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Form 504 Ed. June, 1928	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. PATTON, Director	
Aleutian Islands State: ALASKA	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. B- 37
LOCALITY	
ALUTIAN ISLANDS	
WEST END OF UNIMAK ISLAND	
Sennett Middle Point to Scotch Cap	
19 37	
CHIEF OF PARTY	
RAY L. SCHOPPE	

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U. S. COAST & GEODETIC SURVEY
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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. B-27

T6603

REGISTER NO.

State ~~ALASKA~~ Aleutian Islands

General locality ~~Aleutian Islands~~ West End of Unimak Island

Locality Sennett Middle Point to Scotch Cap
~~West and Unimak Island~~

Scale 1-20,000 Date of survey July 13 to 26, 1937

Vessel DISCOVERER

Chief of party Ray L. Schoppe

Surveyed by Curtis Le Fever

Inked by Curtis Le Fever

Heights in feet above There are no trees on Unimak Island
to ground to tops of trees

~~Contour~~, ~~Approximate-contour~~, Form line interval 100 feet

Instructions dated March 7 30, 1937⁶

Remarks: _____

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DESCRIPTIVE REPORT
To accompany
TOPOGRAPHIC SHEET B-1937 T-6603
Project No. HT-208

U. S. C. & G. S. S. DISCOVERER

R. L. SCHOPPE, COMMANDING

Season of 1937

INSTRUCTIONS

Director's Instructions dated March 7³⁰, 1937⁶.

LIMITS

The area surveyed on this sheet extends from a junction with sheet ^{T-6602}A-1937, at Middle Point southeastward along the west end of Unimak Island to Scotch Cap Lighthouse where it joins sheet ^{T-6604}C-1937. It also extends inland from the coast line for a distance of about five miles.

DESCRIPTION

This part of Unimak Island is covered with a luxuriant growth of grass and moss and shows very green in the summer time, from off shore. The slope is gradually upward to the steeper slopes of the high snow covered ridge forming the center of the island.

While there are no glaciers in the area covered by this sheet there are several mountain glaciers not far inland from its inshore edge. These glaciers appear to extend downward from an area of perpetual snow on top of the higher ridges. Several of the streams in this area are fed by melting glaciers.

All of Unimak Island appears to be of volcanic formation. There are no surface lava flows in this immediate area but such flows were encountered both east and west of here.

Middle Point is low and flat, its coast line being a low rocky bluff. Surf worn ledges extend off shore from the base of the bluff. There are many detached rocks lying near the rocky ledges. This point is dangerous for navigation. The most dangerous of the detached rocks lies in latitude 54-28.6, Longitude 162-54.2. This rock does not show above water at any stage of the tide.

From Middle Point a sand beach extends southward for two and one fourth miles. This beach, just south of the point and near the trappers small cabin, is very well protected from northerly weather and is used by the Lighthouse Service for landing supplies and mail, when a landing cannot be made at either Sarichef or Scotch Cap Lighthouses or on the north side of Middle Point. There is shelter on shore, in the small cabin. In most places this beach is backed by a low bluff. In several places narrow valleys run inland, paralleling streams which are fed by melting snow and glaciers. At several places small rocky points extend off shore from this beach. In latitude 54-27.7, longitude 164-52.8 are two detached rocks which project 8 feet above mean lower low water. A narrow dangerous area extends inshore from these rocks. Heavy kelp beds surround this rocky area and parallel most of the sand beach.

Cabin ?

At latitude 54-26.7, longitude 164-52.2, two rocky ledges extend off shore for about 150 meters. There are submerged rocks lying off the faces of the ledges and also off the beach for a distance of about 650 meters each side of the ledges. Heavy kelp areas parallel the beach near each side of this rocky area. Near the ledges of rock the boulder strewn beach bends sharply eastward. A distance of 600 meters farther along the beach, its character changes to fine sand. The direction of the beach also changes to southerly. A high grassy bluff parallels the beach for a short distance then runs inland and gradually decreases in height to a low grass covered ridge. In latitude 54-26.5, longitude 164-51.4 and about 50 meters outside highwater line is an isolated rock which projects 5 feet above mean lower low water.

From where the sand beach changes direction to southerly, it extends southeastward passing the face of Scotch Cap to end abruptly against the rocky ledges near Scotch Cap Lighthouse. Six streams flow into the ocean along this beach. They are practically all fed by melting snow, in the interior of the island. The largest of these is a glacial stream and is called Big River. In latitude 54-25.2, two rather large streams flow into a small lake which lies just back of the sand beach. The lake has no surface outlet. Evidently the water escapes through the beach sand to the ocean. West Cap Creek is a large stream, fed by melting snow. Cap Creek is evidently spring fed as the flow is large and yet the stream does not come from very far inland. The waterfall in Cap Creek is about fifty feet in height. It is prominent from close in, and directly off shore.

Scotch Cap is a rugged rocky bluff which reaches a height of 425 feet at its highest point. This point is near its face and on it is located triangulation station Scotch 1936. The landward side of the cap slopes downward to the bed of Cap Creek. The bluff extends southeastward paralleling the beach, as far as Scotch Cap Lighthouse. Southeast of the cap the bluff is lower and grass covered. On the low water line and directly below the highest part of the cap, is a large rock pinnacle called Scotch Cap Pinnacle, ¹⁴⁵150 feet in height and very prominent from most all directions off shore. The symmetrical outline of this pinnacle is probably responsible for the naming of Scotch Cap. A large flat rock ²⁸28 feet above tide is located on the low water line, 530 meters east of the pinnacle. This is the probable location of Triangulation Station UNIMAK 1901 but the old station could not be recovered. The few detached off shore rocks in the vicinity of Scotch Cap are close in shore and are no menace unless a ship was too close to the beach for safety.

Westward from Scotch Cap Lighthouse for a distance of 760 meters, surf worn ledges extend off shore from the rocky beach. Detached rocks lie close to the faces of these ledges and extend westward from them parallel to the beach, the farthest being about 120 meters off shore. The highest of these rocks bares 6 feet at mean lower low water. ^{1st MHW}

There is a good foot trail extending from Scotch Cap Lighthouse northwestward paralleling the beach. It goes beyond the western limits of this sheet, passing the cabins each side of Middle Point and continuing on through the area covered by sheet A-1937, to Sarichef Lighthouse. ^{T-6602}

This trail is used by the light keepers when going to Middle Point or to and fro between the lighthouses. It is well marked in most places by stakes, so that when there is deep snow in the winter it can still be followed. Some of the many streams to be crossed have temporary foot bridges which at times are washed out by high water. Several of these streams are large enough so that it is dangerous at times to cross them. During clear warm weather when the snow and glaciers are melting fast, the safest time to cross the streams on Unimak Island in the morning before the heavy run-off for the day has started. In one instance, one of the keepers who was going from one lighthouse to the other, found it necessary to swim Big River. It is a glacial stream and gets high at times. It is also very swift. The keeper took his underwear, trousers, shoes and socks off and rolling them in a bundle attempted to throw them across the stream, as he had a pack and his gun to carry besides. The stream was wider than he thought and his clothes landed short of the other bank. They were carried down the stream so fast that he couldn't recover them. This was late in the fall and there were several inches of snow on the ground. However he arrived at the lighthouse about one and one half hours later but he was in his bare feet and had only a heavy winter shirt on. Snap shots were taken of him before he got in doors and he is still hearing about his adventure.

A description of the weather encountered on Unimak Island will be found in the descriptive report accompanying topographic sheet D-1937.

CONTROL

The Unalaska Datum was used in this survey. The basic triangulation was established by personnel of the DISCOVERER in 1936. All supplemental stations were established this year by the personnel of this ship, Lieut. Bowie being in charge of the field work. All field computations for this triangulation are unadjusted. The triangulation control is excellent, the stations being close together and well located for topographic purposes.

SURVEY METHODS

A camp was established at Middle Point from which the northwest half of this sheet was completed. While working on the southeast half of the sheet the combined triangulation and topographic party lived in one of the houses on the Scotch Cap Lighthouse Reserve. Permission was obtained from the Superintendent of Lighthouses for that District, to occupy the dwelling. The Keepers were eager to cooperate with us in every possible way and made our stay at the reserve very interesting.

The triangulation and topographic units each consisting of one officer and three men worked in close cooperation, lending men and assistance to each other when it was in the interest of the progress of the combined party to do so.

The four horses which were shipped to False Pass from Seattle at the beginning of the season were used continually by the combined party. They were used to transport camp and personal gear and equipment between camps. They were used also for carrying instruments and signal building gear to and

from work. They were experienced pack animals and were carefully chosen. They proved invaluable as a time and labor saver.

The triangulation and topography along the south shore of Unimak Island would have been exceedingly difficult and dangerous without the horses. Places where a boat of any kind could land were very few and the weather is very seldom favorable for landing. This coast in most places is open to the full sweep of the heavy swells from the south and there is a continual boom of the large breakers on the beach.

On the south shore of Unimak Island the building of signals for hydrographic location was comparatively simple. Along the entire coast of the Island where it is possible for lumber to lodge are found large logs and sawed timbers which have washed ashore from passing ships. Some smaller lumber is also scattered along the beach. By nailing the lighter lumber to the heavy logs and timbers it was possible to build sturdy signals. The scarcity of small lumber in some places necessitated the rolling together of the larger timbers and logs. Of course these signals built of the beach lumber are only temporary and would not be of value a second season should a storm move them. However they were located as high as possible and would not be moved except by a very severe storm from the south.

The usual method of plane table topography was used. The traverses were necessarily short, due to the close spacing of the triangulation stations and they required very little or no field adjustment. All off shore details, when possible were located by three or more cuts, their elevations were located by cuts and the elevations determined by vertical angles. Many of the cuts and vertical angles were taken by the triangulation party.

The locations of the mouths of all streams and their courses near the beach were determined by topography. Inland all of the locations of the stream beds were scaled from air photographs of this area. The air photographs proved invaluable for locating the streams and determining the proper shape of the hills, thereby making the form lines on the sheet much more accurate than they could otherwise have been, without the expenditure of a lot more time on the field survey. They were also used to determine the conditions ahead of the triangulation and topographic parties. Due to abrupt and large changes in elevation and to the variable scale of the photographs they could not be relied upon for the actual mapping along the coast line.

LAND MARKS FOR CHARTS Chart Letter 255 (1938)

The Water Fall in Cap Creek	Latitude	54	24	1196.0	meters
	Longitude	164	47	902.0	"
<u>PIN</u> Scotch Cap Pinnacle (145)	Latitude	54	24	397.0	"
	Longitude	164	47	592.0	"
Scotch Cap Light House	Latitude	54	23	1396.5	"
	Longitude	164	44	719.6	"

The water fall shown on the charts of this area in Latitude 54 28.6 Longitude 164 51.0, does not exist and should be removed from the chart.

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5.

RECOVERABLE TOPOGRAPHIC STATIONS

Descriptions are submitted on form No. 624 for the following topographic stations: CAB and PIN. A description is also furnished for the water fall in Cap Creek.

LIST OF NAMES

✓ GHE

The following are well established names in this locality: Middle Point, Big River, West Cap Creek, Cap Creek, Scotch Cap and Scotch Cap Pinnacle

STATISTICS

Statute miles of shoreline - - - - -	10.5
Square statute miles - - - - -	57.0 ⁴ See Rev. par. 1.
Magnetic meridians determined -- - - -	1
Elevations of rocks off shore - - - - -	25
Elevations of points on shore - - - - -	17

Respectfully submitted,

Curtis Le Fever
Curtis Le Fever,
Jr. H. & G. Engr.
U.S.C. & G. Survey.

Approved and forwarded:

Ray L. Schoppe
Ray L. Schoppe,
Chief of Party, C. & G. Survey,
Commanding Ship DISCOVERER.

Remarks

Decisions

1		USGB decision
2	For Title Only	" "
3		" "
4	See story in Dir. pg. 3	submitted to USGB
5	Two creeks meet near the mouth. West Cap. Cr is the longer branch. The easterly Cr. of not much importance	}
6		
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9	From information in descriptive report	
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GEOGRAPHIC NAMES

Survey No. **T-6603**

GEOGRAPHIC NAMES											
Survey No. T-6603											
Name on Survey	<div>On Chart No. 8860</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>D.R. Bakers Dict. On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div>										
	A,	B,	C,	D	E	F	G	H	K		
✓ <u>Unimak Pass</u>	✓									1	
<u>Unimak Island</u>	✓									2	
✓ Sennett <u>Middle Point</u>	✓			✓						3	
✓ Big Loss Creek <u>Big River</u>		<u>Mishap Cr</u>		✓	<u>USGB decision</u>					4	
✓ <u>West Cap Creek</u>				✓						5	
<u>Gap Creek</u>				✓						6	
✓ <u>Scotch Cap</u>				✓				✓		7	
✓ <u>Scotch Cap Pinnacle</u>				✓						8	
<u>Landing</u> SRE		not a geographic name									9
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Names underlined in red approved

by 5/27/38 on SRE

M 234

Names underlined in red approved
by **5/27/38** on **SRE**

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } ~~Moore~~
 PHOTOGRAPH OF } No. T-6603

{ received April 18, 1938
 { registered May 26, 1938
 { 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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88			
90			

RETURN TO

82	T. B. Reed
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✓ *TBR*

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6603 (1937) FIELD NO. B-37

Middle Point to Scotch Cap, West End of Unimak Island,
Aleutian Islands.

Surveyed in July 1937, Scale 1:20,000
Instructions dated March 30, 1936 (DISCOVERER)

Plane Table Surveys.

Aluminum Mounted.

Chief of Party - Ray L. Schoppe.
Surveyed by - Curtis Le Fever.
Inked by - Curtis Le Fever.

1. Condition of Records.

The survey conforms to the requirements of the Topographic Manual except as follows:

- a. Declinatoire.--There is no evidence that the declinatoire was checked at a station of known declination during the season's work.
- b. Rock legends and symbols.--Several rocks awash were described as baring 5 to 11 feet at M.L.L.W. With a mean range of tide of about 5 feet, some of these rocks should have been noted as rocks awash at M.H.W. whereas others should have been shown as islets accompanied by the height in parenthesis. These rocks were correctly represented on H-6288 (1937) in the office and an appropriate note added to the present survey. (See review of T-6602, par. 1).
- c. Form lines.--A considerable number of additional elevations should have been determined in order to comply with the requirement (par. 21) that an elevation be shown for at least every four square inches of field sheet. The Descriptive Report, page 5, however, states that air photographs were used extensively in getting the correct slope of hills. Without more elevations than were determined, it would not be possible to draw form lines with the required degree of accuracy, even with the aid of the air photographs. The form lines, therefore, shall be considered as lacking the required degree of accuracy.
- d. Statistics.--Inasmuch as the 57 square statute miles of topography listed in the Descriptive Report, page 5, includes the 10 squares miles in the common area of the junction with Field Sheet A, T-6602 (1937), which 10 was previously included on that sheet, the actual additional topography on the present survey reduces to 47 square statute miles. The statistics have been corrected accordingly.

Rocks corrected
and note removed
by authority of
letter dated Aug.
23, 1938 rec'd
from field party
and attached to
D.R. of T-6602.
H.W.M. 9/28/38

The Descriptive Report is clear, very comprehensive and satisfactorily covers all matters of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project.

3. Junctions with Contemporary Surveys.

- a. The junction on the north with T-6602 (1937) is satisfactory.
- b. The junction on the southeast with T-6604 (1937) is satisfactory.

4. Comparison with Prior Surveys.

T-2547 (1901) Scale 1:40,000.

This sparsely covered small scale survey covers the entire area of the present survey.

a. Shoreline and Associated Details.

The general shoreline features are borne out by the present survey except that the latter shows considerably more detail. The wreck (charted) of the JAMES SENNETT in lat. $54^{\circ} 27.0'$, long. $164^{\circ} 52.4'$, which originates with the 1901 survey falls inside the low water line on both the old and present survey but was not located on the present survey. It is probably of small importance, if existing, and should be disregarded in future charting.

b. Form lines and Inland Details.

No elevations and only a fringe of form lines along the shore are shown on the old survey. The latter are principally 20 to 80 foot values and an adequate comparison cannot be made with the present survey's 100 foot intervals.

The Descriptive Report, page, 4, of the present survey states that the waterfall (charted) originating with this 1901 survey in lat. $54^{\circ} 28.8'$, long. $164^{\circ} 51.1'$, does not exist. It should be removed from the chart.

Within the area covered, the more detailed present survey should supersede this 1901 survey in future charting.

5. Comparison with Chart 8860 (New Print dated Jan. 12, 1938).

a. Topography.

Within the area of the present survey the chart is based on surveys discussed in preceding paragraphs of this review

and no further consideration is necessary.

b. Magnetic Meridian.

The value of the magnetic declination determined at triangulation station FOG in lat. $54^{\circ} 25.4'$, long. $164^{\circ} 50.4'$ is approximately $19-1/2^{\circ}$ E and is 3° greater than the charted value. This matter has been referred to the Division of Magnetism.

c. Aids to Navigation.

Scotch Cap Lighthouse in lat. $54^{\circ} 24'$, long. $164^{\circ} 45'$ agrees closely with its charted position and satisfactorily marks the features intended.

6. Field Drafting.

The inking of the shoreline, topographic features, and lettering, is very good.

7. Additional Field Work Recommended.

No additional field work is required.

8. Superseded Prior Surveys.

In so far as the topography included on the present survey is concerned, the present survey supersedes the following survey for charting purposes:

T-2547 (1901) in part

9. Reviewed by - Harold W. Murray, July 9, 1938.

Inspected by - E. P. Ellis.

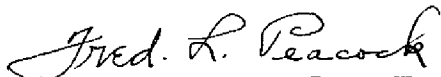
Examined and approved:



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



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.