
 - (2) T-3311 & 12, "Alaska-West Coast, Cape Newenham to Chagvan Bay and Chagvan Bay to Goodnews Bay", Explorer, R. S. Patton, 1912, 1:20,000
- d. Hydrographic Surveys:
 - (1) H-3409, "Alaska-West Coast - Bering Sea- Cape Newenham - etc.", Explorer, R. S. Patton, 1:60,000, July-Sept. 1912.
 - (2) H-3410, "Alaska-West Coast - Bering Sea - Security Cove", Explorer, R.S. Patton, 1:20,000, 1912.

34. Contours and Drainage:

No particular difficulty was had with the photography other than photographic quality which could have been improved somewhat, and no areas of questionable contours exist.

35. Shoreline and Alongshore Details:

Field inspection was adequate except that no shoal or low-water lines were indicated; shoal and approximate low water lines within Chagvan Bay are plotting instrument delineated.

36. Offshore details:

Not applicable.

37. Landmarks and Aids:

No aids exist and no landmarks were selected by the field party in the area of this manuscript.

38. Control for Future Surveys:

Reference side-heading No. 49 of this report, "Notes to the Hydrographer", where recoverable topo stations are listed. All have been located by the radial plot and are shown by name and symbol on the map manuscript. 524 cards were furnished for the three topo stations located on this quadrangle. No hydro signals were selected.

39. Junctions:

q T-9232,
 This map sheet joins T-9232^q and T-9244 with which
 All junctions are in agreement. ~~It also joins T-9232 but this sheet will not be completed until a later date.~~

40. Horizontal and Vertical Accuracy:

Standard.

See Item 66 in The Review Report.

46. Comparison with Existing Maps:

- a. USGS Alaska Map 50, Platinum and Vicinity, Alaska, 1:62,500, 1938 edition.
- b. USGS Alaska Map 18, Goodnews District, Alaska, 1:250,000, 1938 edition.

47. Comparison with Nautical Charts:

Chart No. 9103, Kuskokwim Bay, 1:200,000, published Sept. 1916 (2nd Edition), last correction 21 April 1947.

48. Geographic Name List

See separate page, following.

49. Notes for the Hydrographer:

See separate unnumbered page, following.

50. Compilation Office Review:

See T-2 form, following.

~~51. Remarks:~~

~~This report covers only the area south of an east-west line approximately thru tape station BART, 1948. The small balance north of this line will be completed at a later date as part of another radial plot.~~

Submitted by:

Orvis N. Dalbey
Orvis N. Dalbey
Cartographer - Photogrammetric

Approved and Forwarded:

Louis J. Reed
Louis J. Reed, Chief,
Stereoscopic Mapping Section
Washington Office.

41. JUNCTION OF RADIAL PLOTS:

In the Radial Plot Report covering the north quarter of this quad, it is indicated that a perfect junction was not effected with the previous plot which covered the southern portion. During compilation, the secondary points of the later plot were held to, and an adjustment was carried south into the already compiled area a distance to which it was judged necessary to go to achieve the required accuracy.

GEOGRAPHIC NAMES

Survey No.

T-9238

Name on Survey

On Chart
No.

On previous survey
No.

On U. S. quadrangle
Maps

From local
information

On local Maps

P. O. Guide or Map

Rand McNally Atlas

U. S. Light List

Chagvan Bay

Kinegnak River

Kuskokwim Bay

SALMON RIVER

Alaska

Names underlined in red
and approved
L.H. 52
C. H. 52

Review Report T-9238
Topographic Map
January 12, 1953

62. Comparison with Registered Topographic Surveys.- None
63. Comparison with Maps of other Agencies.-
USGS Alaska Map 18, Goodnews District, Alaska,
1:250,000, 1938 edition.
64. Comparison with Contemporary Hydrographic Surveys.- None
65. Comparison with Nautical Charts.-
See item 47
Chart No. 9103, Kuskokwim Bay, 1:200,000, published
Sept. 1916 (2nd edition), last correction 10 October
1950. There are no significant differences between
T-9238 and the chart.
66. Adequacy of Results and Future Surveys.- Further field
edit is not considered necessary prior to hydrographic surveys
in the area.

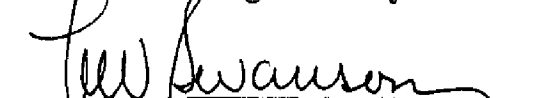
This map complies with project instructions and is
adequate as a base for hydrographic surveys and the construc-
tion of nautical charts.

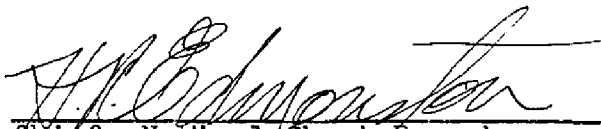
Reviewed by:



B. J. Colner


APPROVED BY:


Chief, Review Section
Div. of Photogrammetry


Chief, Div. of Photogrammetry


Chief, Nautical Chart Branch
Division of Charts


Chief, Div. of Coastal Surveys



49: NOTES FOR THE HYDROGRAPHER:

Recoverable Topographic Stations

Map Manuscript T-9238

AGNE 1948

BADE 1949

DART 1948

PHOTOGRAMMETRIC OFFICE REVIEW

T. 9238

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 along-shore 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. ☒

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

T-9038 thru T-9040
9044 " 9047
9054 " 9057
9064,-9065,-9070
9071,-9074,-9075
9227 thru 9253

Ph-8A(46), PLANIMETRIC

T-9041 thru T-9043
9048 " 9053
9058 " 9063
9066 " 9069
9072,-9073
9076,-9078

Ph-8B(46), SHORELINE

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

SURVEY NO. T. 9238

Record of Application to Charts

2MA

M-2168-1

Figure 1