9077
9578 THRU 9580
9586 THRU 9588
9594 THRU 9598
9601 THRU 9620

Diag. Cht. Nos. 9302 & 9380

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey: Topographic

Field No. / Office No.: T-9077
T-9578 thru 9580
T-9586 thru 9588
T-9594 thru 9598
T-9601 thru 9620

LOCALITY

State: Alaska

General locality: St. Lawrence Island

Locality: Vicinity of Kookooligit Mtns. East to Kinipaghulghat Mtns.

194 51

CHIEF OF PARTY

Fred. A. Riddell, Chief of Party
Jack C. Sammons, Baltimore Photo. Office

LIBRARY & ARCHIVES

DATE: December 8, 1955

8-1870-1 (1)

9077 THRU 9620
9578 THRU 9601

DATA RECORD

T -9578 - 9580 incl.
T -9586 - 9588 incl.
T- 9594 - 9598 incl.
T -9601 - 9620 incl.
9077

Project No. (II): Ph-53(49)

Quadrangle Name (IV): ST. LAWRENCE ISLAND, ALASKA SERIES

Field Office (II): Portland, Oregon

Chief of Party: Fred A. Riddell

Photogrammetric Office (III): Baltimore, Md.

Officer-in-Charge: Jack C. Sammons

Instructions dated (II) (III): 4 May 1950
Field Supplement, I, dated 23 April 1951

Copy filed in Division of Photogrammetry (IV)
Office Files

Method of Compilation (III): Air Photographic (Multiplex & Stereoplanigraph)

Manuscript Scale (III): 1:20,000

Stereoscopic Plotting Instrument Scale (III): 1:10,000

Scale Factor (III): 1.000

Date received in Washington Office (IV): 3/6/53

Applied to Chart No.

Date:

Date reported to Nautical Chart Branch (IV):

Date registered (IV):

T-9578-80	Aug. 26, 1954
T-9586-88	" 8, 1955
T-9594-98	" " "
T-9601-20	" " "
T- 9077	" " "

Publication Scale (IV): 1: 25,000

Publication date (IV):

Geographic Datum (III): N.A. 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): PISTOL, 1951 (T-9603)

Lat.:

Long.:

~~Adjusted~~
Unadjusted Field

Plane Coordinates (IV): UTM

State:

Zone: 2

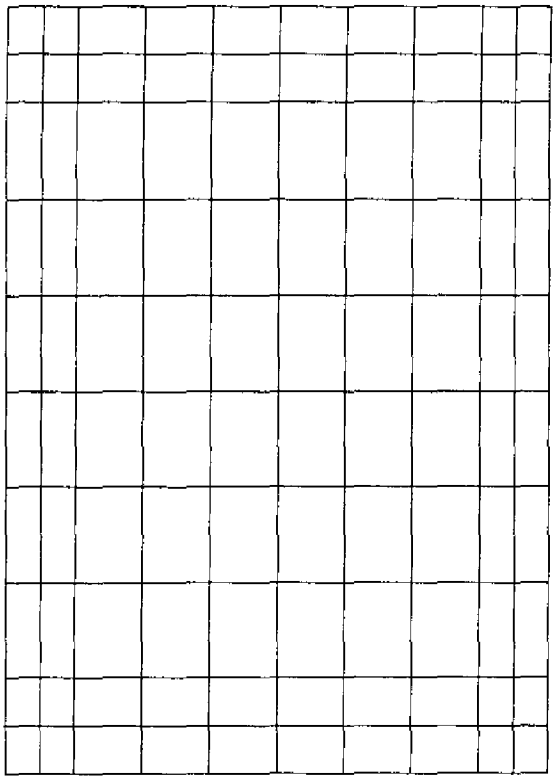
~~XX~~ 7,027,231.7
Northing

~~XX~~ 545,949.9
Easting

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)

Due to the nature of the assignment and manner of compilation, it is impracticable to show direct responsibility for each area contoured.

M-2618-12(4)

DATA RECORD

Field Inspection by (II): Ray H. Skelton-II
John P. Eide
Jack S. Chamberlin
William H. Hill
Robert J. Johnson
Date: June 1951 thru Sept. 1951

Planetable contouring by (II): None
Date:

Completion Surveys by (II): None
Date:

Mean High Water Location (III) (State date and method of location):
August 1948 (Photogrammetric)
Date of photography

~~Projection and~~ Grids ruled by (IV): J.A.
Date: 1952

Projection and Grids checked by (IV): H.D.W.
J. C. Richter
Date: 1952

Control plotted by (III): A. K. Heywood
D. M. Brant
Date: 1952

Control checked by (III): J. C. Richter
E. L. Rolle
E. H. Taylor
Date: 1952

~~Radial Plot or~~ Stereoscopic Control extension by (III): D. M. Brant) Multiplex, Horizontal &
E. H. Taylor) Vertical Bridging
E. L. Rolle)
W. F. Edinger)
D. Lafferman)
S. W. Trow - Steroplanigraph, Hor. & Vert. Bridge.
Date: 1952

Stereoscopic Instrument compilation (III): (Planimetry E. Taylor - E. Rolle
J. Richter - W. Edinger
(Contours D. Brant - D. Lafferman
J. McEvoy
Date: 1952

Work sheets ~~Manuscript~~ delineated by (III): C. A. Lipscomb
J. Y. Council
B. Wilson
J. C. Richter
Date: 1952, 1953

Photogrammetric Office Review by (III): A. K. Heywood
J. D. McEvoy
Date: 1952, 1953

Elevations on Manuscript checked by (II) (III): A. K. Heywood
J. D. McEvoy
Date: 1952, 1953

M-2618-12(4)

Camera (kind or source) (III): Navy Dept. 6" focal length camera

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
See separate listing of photographs by quadrangle.	Aug. 1948		1:20,000	Time of photography not available.

Tide (III)

	Ratio of Ranges	Mean Range	Spring Range
Reference Station: Dutch Harbor Id.,	-	2.2	3.7
Subordinate Station: St. Lawrence to Alaska	0.5	1.3	1.9
Subordinate Station:			

Washington Office Review by (IV): R.J. French Date: Dec.'52 - Aug'53

Final Drafting by (IV): L.M. Gazik Date: ———

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): 1260

Shoreline (More than 200 meters to opposite shore) (III): 216

Shoreline (Less than 200 meters to opposite shore) (III):

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): Recovered: *dentified: 91

Number of BMs searched for (II): Recovered: Identified:

Number of Recoverable Photo Stations established (III): * 5

Number of Temporary Photo Hydro Stations established (III): * 3

Remarks:

* This figure furnished by Compilation Office. In addition to the 91 marked triangulation stations, there were identified 53 HV stations* (unmarked). Vertical angle elevations were determined for all stations.

* HV stations are interpreted as being both horizontal and vertical control for the plotting instruments. Since they are unmarked and unrecoverable they are shown only as a checked spot elevation on the finished manuscript.

M-2618-12(4)

PHOTOGRAPHS

T-9578
STL-11-045
" " -068 thru 071
" " -111 thru 119

T-9579
STL-11-046 thru 052
" " 061 thru 067
" " 120 thru 126

" -12-002 thru 008

T-9580
STL-11-053 thru 054
" " 058 thru 060
" " 127 thru 130

T-9586

STL-6-146 thru 153

" 7-020 thru 026
" " 090 thru 096
" " 136 thru 141

T-9587
STL-6-154 thru 161
"
" 7-012 thru 019
" " 097 thru 103
" " 129 thru 135

STL-12-009 thru 015

T-9588
STL-6-162 thru 167

" 7-004 thru 011
" " 104 thru 111
" " 121 thru 128

" 12-016 thru 017

T-9594
STL-2-027 thru 032
" " 093 thru 098
" " 143 thru 150

" 4-028 thru 034
" " 097 thru 104

" 8-033 thru 039
" " 076 thru 081
" " 149 thru 155

T-9595
STL-2-020 thru 026
" " 099 thru 105
" " 137 thru 142

" 4-021 thru 027
" " 105 thru 110

" 8-040 thru 046
" " 069 thru 075
" " 156 thru 161

T-9596
STL-2-014 thru 019
" " 106 thru 111
" " 131 thru 136

" 4-015 thru 020
" "-111 thru 118

" 8-047 thru 053
" "-062 thru 068
" " 162 thru 168

" 12-018 thru 025

T-9597
STL-2-008 thru 013
" " 112 thru 118
" " 126 thru 130

" 4-008 thru 014
" " 118 thru 123

" 8-059 thru 061
" " 169 thru 172

T-9598
STL-2-002 thru 007
" " 119 thru 122

" 4-003 thru 007
" " 124 thru 129

T-9601
STL-5-103

" 6-050 thru 051

" 12-128 thru 133

T-9602
STL-5-057 thru 061
" " 104 thru 110

T-9602 (cont'd)
STL-6-044 thru 049
" 10-188 thru 191
" 12-121 thru 127

T-9603
STL-5-050 thru 086
" " 111 thru 176
" 6-037 thru 043
" 10-182 thru 187
" 12-026 thru 030
" " 115 thru 120

T-9604
STL-5-043 thru 049
" " 117 thru 123
" 6-030 thru 036
" 10-176 thru 181
" 12-031 thru 034
" " 108 thru 114

T-9605
STL-5-036 thru 042
" " 124 thru 130
" 6-023 thru 029
" 10-168 thru 175
" 12-102 thru 107

T-9606
" 4-166 thru 171
" 5-029 thru 035
" 5-131 thru 137
" 6-016 thru 022
" 10-162 thru 167

T-9607
STL-4-135 thru 139
" 5-023 thru 028
" " 138 thru 144

T-9607 (cont'd)
STL-6-010 thru 015
" "
" 10-155 thru 161
" 12-079 thru 075
" 12-090 thru 094

T-9608
STL-5-014 thru 022
" " 145 thru 151
" 6-006 thru 009
" 10-146 thru 154
" 12-069 thru 076

T-9609
STL-10-005 thru 006
" " 091 thru 093
" " 097 thru 099

T-9610
STL-9-170 thru 171
" 10-007 thru 012
" " 084 thru 090
" " 102 thru 107

T-9611
STL-9-163 thru 169
" 10-013 thru 019
" " 077 thru 083
" " 108 thru 113
" 12-035 thru 042

T-9612
STL-9-157 thru 162
" 10-020 thru 026
" " 071 thru 076
" " 114 thru 119

T-9613
STL-4-158 thru 165
" 9-150 thru 156
" 10-033 thru 028
" " 064 thru 070
" " 120 thru 126

PHOTOGRAPHS

T-9614
STL-4-140 thru 146

" 10-033 thru 038
" " 058 thru 063
" " 127 thru 132

" 12-057 thru 058
" " 084 thru 089

T-9615
STL-9-132 thru 135
" " 138 thru 144

" 10-039 thru 045
" " 050 thru 057
" " 133 thru 140

" 12-059 thru 065

T-9616
STL-9-039 thru 041
" " 058 thru 060
" " 069 thru 071
" " 093 thru 098
" " 103 thru 111

" 12-043 thru 045

T-9617
STL-9-042 thru 047
" " 052 thru 057
" " 072 thru 078
" " 086 thru 092
" " 112 thru 117

" 12-046 thru 050

T-9618
STL-4-155 thru 157

" 9-079
" " 083 thru 085
" " 118 thru 121

T-9619
STL-5-004 thru 007

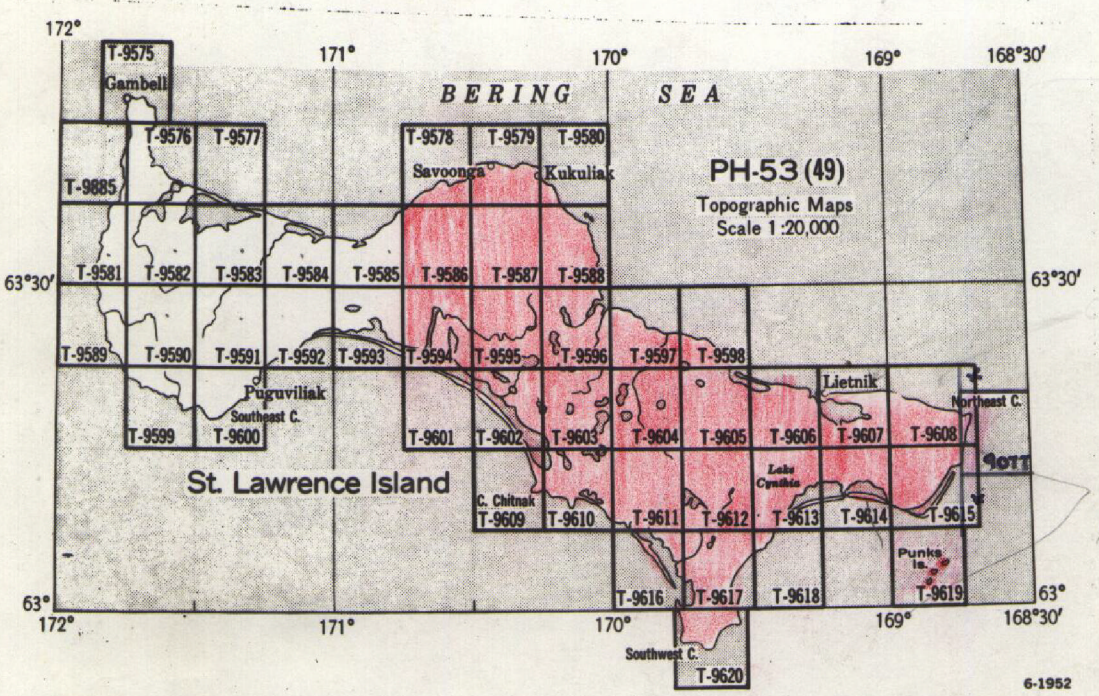
T-9620
STL-9-003 thru 007
" " 015 thru 023
" " 026 thru 034

" 12-051 thru 054

TOPOGRAPHIC MAPPING PROJECT PH-53

ALASKA - Bering Sea, St. Lawrence Island

Compiled by the U. S. Coast and Geodetic Survey at scale of 1:20,000 from U. S. Navy 1:20,000 scale single-lens photographs taken August 1948.
(Refer to U. S. Navy mosaic index)



OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Sq. Miles Area	Sheet No.	Sq. Miles Area	Sheet No.	Sq. Miles Area
T-9575	7	T-9590	67	T-9605	64
T-9576	39	T-9591	67	T-9606	49
T-9577	2	T-9592	52	T-9607	39
T-9578	16	T-9593	42	T-9608	33
T-9579	36	T-9594	56	T-9609	3
T-9580	7	T-9595	66	T-9610	40
T-9581	24	T-9596	64	T-9611	64
T-9582	63	T-9597	41	T-9612	66
T-9583	60	T-9598	16	T-9613	53
T-9584	56	T-9599	21	T-9614	38
T-9585	50	T-9600	28	T-9615	45
T-9586	67	T-9601	2	T-9616	12
T-9587	67	T-9602	31	T-9617	54
T-9588	53	T-9603	65	T-9618	5
T-9589	18	T-9604	65	T-9619	1
				T-9620	19
				T-9885	3
				TOTAL	1836

Summary to Accompany
T-9578-80; T-9586-88;
T-9594-98; T-9601-20; T-9077

These topographic surveys are thirty-one of a series of forty-nine quadrangles, each 7½ minutes in latitude and 15 minutes in longitude, at 1:20,000 scale that cover ST. LAWRENCE ISLAND, ALASKA.

This BERING SEA island is approximately 100 miles long and averages 20 miles in width and has not been previously mapped at this large scale.

ST. LAWRENCE ISLAND is within the CAPE NOME DISTRICT of the SECOND JUDICIAL DIVISION.

The maps of this island are to be published at 1:25,000 scale by the Army Map Service.

For information concerning the project in its broader aspects see the project completion report which will include the following field reports submitted by Fred A. Riddell:

1. Preliminary Report on Supplemental Horizontal and Vertical Control, Ph-53, 21 September 1950

2. Project Report dated June-September 1950

3. Project Report dated June-September 1951

4. Special Report, Control, dated 24 September 1952

(Copies of Items 3 and 4 form part of this descriptive report.)

The registered data is to be permanently filed in the Bureau Archives. Surveys included in this descriptive report will include a cloth-mounted lithographic print of each map manuscript at 1:20,000 scale, together with a cloth-mounted published color print at 1:25,000 scale and the original combined descriptive report.

Reduce to 9 ins

PROJECT REPORT
AERIAL PHOTOGRAPH CONTROL AND INSPECTION
ST. LAWRENCE ISLAND, ALASKA
1951

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Progress Sketch	
Purpose	1
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Areal Description	3
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Horizontal and Vertical Control	5
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PROJECT REPORT
1951
AERIAL PHOTOGRAPH CONTROL AND INSPECTION
St. Lawrence Island, Alaska

Project No.: Ph-53(49)
Chief of Party: Fred A. Riddell
Authority: INSTRUCTIONS, 711-rs, dated 4 May 1950
Field Supplement 1, 711-sal dated 23 April 1951
Date of beginning field work: 27 June 1951
Date of ending field work: 7 September 1951

PURPOSE:

The 1951 photograph control and inspection was a continuation of that begun in 1950, the purpose of which was to secure the necessary field data for the compilation of topographic maps from single-lens aerial photographs and to provide recoverable stations for hydrographic surveys.

PARTY ORGANIZATION AND EQUIPMENT:

The party consisted of one Commissioned Officer (Chief of Party) and 5 Civil Service employees in grades as listed:

Ray H. Skelton II	GS-9
John P. Eide	GS-7
Jack S. Chamberlin	GS-5
William H. Hill	GS-2
Robert J. Johnson	GS-1 (Temporary)

For operational purposes the photogrammetric party was merged with Comdr. J.C. Ellerbe's triangulation party (Project C-1010). Cooperation between the two parties was excellent, resulting in an efficient workable unit which operated with little duplication of effort. Thus, supplies, messing facilities, equipment, and transportation were used to the best advantage by both parties.

In general personnel were employed as follows:

Ray H. Skelton worked with the reconnaissance engineer in the selection and identification of triangulation stations. He also inspected shoreline.

John P. Eide and Jack S. Chamberlin erected and identified targets at such additional stations as were needed for vertical control. They also operated as an observing unit to get additional directions and zenith distances to supplemental control stations. They inspected some shoreline.

William H. Hill acted as general handyman around the main camp. He prefabricated targets and helped in the loading of planes and in the care of equipment.

Robert J. Johnson acted as cook's helper.

Instrumental equipment and camp gear was similar to that used in 1950 with the addition of a Land camera and offset prickers equipped with magnifiers. These special prickers are not considered worth their extra cost. In the field, men on this party as well as on the other parties stated that they found them cumbersome to use. As they needed a linen tester or some other type of magnifier to examine details they felt that the magnifier on the pricker was just an extra gadget. The Land camera was found to be an aid in the location and identification of peaks by intersection. A picture was taken and developed at the time of observations. The features observed were marked on the picture and at the next occupied station it was possible to identify them with a greater degree of certainty than with the usual field sketches. Distant peaks were better imaged if a K-1 filter was used. The black and white pictures are far superior to the sepia for showing details.

Transportation for the combined party consisted of two helicopters, two fixed wing planes (Piper Cubs, model P-18 with 125 h.p. motors), three weasels, and native boats. Use of this transportation has been adequately described by Comdr. J.C. Ellerbe in his 1951 report for Project C-1010, page 3, and will not be repeated here. I fully concur in his statement that the performance of the helicopters cannot be praised too highly. Their use made possible a much better placement of stations in less time than with other means of transportation. Also the short periods of clear weather could be used more advantageously. In several instances a station was reached and the observations completed before fog obscured the targets. Using any other means of transportation these short periods of clear weather would have been wasted reaching the station.

CHRONOLOGY OF ACTIVITIES:

The Chief of Party arrived in Seattle, Washington on 7 June 1951 to make final arrangements for transportation and to supervise last minute loading. R.J. Johnson was hired in Seattle on the day of departure for Alaska. Other members of the party arrived in Seattle on 11 June 1951 and from 12 June throughout the season the photogrammetric party operated and moved with the triangulation party of Comdr. J.C. Ellerbe. Movements of the combined party after leaving Seattle are well covered by Comdr. Ellerbe's report and for this reason are not repeated. The photogrammetric personnel with the exception of R.J. Johnson who was discharged in Seattle, returned to Portland, Oregon on 13 September 1951 and the season was officially closed.

General property belonging to the photogrammetric party was stored in the Division of Geodesy storeroom, Fairbanks, Alaska along with that of the triangulation party. All instruments and photographs were returned to Portland, Oregon.

AREA COVERED:

During the 1951 season the central and eastern portions of St. Lawrence Island were covered, thus completing the survey of the entire island, as the 1950 survey covered the western end to the approximate longitude 170° 45'.

AREAL DESCRIPTION:

The island is long and narrow and essentially a low tundra plane broken by several isolated mountain masses, the largest being the Kookoelgit Mountains in the north central portion. Here, numerous small craters and flows of hardened lava indicate rather recent volcanic activity. These mountains rise to an elevation of over 2,000 feet and in the higher parts were found quantities of light porous rock but on the lower slopes the rock is mostly hard and dense. Large fields of this hard, dense, broken rock cover the north and south slopes. On the north these rock fields give way to grass and tundra mosses at an elevation of about 300 feet but on the south the slope is more gradual and the rock fields extend to a well defined bench running east and west, just north of the Kookuta River. These rock fields form a definite barrier to any kind of transportation, even to full track vehicles. Some of the rocks are as large as 5 feet across and the edges are very jagged. They are covered with moss and lichens and in wet weather become very slippery. Even foot travel is difficult. Helicopter landings can be made with caution but in some places a suitable landing spot may be as much as half a mile from a point desired.

The westerly of the two small lakes in the central part of the Kookoelgit Mountains thaws early in the season and float landings have been made here with sub planes. The easterly, Atuk Lake, is higher and does not thaw until about the end of July. It appears suitable for float landings with small planes but none were made. The other ponds in the area are too small and have too many rocks for landings.

The area west of the Kookoelgit Mountains was described in the 1950 season's report. To the south and extending eastward to approximate longitude 169° 45' is a low tundra area broken only by the eminence of Inwut Mountain. There are numerous "cave-in" lakes. In poorly drained areas the cover is mostly grass and tundra mosses over a layer of black peat-like soil. In better drained areas a similar vegetation covers a brown mineral soil.

East of longitude 169° 45' are a number of isolated mountain masses. Many of the slopes are quite steep and on the tops are large scattered broken rocks up to as much as 30 feet across. A rugged rock outcrop along the crest of the west ridge of Soomagat Mountain looks like trees from a distance. Although all these mountains are covered with broken rock the fields are less extensive than in the Kookoolgit Mountains.

Another low tundra area lies between Nakmak Lagoon and Seepanpak Lagoon. Travel across here is difficult as many of the drains are deep and have banks which are too steep even for track vehicles.

On the extreme east end of the island is a mountain mass which reaches an elevation of about 1800 feet. The shape of the eastern part of this mountain mass was well portrayed by the topographic survey of R. Smith made in 1902 but this survey has caused an error on the published charts because his maximum elevation of 1400 + feet has been shown as the maximum elevation in the area. Smith, however, did not include the highest part of the mountain in his survey although this seems to be the assumption on charts of the area. Except on the north face which is quite steep, wet grass and tundra mosses extend well up the side slopes. In general the rock on the top of the mountain is broken quite small and walking is fairly easy.

SHORELINE INSPECTION:

The shoreline was not inspected in as great detail this year as in previous seasons because of the more open spacing of photo-topographic stations. Also the instructions stated that long detailed descriptions of the shoreline are not desired and that the new collection forms "Coast and Beach Intelligence" are to take the place of the detailed descriptions in the Project Report. These collection forms have been submitted for the principal beaches but much of the information requested is for offshore data which could not be furnished by this party.

The portion of the shoreline inspected this year extends from Kagkusalik Point on the north shore, eastward around the end of the island and westward to the barrier beach south of Kesnata Lagoon which was described in the 1950 Project Report. This shoreline is much less rugged than that inspected last year. There are steep bluffs along the north shore in the neighborhood of Savoonga but from Camp Iveetok eastward and around the island to Powooliiak Bay small boat landings are possible at almost any point except for short stretches around the tips of some of the low rocky points. In two places, one about 4 miles southwest of Savoonga and the other about 14 miles southeast of Savoonga, old lava flows extend to the sea.

Eroded bluffs extend from Kagkusalik Point to about 1/2 mile southwest of Cape Evwhak. This shoreline has been viewed from the air only and the bluffs are estimated to be about 80 feet high. A narrow beach of stones and boulders runs along the toe of the bluff in most places but in certain stretches a very unusual erosion has occurred. Here the face is almost vertical and the bluff has eroded at the water line forming caves. These caves have joined at the back leaving a colonnade at the face. The surf runs past the columns and breaks against the back of the cave as much as 20 to 30 feet in from the face of the bluff.

Cape Evwhak is a low point covered with large broken rock just east of which is an old reindeer corral. From here to Camp Iveetok the shoreline is typified by alternate stretches of bluffs up to 100 feet high and stretches of low shoreline giving way backshore to the tundra. A narrow beach of stones and boulders runs along the toe of the bluff most of this distance.

East from Camp Iveetok a beach of generally finer sediments than on the west end of the island extends all the way around to Powooiliak Bay. Lagoons with barrier beaches extend for several miles at a time. The shoreline in general is quite stable except for breaks in the barrier beaches, many of which close seasonally.

The closest approach of the mountains to the sea is at Southeast Cape where there is only 200-300 feet of low coastal terrain.

More detailed notes on the shoreline appear on the appropriate photographs and in the coast and beach intelligence reports.

HORIZONTAL AND VERTICAL CONTROL:

Essentially the same procedures and practices were followed on this years work as during the 1950 season. The triangulation party cooperated fully in the placement of stations but where horizontal control stations were not ideally located in the model or where additional stations were required to scale the model they were established by the short base method using the subtense principle. Additional horizontal control also was provided by a number of unmarked intersection stations which were established primarily for vertical control.

The horizontal control provided amply meets the requirements specified in the supplemental instructions. Cross flight 12-84 to 95 is controlled by pairs at the ends of the portion which can be effectively used. North of stations SHALLOW and SEEP a large lake is so situated that it cannot be bridged. The effective north end of the

cross flight is on the south shore of the lake. Ground conditions caused considerable difficulty in controlling cross flight 4-134 to 147. The shoreline at the north end of the flight is not sufficiently intervisible from other points to provide an easy location of stations. Two hydrographic stations established by a unit from the Ship PIONEER were identified. Their location was by planetable traverse run by the unit from the PIONEER. It is recommended that the east-west flight 5-140-146 be set up before the cross flight is extended. Station HV 079 was difficult to identify but it is believed correct. Station KINNIP is in this cross flight but could not be identified on the cross flight photographs because of poor detail along the edge of the photographs.

Vertical control is provided by elevations at all triangulation stations, by elevations at unmarked supplemental intersection stations, by a number of vertical angles to identified points and by water surfaces tied to points of known elevation. Elevations for stations V-035, V-049, and all four digit vertical control stations must be computed from scaled distances.

A number of peaks in the Keokeolgit Mountains were observed for vertical control. No signals were built, the high point of the peak being the point observed. Triangles were computed and although side checks in terms of seconds were not good, the triangle of error usually was not more than 2 or 3 meters on a side, providing a good location for the peak. These peaks were not visited but were identified from the air and are believed correct. A geographic position for each should be computed to check the identification. Several peaks were intersected from only two stations and thus have no check on position. To prove that paintings were to the same peak differences of elevation were computed. Identification of stations V-092 and V-093 is positive but the identification of stations V-087 and V-091 should be checked against the geographic positions.

TOPOGRAPHIC STATIONS AND PHOTO-HYDROGRAPHIC STATIONS:

With the increased spacing for topographic stations specified in paragraph 4 of the Instructions, Field Supplement 1, few were needed and only three were established. They are listed in the INDEX OF FIELD WORK. No photo-hydrographic stations were established as such but all buildings and cabins were noted on the photographs for location by the photogrammetric plot and can be considered hydrographic stations.

LANDMARKS AND AIDS:

The only feature recommended for a landmark is the Stolbi Rocks, which has been covered by a special report. There are no navigational aids.

INTERIOR FEATURES:

Reference should be made to classified Air Force installations.

GEOGRAPHIC NAMES:

The usual investigation of geographic names was not required because of previous investigation by the Geological Survey. In preparing this report, names shown on the special copy, Geological Survey map, scale 1:250,000, were used. No data were obtained which would indicate that these names should be changed.

SPECIAL REPORTS AND SUPPLEMENTAL DATA:

Special reports and supplemental data have been submitted as follows:

Progress Mosaic, Ph-53(49)	24 September 1951
Landmark	9 October 1951
Coast and Beach Intelligence Reports	17 October 1951
Computations, Ph-53(49)	29 October 1951
Form 413 (Photographs)	27 September 1951
Form 413 (Pricking Cards)	27 September 1951
Form 413 (Computations)	29 October 1951
Form 413 (Record books)	8 November 1951
Form 413 (C.& B.I. Reports)	9 November 1951
Form 413 (Sketch)	15 November 1951

Respectfully submitted:

Fred A. Riddell
Chief, Photogrammetric
Party No. 3

INDEX OF FIELD WORK

TRIANGULATION, IDENTIFIED:

Station	Photo No.
ANGEE	12-103
B.M. B	4-137
B.M. No. 1	8-062
BEACH	10-189
BLACK	5-041
BLUE	12-086
BLUFF	8-052
BOOTS	4-157
BROOM	10-102
BROWN	4-145
BUTTE	6-042
CHITNAK	10-005
COOK	9-076
CYNTHI	9-153
DUNES	4-157
EMGHEM	9-016
EVWHAK	11-116
FLAKE	12-128
FORKS	6-032
GEENA	9-168
GREEN	12-046
HAPAK	10-139
HELI	4-138
HILOW	12-088
HOLM	5-142
HORN	7-008
HULHAT	10-042
INLET	9-033
INVUT	10-013
KIALEG	12-052
KILOK	10-043
KINNIP	10-040
KOOLO	4-005
KOOZATA	5-059
KULIAK	11-062

TRIANGULATION, IDENTIFIED: - Continued

Station	Photo No.
LAVA	8-039
LEGAK	9-027
LEGS	4-145
MAGMA	7-135
MAKNEK A	10-032
MAKNEK B	10-033
MAKNEK EAST BASE	10-034
MAKNEK WEST BASE	9-152
MYAUG	6-164
MYGNAP	10-076
OKIKAK	6-027
ONGOVE	4-008
PANPAK	12-094
PAWIT	10-114
PINNACLE	5-015
PISTOL	12-116, 12-026
PIPER	12-033
POLAR	4-028
PUNUK	5-005
RANGE	6-047
REIN	5-017
RIFLE	12-124
ROUND	9-116
SAVOONGA	12-003
SEEP	12-091
SEKNAK	12-044
SEVOK	5-138
SNAG	5-005
SHALLOW	12-091
SHIEK	6-150
SOOMA	10-165
SOONG	10-137
STOKE	5-145
TAMNIK	4-171
TOMNAME	5-134

TRIANGULATION, IDENTIFIED: (Continued)

Station	Photo No.
TOOTH	12-010
VIOLET	12-085
VOOKAN	5-017
VOONA	9-004
WALRUS	5-005
WHEAT	12-019
WHITE	8-158
WINDY	12-033
WOODS	4-170
YALOK	10-009
YOUGA	9-059
YOUSIK	8-170

INTERSECTION STATIONS (NOT MARKED), IDENTIFIED:

Station	Photo No.
HV 031	7-137
HV 032	8-036
HV 033	8-078
HV 036	7-132
HV 037	8-156
HV 038, HV 038A	4-025
HV 039, HV 039A, HV 039B	4-108
HV 043	8-071
HV 044, HV 044A	6-042
HV 045, HV 045A, HV 045B	5-132
HV 046, HV 046A, HV 046B	10-185
HV 047	10-184
HV 048	10-088
HV 050	7-107
HV 055, HV 055A	12-036
HV 056, HV 056A, HV 056B	4-011
HV 057, HV 057A	4-121
HV 060, HV 060A, HV 060B, HV 060C	5-122
HV 061, HV 061A, HV 061B	10-177
HV 062	10-113

INTERSECTION STATIONS (NOT MARKED), IDENTIFIED: (Continued)

Station	Photo No.
HV 063	9-159
HV 064	9-115
HV 066	4-125
HV 067, HV 067A	6-028
HV 068, HV 068A, HV 068B	6-028
HV 069	5-041
HV 070	5-038
HV 071, HV 071A, HV 071B, HV 071C	10-170
HV 072	10-073
HV 073	5-030
HV 075, HV 075A, HV 075B	10-065
HV 076	10-064
HV 077	12-053
HV 078	12-053
HV 079	4-143
HV 080	12-074
HV 081	8-167
HV 082	11-066
HV 083	11-048
HV 084	6-154
HV 085	7-019

VERTICAL CONTROL STATIONS AND WATER SURFACES (NOT MARKED), IDENTIFIED:

Station	Photo No.
V 034	7-099
V 040	4-022
V 041	4-022
V 042	4-022
V 051	4-030
V 052	12-026
V 053	12-026
V 054	12-026
V 058	6-032
V 059, V 059A, V 059B	5-121

VERTICAL CONTROL STATIONS AND WATER SURFACES (NOT MARKED), IDENTIFIED: (Continued)

Station	Photo No.
V 074, V 074A	10-162
V 086	12-016
V 087	7-015
V 088	12-011
V 089	12-011
V 090	7-010
V 091	7-010
V 092	12-014
V 093	7-105
V 094	8-068

VERTICAL CONTROL STATIONS AND WATER SURFACES, NOT MARKED, IDENTIFIED: (Elevation to be established during compilation)

Station	Photo No.
V 035	7-099
V 049	10-009
V 1000	8-158
V 1001	8-158
V 1002	8-158
V 1003	8-158
V 1004	12-003
V 1005	4-029
V 1006	4-027
V 1007	12-125
V 1008	12-124
V 1009	12-124
V 1010	10-076
V 1011	10-076
V 1012	10-013
V 1013	4-165
V 1014	4-165
V 1200	12-020
V 1201	8-068
V 1202	4-020
V 1203	7-019
V 1204	6-154
V 1205	7-019

HYDROGRAPHIC STATIONS, established by plane table from triangulation stations HOLM, STOKE, and REIM:

Station	Photo No.	Station	Photo No.
ABE	4-136	KIM	4-136

TOPOGRAPHIC STATIONS:

Station	Photo No.	Station	Photo No.	Station	Photo No.
Bird	7-006	Onga	11-049	Savo	11-046

PHOTOGRAPHS HAVING NOTES CONCERNING SHORELINE AND STRUCTURES:

4-005	4-171	8-063	9-076	10-043	11-047
4-008	5-016	8-151	9-120	10-092	11-049
4-135	5-138	9-027	9-152	10-139	12-053
4-145	5-142	9-033	9-153	10-189	12-080
4-157	6-166	9-059	9-168	11-046	12-103

PHOTOGRAPHS HAVING DESCRIPTIVE NOTES, mostly delineation of cover:

4-005	5-138	8-051	10-034	10-137	12-033
4-008	6-027	8-062	10-040	10-139	12-044
4-011	6-028	9-016	10-042	10-165	12-046
4-028	6-032	9-027	10-043	10-184	12-052
4-145	6-042	9-033	10-064	10-185	12-086
4-157	6-150	9-116	10-065	11-046	12-088
5-005	6-164	9-152	10-078	11-047	12-091
5-030	7-008	9-168	10-076	11-049	12-094
5-041	7-135	10-009	10-088	11-062	12-103
5-059	8-039	10-013	10-113	11-116	12-116
5-112	8-048	10-032	10-114	12-003	12-124
5-121	8-049	10-033			

STATISTICS

PHOTOGRAPH CONTROL:

(1) Triangulation and Intersection Stations (Marked) Identified 82

ANGEK, B.M. B, B.M. NO. 1, BEACH, BLACK, BLUE, BLUFF, BOOTS, BROOM, BROWN, BUTTE, CHITNAK, COOK, CYNTHI, DUNES, ENGHEM, EVUHAK, FLAKE, FORKS, GREENA, GREEN, HAPAK, HELI, HILOW, HOLM, HORN, HULHAT, INLET, INVUT, KIALEG, KILOK, KINNIP, KOOLO, KOOHATA, KULIAK, LAVA, LEGAK, LEGS, MAGMA, MAKNEK A, MAKNEK B, MAKNEK EAST BASE, MAKNEK WEST BASE, MIAUG, MIGHAP, OKINAK, ONGOVE, PANPAK, PAWIT, PINNACLE, PISTOL, PIPER, POLAR, RANGE, RHIM, RIFLE, ROUND, SAVOONGA, SEEP, SEKNAK, SEVOK, SHAG, SHALLOW, SHIEK, SOOMA, SOONG, STOKE, TAMNIK, TOMNAME, TOOTH, VIOLET, VOOKAN, VOOMA, PUNUK, WALRUS, WHEAT, WHITE, WINDY, WUGGS, YALOK, YOUGA, YOUSIK.

(2) Intersection Stations (Not marked) established and identified 41

HV 031 through HV 033, HV 036 through HV 039, HV 043 through HV 048, HV 050, HV 055 through HV 057, HV 060 through HV 064, HV 066 through HV 073, HV 075 through HV 085.

(3) Vertical Control Stations and Water Surfaces, (not marked) established and identified . . 20

V 034, V 040 through V 042, V 051 through V 054 V 058, V 059, V 074, V 086 through V 094.

(4) Vertical Control Stations and Water Surfaces, (not marked), identified, elevation to be established during compilation 23

V 035, V 049, V 1000 through V 1014, V 1200 through V 1205

STATISTICS: (Continued)

(5) Hydrographic Stations, position established by Ship PIONEER by plane table from Triangulation Stations HOLM, STOKE, and REIM. 2

AKE, KIM

TOPOGRAPHIC STATIONS:

(1) Topographic Stations, established, marked, and identified 3

Bird, Onga, Save

RECAPITULATION

Horizontal Control:

Marked Stations	82
Unmarked Stations	43
TOTAL	125

Vertical Control:

Marked Stations	82
Unmarked Stations	84
TOTAL	166

PHOTOGRAMMETRIC PLOT REPORT

FIELD INSPECTION REPORT

See Project Report St. Lawrence Island, Alaska of Fred. A. Riddell for season June - September 1951, under separate cover.

21. AREA COVERED

Surveys Nos.	T-9578	thru 9580
"	T-9586	thru 9588
"	T-9594	thru 9598
"	T-9601	thru 9620

22. METHOD

Both horizontal and vertical control was bridged in the area. A north-south, diagonal flight (12-002 thru 12-054) was bridged in sections by the stereoplanigraph at the Washington office. The horizontal and vertical pass points were established on the 1:10,000 work sheets furnished by this office. This was the only flight bridged by the stereoplanigraph. All other bridging was done by multiplex at the Baltimore Photogrammetric office.

Mr. S. W. Trow, who ran the bridging of the diagonal flight (12-002 thru 12-054) using the stereoplanigraph at the Washington office, commented as follows in a note to the Baltimore office.

"The bridge from HV-055 to SEKNAK checked for scale but had 8.0 mm of swing to the south. The swing has been adjusted.

The BZ curve fell 4.5 mm. The elevation at the vicinity of SEKNAK used to adjust the fall off is an average of SEKNAK and an elevation from the east-west flight which falls near the center of the bridged strip. There was not enough vertical control to be sure of this bridge, because SEKNAK falls on the edge of the strip and may be in error due to cross tilts. The slope of the BZ curve was drawn similar to other BZ curves in this flight because there was no vertical control between the ends of the bridge."

The horizontal and vertical pass points were built up by fitting together a series of bridges. Each starting model was scaled and leveled to the available control, i.e., either field control, pass points or water surfaces (for level). The strip was then run ending on a control point or a water surface for vertical control. See Photo. Plot Report for T-9575, T-9576, and T-9577 (Project Ph-53), item 22, par. 1 and 3.

Pass points were averaged between strips (both horizontally and vertically). The points thus established were used to control the individual models for multiplex compilation of the topography. All work was done on the 1:10,000 work sheets layed out by this office.

22. METHOD (cont'd)

The bridging could not be limited, as it was in the major portion of the previous work, to four models. Most of the strips were five and six models. This was unfortunate since we found that while a four-model strip would drop off in elevation about 4 mm. (130'), a five-model strip would fall off about 7 mm. (220') and a six model strip about 12 mm. (400').

All strips were not bridged because the distance between control points would have required the setting of too many models. It was feasible in these cases to set each model separately during the compilation holding pass points from the adjoining bridged strips. About fifteen percent of the models were "sandwiched" in this manner.

Most of the bridging problems encountered were of a rountine nature. A complete discussion of all these problems would not be feasible. The most troublesome area was on the easternmost portion of the island. Here we had some difficulty with the control and it was also necessary to run longer bridges. A more complete discussion of the major problems encountered, follows:

The flight 4-155 thru 171 was one of the key north-south flights in the area, since established pass points were to be used as a base for running east-west strips. Nevertheless, vertically, the flight has to be considered weak because of the poor location of the control and the necessity to bridge six models. SOOMA, 1951 was at the very edge of the model where considerable falling off usually occurs. There were, also, two vertical control points, V 1013 and V 1014 along the strip, also located at the edge of the model, which would not hold and are believed to be considerably in error. This will be discussed in item 23.

There were two additional north-south flights (12-084 thru 094 and 4-135 thru 146) which were key to the vertical bridging problem. 12-084 - 094 was run satisfactorily in several parts. 4-142-146 and 4-135 - 138 were run next. 4-138-142 from HELI to HV-079 could not be accepted as the solution of the models was very poor (film distortion). This was confirmed by the cross-tilts which were as much as 1.5 mm. It was necessary to extend the east-west strips in stages across this gap without the benefit of control from this north-south flight.

An east-west strip 10-133-140 could not be set as there was insufficient forward overlap in the photography. This was unfortunate since, in addition to pass points from the north-south flight, there was a control point at each end of the strip (HV-079 and SOONG). As a result the only solution available was to set the east-west flights at either side of 10-133-140. These strips were controlled only by pass points at one side and the models in flight 10-133-140 were then set individually holding to the established pass points. This was the best that could be done although it was realized that we might be building up vertical error.

23. ADEQUACY OF CONTROL

Control from a horizontal standpoint was generous but had it been distributed more advantageously with respect to the north-south cross-flights, it would have straightened the vertical bridging. Of the numerous

23. ADEQUACY OF CONTROL (cont'd)

stations involved, there were only a few which could not be held horizontally. In all cases we believed the error to be in identification. There was sufficient remaining horizontal control to hold the area without question. All other control held within 0.5 mm. Those stations which could not be held horizontally were as follows: *

QUAD	STATION	MULTIPLEX POSITION
T-9586	SUGAR, 1950	5.2 mm west
T-9588	HV-050, 1951	2.5 mm west
T-9596	BM I, 1951 (Sub Pt "A")	1.5 mm southeast
T-9602	RANGE, 1951 (Sub Pt "B")	2.3 mm southeast
T-9612	PAWIT, 1951 (Sub Pt. "A")	1.0 mm northeast
T-9613	MAKNEK "A", 1951	5.7 mm west

Several vertical points, the elevations of which were computed from nonreciprocal observations furnished by the field party, could not be held. They are as follows:

QUAD	STATION	COMPUTED ELEVATION MINUS MULTIPLEX ELEVATION
T-9587	V-035	+ 1.4 mm
T-9596	V-1202	+ 0.7 mm
T-9602	V-1009	+ 0.8 mm
T-9606	V-1014	- 2.0 mm
T-9613	V-1013	+ 10.0 mm
T-9587	V-1205	—

24. SUPPLEMENTAL DATA

None

25. PHOTOGRAPHY

Diapositives were from fair to very poor. Those that were poor were so for the following reasons:

1. Incorrect density (usually too dark, some washed out).
2. Dirt on diapositives.
3. Reticulation.

Examination of the contact prints indicates that part of the reason for this is in the photography itself. There was a distinct warpage of models which affected the extent and accuracy of the bridging.

There were some gaps in the photography as well as some flights with poor overlap. These will be discussed in the Compilation Report as they affected the compilation.

* See Review Report, page ? item 66

26. ACCURACY

See Photogrammetric Report, St. Lawrence Island, Alaska, for surveys in the vicinity of Poovoot Range.

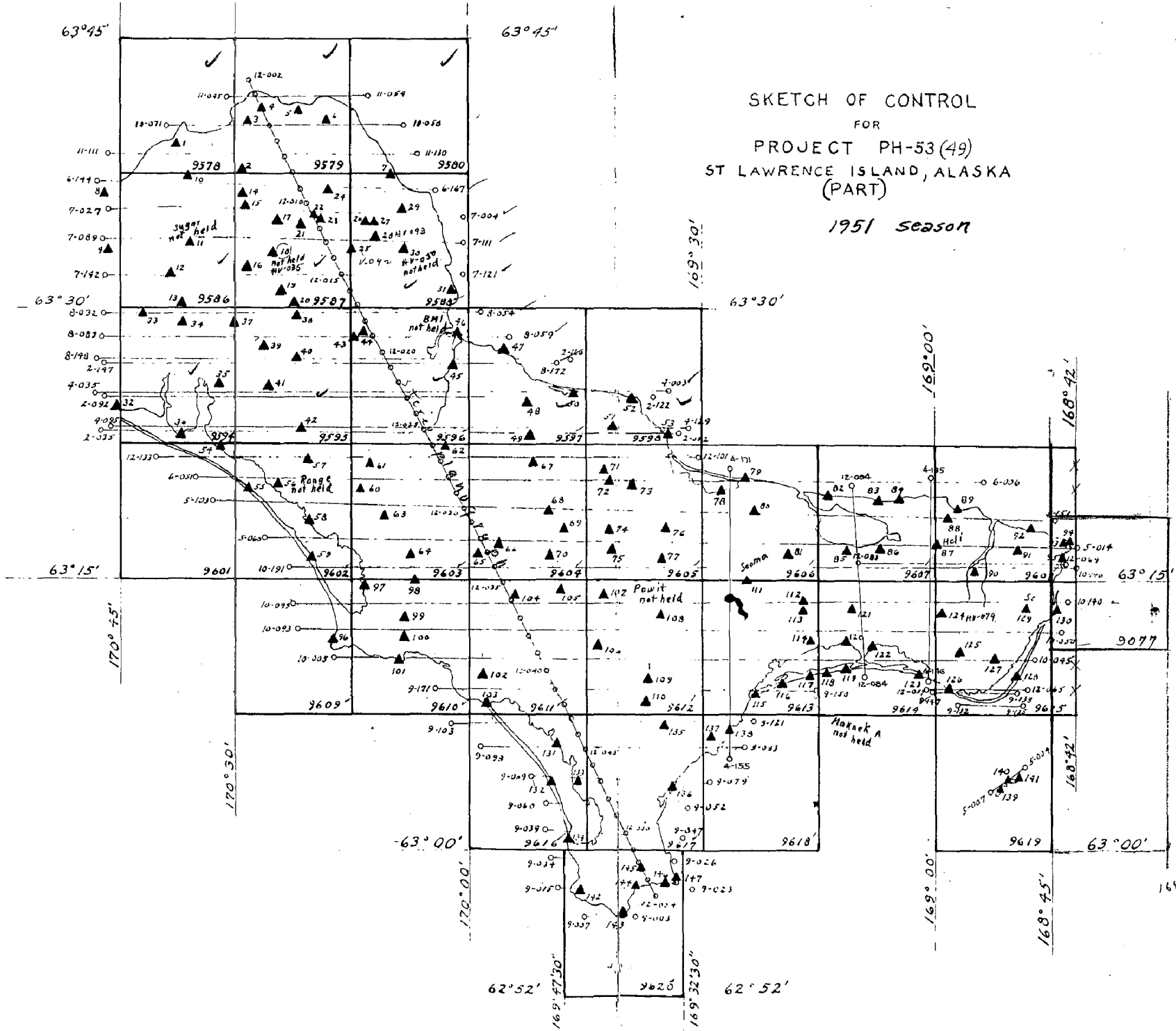
Since there was more control near the shoreline plus the advantage of the water for level, the vertical accuracy there should be better than in the interior where more error could be built up. As may be surmised by the foregoing the area of least vertical accuracy is probably the east-central portion of the area.

Respectfully submitted
3 March 1953

Henry P. Eichert
Supervisory Cartographer

SKETCH OF CONTROL
FOR
PROJECT PH-53(49)
ST LAWRENCE ISLAND, ALASKA
(PART)

1951 season



Ph-53(49)

No.	Name	Date	No.	Name	Date	No.	Name	Date
1.	EVWHAK	1951	51.	HV-066	1951	101.	YALOK	1951
2.	HV-084	" not mkd	52.	KOOLO	"	102.	INVUT	"
3.	HV-082	" "	53.	ANGEE	"	103.	GEENA	"
4.	SAVOONGA	"	54.	FLAKE	"	104.	HV-055	"
5.	HV-083	" "	55.	ZEBRA	"	105.	HV-062	"
6.	KULIAK	"	56.	RANGE	"	106.	MYGHAP	"
7.	MYAUG	"	57.	RIFLE	"	107.	PAWIT	"
8.	KASAL	1950	58.	KOOZATA	"	108.	HV-072	"
9.	NIGGER	"	59.	BEACH	"	109.	HV-063	"
10.	SHIEK	1951 "	60.	BUTTE	" not mkd	110.	HV-064	"
11.	SUGAR	1950	61.	HV-044	"	111.	SOOMA	"
12.	HV-031	1951	62.	PISTOL	" "	112.	HV-074	"
13.	HV-032	"	63.	HV-045	"	113.	HV-075	"
14.	KOOKOO	"	64.	HV-046	"	114.	HV-076	"
15.	HV-085	" "	65.	PIPER	"	115.	CYNTHY	"
16.	MAGMA	1950	66.	WINDY	"	116.	MAKNEK W. BASE - 1951	
17.	HV-034	1951	67.	FORKS	"	117.	MAKNEK "A"	1951
18.	HV-035	"	68.	HV-059	"	118.	MAKNEK "B"	"
19.	HV-036	"	69.	HV-060	"	119.	MAKNEK E BASE	1951
20.	HV-086	"	70.	HV-061	"	120.	VIOLET	1951
21.	HV-087	"	71.	HV-067	"	121.	HILOW	"
22.	HV-088	"	72.	HV-068	"	122.	BLUE	"
23.	HV-089	"	73.	OKIKAK	"	123.	LEGS	"
24.	TOOTH	"	74.	HV-069	"	124.	HV-079	"
25.	HV-092	"	75.	BLACK	"	125.	KINNIP	"
26.	HV-090	"	76.	HV-070	"	126.	BROWN	"
27.	HV-091	"	77.	HV-071	"	127.	HULHAT	"
28.	HV-093	"	78.	WOODS	"	128.	KILOK	"
29.	HORN	"	79.	TAMNIK	"	129.	SOONG	"
30.	HV-050	"	80.	TOMNAME	"	130.	HAPAK	"
31.	BLUFF	"	81.	HV-073	"	131.	SEKNAK	"
32.	GYPSY	1950	82.	SEVOK	"	132.	YOUGA	"
33.	BENCH	"	83.	PANPAK	"	133.	GREEN	"
34.	HV-033	1951	84.	HOLM	"	134.	INLET	"
35.	POLAR	"	85.	SHALLOW	"	135.	ROUND	"
36.	KNIFE	"	86.	SEEP	"	136.	COOK	"
37.	LAVA	"	87.	HELI	"	137.	BOOTS	"
38.	HV-043	"	88.	BM "B"	"	138.	DUNES	"
39.	HV-037	"	89.	STOKE	"	139.	SHAG	"
40.	WHITE	"	90.	HV-080	"	140.	WALRUS	"
41.	HV-038	"	91.	WOOKAN	"	141.	PUNUK	"
42.	HV-039	"	92.	REIM	"	142.	EMGHEM	"
43.	HV-094	"	93.	PINNACLE	"	143.	VOONA	"
44.	WHEAT	" "	94.	NECAPE (ASTRO 2)	1950	144.	HV-078	"
45.	HV-081	"	95.	NECAPE (AZ MK)	1950	145.	KIALEG	"
46.	BM1	"	96.	CHITNAK	1951	146.	HV-077	"
47.	YOUSIK	"	97.	BROOM	1950	147.	LEGAK	"
48.	HV-056	"	98.	HV-047	1951	148.		
49.	HV-057	"	99.	HV-048	"			
50.	ONGROVE	"	100.	HV-049	"			

Photogrammetry

MAP T-9578 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N/φ-COORDINATE LONGITUDE OR E/λ-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
EVWHAK, 1951	G-9208 p6*	Prelim. datum	7,058,027.87	027.9 (972.1)	-139	7,057,888.87	888.9 (111.1)
			516,105.05	105.0 (895.0)	+989	517,094.05	094.0 (906.0)

*Geodetic Position. Plane coordinates computed at Baltimore Photo. office

-13-

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE: December 1951 CHECKED BY: D. M. Brant DATE: January 1952

Photogrammetry

MAP T- 9579 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.0000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR ✓-COORDINATE LONGITUDE OR ✗-COORDINATE E	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD (BACK)	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
KULIAK, 1951	G-9208 P.1*	Prelim Datum	7,060,767.74 532,325.57	767.7 (232.3) 325.6 (674.4)	-139 +989	7,060,628.74 533,314.57	628.7 (371.3) 314.6 (685.4)
SAVOONGA, 1951	"	"	7,061,542.69 525,097.02	542.7 (457.3) 097.0 (903.0)	-139 +989	7,061,403.69 526,086.02	403.7 (596.3) 86.0 (914.0)
HV-082, 1951 ✓	**	NA 1927	7,060,476.1 524,836.3	476.1 (523.9) 836.3 (163.7)			
HV-083, 1951 ✓	**	"	7,062,410.8 527,796.9	410.8 (589.2) 796.9 (203.1)			
HV-084, 1951 ✓	**	"	7,054,204.2 521,280.2	204.2 (795.8) 280.2 (719.8)			

* Geodetic position. Plane coordinates computed at Balto. Photo. Office.
** Positions (Fourth Order) computed at Baltimore Photo. Office. from data submitted by field inspection party.

✓ These stations are not recoverable, and are shown as checked spot elev's only. RJF

-14-

1 FT. = .3048006 METER

COMPUTED BY: E. H. TAYLOR DATE: Dec. 1951 CHECKED BY: D. M. BRANT DATE: JAN. 1952

M-2388-12

Photogrammetry

MAP T-9580 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD	(BACK)	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
MYAUG, 1951	G-9208 P.6*	Prelim. Datum	7,055,815.41	815.4	(184.6)	-139	7,055,676.41		676.4	(323.6)
			538,693.44	693.4	(306.6)	+989	539,682.44		682.4	(317.6)
STOLBI ROCKS, 1951 (S.W. & Lower one of two)	G-9208 P. 10*	"	7,057,982.24	982.2	(017.8)	-139	7,057,843.2		843.2	(156.8)
			545,633.84	633.8	(366.2)	+989	546,622.84		622.8	(377.2)
STOLBI ROCKS, 1951 (N. E. & Higher one of two)	G-9208 P.10*	"	7,057,995.56	995.6	(004.4)	-139	7,057,856.6		856.6	(143.4)
			545,685.65	685.7	(314.3)	+989	546,674.65		674.7	(325.3)

*Geodetic position. Plane coordinates computed at Baltimore Photo. Office.

1 FT. = .3048006 METER

COMPUTED BY: E.H.Taylor DATE Dec.1952 CHECKED BY: D.M.Brant DATE Jan.1952

M-2388-12

Photogrammetry

MAP T- 9586 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N/Y-COORDINATE LONGITUDE OR E/X-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
SUGAR, 1950	Plane Coordinates P.3	Prelim. Datum	7,048,241.45 516,161.80	241.4 (758.6) 161.8 (838.2)	-139 +989	7,048,102.45 517,150.80	102.4 (897.5) 150.8 (849.2)
SHIEK, 1951	G-9208 P.1 *	"	7,053,638.66 514,165.09	638.7 (361.3) 165.1 (834.9)	-139 +989	7,053,499.66 515,154.09	499.7 (500.3) 154.1 (845.9)
HV-032, 1951 ✓	* *	"	7,043,011.97 517,475.26	12.0 (988.0) 475.3 (524.7)	-139 +989	7,042,873.97 518,464.26	874.0 (127.0) 464.3 (535.7)
HV-031,1951 ✓	* *	"	7,046,284.06 516,911.13	284.1 (715.9) 911.1 (88.9)	-139 +989	7,046,284.06 517,900.13	145.1 (854.9) 900.1 (99.9)

* Geodetic position. Plane coordinates computed at Baltimore Office

** Plane coordinates on listing furnished by the Washington office.

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1 FT. = .3048006 METER

COMPUTED BY: E.H.Taylor DATE Dec.1951 CHECKED BY: D.M.Brant DATE Jan.1952

M-2388-12

Photogrammetry

MAP T-9587 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE ~~FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD (BACK)	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
~~HV-031,1951~~ ✓	~~*~~	~~Prelim. Datum~~	~~7,046,284.06~~ ~~516,911.13~~	~~284.1 (715.9)~~ ~~911.1 (88.9)~~	~~-139~~ ~~+989~~	~~7,046,284.06~~ ~~517,900.13~~	~~145.1 (854.9)~~ ~~900.1 (99.9)~~
HV-034, 1951 ✓	*	"	7,049,787.32 525,079.61	787.3 (212.7) 79.6 (920.4)	-139 +989	7,049,648.32 526,068.61	648.3 (351.7) 68.6 (931.4)
HV-036,1951 ✓	*	"	7,043,498.94 526,409.60	498.9 (501.1) 409.6 (590.4)	-139 +989	7,043,359.94 527,398.60	359.9 (640.1) 398.6 (601.4)
HV-085,1951 ✓	**	NA 1927	7,051,438.5 522,202.8	438.5 (561.5) 202.8 (797.2)			
HV-086,1951 ✓	*	Prelim. Datum	7,042,329.67 534,473.88	329.7 (670.3) 473.9 (526.1)	-139 +989	7,042,190.67 535,462.88	190.7 (809.3) 462.9 (537.1)
HV-087,1951 ✓	*	"	7,051,321.03 528,060.49	321.0 (679.0) 60.5 (939.5)	-139 +989	7,051,182.03 529,049.49	182.0 (818.0) 49.5 (950.5)
HV-088, 1951 ✓	*	"	7,050,516.77 531,517.21	516.8 (483.2) 517.2 (482.8)	-139 +989	7,050,377.77 532,506.21	377.8 (622.2) 506.2 (493.8)
HV-089,1951 ✓	*	"	7,050,187.17 532,905.67	187.2 (812.8) 905.7 (94.3)	-139 +989	7,050,048.17 533,894.67	48.2 (951.8) 894.7 (105.3)
KOOKOO, 1951	G-9208 P.6***	"	7,052,682.35 520,694.17	682.4 (317.6) 694.2 (305.8	-139 +989	7,052,543.35 521,683.17	543.4 (456.6) 683.2 (316.8)
MAGMA, 1950	G-9208 P.1***	"	7,045,581.52 522,378.70	581.5 (418.5) 378.7 (621.3)	-139 +989	7,045,442.52 523,367.70	442.5 (557.5) 367.7 (632.3)
TOOTH, 1951	"	"	7,051,691.41 529,727.58	691.4 (308.6) 727.6 (272.4)	-139 +989	7,051,552.41 530,716.58	552.4 (447.6) 716.6 (283.4)

*Plane coordinates on listing furnished by the Washington Office.

** Position (4th order) computed at Baltimore from data submitted by field inspection party.

~~*** Geodetic position. Plane coordinates computed at Baltimore Photo. Office.~~

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1 FT. = .3048006 METER

M-2388-1

COMPUTED BY: E.H.Taylor DATE Dec.1951 CHECKED BY: D.M.Brant DATE Jan.1952

Photogrammetry

MAP T-9588 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N/X-COORDINATE LONGITUDE OR E/Y-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD (BACK)	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
BLUFF, 1951	G-9208 P.2*	Prelim. Datum	7,044,283.88 546,422.60	283.9 (716.1) 422.6 (577.4)	-139 +989	7,044,144.88 547,411.60	144.9 (855.1) 411.6 (588.4)
HORN, 1951	G-9208 P.1 *	"	7,051,305.30 539,928.57	305.3 (694.7) 928.6 (71.4)	-139 +989	7,051,166.30 540,917.57	166.3 (833.7) 917.6 (82.4)
HV-050, 1951 ✓	**		7,047,567.93 540,032.06	567.9 (432.1) 32.1 (967.9)	-139 +989	7,047,428.93 541,021.06	428.9 (571.1) 21.1 (978.9)
HV-090, 1951 ✓	**		7,050,052.25 534,968.07	52.2 (947.8) 986.1 (13.9)	-139 +989	7,049,913.25 535,975.07	913.2 (86.8) 975.1 (24.9)
HV-091, 1951 ✓	**		7,051,116.88 535,947.65	116.9 (883.1) 947.6 (52.4)	-139 +989	7,050,977.88 536,936.65	977.9 (22.1) 936.6 (63.4)
HV-092, 1951 ✓	**		7,048,073.64 535,194.14	73.6 (926.4) 194.1 (805.9)	-139 +989	7,047,934.64 536,183.14	934.6 (65.4) 183.1 (816.9)
HV-093, 1951 ✓	**		7,048,647.75 536,523.71	647.8 (352.2) 523.7 (476.3)	-139 +989	7,048,508.75 537,512.71	508.8 (491.2) 512.7 (487.3)

* Geodetic position. Plane coordinates computed by Baltimore Photo. Office.

** Plane coordinates on listing furnished by the Washington Office.

1 FT. = .3048006 METER

COMPUTED BY: E.H.Taylor DATE Dec. 1951 CHECKED BY: D.M.Brant DATE Jan.1952

M-2388-12

MAP T-9594 PROJECT NO. PH-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR / -COORDINATE LONGITUDE OR / -COORDINATE E S	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
KNIFE, 1951	G-9208 p 1 *	Prelim. Datum	7,028,278.58	278.6	(721.4)	-139	7,028,139.58	139.6	(860.4)
			517,158.33	158.3	(841.7)	+989	518,147.33	147.3	(852.7)
POLAR, 1951	G-9208 p 2 *	"	7,033,692.49	692.5	(307.5)	-139	7,033,553.5	553.5	(446.5)
			522,091.33	91.3	(908.5)	+989	523,080.33	80.3	(919.7)
HV 033, 1951 ✓	**	"	7,040,336.83	336.8	(663.2)	-139	7,040,197.8	197.8	(802.2)
			517,443.52	443.5	(556.5	+989	518,432.52	432.5	(567.5)

*Geodetic Position. Plane Coordinates computed at Baltimore Photo. Office.

**Plane Coordinates on listing furnished by Washington office.

-19-

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: J. C. Richter DATE December 1951

Photogrammetry

MAP T-9595 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
HV 037, 1951 ✓	*	Prelim. Datum	7,037,744.83	744.8	(255.2)	-139	7,037,605.8	605.8	(394.2)
			526,328.20	328.2	(671.8)	+989	527,317.20	317.2	(682.8)
HV 038, 1951 ✓	*	"	7,033,526.06	526.1	(473.9)	-139	7,033,387.1	387.1	(612.9)
			526,933.43	933.4	(66.6)	+989	527,922.43	922.4	77.6)
HV 039, 1951 ✓	*	"	7,029,687.7	687.7	(312.3)	-139	7,029,548.7	548.7	(451.3)
			530,882.1	882.1	(117.9)	+989	531,871.1	871.1	(128.9)
LAVA, 1951	**	"	7,040,895.37	895.4	(104.6)	-139	7,040,756.4	756.4	(243.6)
			522,725.35	725.4	(274.6)	+989	523,714.35	714.4	(285.6)
WHITE, 1951	**	"	7,036,713.55	713.6	(286.4)	-139	7,036,574.6	574.6	(425.4)
			529,237.74	237.7	(762.3	+989	530,226.74	226.7	(773.3)
HV 043, 1951 ✓	*	"	7,041,279.62	279.6	(720.6)	-139	7,041,140.6	140.6	(859.4)
			530,074.12	74.1	(925.9)	+989	531,063.12	62.1	(936.9)

*Plane Coordinate on listing furnished by Washington office.
**Geodetic position. Plane coordinates computed by Baltimore office.

-20-

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

Photogrammetry

MAP T- 9596 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LIN. IN METERS FORWARD (BACK)
BM1, 1951 (~~TIDE GAGE~~)	G-9208 p. 6**	Prelim. datum	7,040,245.11 546,763.47	245.1 (754.9) 763.5 (236.5)	-139 +989	7,040,106.1 547,752.47	106.1 (893.9) 752.5 (247.5)
HV 081, 1951 ✓	*	"	7,036,193.14 546,289.98	1193.1 (806.9) 290.0 (710.0)	-139 +989	7,036,054.1 547,278.98	54.1 (945.9) 279.0 (721.0)
WHEAT, 1951	G-9208 p. 2)) * *	"	7,039,879.47 538,527.43	879.5 (120.5) 527.4 (472.6)	-139 +989	7,039,740.5 539,516.43	740.5 (259.5) 516.4 (483.6)
HV 094, 1951 ✓	*	"	7,038,637.61 535,503.29	637.6 (362.4) 503.3 (496.7)	-139 +989	7,038,498.6 536,492.29	498.6 (501.4) 492.3 (507.7)

*Plane Coordinates on listing furnished by Washington office

**Geodetic Position. Plane coordinates computed at Baltimore Photo. Office

1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

M-2388-12

Photogrammetry

MAP T- 9597 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N COORDINATE LONGITUDE OR E COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LIN IN METERS FORWARD (BACK)
HV 086, 1951 ✓	*	Prelim Datum	7,033,404.56	404.6 (595.4)	-139	7,033,265.6	265.6 (734.4)
			554,592.15	592.2 (407.8)	+989	555,581.15	581.2 (418.8)
HV 057, 1951 ✓	*	"	7,029,554.98	555.0 (445.0)	-139	7,029,416.0	416.0 (584.0)
			555,331.36	331.4 (668.6)	+989	556,320.36	320.4 (629.6)
ONGOVE, 1951	G-9208 p.6 **	"	7,034,488.92	488.9 (511.1)	-139	7,034,349.9	349.9 (650.1)
			560,191.61	191.6 (808.4)	+989	561,180.61	180.6 (819.4)
YOUSIK, 1951	G-9208 p.2 **	"	7,038,303.52	303.5 (696.5)	-139	7,038,164.5	164.5 (835.5)
			551,993.80	993.8 (006.2)	+989	552,982.80	982.8 (017.2)

* Plane Coordinate on listing furnished by Washington office.

** Geodetic Position. Plane coordinates computed at Baltimore office.

-22-

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

Photogrammetry

MAP T-9598 PROJECT NO. PH-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N/S-COORDINATE LONGITUDE OR E/W-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
ANGEE, 1951	G-9208 p.7**	Prelim. Datum	7,030,950.21	950.2 (049.8)	-139	7,030,811.2	811.2 (188.8)
			570,292.30	292.3 (707.7)	+989	571,281.30	281.3 (718.7)
HV 066, 1951 ✓	*	"	7,031,299.48	299.5 (700.5)	-139	7,031,160.5	160.5 (839.5)
			564,428.49	428.5 (571.5)	+989	565,417.49	417.5 (582.5)
KOOLO, 1951	G-9208 p.3**	"	7,034,129.55	129.6 (870.4)	-139	7,033,990.55	990.6 (009.4)
			566,131.59	131.6 (868.4)	+989	567,120.59	120.6 (879.4)

*Plane Coordinates on listing furnished by Washington office.

** Geodetic Position. Plane coordinates computed at Baltimore office.

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

Photogrammetry

MAP T-9601 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
FLAKE, 1951	G-9208 p:6 *	Prelim. Datum	7,027,201.42 521,649.04	201.4 (798.6) 649.0 (351.0)	-139 +989	7,027,062.4 522,638.04	062.4 (937.6) 638.0 (362.0)

*Geodetic Position. Plane coordinates computed at Baltimore office

-24-

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

Photogrammetry

MAP T-9602 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
ZEBRA, 1951	G-9208 p. 3*	Prelim. Datum	7,023,111.57	111.6	(888.4)	-139	7,022,972.57	972.6	(027.4)
			524,848.16	848.2	(151.8)	+989	525,837.16	837.2	(162.8)
BEACH, 1951	" p. 2*	"	7,015,720.37	720.3	(279.6)	-139	7,015,581.4	581.4	(418.6)
			532,164.20	164.2	(835.8)	+989	533,153.2	153.2	(846.8)
KOOZATA, 1951	" p. 3*	"	7,019,332.36	332.4	(667.6)	-139	7,019,193.4	193.4	(806.6)
			532,107.36	107.4	(892.6	+989	533,096.36	096.4	(903.6)
RANGE, 1951	" p. 3*	"	7,023,312.83	312.8	(687.2)	-139	7,023,173.8	173.8	(826.2)
			528,285.73	285.7	(714.3)	+989	529.274.73	274.7	(725.3)
RIFLE, 1951	" p. 1*	"	7,026,420.72	420.7	(579.3)	-139	7,026,281.7	281.7	(718.3)
			531,140.20	140.2	(859.8)	+989	532,129.20	129.2	(870.8)

*Geodetic Position. Plane coordinates computed at Baltimore office

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1 FT.=.3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

M-2388-12

Photogrammetry

MAP T-9603 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LIN IN METERS FORWARD	(BACK)
BUTTE, 1951	G-9208 p. 2**	Prelim. Datum	7,023,318.26	318.3	(681.7)	-139	7,023,179.3		179.3	(820.7)
			537,190.31	190.3	(809.7)	+989	538,179.31		179.3	(820.7)
HV-044, 1951 ✓	*	"	7,025,793,90	793.9	(206.1)	-139	7,025,654.9		654.9	(345.1)
			538,138.56	138.6	(861.1)	+989	539,127.56		127.6	(872.4)
HV-045, 1951 ✓	*	"	7,020,426.14	426.1	(573.9)	-139	7,020,287.1		287.1	(712.9)
			540,137.52	137.5	(862.5)	+989	541,126.52		126.5	(873.5)
HV-046, 1951 ✓	*	"	7,016,188.18	188.2	(811.8)	-139	7,016,049.2		049.2	(950.8)
			542,325.80	325.8	(674.2)	+989	543,314.80		314.8	(685.2)
PISTOL, 1951,	G-9208 p. 2**	"	7,027,370.70	370.7	(629.3)	-139	7,027,231.7		231.7	(768.3)
			545,960,88	960.9	(039.1)	+989	545,949.88		949.9	(050.1)

* Plane coordinates on listing furnished by Washington office.

** Geodetic Position. Plane coordinates computed at Baltimore office.

-26-

1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

M-2388-12

Photogrammetry

MAP T-9604 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LIN IN METERS FORWARD	(BACK)
FORKS, 1951	G-9208 p.7**	Prelim. Datum	7,026,474.22	474.2	(525.8)	-139	7,026,335.2	335.2	(664.8)
			555,550.60	550.6	(449.4)	+989	556,539.60	539.6	(460.4)
WINDY, 1951	G-9208 p.7**	"	7,017,554.53	554.5	(445.5)	-139	7,017,415.5	415.5	(584.5)
			552,127.18	127.2	(872.8)	+989	553,116.18	116.2	(883.8)
HV 059, 1951 ✓	*	"	7,021,874.00	874.0	(126.0)	-139	7,021,735.0	735.0	(265.0)
			557,712.46	712.5	(287.5)	+989	558,701.5	701.5	(298.5)
HV 060, 1951 ✓	*	"	7,020,251.81	251.8	(748.2)	-139	7,020,112.8	112.8	(887.2)
			559,210.40	210.4	(789.6)	+989	560.199.40	199.4	(800.6)
HV 061, 1951 ✓	*	"	7,016,553.34	553.3	(446.7)	-139	7,016,414.3	414.3	(585.7)
			558,474.65	474.6	(525.4)	+989	559,463.65	463.6	(536.4)
PIPER, 1951	G-9208 p.7**	"	7,015,942.62	942.6	(057.4)	-139	7,015,803.6	803.6	(196.4)
			549,373.44	373.4	(626.6)	+989	550,362.4	362.4	(637.6)

* Plane Coordinates on listing furnished by Washington office.
** Geodetic Position. Plane coordinates computed at Baltimore office.

1 FT. = 3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

M-2388-12

Photogrammetry

MAP T- 9605 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N/Y-COORDINATE LONGITUDE OR X/E-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
✓ BLACK, 1951	G-9208 p. 7**	Prelim. Datum	7,018,159.66	159.7	(840.3)	-139	7,018,020.7		020.7	(979.3)
			565,179.59	179.6	(820.4)	+989	566,168.59		168.6	(831.4)
HV 067, 1951 ✓	*	"	7,026,829.64	829.6	(170.4)	-139	7,026,690.6		690.6	(309.4)
			564,463.30	463.3	(536.7)	+989	565,452.30		452.3	(547.7)
HV 068, 1951 ✓	*	"	7,024,916.76	916.8	(083.2)	-139	7,024,777.8		777.8	(222.2)
			563,895.71	895.7	(104.3)	+989	564,884.71		884.7	(115.3)
HV 070, 1951 ✓	*	"	7,020,930.58	930.6	(069.4)	-139	7,020,791.6		791.6	(208.4)
			570,752.19	752.2	(247.8)	+989	571,741.19		741.2	(258.8)
HV 071, 1951 ✓	*	"	7,017,287.24	287.2	(712.8)	-139	7,017,148.2		148.2	(851.8)
			570,742.18	742.2	(257.8)	+989	571,731.18		731.2	(268.8)
✓ OKIKAK, 1951	G-9208 p.2 **	"	7,025,676.28	676.3	(323.7)	-139	7,025,537.3		537.3	(462.7)
			566,577.54	577.5	(422.5)	+989	567,566.54		566.5	(433.5)
HV 069, 1951 ✓	*	"	7,020,218.8	218.8	(781.2)	-139	7,020,079.8		079.8	(920.2)
			564,383.1	383.1	(616.9)	+989	565,372.1		372.1	(627.9)

*Plane Coordinates on listing furnished by Washington office

**Geodetic Position. Plane Coordinates computed at Baltimore office.

✓ These sta's are not recoverable, and are shown as checked spot elev's only.

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1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. M. Brant DATE January 1952

M-2388-12

Photogrammetry

MAP T- 9606 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ (~~BACK~~)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
HV 073, 1951 ✓	*	Prelim. Datum	7,018,308.20	308.2	(691.8)	-139	7,018,169.20	169.2	(830.8)
			584,857.02	857.0	(143.0)	+989	585,846.02	846.0	(154.0)
TAMNIK, 1951	G-9208 p.7 **	"	7,026,427.23	427.2	(572.8)	-139	7,026,288.23	288.2	(711.8)
			579,586.38	586.4	(413.6)	+989	580,575.38	575.4	(424.6)
TOMNAME, 1951	" p.3 **	"	7,023,198.42	198.4	(801.6)	-139	7,023,059.42	059.4	(940.6)
			580,712.10	712.1	(287.9)	+989	581,701.10	701.1	(298.9)
WOODS, 1951	" p.8 **	"	7,024,801.54	801.5	(198.5)	-139	7,024,662.54	662.5	(337.5)
			576,632.84	632.8	(367.2)	+989	577,621.84	621.8	(378.2)

*Plane coordinates on listing furnished by Washington office.

**Geodetic Position. Plane coordinates computed at Baltimore office

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1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor DATE Dec. 1951 CHECKED BY: D. M. Brant DATE January 1952

M-2388.12

Photogrammetry

MAP T- 9607 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N/y-COORDINATE LONGITUDE OR x-COORDINATE E	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
SHALLOW, 1951	G-9208 P8**	Prelim. datum	7,018,837.07	837.1 (162.9)	-139	7,018,698.07	698.1 (301.9)
			591,253.94	253.9 (746.1)	+989	592,242.94	242.9 (757.1)
SEVOK, 1951	G-9208 p.9 **	"	7,024,740.19	740.2 (259.8)	"	7,024,601.19	601.2 (398.8)
			588,444.49	444.5 (555.5)	"	589,433.49	433.5 (566.5)
SEEP, 1951	"	"	7,019,468.31	468.3 (531.7)	"	7,019,329.31	329.3 (670.7)
			594 262.73	262.7 (737.3)	"	595,251.73	251.7 (748.3)
PANPAK, 1951	"	"	7,024,467.52	467.5 (532.5)	"	7,024,328.52	328.5 (671.5)
			594,280.73	280.7 (719.3)	"	595,269.73	269.7 (730.3)
HOLM, 1951	"	"	7,025,073.35	073.4 (926.6)	"	7,024,934.35	934.3 (065.7)
			596,106.66	106.7 (893.3)	"	597,095.66	095.7 (904.3)
			** Geodetic Position.	Plane coordinates computed at Baltimore office.			

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1 FT. = .3048006 METER

M-2388-12

COMPUTED BY A. K. Heywood DATE Dec. 1951 CHECKED BY E. H. Taylor DATE Jan. 1952

Photogrammetry

MAP T- 9608 PROJECT NO. Ph-53(49) SCALE OF MAP 1:10,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
HELI *, 1951	G-9208 p4**	Prelim. datum	7,019,634.22	634.2 (365.8)	-139	7,019,495.22 *	495.2 (504.8)
			600,927.31	927.3 (072.7)	+989	601,916.31	916.3 (083.7)
BM B (USE), 1951	G-9208 p9	"	7,022,476.65	476.7 (523.3)	"	7,022,337.65	337.7 (662.3)
			602,139.30	139.3 (860.7)	"	603,128.30	128.3 (871.7)
VOOKAN, 1951	G-9208 P4**	"	7,019,446.61	446.6 (553.4)	"	7,019,307.61	307.6 (692.4)
			609,281.98	282.0 (718.0)	"	610,270.98	271.0 (729.0)
STOKE, 1951	" p5**	"	7,023,493.76	493.8 (506.2)	"	7,023,354.76	354.8 (645.2)
			602,880.03	880.0 (120.0)	"	603,869.03	869.0 (131.0)
REIM, 1951	" p9**	"	7,021,748.58	748.6 (251.4)	"	7,021,609.58	609.6 (390.4)
			610,778.29	778.3 (221.7)	"	611,767.29	767.3 (232.7)
PINNACLE, 1951	" p4**	"	7,020,518.96	519.0 (481.0)	"	7,020,379.96	380.0 (620.0)
			614,379.50	379.5 (620.5)	"	615,368.50	368.5 (631.5)
HV 080, 1951 ✓	*	"	7,017,156.27	156.3 (843.7)	"	7,017,017.27	017.3 (982.7)
			604,949.46	949.5 (050.5)	"	605,938.46	938.5 (061.5)
NE CAPE ASTRO 2, 1950	G-9208 p4**	"	7,016,879.39	879.4 (120.6)	"	7,016,740.39	740.4 (259.6)
			613,207.10	207.1 (792.9)	"	614,196.10	196.1 (803.9)
NE CAPE AZIMUTH 1902-50	p5**	"	7,019,837.36	837.4 (162.6)	"	7,019,698.36	698.4 (030.6)
			613,101.35	101.4 (898.6)	"	614,090.35	090.4 (909.6)
						7,019,499.86 N	+4.86
* see Memo	23 Mar	1954	final coordinates	(NA1927)		601,906.52 E	-9.48

* Plane coordinates on listing furnished by Washington office
** Geodetic position. Plane coordinates computed at Baltimore office.

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1 FT. = .3048006 METER

COMPUTED BY: A. K. Heywood DATE December 1951 CHECKED BY: E. H. Taylor DATE January 1952

M-2388-12

Photogrammetry

MAP T-9609 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR / -COORDINATE LONGITUDE OR / E COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD	(BACK)	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
	G-9208	Prelim.	7,007,732.14	732.1	(267.9)	-139	7,007,593.1		593.1	(406.9)
CHITNAK, 1951	p. 3*	Datum	535,204.35	204.4	(795.6)	+989	536,193.4		193.4	(806.6)
		*	Geodetic Position Plane Coordinates Computed at Baltimore office.							

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE Dec. 1951 CHECKED BY: D. Brant DATE Jan. 1952

Photogrammetry

MAP T- 9610 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR / -COORDINATE LONGITUDE OR / -COORDINATE E	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD	~~(BACK)~~	~~DISTANCE~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
	G-9208	Prelim.	7,012,968.62	968.6	(031.4)	-139	7,012,829.6		829.6	(170.4)
BROOM, 1950	p.7 **	Datum	537,976.88	976.9	(023.1)	+989	538,965.88		965.9	(034.1)
			7,013,668.53	668.5	(331.5)	-139	7,013,529.5		529.5	(470.5)
HV047, 1951 ✓	*	"	543,294.98	295.0	(705.0)	+989	544,283.98		284.0	(716.0)
			7,010,386.86	386.9	(613.1)	-139	7,010,247.9		247.9	(752.1)
HV048, 1951 ✓	*	"	543,246.99	247.0	(753.0)	+989	544,235.99		236.0	(764.0)
			7,005,643.76	643.8	(356.2)	-139	7,005,504.8		504.8	(495.2)
YALOK, 1951	*	"	541,810.47	810.5	(189.5)	+989	542,799.47		799.5	(200.5)

* Plane Coordinates on Listing Furnished by Washington office.

** Geodetic Position. Plane Coordinates Computed at Baltimore Photo. Office

1 FT.=.3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1952 CHECKED BY: D. M. Brant DATE Jan. 1952

M-2388-12

Photogrammetry

MAP T-9611 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR / E LONGITUDE OR -COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
	G-9208	Prelim.	7,001,778.86	778.9	(221.1)	-139	7,001,639.9	639.9	(360.1)
GEENA, 1951	p.8 **	Datum	551,288.24	288.2	(711.8)	+989	552,277.24	277.2	(722.8)
	G-9208		7,004,599.64	599.6	(400.4)	-139	7,004,460.6	460.6	(539.4)
INVUT, 1951	p.2 **	"	550,826.02	826.0	(174.0)	+989	551,815.02	815.0	(185.0)
			7,011,298.84	298.8	(701.2)	-139	7,011,159.8	159.8	(840.2)
HV 055, 1951 ✓	*	"	555,306.56	306.6	(693.4)	+989	556,295.56	295.6	(704.4)
			7,013,340.93	340.9	(659.1	-139	7,013,201.9	201.9	(798.1)
HV 062, 1951 ✓	*	"	559,399.18	399.2	(600.8)	+989	560,388.18	388.2	(611.8)

* Plane Coordinates on List Furnished by Washington office.

** Geodetic Position. Plane Coordinates Computed at Baltimore Photo. Office.

34

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE Dec. 1951 CHECKED BY: D. M. Brant DATE Jan. 1952

MAP T- 9612 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR ∕ COORDINATE LONGITUDE OR ∕ COORDINATE E	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
HV 063, 1951 ✓	*	Prelim. Datum	7,004,725.92	725.9	(274.1)	-139	7,004,586.9	586.9	(413.1)
			569,425.50	425.5	(574.5)	+989	570,414.50	414.5	(585.5)
HV 064, 1951 ✓	*	"	7,002,206.97	207.0	(793.0)	-139	7,002,068.0	068.0	(932.0)
			569,284.38	284.4	(715.6)	+989	570,273.38	273.4	(726.6)
HV 072, 1951 ✓	*	"	7,011,210.68	210.7	(789.3)	-139	7,011,071.7	071.7	(928.3)
			570,778.00	778.0	(222.0)	+989	571,767.00	767.0	(233.0)
MYGHAP, 1951	G-9208 p.3**	"	7,008,384.66	384.7	(615.3)	-139	7,008,245.7	245.7	(754.3)
			563,800.24	800.2	(199.8)	+989	564,789.2	789.2	(210.8)
PAWIT, 1951	G-9208 p.7 **	"	7,012,130.13	130.1	(869.9)	-139	7,011,991.13	991.1	(008.9)
			562,611.84	611.8	(388.2)	+989	563,600.84	600.8	(399.2)

* Plane Coordinates on List Furnished by Washington Office

** Geodetic Position. Plane Coordinates Computed at Baltimore Photo. Office

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE Dec. 1951 CHECKED BY: D. Brant DATE Jan. 1952

Photogrammetry

MAP T-9613 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR Y-COORDINATE LONGITUDE OR X-COORDINATE E	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
		Prelim.	7,003,506.09	506.1	(493.9)	-139	7,003,367.1	367.1	(632.9)
CYNTHY, 1951	**	Datum	580,891.80	891.8	(108.2)	+989	581,880.8	880.8	(119.2)
			7,014,656.17	656.2	(343.8)	-139	7,014,517.2	517.2	(482.8)
HV 074, 1951 ✓	*	"	586,131.22	131.2	(868.8)	+989	587,120.22	120.2	(879.8)
			7,012,302.96	303.0	(697.0)	-139	7,012,164.0	164.0	(836.0)
HV 075, 1951 ✓	*	"	585,714.52	714.5	(285.5)	+989	586,703.52	703.5	(246.5)
			7,009,055.76	055.8	(944.2)	-139	7,008,916.76	916.8	(083.2)
HV 076, 1951 ✓	*	"	587,248.46	248.5	(751.5)	+989	588,237.46	237.5	(762.5)
MAKNEK			7,004,747.28	747.3	(252.7)	-139	7,004,608.3	608.3	(391.7)
WEST BASE, 1951	**	"	583,550.75	550.8	(449.2)	+989	584,539.75	539.8	(460.2)
			7,015,755.83	755.8	(244.2)	-139	7,015,616.8	616.8	(383.2)
SOOMA, 1951	**	"	580,173.40	173.4	(826.6)	+989	581,162.40	162.4	(837.6)

* Plane Coordinates on List Furnished by Washington Office.

** Geodetic Position. Plane Coordinates Computed at Baltimore Photo. Office.

-36-

1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor DATE Dec. 1951 CHECKED BY: D. Brant DATE Jan. 1952

M-2388-12

Photogrammetry

MAP T-9614 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
	G-9208	Prelim.	7,009,059.29	059.3	(940.7)	-139	7,008,920.3	920.3	(79.7)
VIOLET, 1951	p.9 **	Datum	591,031.23	031.2	(968.8)	+989	592,020.23	20.2	(979.8)
	G-9208		7,006,388.23	388.2	(611.8)	-139	7,006,249.2	249.2	(750.8)
LEGS, 1951	p.9 **	"	599,237.97	238.0	(762.0)	+989	600,226.97	227.0	(773.0)
MAKNEK	G-9208		7,006,725.83	725.8	(274.2)	-139	7,006,586.8	586.8	(413.2)
EAST BASE, 1951	p.4 **	"	591,266.88	266.9	(733.1)	+989	592,255.88	255.9	(744.1)
	G-9208		7,013,096.91	796.9	(903.1)	-139	7,012,957.9	957.9	(42.1)
HILOW, 1951	p.4 **	"	591,299.51	299.5	(700.5)	+989	592,288.5	288.5	(711.5)
	G-9208		7,009,069.26	69.3	(930.7)	-139	7,008,930.26	930.3	(69.7)
BLUE, 1951	p.9 **	"	593,787.07	787.1	(212.9)	+989	594,776.1	776.1	(223.9)
MAKNEK "A" *	G-9208		~~7,005,961.07~~	~~961.1~~	~~(38.9~~	~~-139~~	~~7,005,822.1~~	~~822.1~~	~~(177.9)~~
1951	p.5 **	"	~~587,130.41~~	~~130.4~~	~~(869.6)~~	~~+989~~	~~588,119.4~~	~~119.4~~	~~(880.6)~~
MAKNEK "B"	G-9208		7,006,435.61	435.6	(564.4)	-139	7,006,296.6	296.6	(703.4)
1951	p.5 **	"	589,258.27	258.3	(741.7)	+989	590,247.3	247.3	(752.7)
MAKNEK "A", * 1951		"	63 - 10 - 26.692			- 5.37"	= 21.32"	660.1	(1197.7)
			169 - 16 - 14.202 (15)			-70.69	= 03.51"	49.1	(790.5)
		**	Geodetic Position. Plane Coordinates Computed at Baltimore Photo. Office						

-37-

1 FT. = .3048006 METER

COMPUTED BY: A. K. Heywood DATE Dec. 1950 CHECKED BY: E. H. Taylor DATE Dec. 1951

M-2388-12

Photogrammetry

MAP T- 9615 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N/E COORDINATE LONGITUDE OR E COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~	~~(BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
HAPAK, 1951	G-9208 p.10**	Prelim. Datum	7,013,727.18	727.2	(272.8)	-139	7,013,588.18		588.2	(411.8)
			613,486.29	486.3	(513.7	+989	614,475.29		475.3	(524.7)
HULHAT, 1951	G-9208 p.4 **	"	7,008,126.30	126.3	(873.7)	-139	7,007,987.30		987.3	(12.7)
			606,997.16	997.2	(2.8)	+989	607,986.16		986.2	(13.8)
BROWN, 1951	G-9208 p.10 **	"	7,005,437.69	437.7	(562.3)	-139	7,005,298.69		298.7	(701.3)
			601,779.48	779.5	(220.5)	+989	602,768.48		768.5	(231.5)
HV 079, 1951 ✓	*	"	7,012,441.31	441.3	(558.7)	-139	7,012,302.31		302.3	(697.7)
			601,250.82	250.8	(749.2)	+989	602,239.82		239.8	(760.2)
SOONG, 1951	G-9208 p.4 **	"	7,013,725.90	725.9	(274.1)	-139	7,013,586.90		586.9	(413.1)
			609,489.26	489.3	(510.7)	+989	610,478.26		478.3	(521.7)
KILOK, 1951	G-9208 p.5 **	"	7,006,433.92	433.9	(566.1)	-139	7,006,294.92		294.9	(705.1)
			609,322.08	322.1	(677.9)	+989	610,311.08		311.1	(688.9)
KINNIP, 1951	G-9208 p.4 **	"	7,008,430.11	430.1	(569.9	-139	7,008,291.11		291.1	(708.9)
			602,582.94	582.9	(417.1)	+989	603,571.94		571.9	(428.1)

* Plane Coordinates on List Furnished by Washington Office.

** Geodetic Position. Plane coordinates Computed at Baltimore Photo. Office

-38-

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: A. K. Heywood DATE Dec. 1951 CHECKED BY: E. H. Taylor DATE Dec. 1951

Photogrammetry

MAP T-9616 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N LATITUDE OR Y-COORDINATE / E LONGITUDE OR X-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ FORWARD	(BACK)	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
GREEN, 1951	G-9208 p.8 **	Prelim. Datum	6,993,304.86	304.9	(695.1)	-139	6,993,165.86		165.9	(834.1)
			561,882.44	882.4	(117.6)	+989	562,871.44		871.4	(128.6)
INLET, 1951	G-9208 p.8**	Prelim. Datum	6,987,068.93	068.9	(931.1)	-139	6,986,929.93		929.9	(70.1)
			560,959.83	959.8	(040.2)	+989	561,949.83		949.8	(50.2)
SEKNAK, 1951	G-9208 p.8**	Prelim. Datum	6,997,201.40	201.4	(798.6)	-139	6,997,062.40		062.4	(937.6)
			559,490.64	490.6	(509.4)	+989	560,479.64		479.6	(520.4)
YOUGA, 1951	G-9208 p.3**	Prelim. Datum	6,992,935.06	935.1	(064.9)	-139	6,992,796.06		796.1	(230.9)
			559,133.42	133.4	(866.6)	+989	560,122.42		122.4	(877.6)
		**	Geodetic Position. Plane coordinates computed at Baltimore Photo. Office							

-39-

1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. Brant DATE Jan. 1952

M-2388-12

Photogrammetry

MAP T- 9617 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N / LATITUDE OR / -COORDINATE LONGITUDE OR E / COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
COOK, 1951	G-9208 p.8 **	Prelim. Datum	6,993,351.49	351.5	(648.5)	-139	6,993,212.49	212.5	(787.5)
			572,053.52	053.5	(946.5)	+989	573,042.52	042.5	(957.5)
ROUND, 1951	G-9208 p.8 **	"	6,999,593.05	593.0	(407.0)	-139	6,999,454.05	454.0	(546.0)
			570,918.52	918.5	(081.5)	+989	571,907.52	907.5	(092.5)
		**	Geodetic Position. Plane coordinates computed at Baltimore Photo. Office						

1 FT. = .3048006 METER

COMPUTED BY: E. H. Taylor DATE December 1951 CHECKED BY: D. Brant DATE Jan. 1951

M-2388-12

Photogrammetry

MAP T- 9618 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N / LATITUDE OR Y-COORDINATE / LONGITUDE OR X-COORDINATE / E	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	~~FROM~~ OR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
	G-9208	Prelim.	6,998,824.29	824.3	(175.7)	-139	6,998,685.29	685.3	(314.7)
BOOTS, 1951	p.8 **	Datum	576,319.63	319.6	(680.4)	+989	577,308.63	308.6	(691.4)
	G-9208		6,999,766.16	766.2	(233.8)	-139	6,999,627.16	627.2	(372.8)
DUNES, 1951	p.4**	"	578,412.14	412.1	(587.9)	+989	579,401.14	401.1	(598.9)
	**		Geodetic Position. Plane coordinates computed at Baltimore Photo. Office						

Photogrammetry

MAP T-9619 PROJECT NO. Ph-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1:000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	N / LATITUDE OR / LONGITUDE OR Y / X COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~ ~~(BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
	G-9208	Prelim.	6,996,525.29	525.3	(474.7)	-139	6,996,386.29	386.3	(613.7)
PUNNUK, 1951	p.10**	Datum	610,052.45	052.5	(947.5)	+989	611,041.45	041.5	(958.5)
			6,995,188.02	188.0	(812.0)	-139	6,995,049.02	049.0	(951.0)
SHAG, 1951	"	"	608,388.93	388.9	(611.1)	+989	609,377.93	377.9	(622.1)
			6,996,274.86	274.9	(725.1)	-139	6,996,135.86	135.9	(864.1)
WALRUS, 1951	"	"	609,157.21	157.2	(842.8)	+989	610,146.21	146.2	(853.8)
		**	Geodetic Position. Plane Coordinates Computed at Baltimore Photo. Office.						

-42-

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE Dec. 1951 CHECKED BY: D. Brant DATE January 1952

Photogrammetry

MAP T. 9620 PROJECT NO. Fh-53(49) SCALE OF MAP 1:20,000 SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR N-COORDINATE / LONGITUDE OR E-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM ~~DISTANCE FROM GRID OR PROJECTION LINE IN METERS~~ ~~FORWARD~~	~~(BACK)~~	~~FACTOR~~ DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
	G-9208	Prelim.	6,981,894.32	894.3	(105.7)	-139	6,981,755.32		755.3	(244.7)
EMGHEM, 1951	p.3 **	Datum	563,149.19	149.2	(850.8)	+989	564,138.19		138.2	(861.8)
			6,983,892.51	892.5	(107.5)	-139	6,983,753.51		753.5	(246.5)
HV-077, 1951 ✓	*	"	571,980.79	980.8	(019.2)	+989	572,969.79		969.8	(030.2)
			6,982,538.62	538.6	(461.4)	-139	6,982,399.62		399.6	(600.4)
HV-078, 1951 ✓	*	"	569,045.47	045.5	(954.5)	+989	570,034.47		034.5	(965.5)
	G-9208		6,985,080.05	080.0	(920.0)	-139	6,984,941.05		941.0	(059.0)
KIALEG, 1951	p.3 **	"	568,977.70	977.7	(022.3)	+989	569,966.70		966.7	(033.3)
	G-9208		6,984,469.78	469.8	(530.2)	-139	6,984,330.78		330.8	(669.2)
LEGAK, 1951	p.7 **	"	573,343.60	343.6	(656.4)	+989	574,332.60		332.6	(667.4)
	G-9208		6,979,949.83	949.8	(050.2)	-139	6,979,810.83		810.8	(189.2)
VOONA, 1951	p.3 **	"	567,665.87	665.9	(334.1)	+989	568,654.87		654.9	(345.1)

* Plane Coordinates on Listing Furnished by the Washington Office.

** Geodetic Position. Plane Coordinates computed at Baltimore Photo. Office

43

1 FT. = .3048006 METER

M-2388-12

COMPUTED BY: E. H. Taylor DATE Dec. 1951 CHECKED BY: D. Brant DATE January 1952

special Report, Control Proj. 53

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
c/o Swan Island Postal Station
Portland 18, Oregon

POST-OFFICE ADDRESS:
TELEGRAPH ADDRESS:
EXPRESS ADDRESS:

24 September 1951

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

Subject: Progress Mosaic, Ph-53(49)

all data transferred to index 20 Oct 51

1. Under separate cover, addressed to the Chief, Division of Photogrammetry is being forwarded a mosaic index of photographs on which all control established during the 1951 field season on St. Lawrence Island, Alaska has been plotted.

2. Some of the designations used require an explanation. Triangles (△) in general indicate triangulation stations which were established, marked, named and located by the geodetic party. The exceptions are:

HV-082 - HV-085
WHEAT Sub Stations A and B
PISTOL Sub Stations B and C
BUTTE Sub Station B
SHIEK Sub Station

These stations are unmarked and were located by a method using the subtense principle. Small circles (o) in general indicate supplemental stations which were established primarily to satisfy the vertical control requirements. They were targeted, identified and given a (V) designation with three digits. If during the course of observing sufficient horizontal cuts to these targets were obtained so that side checks could be computed, the stations were given an (H) designation indicating that they can be used for horizontal as well as vertical control. The exceptions are:

V-040 - V-042	(water surfaced tied to other stations by hand level observations)
V-051 - V-054	"
V-058	"
HV-081	(3-point fix)
V-086	(3-point fix - not identified other than highest point)
V-087 - V-094	

The Director - Continued
24 September 1951

These stations were not visited and are identified as the highest point.

KIM and ABE

These stations are hydrographic signals which were established by the Ship PIONEER. They were located by a plane table traverse run by a unit from the Ship PIONEER. An (x) with a (V) designation and four digits indicates an identifiable point to which vertical angles only were taken. Squares (□) indicate marked topographic stations which are to be located by the plot.

Fred A. Riddell
U.S.C.& G. Survey
Chief of Party

FAR/gr

COMPILATION REPORT
SURVEYS - 9578 - 9580 incl.
9586 - 8588 incl.
9594 - 9598 incl.
9601 - 9620 incl.

31. DELINEATION

All of the topography covered by these surveys was plotted by the multiplex instrument on 1:10,000 work sheets. These work sheets were submitted to the Washington office for photographic reduction and assembly into 1:20,000 scale manuscripts.

Shoreline was delineated from ratio prints, holding detail points furnished by the multiplex instrument. In areas of steep bluffs and bluffs in shadows, the multiplex plotted the Mean High Water Line. This Mean High Water Line was then delineated on the work sheets with the approximate M.H.W.L. symbol.

32. CONTROL

See Photogrammetric Plot Report, item 23. & Review Report, item 6.6

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

A 25 foot contour interval was assigned this project to supplement the 50 foot contours in order to obtain better topographic expression. This appears to be a satisfactory treatment although most of the flat areas had little character to express. An even smaller interval, not practical for this project, would have been needed for any further expression.

In a few areas of this project, gaps and poor overlap in photographic coverage were encountered as mentioned in Photogrammetric Plot Report, item 25. Examples of these above-mentioned areas are as follows:

T-9587 and T-9588

There was a 3/4" gap in the photography between strip 7-100 thru 7-105 and strip 7-008 thru 7-015.

T-9597

In this quadrangle there were photographic gaps along the forward overlap area of models 12-105 thru 12-108. These models contained only partial overlap and this amounted to no more than 1/4".

T-9606

The tie between strip 10-161 thru 10-166 and strip 10-122 thru 10-126 was less than 1/2".

34. CONTOURS AND DRAINAGE (cont'd)

T-9610

The forward overlap in models 10-102 thru 10-105 was practically nil.

T-9614

In this quadrangle, the overlap between strip 10-128 thru 10-133 and strip 12-76 thru 12-81 was less than 5%. Another strip, 10-152 thru 10-160, which is directly below strip 12-76 thru 12-81 and could have increased the side overlap, was unusable due to heavy clouds in the photographs throughout the strip.

In the areas with gaps and inadequate overlap as mentioned above, the contours were sketched by this office. For the most part these areas were long and narrow and it was felt that topographic features could be sketched across these gaps adequately as the only practical solution.

There was a distinct warpage of models prevalent throughout the project. This hindered contouring and ties between models, particularly in flat areas where a difference of a few feet would change considerably the horizontal displacement of contours.

Except in the low lands, most of the drainage pattern in this area is undeveloped and not well defined. The compilation office tried to show all main streams as accurately as possible with a minimum of confusing detail. Some drains were distinct for a mile or more only to disappear, apparently having no visible outlet. Other streams could be seen from their headwaters to the edge of lava flows, where they apread into numerous rills. Ponds, small enough to be considered insignificant at the reduced scale, were not shown.

The quality of the diapositives in this project were from fair to extremely poor. In some cases new diapositives were ordered only to be found of the same poor quality as the original, indicating that the film was poor. The poor quality of the film and/or diapositives adversely affects the definition of the model rendering contouring more difficult.

35. SHORELINE AND ALONGSHORE DETAILS

Refer to Paragraph 31 of this report and page 4 of the Field Inspection Report. Some field inspection was furnished this office to aid in interpretation of the M.H.W.L.

The M.H.W.L. of the barrier beaches of Koozata Lagoon and Sźkinak Lagoon was for the most part delineated from monoscopic coverage furnished by the multiplex models. The horizontal accuracy of MHWL in these areas may not be strong due to this weak photographic coverage.

The M. H. W. L. in quadrangle T-9580 was in shadow and obscured by by steep bluffs. The shoreline was delineated as approximate on the manuscript and requires verification.

Special mention is made here of bluffs eroded at the water line forming caves which are described in the Field Inspection Report, page 5. The M.H.W.L. in these areas merits close attention.

36. OFFSHORE DETAILS

Stolbi Rocks on quadrangle T-9580 were not shown due to lack of photographic coverage. Geographic Positions are available for two of them in this group and they are listed on form M-2388-12 for quadrangle T-9580. The area of the rocks was not covered by our 1:10,000 work sheets. The geographic positions should be plotted on the 1:20,000 manuscripts during their assembly.

Alaska Vol III Pg 353 were
by Blakenbaker April 22, 1969 by request of Oceanographic Mapping Group

Youghapotit Rocks in quadrangle T-9616 were not shown due to lack of photographic coverage.

37. LANDMARKS AND AIDS

See Special Report of Landmarks dated 9 October 1951.

38. CONTROL FOR FUTURE SURVEYS

Forms 524, submitted herewith, are for topographic stations established by instrument compilation. They are as follows:

T-9579	T-9588	T-9594
ONGA, 1951	BIRD, 1951	HOPE, 1951
SAVO, 1951		SOCK, 1951

A list of recoverable topographic stations and descriptions of photo hydro stations is included in paragraph 49 of this report.

39. JUNCTIONS

Junctions have been made between all work sheets.

40. HORIZONTAL AND VERTICAL ACCURACY

See item 26 of Photogrammetric Plot Report.

41. RECOMMENDATIONS FOR FUTURE SURVEYS

The method of prepairing the manuscripts, i.e., by assembly of reduced film positives of the work sheets, does not seem to be entirely satisfactory for this type of assignment. Preparation of the 1:20,000 manuscripts on vinylite by the compilation office would have facilitated and improved compilation by presenting a much better overall picture.

42 thru 45

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with USGS map, scale 1:250,000, printed in 1949.

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 9302, scale 1:1,534,076 at latitude 60° 00' published July 1945 (16 Edition), 8/29/49.

Items to be applied to nautical charts immediately:

None.

Items to be carried forward:

None.

After compilation of the hydrographic surveys, these quadrangles should supersede all previously charted information.

Respectfully submitted
5 March 1953

Albert K. Heywood
Cartographer (Photo)

Approved and forwarded

Jack C. Sammons,
Capt. U.S.C. & G. S.
Officer in Charge

Form T-2

PHOTOGRAMMETRIC OFFICE REVIEW

9578-9580 incl.
T- 9588
9595-9598 "
9601-9620 "

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. _____ Reviewer _____ 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

49. NOTES FOR THE HYDROGRAPHER

The following is a list of recoverable topographic stations:

T-9579	T-9588	T-9594
ONGA, 1951	BIRD, 1951	HOPE, 1951
SAVO, 1951		SOCK, 1951

The following is a list of descritions of photo-hydro stations:

T-9607

KIM - 34m W of MHWL

T-9608

ABE - 28 m N.W. of MHWL
IVY - North gable of house

GEOGRAPHIC NAMES

Survey No.

T - 9578

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
& Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Koovukseluk Point										5
Koomlangeelkuk Bay										6
Ughkooleekuk Cove										7
Eevwak Point										8
Kiveepuk Bay										9
Kineeghit Point										10
Shiekuk Creek										11
										12
										13
				Names approved						14
				1-14-54						15
				A.J.W.						16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No.

T - 9579

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	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Savoonga Point										5
Savoonga										6
Sawoonhak Creek										7
Sovwalk Creek										8
Kitnik River										9
Punelok Bay										10
Kookoolik Cape										11
Kookoolik Hill										12
										13
					Names approved					14
						1-14-54				15
							AJW.			16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No.

T - 9580

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Cape Myaughee										5
										6
										7
										8
					Names approved 1-14-54 Ry.C.					9
										10
										11
										12
										13
										14
										15
										16
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										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No.

T - 9586

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Second Judicial Division										2
St. Lawrence Island										3
Kookooligit Mountains										4
Shiekuk Creek										5
										6
					Names approved 1-14-54 A.J.W.					7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No.

T - 9587

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Second Judicial Division										2
St. Lawrence Island										3
Kitnik River										4
Kookooligit Mountains										5
Atuk Lake					Names approved 1-14-54 O.J.W.					6
Atuk Mountain										7
Aivichtik River										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No.

T - 9588

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Ataakak Camp										5
Singikpo Cape										6
Kookooligit Mountains										7
Aivichtik River										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
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										24
										25
										26
										27

Names approved
1-14-54
A.J.W.

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GEOGRAPHIC NAMES

Survey No.

T - 9594

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Koozata Lagoon										5
Koozata River										6
Silook Camp										7
Leghveehuk Creek										8
Oskuvalowik Creek										9
										10
					Names approved					11
						12-18-53				12
							A.F.W.			13
										14
										15
										16
										17
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										27
										M 234

GEOGRAPHIC NAMES

Survey No.
T - 9595

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	
Alaska										1
Second Judicial Division										2
St. Lawrence Island										3
Koozata River										4
										5
										6
										7
										8
										9
				Names approved						10
					12-18-53					11
						AJW				12
										13
										14
										15
										16
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										18
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M 234

GEOGRAPHIC NAMES

Survey No.
T - 9596

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Fossil River										5
Kapsukalik Lake										6
Aivichtik River										7
Camp Iveetok										8
										9
										10
					Names approved					11
						12-18-57				12
							agw			13
										14
										15
										16
										17
										18
										19
										20
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										23
										24
										25
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GEOGRAPHIC NAMES

Survey No. T - 9597

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
~~Second Judicial~~ Division										3
St. Lawrence Island										4
Oomyou sik Point *										5
Agnayaghit Point *										6
Kintanga Bay *										7
Kintanga Point *										8
Ongoveyuk River *										9
Ongoveyuk Lagoon *										10
Taphatikuk Bay *										11
										12
				* = U.S.B.G.N. Decisions						13
				Names approved						14
					5-20-53					15
					a.j.w.					16
										17
										18
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GEOGRAPHIC NAMES

Survey No. T - 9598

	Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
1	Alaska										1
2	Bering Sea										2
3	~~Second Judicial Div.~~										3
4	St. Lawrence Island										4
5	Akoolokok Point										5
6	Alngeeyak Point										6
7	Tomname Lagoon										7
8	Ongoveyuk Lagoon										8
9											9
10											10
11					Names approved						11
12					5-15-53. L. Heck						12
13											13
14											14
15											15
16											16
17											17
18											18
19											19
20											20
21											21
22											22
23											23
24											24
25											25
26											26
27											27

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GEOGRAPHIC NAMES

Survey No. T - 9601

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	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Koozata Lagoon										5
					Names approved 10-8-53 Heck					6
										7
										8
										9
										10
										11
										12
										13
										14
										15
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GEOGRAPHIC NAMES

Survey No. T - 9602

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Koozata Lagoon										5
				Names approved				10-8-53 L. Heck		6
										7
										8
										9
										10
										11
										12
										13
										14
										15
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GEOGRAPHIC NAMES

Survey No. T - 9603

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	
Alaska										1
Second Judicial Division										2
St. Lawrence Island										3
Koozata Lagoon										4
Fossil River										5
										6
										7
				Names approved						8
						10-7-53				9
							a.g.w.			10
										11
										12
										13
										14
										15
										16
										17
										18
										19
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										21
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										24
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GEOGRAPHIC NAMES

Survey No. T - 9604

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Second Judicial Div.										2
St. Lawrence Island										3
Ongoveyuk River										4
				Names approved				9-24-53 Heck		5
										6
										7
										8
										9
										10
										11
										12
										13
										14
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GEOGRAPHIC NAMES

Survey No. T - 9605

	Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
1	Alaska										1
2	Bering Sea										2
3	~~Second Judicial Div.~~										3
4	St. Lawrence Island										4
5	Okikak Mountain										5
6	Myghapowit Mountain										6
7	Ongoveyuk River										7
8	Tommame Lagoon										8
9											9
10											10
11							Names approved				11
12							5-13-53				12
13							R.G.W.				13
14											14
15											15
16											16
17											17
18											18
19											19
20											20
21											21
22											22
23											23
24											24
25											25
26											26
27											27

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GEOGRAPHIC NAMES

Survey No. T-9606

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
~~Second Judicial Div.~~									BGN	3
St. Lawrence Island										4
~~XXXXX~~									BGN	5
Tomname Lagoon									BGN	6
Tomname Mt.									"	7
Gudrum Mt.									"	8
Soomaghat ~~Seegrumghat~~ Mt.									"	9
Seepanpak Inlet									"	10
Egans Creek									"	11
Tamnik ~~Tam-nik~~ Point										12
Nivalghat Beach	(1.5 mile west of Seepanpak Inlet)								BGN	13
										14
			Names approved 4-28-53							15
					L. Heck					16
										17
										18
										19
										20
										21
										22
										23
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GEOGRAPHIC NAMES

Survey No.

T-9607

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
work sheet 37										1
Bering Sea										2
Salghat Beach										3
Seepanpak lagoon										4
Camp Sevok										5
Seepanpak Inlet										6
ALASKA			Approved		12-12-52					7
ST. LAWRENCE ISLAND					L. Heck					8
										9
										10
work sheet 38										11
None										12
										13
										14
										15
										16
										17
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GEOGRAPHIC NAMES

Survey No. T - 9609

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
Koozata Lagoon										5
Siknik Cape										6
Siknik Trapping Camp										7
~~Sea Koovook Bay~~										8
Seakoovook Bay										9
										10
										11
					Names approved					12
						10-7-53				13
							a.j.w.			14
										15
										16
										17
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										25
										26
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M 234

GEOGRAPHIC NAMES

Survey No. T - 9610

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	
Alaska										1
Bering Sea										2
Second Judicial Division										3
St. Lawrence Island										4
~~Oo~~ Oomeyaluk Bay										5
Seakoovook Bay										6
Emekyalok Point										7
Gheena Point										8
Koozata Lagoon				Names approved 10-8-53 (5-9 BGN decisions						9
										10
										11
										12
										13
										14
										15
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										17
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										25
										26
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M 234

GEOGRAPHIC NAMES

Survey No. T - 9611

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	
St. Lawrence Island										1
Alaska										2
Second Judicial Div.										3
Bering Sea										4
Invut Mountain										5
Sekinak Lagoon										6
					Names approved 8-21-53 L. Heck					7
										8
										9
										10
										11
										12
										13
										14
										15
										16
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M 234

GEOGRAPHIC NAMES

Survey No. T - 9612

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
~~Second Judicial Div.~~										3
St. Lawrence Island										4
Seknak River *										5
Myghapowit Mountain *										6
Niykhapakhit Lake *										7
										8
				*=VSBGN Decisions						9
				Names approved						10
				5-20-53						11
				a.j.w.						12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										M 234

GEOGRAPHIC NAMES

Survey No. T - 9613

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
~~Second Judicial Div.~~										3
St. Lawrence Island										4
Maknik Lagoon *										5
Maknek River *										6
Soomaghat Mt. *										7
										8
										9
					Names approved					10
					5-13-53					11
					a.j.w.					12
					* = Board decisions.					13
~										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										M 234

GEOGRAPHIC NAMES

Survey No. T-9614

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
~~Second Judicial Div.~~										3
St. Lawrence Island										4
Maknik Lagoon										5
				Names approved 4-27-83 L Heck						6
										7
										8
										9
										10
										11
										12
										13
										14
										15
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										20
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										22
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										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No. T - 9615

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
~~Second Judicial Div.~~										3
St. Lawrence Island										4
Apavawook Cape										5
Kiloknak Lagoon										6
Kinipaghulghat Mts.										7
Tapisaghak River										8
Soonglaghak Creek										9
				Names under lined in						10
				red are approved.						11
						A. J. W.				12
							5-13-53			13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No. T - 9616

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
~~Second Judicial Div.~~										3
St. Lawrence Island										4
Sekinak Lagoon*										5
Seknak River*										6
										7
										8
										9
					*= U.S. Bd. on Geog. Names Decisions					10
										11
					Names approved					12
							5-20-53			13
							a.g.w.			14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										M 234

GEOGRAPHIC NAMES

Survey No. T - 9617

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Div.										3
St. Lawrence Island										4
Sekinak Lagoon *										5
Oolamushak Hill *										6
Seknak River *										7
Kooku Beach *										8
Oolahpuk Mountain *										9
Kialegak Mountains *										10
										11
										12
				* = U.S.B.G.N. Decisions.						13
					Names approved					14
							5-20-53			15
							a.f.w.			16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No. T - 9618

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Div.										3
St. Lawrence Island										4
Tapphaghtalghee Bay										5
Kooku-Beach										6
										7
										8
										9
										10
										11
										12
										13
										14
						Names approved, 5-10-57 EJW				15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No. 9619

	Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
1	Alaska										1
2	Bering Sea										2
3	St. Lawrence Island										3
4	Punuk Islands										4
5											5
6					Approved	12/16/52					6
7					/s/	L. Heck					7
8											8
9											9
10											10
11											11
12											12
13											13
14											14
15											15
16											16
17											17
18											18
19											19
20											20
21											21
22											22
23											23
24											24
25											25
26											26
27											27

M 234

GEOGRAPHIC NAMES

Survey No. T - 9620

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	
Alaska										1
Bering Sea										2
Second Judicial Div.										3
St. Lawrence Island										4
Southeast Cape										5
Kialegak Point										6
Kialegak Mountains										7
Pingootikook Bay										8
Kangeeghuk Bay										9
Tasighoovik Bay										10
Seevoonah Mt.										11
Emghem Mt.										12
Oolahpuk Mt.										13
Emeghee Point										14
~~Pingootikook Bay~~										15
										16
										17
										18
										19
										20
					Names approved					21
					5-13-53					22
					a.j.w.					23
										24
										25
										26
										27

M 234

GEOGRAPHIC NAMES

Survey No. T - 9885

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atl. G	U. S. Light List H	K	
Alaska										1
Bering Sea										2
Second Judicial Div.										3
St. Lawrence Island										4
Nekeelit Pt.										5
Kaghoopalik Pt.										6
Kavalghak Bay										7
Kavalrok										8
Singik Pt.										9
Upakpak Pt.										10
Hsit Pt.										11
Kavalghak Creek										12
			Names underlined in red are approved.							13
			/s/ L. Heck			3/7/53				14
										15
										16
										17
										18
										19
										20
										21
										22
										23
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M 234

Review Report
Topographic Maps T-9578 thru 9580; T-9586 thru 9588;
T-9594 thru 9598; T-9601 thru 9620; T-9077
21 June 1955

61. General:

The review of these maps was accomplished in 1952 and 1953. Because the maps were not reviewed on a project basis by an individual reviewer, the writing of the review report was deferred until now (the time of registration).

62. Comparison with Registered Topographic Surveys:

No prior mapping by this Bureau.

63. Comparison with Maps of Other Agencies:

USGS St. Lawrence, Alaska 1:250,000 1949 (Reconn.)

The scale of this map affords only a generalized delineation of all features and so precludes a detailed comparison.

64. Comparison with Contemporary Hydrographic Surveys:

None available at the time of review. See Revision Survey 508.

65. Comparison with Nautical Charts:

9302 1:1,534,076, corrected to 12/8/52

The small scale of the chart precludes comparison of detail.

66. Accuracy:

There were 31 maps in this radial plot and there were several triangulation stations in each map area. Only six of the numerous stations failed to hold and these points were widely separated--one in each of the map areas affected.

Six vertical points failed to hold, but these, too, were widely separated.

Because of the abundance and the good distribution of control, these maps meet charting requirements and the National Standards of Accuracy. I believe this statement to be correct for Horizontal Accuracy, however in checking the Vertical bridging it is a broad statement especially in the interior away from water level.

L W Swanson

67. Datums:

The original compilations were based on the St. Lawrence Island (Gambell) Astrolabe Datum. After review and during final drafting these maps will be adjusted to the North American 1927 Datum. The datum was adjusted still further at the time of registration. EHR

68. Contours:

The contour interval for these maps is fifty feet, except that a supplemental twenty-five contour follows the shoreline (unless it becomes unnecessary in high, steep bluffs) and in those inland places where the extra contour has interpretative significance.

Report written by:

Lena T. Stevens

Lena T. Stevens

APPROVED:

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B/Ltr, Department of Commerce, U. S. Coast and Geodetic Survey, Washington 25, D. C., Subject: Security Review, Topographic Maps

IG (30 Nov 55) 1st Ind

HEADQUARTERS ALASKAN AIR COMMAND, APO 942, Seattle, Washington 13 DEC 1955

TO: Department of Commerce, U. S. Coast and Geodetic Survey, Washington 25, D. C.

No classification is required by this headquarters.

FOR THE COMMANDER:

2 Incls:
1. Topographic Manuscript, T-9608
2. Topographic Manuscript, T-9607

JAMES H. SAMS
Captain USAF
Executive, Inspector General

"When inclosures No. 1, 2 ~~is~~ (are) withdrawn or not attached, the classification of CONFIDENTIAL on this correspondence will be downgraded in accordance with para. 25g, AFR 205-1 to UNCLASSIFIED"

applied to Records chart 9380 in 1955 by G.H.E.

T.9077 T.9607 T.9608

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