6646

~~CONFIDENTIAL~~

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic / ~~*Hydrographic*~~ Field No. V - 38
Sheet No. T - 6646

State ~~Alaska~~ Aleutian Islands

LOCALITY

~~Aleutian Islands~~

Umnak Island
~~Battleg~~ Point to Derby Point
Kshalnuk ~~Bay - Coast~~

1938

CHIEF OF PARTY

A. M. SOBIERALSKI, H.&G.E.

U. S. GOVERNMENT PRINTING OFFICE

6646
CONFIDENTIAL

Form 537a
Ed. Nov., 1929

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. V - 38

REGISTER NO. T - 6646

State ~~Alaska~~ Aleutian Islands

General locality ~~Aleutian Islands~~ Umnak Island

Locality ~~Umnak Island - NW coast.~~ Kshalrok Butldag Point to Derby Point

Scale 1:20,000 Date of survey July - August, 1938

Vessel U.S.C.&G.S.S. SURVEYOR

Chief of party A. M. Sobieralski

Surveyed by J. C. Tison, Jr.

Inked by J. C. Tison, Jr.

Heights in feet above M.H.H.W. to ground ~~to top of contour~~

~~Contour, approximate contour~~, Form line interval 100 feet

Instructions dated February 3, 1938

Remarks:

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ore

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET T-6646

Field No. V-38

NORTHWEST COAST UMNAK ISLAND, ALASKA

Project HT-218

Season 1938

INSTRUCTIONS:

The work was executed in accordance with the Director's Instructions, dated February 3, 1938.

EXTENT OF SURVEY:

This survey includes the Bering Sea coast of Umnak Island from Longitude 168° - 40' W. southwestward to Latitude 53° - 08.65 N. It covers the land area of the Island north of an irregular line running from Mount Vsevidof westward to Lat. 53° - 08.65' and Long. 168° - 48.1', and west of a line running northeast from Mount Vsevidof to Latitude 53° - 11.1' and Long. 168° - 39.5', thence west along Lat. 53° - 11.1' to Long. 168° - 40', then north along Long. 168° - 40' to Bering Sea.

GENERAL DESCRIPTIONS AND COMMENTS:

The shoreline on this sheet is generally rocky and ragged, with occasional short stretches of sand beach. Small boat landings are difficult in all but very calm weather.

The point of land called "Bulldog Point" (Kshaliuk Point) by the survey party, and located near the N.E. end of the sheet, is very prominent from seaward. Steep grass bluffs rise directly back of the H.W.L. on its north and southwest sides, while on its northwest face the slope is gradual. The small rock point on the end of which signal "Par" is located is grass covered on top with vertical rock cliff sides rising directly ffom the water, and is a prominent feature of the larger point. In vicinity of signal "Tat" the shoreline consists of a narrow rocky shelf rising about 15 feet vertically from the water, then flat on top back to the base of the grass slope behind. Otherwise, the shoreline from triangulation station "Strat 1938" to signal "Rum" consists of a steep boulder beach. A fringe of sunken rocks parallels the N.W. shoreline of the point.

Signal "Fall", on the S.W. side of ~~"Bulldog Point"~~ Kshaliuk Pt., is the largest and most conspicuous of several small cascades located in the immediate vicinity. The other cascades seem to be springs flowing from the rocky face of the steep bluff.

From signal "Rum" southwest to signal "Pip" the beach is light colored sand, except in vicinity of signal "Ted" where a low gray rock cliff is located. Between signals "Dul" and "Pip" clouds of sand are blown into the air by S'ly winds in dry weather.

The shoreline between signals "Pip" and "Las" is formed by the north end of a black lava flow and is quite low. Many fantastically shaped black lava rocks exist along the beach, but the flow is entirely covered by grass a short distance back of the H.W.L.

The stream emptying into Bering Sea at signal "Last" has a large volume of flow and is evidently of glacial origin, its waters being very muddy during the summer months. The waters of Bering Sea are discolored by it for a considerable distance offshore at certain stages of tide. The stream bed is in a deep cut with steeply eroded banks.

From the above stream southwest to signal "Jus" extends a light colored sand beach, with low flat grass land behind it. The rock cliff outcropping at signal "Add" is quite low and not conspicuous from offshore. The fresh water spring indicated 120 meters offshore to north of signal "Add" is evidently the outlet for a large underground stream; probably fed by water from the slopes of Mount Vsevidof. The waters of Bering Sea are about three fathoms deep in the vicinity, yet the fresh water from the stream makes a large circular break in the salt water surface and is drinkable. The water is clear, and several other smaller outlets, or springs, are located in vicinity of the rocks awash shown just east of the main spring.

The slight point just west of signal "Jus" is quite low and flat and is the outer end of another black lava flow. It is grass covered except along the water's edge. From signal "Jus" southwest to signal "Gib" the water adjacent to shore is very foul, and the shoreline rocky. Steep grass bluffs and lava cliffs rise just back of the H.W.L. southwestward from signal "Out"; then gives way to a rough surfaced, grass covered slope, almost flat, behind. The slight point, or rather twin point, at triangulation station "Lanuk 1938" consists of dark lava with many reddish streaks, and is quite conspicuous for at least two miles out in Bering Sea. The lava cliffs are about 100 feet high and are particularly noticeable when approached from the northeast. This is the first land feature of any prominence along the low coastline southwest of "Bulldog Point", principally because of its height, and was assigned a name for that reason.
- Kshaliuk Pt

Signal "Red" is on the outer end of another black lava flow. The cliffs indicated are about 50 feet high, then a flat grass covered area extends inland to vicinity of the 100 ft. form line.

Southwest of signal "Sis" is a short stretch of black sand beach with a sand bluff behind which gives way to a steep grass slope. Signal "Hi" marks the highest point of the sand bluff and is about 80 ft. above H.W.

The point of land called "Derby Point" by the Survey party, from signal "Eve" westward to signal "Elk", is the result of a lava flow, and the cliffs and rock outcroppings along the shoreline are of

a dark brown color. The steep sides of the point are grass covered above these cliffs and outcrops, but the rounded top is bare and strewn with cinders and small lava boulders. Triangulation station "Bowl 1938" is near the center of the rounded top, which resembles the crown of a derby hat from the water. The point is a conspicuous feature of the coastline, and also serves as a line of demarcation for different weather conditions which are apt to prevail along this stretch of coast. When foggy, wet, windy weather prevails to southwest of the point, good and comparatively clear weather conditions are apt to be encountered to the northeast, and vice versa. A large herd of hair seal were seen hauled out along the rocky northwest shoreline of the point upon several different occasions.

The rounded point off signal "Fog" is low and flat back to the steep bluff indicated on the sheet. It consists of grey bed rock, and is very rough and irregular on top.

The hill called "Teapot Hill" by the survey party, with triangulation station "Teapot 1938" located on its highest point, is very conspicuous from the water. It is conical in shape, its bare rock sides rise abruptly from the water, and it is surmounted by a sharp pointed hummock of grass. From certain directions the formation resembles a teapot. The cliffs from signal "Rod" to the southwest limit of the sheet are of brown lava and very sheer.

The double crater located east of triangulation station "Black 1938" is quite deep, and a small intermittent lake is at the bottom of the easterly depression. The formation appears to be a bare topped, black cinder hill when viewed from offshore.

A noticeable feature of the coastline from signal "Las" to the southwest limit of the sheet is the complete absence of fresh water streams. Only for a few days after very heavy rains do even small rivulets exist. This fact is due to the very porous character of the land which prevails over all of the inland area back of this coast. While it is generally grass covered up to an elevation of about 1500 feet, there are numerous bare topped cinder hills and many lava and cinder outcroppings. The air is filled with small cinder particles during periods of strong S'ly winds.

The slopes of Mount Vsevidof appear smooth from offshore, and during the summer of 1938 were practically bare of snow after August 1st. The peak appears conical from the northwest with a slightly flattened top; the large crater so plainly visible from the south side of Umnak Island not showing at all. The two small glaciers indicated on this sheet are not prominent from offshore, there being so many black cinders mixed with the ice that they blend in with the rest of the mountain. All the slopes appear to be composed of cinders and lava and appear black in color except for occasional yellow and reddish patches. Evidently most of the water from the glaciers and melting snow seeps underground and disappears before it reaches the rolling land nearer the coastline.

The valley extending inland on the north side of Mount Vsevidof is strewn with large blocks of lava, and many bare cinder patches and lava outcroppings are visible from offshore.

The twin mountain peaks constituting triangulation station "Troupe 1938" and signal "Troupe 2" are prominent from offshore. They are rounded and dark in color on top, and generally bare of grass on the higher slopes. ✓

The ridge extending southeast from "Bulldog Point" Kshaliuk Pt. is smooth and bare of grass on top. The peaks constituting triangulation stations "Rollo", "Ti", and "Grad" are sharp on top and very conspicuous from offshore. ✓

CONTROL:

This survey was controlled entirely by second and third order triangulation stations established and located during the 1938 field season in advance of the topography. ✓

SURVEYING METHODS:

A combination of traversing and resecting was used in executing this planetable survey; supplemented by three point fixes whenever possible to obtain same. At each set-up, all visible topographic signals for hydrographic use were cut in, and this procedure helped materially in controlling the traverses run; furnishing at least an indication of possible error. ✓

All important off-lying features were located either by direct rod readings or from three or more intersecting cuts. ✓

TRAVERSES:

Closed traverses were run as follows:

1. From triangulation station "Terrace 1938" northeastward to triangulation station "Strat 1938". The traverse failed to check in at triangulation station "Strat 1938" by 21 meters, most of the error being due to faulty azimuth. This condition was undoubtedly due to the fact that six very short set-ups were required in traversing around the outer end of "Bulldog Point" Kshaliuk Pt between signals "Tat" and "Rok"; four of them being necessary in rounding the small rocky point at signal "Par". Before reaching a set-up in the immediate vicinity of signal "Tat", that signal had been located in advance of the traverse by four intersecting cuts, giving a perfect, although rather slim, intersection. The traverse failed to check this advance position by 7 meters in distance, but checked perfectly in azimuth. This indicated traverse error was kept in going ahead around "Bulldog Point". In making the final adjustment of the traverse, it was assumed for the above reasons that the advance location of signal "Tat" was correct, and that the traverse up to that point was correct in azimuth but too long by 7 meters. An adjustment was made accordingly, up to signal "Tat", as specified in the Topographic Manual. The rest of the error was applied between signal "Tat" and triangulation station "Strat 1938" according to standard practice.

Error from Tat to Strat slightly excessive but acceptable in view of rugged shoreline. J.A.M.

2. From triangulation station "Terrace 1938" southwestward to triangulation station "Lanuk 1938". The traverse checked in azimuth, but was too long by 8 meters indistance. Adjustment was made as specified in the Topographic Manual.

Satisfactory.

3. From triangulation station "Lanuk 1938" southwestward to a three-point-fix position on the 6 foot rock islet off "Derby Point"; this being the only set-up on the sheet where visibility of triangulation stations permitted a strong solution of the three-point problem. The traverse checked in azimuth, but was too long by 10 meters in distance. Adjustment was made as specified in the Topographic Manual. Satisfactory.

4. From the three-point-fix position off Derby Point to triangulation station "Teapot 1938". This traverse checked as regards azimuth, but was too long by 6 meters in distance. An adjustment was made as specified in the Topographic Manual. Satisfactory.

ELEVATIONS:

The following elevations shown on this sheet were located and computed from sextant cuts and vertical angles taken from offshore positions:

5833 ft. in Lat. 53° - 08.12' and Long. 168° - 41.35'. ✓
2592 ft. in Lat. 53° - 08.95' and Long. 168° - 42.72'. ✓
2070 ft. in Lat. 53° - 09.42' and Long. 168° - 43.45'. ✓
2225 ft. in Lat. 53° - 09.54' and Long. 168° - 43.00'. ✓
1280 ft. in Lat. 53° - 09.94' and Long. 168° - 43.30'. ✓
975 ft. in Lat. 53° - 10.40' and Long. 168° - 42.83'. ✓

All other elevations shown on this sheet were located with the planetable by means of intersecting cuts, in many instances supplemented by triangulation cuts and sextant angles from offshore. Two or more vertical angles taken with the Alidade were used in computing elevations. ✓

FORM LINES:

Form lining on this sheet was carried inland as far as land formations permitted good visibility. Most of the work was done while the planetable survey was in progress, but the northern slopes of Mount Vsevidof were done largely from observations and sketches made from offshore. The gradual slope adjacent to the coast, northeast from triangulation station "Nubby 1938" to the large glacial stream, was form lined entirely from sketches and mental pictures made from offshore; elevations in the area being lacking due to the complete absence of any distinguishing features to locate. This area was not visible while traversing along the beach. ✓

JUNCTIONS WITH ADJACENT SURVEYS:

On the east this sheet joins Topographic Sheet T-6645, 1938 Field No. T-38, Scale 1:20,000, north of Lat. 53° - 11.1', and also along that Latitude eastward to Long. 168° - 39.55'. A satisfactory junction on the shoreline was accomplished at triangulation station "Strat 1938", while a junction of form lines was effected along the 168° - 40' W. meridian and along the 53° - 11.1' N. parallel. ✓

On the east, south of Lat. 53° - 11.1' N., and on the south, this sheet joins a 1:40,000 scale Topographic Sheet, Field No. X-37.

T-4947

A satisfactory junction of form lines has been effected between the two sheets except in the area west of Long. 168° - 43.35', where no work has been done south of the southern limit of this sheet.

The shoreline south of triangulation station "Teapot 1938" has not yet been surveyed.

COMPARISON WITH EXISTING CHARTS:

A detailed comparison with Chart 8802, the only chart available showing this section of Umnak Island, is impossible because of the small scale of the chart.

The elevation of Mount Vsevidof as shown on Chart 8802, is too high by several hundred feet, however.

NAMES:

The names "Bering Sea", "Umnak Island", and "Mount Vsevidof" are from Chart 8802.

The following new names which have not appeared on charts of the area were assigned during the 1938 field season while executing this survey:

1. ~~BULLDOG POINT~~ Kshenuk Pt.: to the high point of land on which triangulation station "Hoof 1938" is located. Name suggested by the resemblance of the charted outline of the point to the head of a bulldog. The prominence of this point from offshore merits the assignment of a name.

2. ~~LAVANAK~~ POINT: to the slight but prominent twin lava point at triangulation station "Lanuk 1938". The name was applied to this feature by personnel of the Ship "Surveyor", and consists of the word "lava", of which the feature is composed, plus the ending "nak" so often common to place names in this region.

3. DERBY POINT: to the prominent point of land on which triangulation station "Bowl 1938" is located. Name was suggested because the rounded hill on the point resembles the crown of a derby hat when viewed from the water, the rocky shoreline serving as an imaginary hat brim.

4. TEAPOT HILL: to the conical steep sided hill on top of which triangulation station "Teapot 1938" is located. Name suggested by the resemblance this feature bears to a teapot when viewed from certain directions. It is prominent from offshore.

STATISTICS:

Statute Miles of Shoreline - 13.9.

Area in square statute miles - 18.2.

Respectfully submitted:

James C. Tison, Jr.

JAMES C. TISON, JR.
Jr. H. & G. Engineer

Forwarded:

RAY L. SCHOPPE, H.&G.E.
Commanding Officer
U.S.C.&G.S.S. SURVEYOR

Topographic Sheet T-6646, Field No. V-38 and its accompanying descriptive report, have been reviewed and examined and are hereby approved:

A. M. Sobieralski

A. M. SOBIERALSKI, H.&G.E.
Chief of Party

LIST OF SIGNALS

to accompany

DESCRIPTIVE REPORT FOR TOPOGRAPHIC SHEET T-6646

TOPOGRAPHIC SIGNALS:

ADD - Whitewash on rock cliff - not recoverable.
ANT - Driftwood signal - not recoverable.
ARC - Rock projection side cliff - not recoverable.
BUZ - Whitewash face rock point - not recoverable.
DES - Whitewash boulder on beach - not recoverable.
DUC - Driftwood signal - not recoverable.
DUL - Driftwood signal - not recoverable.
ELK - Whitewash face cliff - not recoverable.
EVE - Driftwood signal - not recoverable.
FALL - Top of cascade - RECOVERABLE.
FOG - Whitewash face cliff - not recoverable.
FUR - Whitewash on rock - not recoverable.
GIB - Whitewash face cliff - not recoverable.
HEM - Whitewash face rock point - not recoverable.
HI - Driftwood and cloth - not recoverable.
JET - Whitewash face rock outcrop - not recoverable.
JUS - Whitewash face rock outcrop - not recoverable.
LAS - Whitewash on rock on beach - not recoverable.
MIL - Whitewash on rock islet - not recoverable.
MIN - Whitewash face rock cliff - not recoverable.
NIT - Driftwood and cloth - not recoverable.
ODD - Whitewash top rock islet - RECOVERABLE.
OFF - Whitewash on rock point - not recoverable.
OUT - Whitewash face rock outcrop - not recoverable.
PAR - Whitewash face rock point - not recoverable.
PIP - Whitewash face rock outcrop - not recoverable.
PUT - Whitewash on rock on beach - not recoverable.
RAT - Whitewash face rock point - not recoverable.
RAZ - Whitewash face rock point - not recoverable.
RED - Whitewash top rock cliff - not recoverable.
REF - Whitewash on rock on beach - not recoverable.
ROD - Whitewash face rock cliff - not recoverable.
ROK - north end rock islet - RECOVERABLE.
RUM - Whitewashed boulder on beach - not recoverable.
SIS - Black spot bare earth at grass line top of eroded slope - not recoverable.
SUM - Whitewash face cliff - not recoverable.
BP SUS - Whitewash high point rock islet - RECOVERABLE.
TAT - Whitewash on rock outcrop - not recoverable.
TED - Whitewash face cliff - not recoverable.
TIE - Whitewash on rock outcrop on beach - not recoverable.
TROUPE 2 - Highest point rounded peak; 1973 ft. high, and SW'ly of two similar peaks - RECOVERABLE.

	Remarks	Decisions
1	USGB decision	File No. 530 685
2		530 685
3	Names assigned by field party	530685
4	submitted to USGB	530 685
5		530 685
6	USGB decision	530 685
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M 234

GEOGRAPHIC NAMES

Survey No. T-6646

Name on Survey	On Chart No. 8802 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	
Bering Sea	✓									1
Kshaliuk Bulldog Point				USHD decision						2
~~Kayanak~~ Point Twin lava		PH.		"	"	"				3
Derby Point				"	"					4
Teapot Hill										5
Umnak Island	✓									6
Mount Vsevidof	✓									7
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7/18/39										27

M 234 ✓R

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
[redacted]

Mxxxbt

No. T-6646

received May 8, 1939
registered June 14, 1939
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
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RETURN TO

82	T. B. Reed

r JBR

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6646 (1938) FIELD NO. V.

Kshaliuk Point to Derby Point, Umnak Island, Aleutian Islands.
Surveyed in July-Aug., 1938, Scale 1:20,000.
Instructions dated Feb. 3, 1938 (SURVEYOR).

Plane Table Survey. Aluminum Mounted.

Chief of Party - A. M. Sobieralski
Surveyed by - J. C. Tison, Jr.
Inked by - J. C. Tison, Jr.
Reviewed by - J. A. McCormick, November 28, 1939.
Inspected by - H. R. Edmonston

1. Junctions with Contemporary Surveys.

Junctions with T-4947 (1937-38) on the southeast and T-6645 (1938) on the northeast are satisfactory. Surveys on the south have not been received from the field.

2. Comparison with Prior Surveys.

This Bureau has made no previous surveys in this vicinity.

3. Comparison with Chart 8802 (New Print of November 3, 1938).

Charted shoreline bears only a general resemblance to that on the survey. The elevation of Mt. Vsevidof is charted as 7236 feet as compared with 6920 feet on the present survey. The small scale of the chart precludes further comparison. The present survey supersedes the topographic information now charted in the common area.

4. Condition of Survey.

Satisfactory.

5. Compliance with Instructions for the Project.

Satisfactory.

6. Additional Field Work Recommended.

None.

Examined and Approved:

Thos B Reed
T. B. Reed,
Chief, Section of Field Records.

K. T. Adams
Chief, Division of Charts.

Fred L. Peacock
Chief, Section of Field Work.

G Rude
Chief, Division of H. & T.