

6604

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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

U. S. COAST & GEODETIC SURVEY
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APR 18 1938

Aleutian Islands
State: ~~ALASKA~~

Acc. No.

DESCRIPTIVE REPORT

Topographic
Hydrographic

Sheet No. C-37

LOCALITY

~~ALEUTIAN ISLANDS,~~

SOUTH SIDE OF UNIMAK ISLAND

Seal Cape & Vicinity

~~UNIMAK PASS~~

19 37

CHIEF OF PARTY

RAY L. SCHOPPE

U. S. GOVERNMENT PRINTING OFFICE: 1929

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applied to chart 8860 Dec. 3, 1938 U.G.H.

applied to chart 8720 Mar. 15, 1943 G.H.S.

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. G-37

REGISTER NO.

T6604

Aleutian Islands

State ALASKA

General locality South side of Unimak Island
Aleutian Islands, North side Unimak Pass

Locality Seal Cape & Vicinity
South side Unimak Island

Scale 1-20,000 Date of survey June 28 to July 12 1937

Vessel DISCOVERER

Chief of party Ray L. Schoppe

Surveyed by Curtis Le Fever

Inked by Curtis Le Fever

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

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

Instructions dated March 30, 1937

Remarks:

DESCRIPTIVE REPORT
To accompany
TOPOGRAPHIC SHEET C-1937 T-6604
Project No. HT-208

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

R. L. SCHOPPE, COMMANDING

Season of 1937

INSTRUCTIONS

Director's instructions dated March ³⁰ ~~7~~ ³⁶, 1937.

LIMITS

^{T-6603} The area surveyed on this sheet extends from a junction with sheet B-1937 at Scotch Cap Lighthouse, eastward along the south shore of Unimak Island to a junction with sheet D-1937 at Promontory Hill. ^{T-6605} It also extends inland from the shore line for a distance of about five and one half miles.

DESCRIPTIONS

This part of Unimak Island is covered with a heavy growth of grass and moss. It slopes gradually upward from the coast to the high snow covered ridge inland. The drainage from the heavy fall of rain and snow is considerable. Many large creeks cut deep into the slope and flow into the ocean along this part of the coast. The run-off is heavy at all times and especially so in the summer time. The amount of water running in these streams varies considerably during the day. It is the least, early in the morning and they are the least dangerous for crossing at that time. The melting snow and glaciers during a warm day causes them to increase their volume tremendously and they should be crossed with care at such a time. There are several waterfalls in this area which are visible from seaward, none, however, are particularly good landmarks.

Located on Scotch Cap Lighthouse Reserve are several large white buildings which are the dwellings of the keeper and his assistants. These buildings set just back from and about 30 feet above a small sand beach. In back of the buildings is a grass covered bluff. Part way up the slope of the bluff and west of the other buildings is the lighthouse. It is a low building, with its light 87 feet above mean lower low water. This part of the coast is fog bound a good part of the time and the light seems to be about the right elevation so as to get the maximum hours of visibility. The small beach below the buildings is partially protected by ledges projecting off shore both east and west of it. When the weather is favorable mail and supplies are landed on this beach for the light keepers. The small boats from the ships come in and lie just out side the surf and the mail or supplies are hauled aboard, or ashore by a line which must be shot out or carried out to the small boat. When a man goes ashore or aboard from the lighthouse he is usually hauled through the surf in the same way. There are generally a few days around the first of August when the surf is low enough so that the lighthouse tender can land a boat

on this beach. They try to choose such a time to put coal and a years supplies of food ashore for the keepers. The landings at Middle Point located on sheet B-1937, are used for small amounts of supplies and mail for the Scotch Cap Light Keepers during the stormy part of the year.

Just east of the small beach which is below the buildings on Scotch Cap Lighthouse reserve and on the end of the rock ledge projecting off shore is the wreck of the Japanese freighter Koshun Maru. She went aground just outside her present position during a heavy fog in 1929. At present the wreck is broken into two parts. Both halves of the ship are lodged securely on the rock ledge. The stern half of the ship is battered all out of shape and is above all normal stages of the tide. The forward half of the ship is lodged on the point of the reef with the bow pointing off shore. The foremast is still in place and was used as a hydrographic signal during this survey. The bottom of this half of the ship is under water. While the Discoverer worked in that vicinity this year a portable tide gauge was installed in the forward hold of the ship where the water entered through holes in the bottom. The gauge was removed at the end of the season. This part of the wreck will probably remain in place a long time as the main hold is filled with large logs which tend to prevent the hull from being shifted.

Eastward from this wreck a wide sand beach extends for one and one fourth miles. It ends abruptly where an area of large boulders projects out into the surf. From this point eastward to a point just beyond Seal Cape extends a very narrow rocky beach. In some places great boulders cover this sand beach so that it is almost impossible to climb over them when walking along the beach. In some areas along this beach, surf worn ledges extend seaward. There are many off lying rocks which would make this part of the coast very dangerous for landing. Back of the beach is a vertical bluff. Waterfalls pour from the top of this bluff in three places and are visible from seaward. Seal Cape is low and decidedly not prominent as a feature. When off this part of the coast a navigator would wonder what part of the coast was Seal Cape and be surprised that it was given a name. Eastward from Seal Cape the sandy beach is paralleled by a low grassy sand ridge. Small ledges and submerged rocks are scattered along this beach for its length of a mile. The beach ends against a higher rock ledge which projects seaward.

From the rocky ledge eastward the coast is precipitous. A high vertical bluff parallels a narrow rocky beach to a point in longitude 164-35.6. Here again rocky ledges project seaward. Near the faces of these ledges and those projecting from the rock beach just described are dangerous detached rocks.

From longitude 164-35.6, extends a broad sand beach eastward almost to Arch Point. At one place along this beach a large stream flows into the ocean. Just back from the beach and west of the stream is a trappers cabin. A small grave, evidently that of a child is located near the cabin. On the west side of Arch Point and between it and a projecting ledge is a small sand beach. This beach is well protected from any weather except southerly and the heavy surf which is present along most of this coast seems to be absent on this beach. I believe small boats could land

3.

here at times when they would have trouble on any other part of the coast surveyed on this sheet. There is shelter for a small number of persons in the cabin near the large stream.

Arch Point is high and very narrow. Through its face is a large arch which is only visible from on shore or close in shore. The west side of the point is vertical and deep water runs against its face. The east side of the point is also vertical but is protected by a flat ledge projecting off shore from its base. There are dangerous detached rocks near the end of the point and east of it. On the extreme end of the point is a large vertical sided rock which is 77 feet in height. A large stream runs along the east face of the point for a short distance and enters the ocean just east of the point.

East of Arch Point and 630 meters back from the beach is a large waterfall which is prominent seaward from the south and east. There is another waterfall a mile inland which shows well from off shore. It is high up on the grassy slope and the fall is quite high and narrow. There is a third large waterfall about a mile east of the first one described here. It is about 650 meters back from the beach but is not visible from seaward. However it is visible from the air as it shows well on the air photographs of this area. This fall is in a large stream which is fed by melting snow. At times when the run off is large it spreads out over the flat area which lies behind the wide sand beach. From the air it might look like a small lagoon. A broad sand beach extends from Arch Point eastward to beyond the edge of this sheet. ✓

Promontory Hill is on the extreme east end of this sheet. It is high and grass covered, the highest point on it is about one and one fourth miles inland. Its seaward slope is very steep and is spotted with large projecting boulders. It runs up from near sea level to a grassy shoulder 1000 feet in height. The beach must have run near the base of this steep slope at one time as a large bone, probably that of a whale, was found projecting from a wind swept bank near the base of the slope. The bone was too large to have been carried there by any animal. Promontory Hill stands out from both east or west along the south coast of Unimak Island and is also prominent from off shore. Its name is certainly very appropriate. Approaching Unimak Pass from the east and south east, Promontory Hill can often be seen when all other landmarks are fog covered. ✓

CONTROL

The Unalaska Triangulation Datum is used on this survey. The line, "Promontory Hill to Seal Cape", was established by the DISCOVERER in 1936. All other triangulation stations on this sheet were established this year by the personnel of this ship, Lieut. Bowie in charge of the field work. All field computations for this triangulation are un-adjusted. The triangulation control is excellent, the stations being close together and well located for topographic purposes.

SURVEY METHODS

While working on the west half of this sheet the combined triangulation and topographic party lived in one of the dwelling houses on the Scotch Cap Lighthouse Reserve. Permission to occupy the dwelling was obtained from the Superintendent of Light Houses for that District. The Keepers were eager to cooperate with us in every way and made our stay at the reserve very comfortable and interesting. The accommodations were certainly appreciated by every one on the party as we had a large amount of fog and rain during our stay there.

The topography and triangulation on the eastern half of this sheet was done from a good camp site very near the Hydrographic signal CAM at the base of Promontory Hill. This site however is not easily arrived at from the water as a heavy swell is running at all times on the open sand beach in this vicinity. The few landings that were made at this point both in 1936 and 1937 were dangerous. The smoothest of seas was always picked but it was seldom possible to get even a few supplies ashore without partially or wholly swamping a whaleboat. The weather conditions that were encountered on Unimak Island during this survey will be discussed in the description report accompanying topographic sheet D-1937.

The triangulation and topographic units, each consisting of one officer and three men worked in close cooperation, lending 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 from Seattle to False Pass at the beginning of the season were used continually by the combined party. They were used to transport camp and personal gear and signal building equipment between camps. They were used also for carrying instruments to and from work. The horses were experienced pack animals and were carefully chosen. Their experience was especially evident in this area when transporting the equipment from the camp at Promontory Hill to Scotch Cap. The streams were swollen and the entire area is a series of very deep washes with sides grass covered but so steep that an inexperienced horse would not be able to go up and down them. There was no trail except perhaps a game trail for short distances. The equipment was very ungainly in shape and it was almost impossible to make a balanced well shaped pack of it. However due to the experience of the packers and the calmness with which the horses worked there was no serious mishap. The horses proved to be invaluable as a time and labor saver throughout the summer. This survey would have proven extremely dangerous and expensive should it have been attempted by boat. The landing of a boat on the south western part of Unimak Island is impossible except under very unusual conditions and then only in widely spaced, sheltered spots.

As along all other parts of the south shore of Unimak Island where we worked, enough large and small drift lumber and logs were found from which we built most of our signals. At a few places where it was possible to land, lumber from the ship was used. Signals from the small light lumber from on board ship were much quicker and easily built. Where the coast was rocky, spots of whitewash on the rock bluff or large boulders were used as signals. The signals built of lumber along the coast are temporary and

will eventually be destroyed by surf and wind. The whitewash spots will eventually disappear also.

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 adjustments. All off shore details when possible, were located by three or more cuts, their elevations being determined by vertical angles and check angles. The inshore details were located by cuts and vertical angles, many of which were taken by the triangulation party and plotted on the topographic sheets.

The reefs were located by cuts and by rod readings to points accessible from the shore. In some instances it was necessary for the rodman to estimate the distances from the rodded points to the face of the reef. The face of the reef in lat. $54^{\circ}24'$, long. $164^{\circ}41'$ was adjusted on this sheet to agree with strong hydrographic fixes which were taken near it.

The locations of the mouths of all streams and their courses near the beach were determined by topography. Inland the positions of stream beds were scaled from the air photographs of this area. The air photographs proved invaluable for locating the streams and determining the proper shape of 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 accurate mapping along the coast line.

LAND MARKS FOR CHARTS

Chart Letter 255 (1938)

Mast	Wreck of Japanese Freighter	Latitude 54 23	1380.0 meters	
		Longitudel64 44	370.0	"
TER	Waterfall	Latitude 54 24	135.0	"
		Longitudel64 43	1032.0	"
RINK	Waterfall	Latitude 54 24	159.0	"
		Longitudel64 41	668.0	"
WET	Waterfall	Latitude 54 23	1834.0	"
		Longitudel64 40	852.0	"
WAT	Large waterfall	Latitude 54 23	1380.0	"
		Longitudel64 39	910.0	"
CHAR	Large arch in Arch Pt.	Latitude 54 24	856.0	"
		Longitudel64 33	962.0	"
BRINK	Large Waterfall	Latitude 54 24	1760.0	"
		Longitudel64 33	774.0	"
	High Waterfall	Latitude 54 25	1091.0	"
		Longitudel64 33	118.0	"
	Promontory Triangulation Station	Latitude 54 25	1761.0	"
	Highest point on Promontory Hill	Longitudel64 31	287.1	"

Note:

Of the waterfalls given in landmarks, none can be depended on to show from all directions offshore.

RECOVERABLE TOPOGRAPHIC STATIONS

Descriptions are submitted on form No. 624 for the following topographic stations: MAST, TER, RINK, WET, WAT, OUT, WIDE, CAB, CHAR, and BRINK. ✓

LIST OF NAMES ✓ GHE

The following are well established names in this locality: Iron Bridge Creek, Seal Cape, Arch Point and Promontory Hill.

STATISTICS

Statute Miles of shore line	-----10	
Square statute miles surveyed	-----55	41.5 See Rev., par. 1.
Magnetic Meridians determined	-----1	
Elevations of rocks off shore	-----29	
Elevations of points on shore	-----22	138 upland 22 116

Curtis Le Fever

Respectfully submitted,

Curtis Le Fever
Jr. H. & G. Engineer
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

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2		
3	<i>"Cape Khituk Hill" on T-2547</i>	
4		
5	<i>For Title Only</i>	<i>USGB decision</i>
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GEOGRAPHIC NAMES

Survey No. T-6604

Name on Survey	On Chart No. 8860		On previous survey No.	On U. S. quadrangle Maps	From local information	Baker On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
	A,	B,								
Seal Cape <u>SEAL CAPE</u>	✓	Cape Khatuk T-2547			✓					1
<u>Arch Point</u>	✓	T-2547		✓	✓					2
<u>Promontory Hill</u>	✓	H-2556		✓	✓					3
<u>Ironbridge Creek</u>				✓						4
<u>Unimak Island</u>	✓									5
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Names underlined in red approved										26
by <u>STE</u> on <u>5/24/38</u>										27

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } ~~No. T-6604~~
 PHOTOGRAPH OF } No. T-6604

{ 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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RETURN TO

82	T. B. Reed
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✓ 2030

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6604 (1937) FIELD No. C-37

Seal Cape and Vicinity, South Side of Unimak Island,
Aleutian Islands

Surveyed in June - July 1937, Scale 1:20,000

Instructions dated March 30, 1936 (DISCOVERER)

Plane Table Survey

Aluminum Mounted

Chief of Party - Ray L. Schoppe.

Surveyed by - Curtis LeFever.

Inked by - Curtis LeFever.

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.-- Ten rocks awash were described as baring 6 to 10 feet at M.L.L.W. With a mean range of tide of about 5 feet, these rocks should have been shown as dry rocks accompanied by the heights in parenthesis. These rocks were correctly represented on H-6287 (1937) and H-6288 (1937) in the office and an appropriate note added to the present survey. (See Review 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 elevations be shown for at least every four square inches of topography. 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 55 square statute miles of topography listed in the Descriptive Report, page 6, includes the 13.5 square miles in the common area of the junction with field sheet B-37, T-6603 (1937) on the west and which 13.5 was previously included on that sheet, the actual additional topography on the present survey reduces to 41.5 square statute miles. The statistics have been corrected accordingly.

Rocks corrected and
note removed by
authority of letter
dated Aug. 23, 1928
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.

The junction on the west with T-6603 (1937) and on the east with T-6605 (1937) is satisfactory.

4. Comparison with Prior Surveys.

T-2547 (1901) and H-2556 (1901), Scales 1:40,000 and 1:140,000.

A portion of this small scale sparsely developed survey covers the entire area of the present survey.

a. Shoreline and Associated Details.

The general shoreline features are generally borne out by the present survey except that the latter shows considerably more detail.

b. Form Lines and Inland Details.

But one elevation is shown on the old survey. Form lines are very sparse, most of them being a fringe of 20 to 80 foot values which are less than the 100 foot interval used on the present survey. In long. $164^{\circ} 37.7'$, a narrow strip of 100 foot intervals (not charted) extends from the shoreline northward to a point in lat. $54^{\circ} 28.2'$. They are based on a single elevation of 3300 feet (charted) which agrees closely with the interpolated heights on the present survey. Agreement of the form lines, however, is very poor; the maximum difference noted being 950 m. in the 100 foot form line.

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 Seal Cape agrees closely with the charted value.

c. Aids to Navigation.

Scotch Cap Lighthouse 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 8, 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.