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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
L. O. Colbert, Director

Aleutian Islands

State: Alaska

DESCRIPTIVE REPORT

Topographic } Sheet No. Reg. No. T-6649
~~Hydrographic~~ } Field No. M-37

LOCALITY

Aleutian Islands

South side Unnak Island

Northeast of Driftwood Bay
Black Cape to Lookout Point

1938

CHIEF OF PARTY

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

U. S. GOVERNMENT PRINTING OFFICE: 1923

DECLASSIFICATION BY NOAA

PURSUANT TO DOC SYSTEMATIC REVIEW

GUIDELINES AS DESCRIBED IN SECTION

3.3 (a), EXECUTIVE ORDER 12356

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 Letter M-37

REGISTER NO. T-6649

State ~~Alaska~~ Aleutian Islands
General locality ~~Black Cape to Lookout Point~~ Aleutian Islands So. side of Umnak Island
Locality ~~Black Cape to Lookout Point~~ So. side Umnak Island, Northeast of Driftwood Bay
Scale 1:20,000 Date of survey Summer, 19 38
Vessel U.S.C. & G.S.S. SURVEYOR
Chief of Party A. M. Sobieralski
Surveyed by W. R. Tucker
Inked by W. R. Tucker
Heights in feet above M.H.K.W. to ground to tops of trees
~~Contour~~ Approximate contour Form line interval 100 feet
Instructions dated February 3, 19 38
Remarks:

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET T-6649

Field No. M-37

NORTHEAST OF DRIFTWOOD BAY

SOUTH SIDE UMNAK ISLAND, ALASKA

Project No. HT-218

Season 1938

INSTRUCTIONS:

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

EXTENT OF SURVEY:

This survey covers that part of the shore line of the south side of Umnak Island, Alaska, extending from Lat. $53^{\circ} - 01.4'$ N. and Long. $168^{\circ} - 35.7'$ west to Lat. $52^{\circ} - 56.8'$ N. and Long. $168^{\circ} - 41.3'$ west, also that part of the land area of Umnak Island included between Latitudes $52^{\circ} - 56.8'$ N. and $53^{\circ} - 02.0'$ N. and Longitudes $168^{\circ} - 35.7'$ W. and $168^{\circ} - 41.3'$ W. with the exception of that land area included between Latitudes $52^{\circ} - 59.8'$ N. and $53^{\circ} - 02.0'$ N. and Longitudes $168^{\circ} - 40.0'$ W. and $168^{\circ} - 41.3'$ W. This area excepted could not be covered from the south side of Umnak by topographer working along shore line or by the ship or launches and it is thought that it can be readily covered by topography supplemented by ship sextant cuts from the north side of Umnak Island. ✓

In addition this survey covered a revised survey of that part of the shore line of Topographic Sheet Field No. D-37, extending from signal "CUR" to signal "LED". This revision work will be covered in detail later on in this report. ✓

GENERAL DESCRIPTIONS AND COMMENTS:

The shoreline in general shown on this sheet is rocky and precipitous except at the heads of several bights or coves that indent the shore line. Sand and pebble beaches are found at the heads of these coves and low bluffs of from 5 ft. to 30 ft. high rise abruptly from the grass or storm water line; these generally are backed by extensive flat lands and grass covered marshes beyond, which in the rainy season (which is rather extensive), are too soft and unstable for even foot travel. ✓

Numerous low water reefs extend considerable distance off shore,

with a large number of rocks awash, sunken rocks, and rock islets, extending outside the reef line.

From signal "CUR" to signal "BOY" we find a sand and gravel beach backed by gentle grass covered slopes; and with rocky low water reefs extending 30 to 100 meters offshore. A sunken rock located by breakers lies about 1400 meters east of signal "BOY". From signal "BOY" to signal "SIN" the offshore reefs continue as before but the shore line is more rocky and is backed by 20 to 75 ft. bluffs except for a short section back of signal "TRES" where a small stream enters from the north with characteristic low valley and gentle slopes. A sunken rock located by breakers lies 1100 meters east by south of signal "DOS".

Between signals "SIN" and "SEX" we have a low sand and gravel beach and large stream, backed by long low valley. Here also, we find our best small boat landing for rough weather and at any stage of the tide. The small cove, named "LOOKOUT COVE" by the surveying party, affords a comparatively safe anchorage from all but southeasterly weather.

From signal "SEX" around by triangulation station "GOLD 1937" to signal "FALL" (waterfall) rocky bluffs rise to 285 ft. Although this point does not project out prominently from the general outline of the coast, the two small coves on the south and north and the height of the bluffs make it stand out locally, and was given the name "LOOKOUT PT." by the survey party since it has been called by the same name by the natives for several years.

From signal "FALL" halfway to signal "SEP2" we find a gravel beach backed by gentle low grassy slopes and with low water rocky reefs offshore; then we have a rocky shore line extending to signal "SEP2", backed by 150 ft. rocky bluffs and cliffs with low water rocky reef and islets extending one half mile offshore.

From signal "SEP2" a gravel beach backed by low grassy bluffs continues for 350 meters, then the rocky shore line and rocky steep bluffs begin again and continue to signal "DEC" which is another waterfall.

From signal "DEC" to 300 meters past signal "FEB" the beach is again of gravel backed by 100 ft. bluffs to signal "JAN", then by low grassy slopes the remainder of the distance. A stream comes in from the north west at signal "FEB" and a low grassy valley extends along this stream for about $\frac{1}{4}$ mile. Small boats can be safely landed in this vicinity except in easterly weather.

From the point on the beach 300 meters south of signal "FEB" around by triangulation station "TOWN 1937" and $\frac{1}{2}$ way to signal "MAR" we find rocky shore line, extensive offlying reefs and 150 ft. steep rocky bluffs; from this point a narrow gravel beach backed by steep low grassy slopes extends to near signal "MAR". A small stream enters from the north about 320 meters east of signal "MAR".

From signal "MAR" we have a rocky beach backed by 75 ft. bluffs continuing west for 175 meters; then we have a gravel beach backed by 150 ft. bluffs extending to 300 meters west of signal "PIL". This area is denoted as foul area (broken black line) on the sheet due to numerous sunken rocks, rocks awash, and small low water reefs not connected with the shore line.

From 300 meters west of signal "PIL" to 100 meters west of signal "MAY" we find a rocky shore line with 50 ft. rocky cliffs and fronted by a continuous low water rocky reef--extending about 100 meters offshore--and by several rocky islets.

From this point we find a gravel and boulder beach extending to 200 meters past signal "LAB". Numerous rocks, sunken rocks, and rocks awash make small boat landings difficult. The 50 ft. bluff back of signal "MAY" increases to a prominent 280 ft. bluff at signal "JUNE"; this bluff decreases to 100 ft. steep grassy slope and gap to 200 meters north of signal "AUG" from which point we find steep rocky bluffs or cliffs of 300 to 390 ft. in height to signal "TAN".

From a point 200 meters south of signal "LAB" on to end of the sheet we have a rocky shore line backed by 150 ft. to 100 ft. rocky cliffs.

The rocky islets, on the highest point of the largest of which is located triangulation station "PORT 1937", rise as rocky cliffs from the water line on the north side and rise with a gentle slope from the south. These Rock Islets together with the narrow mainland is what is designated "BLACK CAPE" on Chart 8802.

CONTROL:

This Topographic survey was controlled entirely by second and third order triangulation stations established during the 1937 and 1938 field seasons.

SURVEYING METHODS:

A combination of traversing and resecting, supplemented by three point fix checks on set up positions when available was used in executing this survey. Topographic signals for hydrographic use were usually located by cuts in advance of the traverse by cuts and these therefore furnished a constant check on the traverse.

All important offlying features were located by direct rod readings or by intersecting cuts.

TRAVERSES:

Closed traverses with no appreciable closing errors and requiring no adjustments were run as follows:

From triangulation station "TOWN 1937" to triangulation station "PORT 1937".

From triangulation station "TOWN 1937" to triangulation station "GOLD 1937". ✓

From triangulation station "GOLD 1937" to signal "CUR" which had been previously located from intersecting cuts from triangulation stations "GOLD 1937" and "ERG 1937". ✓

ELEVATIONS:

All elevations shown on this sheet were located by one of the following methods or by a combination of them: A. with the plane table by means of intersecting cuts. In most cases two or more vertical angles were used in computing the elevations. B. By two or more cuts and vertical angles from prominent knolls with a 7 inch theodolite. ✓
C. By three or more cuts and vertical angles taken with sextant from offshore positions in hydrographic launch.

FORM LINES:

Form lining on this sheet was carried inland as far as the land formation permitted visibility. The general land configuration was verified from various positions offshore. ✓

Form lining on this sheet east of Long. $168^{\circ} - 38' W.$ and north of Lat. $53^{\circ} - 02' N.$ ties into 40,000 sheet X-37. Form lining on the west joins sheet P-38. The area north of Lat. $53^{\circ} - 00' N$ between Long. $168^{\circ} - 40.4' W.$ and Long. $168^{\circ} - 44' W.$ had not been surveyed at this date. ✓

MAGNETIC MERIDIAN:

Magnetic meridian was determined at triangulation station "GOLD 1937" and at triangulation station "PORT 1937" with declinator No. 231, which was tested at Green Lake Magnetic Station at the beginning and end of the 1938 Field season (see 1938 Report on Magnetics).

T.M. & S. Division states no such report received. No local attraction indicated.

JUNCTIONS WITH ADJACENT SURVEYS:

This sheet joins Topographic Sheet Field No. D-37 on the north and east. An attempted junction with signal "CUR" was made, but as no tie in could be made by either distance and azimuth with either signal "CUR" or "YON" these signals were relocated by Topographic cuts from triangulation stations "GOLD 1937" and "ERG 1937". Signals "RUF" and "LED" were located by rod reading and cuts from new location of signal "YON" and cuts from triangulation station "ERG 1937". The shoreline and location of all important features was then revised to comply with this new survey. A junction was made with the shore line of old survey sheet D-37 just east of signal "LED". Due to it being the end of the field season and also limits of this sheet no further topographic signals of sheet D-37 were checked by this topographer, but no indication of any further signals being out was found by the hydrographic party working in this immediate vicinity. In effect the junction between the two sheets is made on triangulation station "ERG 1937". As the work on sheet D-37 was extended beyond good control, it is recommended that the work on this sheet between signals "CUR" and "LED" supersede the work in this area on sheet D-37. ✓

T-6595

T-6595

Conflicting work removed from T-6595.
J.A.M.

On the west and south this sheet ends at triangulation station "PORT 1937". ✓

Form lines were joined to topographic sheet X-37. ^{T-4947} ~~No surveys~~
~~were completed on the south and west.~~

COMPARISON WITH EXISTING CHARTS:

Chart 8802 is the only chart available showing this area, and due to the small scale of this chart no detailed comparison could be made. ✓

NAMES:

UMNAK ISLAND and BLACK CAPE are from Chart 8802.

The following new names which have never appeared on charts were assigned during the 1938 field season while executing this survey:

1. LOOKOUT PT. - to the high point of land near triangulation station "GOLD 1937". The natives of Umnak Village informed the topographer that this was the local name for this point.

2. "LOOKOUT COVE" - to the first bight or cove north of "Lookout Point".

STATISTICS:

Statute miles of regular shoreline	9.8 mi.
Statute miles of narrow rock ledges and rock islets	<u>3.0 mi.</u>
Total Statute Miles	12.8 mi.
Area in square statute miles	15.0 mi.

Respectfully submitted

William R. Tucker

WILLIAM R. TUCKER, Aid
U.S. Coast and Geodetic Survey

Forwarded:

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

APPROVAL SHEET

to accompany

TOPOGRAPHIC SHEET No. T-6649, FIELD No. M-37

Topographic Sheet T-6649, Field No. M-37, 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

U. S. Coast and Geodetic Survey

LIST OF SIGNALS

to accompany

DESCRIPTIVE REPORT FOR TOPOGRAPHIC SHEET T-6649

TRIANGULATION STATIONS OUTSIDE H.W.L.:

- ERG 1937 - Marked station on highest point of grass topped offshore islet.
- GOLD 1937 - Marked station on offshore rock islet.
- TOWN 1937 - Marked station on narrow rock islet just outside of regular shore line.
- PORT 1937 - Marked station on highest point of largest of group of rock islands.

TOPOGRAPHIC SIGNALS:

- AUG - Whitewashed face of rock cliff--not recoverable.
- BET - Whitewashed face of rock cliff--not recoverable.
- BOY - Whitewashed boulder--not recoverable.
- *CUR - Whitewashed face of low rock cliff--not recoverable.
- DEC - Highest part of small water fall--recoverable.
- DGS - Whitewashed face of large (20' high) pinnacle rock--recoverable.
- FALL - Highest part of small waterfall--recoverable.
- FEB - Whitewashed driftwood--not recoverable.
- FOX - Whitewashed face of rock--not recoverable.
- JAN - Whitewashed face of cliff--not recoverable.
- JULY - Whitewashed face of cliff--not recoverable.
- JUNE - White washed face of cliff--not recoverable.
- LAB - Whitewashed rock boulder--not recoverable.
- *LED - Whitewashed face of pinnacle rock (15' high) on beach. *called "Leo"*
T-6595
- MAR - Whitewashed face of cliff--not recoverable.
- MAY - Whitewashed face of pinnacle rock (20' high) on small offshore rock islet--recoverable.
- NOV - Whitewashed face of cliff--not recoverable.
- NUB - Whitewashed face of low cliff--not recoverable.
- OCT - Whitewashed face of cliff--not recoverable.
- PEL - Whitewashed boulder--not recoverable.
- POT - Whitewashed top of small (8' high) rock islet--not recoverable.
- QUAT - Whitewashed face of cliff--not recoverable.
- *RUF - Whitewashed large rock--not recoverable.
- SEP - Whitewashed face of cliff--not recoverable.
- SEX - White washed boulder--not recoverable.

LIST OF SIGNALS (cont.)

to accompany

DESCRIPTIVE REPORT FOR TOPOGRAPHIC SHEET T-6649

TOPOGRAPHIC SIGNALS (cont):

- SIN - Whitewashed face of cliff--not recoverable.
- TAX - Whitewashed top rock on rock island--not recoverable.
- TAN - Whitewashed rock cliff--not recoverable.
- TIP - Large (20' high) black pinnacle rock--recoverable.
- TRES - Whitewashed face of low cliff on rock islet-- not recoverable.
- UNO - Whitewashed face of low cliff on rock islet--not recoverable.
- *YON - White washed top rock near south end of small rock islet--not recoverable.

* These signals recovered from sheet D-37 and relocated on sheet M-38.

T-6595
Shoreline and signals between signals LED and RVF inclusive removed from T-6595. Aug 16, 1931. L. S. S. (Authority letter from Chief of Party dated Oct. 24, 1938 attached to descriptive report T-6595.)

Remarks.

Decisions

1		File No. 525 685
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3	local name	530 685
4	local name	530 685
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GEOGRAPHIC NAMES

Survey No. **T-6649**

Name on Survey	On Chart No. 8802		On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
	A,	B,								
<u>Black Cape</u>	✓									1
<u>Pacific Ocean</u>	✓									2
<u>Lookout Point</u>										3
<u>Lookout Cove</u>										4
<u>Umnak I</u>	✓									5
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✓ GHE

7/18/39

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } ~~No. 11~~
~~PHOTOGRAPHIC~~ } No. T-6649

{ 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	
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✓ JBR

80-DRM

January 5, 1950⁴⁰

To: Ensign William R. Tucker,
U. S. Coast and Geodetic Survey,
Ship SURVEYOR,
601 Federal Office Building,
Seattle, Washington.

Through: Commanding Officer, Ship SURVEYOR.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Topographic surveys Nos. T-6648b and T-6649.

During the review of the above topographic surveys made by you on the south coast of Umnak Island in 1938, certain discrepancies have been noted between the form lines and elevations shown on the surveys. While it is unlikely that you can at this time, from memory, coordinate properly all the discrepancies it is believed that you may be able to correct a part of them.

There are being forwarded to you by registered mail photostatic copies of T-6648b (in two sections) and T-6649. You will note that the following elevations which disagree with the form lines have been circled in yellow pencil on the photostats:

<u>T-6648b</u>		<u>T-6649</u>
505	435	305
510	430	205
535	410	331
500	310	520
545	325	310
535	435	310
430	135	320

Such corrections to the form lines as you may be able to make, from memory, should be indicated on the photostats, or if desired, on a tracing vellum overlay, and the photostats returned to this office.

Page 2
Ensign William R. Tucker
January 5, 1940

The following, which applies also to T-6648b, is quoted for your information from the reviewer's report on T-6449:

"Some of the form lining on the present survey has the appearance of improbability. In such rugged country almost anything is possible but the sudden transitions from steep to gentle slopes and the winding valleys and ridges would have been more plausible if supported by a few additional elevations and by bluff symbols and intermediate form lines of no definite interval where necessary (S. P. 144, pages 80 to 83). There are several elevations on the survey which appear to have been overlooked or misinterpreted when the form lines were drawn. A photographic copy of the survey has been sent to the field party for inspection and possible revision of form lines."

Please note that the photostats are confidential.

(Signed) J. H. HAWLEY

Acting Director.

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6649 (1938) FIELD NO. M.

Black Cape to Lookout Point, South Side of Unmak Island,
Aleutian Islands.

Surveyed in Summer, 1938, Scale 1:20,000.
Instructions dated Feb. 3, 1938 (SURVEYOR).

Plane Table Survey.

Aluminum Mounted.

Chief of Party - A. M. Sobieralski

Surveyed by - W. R. Tucker

Inked by - W. R. Tucker

Reviewed by - J. A. McCormick, December 1, 1939

Inspected by - H. R. Edmonston

1. Junctions with Contemporary Surveys.

Junctions with T-6595 (1937) and T-4947 (1937-38) on the north and with T-6648 a&b (1938) on the southwest are satisfactory.

2. Comparison with Prior Surveys.

This Bureau has made no previous surveys in this locality.

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

The small scale of the chart precludes detailed comparison. Topography charted in the common area bears but a general resemblance to the present survey and is superseded by the latter.

4. Condition of Survey.

Some of the form lining on the present survey has the appearance of improbability. In such rugged country almost anything is possible but the sudden transitions from steep to gentle slopes and the winding valleys and ridges would have been more plausible if supported by a few additional elevations and by bluff symbols and intermediate form lines of no definite interval where necessary (S.P. 144, pages 80 to 83). There are several elevations on the survey which appear to have been overlooked or misinterpreted when the former lines were drawn. A photographic copy of the survey has been sent to the field party for inspection and possible revision of form lines. See supplemental D.R.

5. Compliance with Instructions for the Project.

Satisfactory except as noted in the preceding paragraph.

6. Additional Field Work Recommended.

See par. 4.

Examined & Approved:

Thos B Reed

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

K.T. Adams

Chief, Division of Charts.

Med. L. Peacock

Chief, Section of Field Work.

G. W. de

Chief, Division of H. & T.

SUPPLEMENTAL DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET T-6649

ALEUTIAN ISLANDS

SOUTH SIDE OF UMNAK ISLAND, ALASKA

- 0 -

SEASON OF 1938

- 0 -

U.S.S. SURVEYOR - A.M. SOBIERALSKI Comdg.

SUPPLEMENTAL DESCRIPTIVE REPORT
TO ACCOMPANY TOPOGRAPHIC SHEET T-6649
SEASON OF 1938

FORM LINES:

Due to lack of explanation of the type of area covered by the original descriptive report the reviewer desired further information relative to form lining. ✓

From off-shore the land area appears to be a gradual smooth slope extending from the bluffs above the high water line to the flat, apparently unbroken ridge of 400 to 500 foot elevation which runs down the approximate center of UMNIAK ISLAND (northeast to southwest) in this area. Upon inspection of the area from nearby peaks and ridges it will be noted that the area is broken irregularly by long winding valleys of various shapes and sizes and that the center ridge, although not broken by any great number of valleys of any depth, is characterized by innumerable small individual knolls or mounds rising above the ridge along its entire length. The individual knolls are not prominent enough however to be of aid to the navigator. Lack of prominent features on this land area for determining elevations or for aids to navigation will be readily noticeable. ✓

A few small, individual, grass covered knolls or mounds, rising from 20 feet to 60 feet above the immediate terrain were a great help to the topographer, who was able to identify them and determine their elevation from tops of near by bluffs. ✓

Lack of sufficient days of clear weather made it impracticable to determine as many elevations as would be desired. (The area between Vsevidof Peak and Driftwood Bay seemed to be a catch basin for rainy and foggy weather as well as high winds). ✓

After the elevations as shown on the sheet were determined, a rough tracing of the sheet was made including the elevations. On days when rough seas and high winds prevented other work, this topographer walked over majority of the area covered by this sheet and sketched in form lines, drainage areas, streams, etc. The abrupt changes from steep to gentle slopes were noted by the topographer and the form lines drawn accordingly. Admittedly 100 foot form lines do not convey as clear an outline of the land configuration as would be desired, but due to lack of prominent peaks or other features which might be of aid to the navigator, it is doubtful if the extra trips and great cost required for detail contouring of this area would be practicable. ✓

ELEVATIONS:

In several cases, the center of the number representing the point to which the elevation referred, obscured or prevented drawing the immediate contour and caused confusion as to the accuracy of the location of the contours. These contours which were omitted on the original sheet are herewith explained and also their location is furnished on a tracing of the sheet.

Tracing
inspected and
destroyed.
J.A.M.

Beginning at the northeast end of the sheet and following elevations southwestward, (305) is the top of a small grass covered hill which rises about 20 ft above the surrounding terrain. (360) is highest part of a large individual knoll which rises about 220 feet above the land at base. (205) is the top of a small individual knoll which rises about 60 feet above the immediate terrain. (331) is a small individual knoll with a sharp peak about 50 feet higher than the remainder of the ridge. (520) is a small pinnacle which rises about 70 feet above the remainder of the ridge. The two elevations of (310) feet each and very near each other are small grass covered crests which rise about 40 feet above another-wise unbroken and comparatively flat ridge. (320) is a large prominent knoll which rises about 170 feet above the ridge of which it forms the northeast end.

Respectfully submitted,

William R. Tucker

William R. Tucker

Aid

U. S. C. & G. Survey

Examined & Forwarded:

Ray L. Schoppe

Ray L. Schoppe, R. & G. E.

Commanding Officer

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