

6750

Diag. Cht. No. 8861-1

Form 504 Rev. April 1935	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Topographic <del>Hydrographic</del>	Sheet No. G-40 T 6750
U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES MAR 3 1941 Acc. No. ....	
State ALASKA	
LOCALITY YUNASKA ISLAND (EAST END) ALEUTIAN ISLANDS, ALASKA	
1940 CHIEF OF PARTY J. H. Peters	

U. S. GOVERNMENT PRINTING OFFICE 102221

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 No. G-40

T6750

REGISTER NO. T6750

State ~~Alaska~~ Aleutian Islands

General locality Islands of Four Mountains  
~~Aleutian Islands~~

Locality Yunaska Island (East End)

Scale 1-20,000 Date of survey Aug. - Sept. 19 40

Vessel Explorer

Chief of party J. H. Peters

Surveyed by H. A. Paton

Inked by H. A. Paton

Heights in feet above M. H. W. to ground ~~xxxxxx~~

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

Instructions dated February 3, 19 38

Remarks:

DESCRIPTIVE REPORT

TO ACCOMPANY

TOPOGRAPHIC SHEET G-40

YUNASKA ISLAND (EAST END)

ALEUTIAN ISLANDS, ALASKA

PROJECT NO. HT-218

SEASON OF 1940

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U. S. C. & G. S. S. EXPLORER

J. H. Peters, Comdg.



DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET G-40

YUNASKA ISLAND (EAST END)

ALEUTIAN ISLANDS, ALASKA

PROJECT NO. HT-218

U. S. C. & G. S. S. EXPLORER

J. H. Peters, Comdg.

INSTRUCTIONS

The work on this sheet was done under authority granted by orders dated Feb. 21, 1940 which referred to instructions dated Feb. 3, 1938 issued to the SURVEYOR and PIONEER. ✓

SCOPE

The area covered by this sheet is roughly the portion of Yunaska Island lying east of meridian  $170^{\circ} 40'$ . It includes the large crater found on this end of the island. ✓

CONTROL

The following <sup>A</sup>stations were used in this survey: "Spur", "Calf", "Dove", "Ridge", "Yuma", "Seal", and "Easy". All of these were located by the party on the PIONEER in 1939. Five more stations fell on the western part of the sheet but were not used. (See Methods, below) ✓

DATUM

The datum for the above stations is Unalaska 1901. See Descriptive Report for Sheet A-39 <sup>T-6746 (1940)</sup> for a more complete discussion of the datum. The heights of all rocks awash are referred to Mean Lower Low Water. ✓

METHODS

The projection for this sheet was made by officers aboard the PIONEER but was transferred to this party before any work had been done in the field. ✓



is in a northeast and southwest direction as indicated and there are two principal elevations with a low pass between. The detail along the shore was in error however and the island was two miles too far west.

#### GENERAL DESCRIPTION OF SHORE LINE

The most important topographic feature on this sheet is the large circular crater, about two miles in diameter. The highest point on the rim is found on the northwest side, (1960 feet) which appears to be a lone peak from some directions. The remainder of the rim is quite regular, with the lowest point being found on the southwest side (1110 feet).\* A prominent lava flow was erupted over the rim at this point which extends a mile to the south. The south slope of the rim is very smooth and regular down to the low cliffs along the shore. The cliffs along the south shore are honey combed with caves and marked with many bridges and arches. Signal "Arch" is the largest and most prominent natural bridge.

On the east side of the rim there are two parallel ridges, the south one extends in an E.S.E.'ly direction to the shore. The north one however turns north about a mile east of the rim and extends three miles to the north. The first half is a smooth grass covered ridge with three rounded bumps on it. The remainder of the ridge is higher and more rugged. There is first a saddle shaped peak (1066 to 1051 feet high), and then a bold promontory (747 feet high) at the extreme north end of the ridge.

To the west of this ridge and north of the rim is a broad smooth grassy valley, which could easily be made into an emergency landing field for airplanes. Through the middle of the valley is found a long lava flow, coming from a vent on the side of the rim and extending in a N.N.E'ly direction to the shore.

Along the north shore is a smooth ridge about 770 feet high and about two miles long. The shore is bordered, in general, by steep rock cliffs, the most important breaks being at the lava flow near signal "Hog", at the prominent draw north east of station "DOVE" and the cul-de-sac northwest of signal "Pipe". There are, of course, many other places where the cliffs can be scaled without too much difficulty. Signal "Pipe" is the top of a prominent pinnacle rock, 91 feet in height. The top of this rock can be seen from signal "Con" and it could probably be scaled on its northeast side. A smaller pinnacle, 52 feet tall is 70 meters northwest of "Pipe" and there is a cluster of rocks around them.

\* Near the center of the crater, a rough lava cone rises to a height of 1804 feet (Signal ADDY). There is a small crater in this cone.



An interesting cave is found in the bold head land at signal "vi" (lat.  $52^{\circ} 42'$ , long.  $170^{\circ} 39'$ ). It is about 75 meters long, 5 meters wide, 10 meters high, and the water has sufficient depth for small motor boats to navigate through it. The cave is curved, so light does not show thru it. Water drips from the ceiling and many birds fly out when disturbed.

A shallow basin is found on the upper slopes about 500 meters east of signal "Mid" (lat.  $52^{\circ} 39.2'$ , long.  $170^{\circ} 34.8'$ ), shown by a depression contour. It is about 10 feet deep, is grass covered, but is probably filled with water in rainy seasons.

There are no lakes or ponds on this part of the island.

There are no houses or structures of any kind on this part of Yunaska and during the summer of 1940 the island was uninhabited. (See reports of sheet H-40, EXPLORER and ~~B-40~~ <sup>7-152, 1940</sup> JONES concerning the trapper cabins on the other portions of the island).

Good landing sites are found at the tide gage in East Cove, at the head of the bight north of East Cove (signal "Duce") and on the lava flow near signal "Hog".

Only two camp sites can be recommended on this sheet on account of the scarcity of drinking water. At signal "Duce" there is a small stream from which a little water can usually be obtained. Near signal "Hog" there is an underground stream about 150 meters east of and behind the westernmost corner of the new lava flow. The water flows below and around the boulders of the old beach.

#### LAVA FLOWS

The lava flows are very interesting topographic features on this sheet. The big crater was reported to be active on November 3, 1937 according to the Coast Pilot. In 1939 the floor of the crater was still hot and the north lava flow was warm down in the crevasses. The north flow comes from an old vent, (elevation 967 feet) and covers most of an older flow. The irregular convex bulge in the shore line represents the change made in 1937. The lava apparently flowed down a deep and narrow gulch in the cliff along the shore and spread out along the waters edge. Back up on the valley floor it has several long narrow branches, but only one reached the shore. In places the branches came together leaving an island of grass between them.

The next older flow is the one on the south side of the island. It is the only one that comes out over the lip of the rim. On the extreme south end, the grass is beginning to grow. The next older



flow is the one which was partly covered by the 1937 flow on the north side. The portion not covered has a moderate growth of grass on it. Another flow of about the same age is found on the east side of the rim between signals "Notch", "Con" and "Mid". It came out of a vent whose elevation is 1262 feet. Apparently the tube collapsed after the flow ceased as evidenced by the slight depression between the vent and a notch on the rim. This flow is hidden behind the ridge on which signals "Con" and "Mid" are located and can be seen from the sea only thru the draw southeast of "Con". It is covered with a moderate growth of grass.

#### VEGETATION

There are no trees or bushes on this island. A thick carpet of moss and grass grows along the lower slopes up to an elevation of about 1100 feet. In some of the draws the grass grows five to six feet high.

#### WILD LIFE

Yunaska is a Wild Life Preserve. Blue foxes have been planted and are now quite plentiful and tame. Several ptarmigan were seen but few other birds live there at present. Many hair seals are found around the point at signal "But" (lat.  $52^{\circ} 41.5'$ , long.  $170^{\circ} 36'$ ). Seal Rock at times is covered with these seals.

#### GEOGRAPHIC NAMES

See Descriptive Report for sheet A-46<sup>39</sup> for a complete discussion of the lack of names. The name Yunaska Island is in use on the charts and in the Coast Pilot and all sources are in agreement on its use. T-6746 (1940)

Only two names were originated by the survey party. East Cove, the broad indentation on the extreme eastern end of the island. Seal Rock, a small islet east of signal "But" (lat.  $52^{\circ} 41.5'$ , long.  $170^{\circ} 35.7'$ ). During most of the summer it was covered with hair seals.

#### DANGERS

The principal dangers on this sheet were used as survey signals and bear the following names: "Jean", "Dec", "Ve", and "Pipe". There is a rock awash, which bares one foot at mean lower low water, about 140 meters east of signal "Pipe". Most all dangers are marked by kelp but this frequently tows under due to the strong currents.



# DISCREPANCIES

All triangulation stations that were used checked satisfactorily except station "HOG". This had been located by two cuts, from stations "SNOW" and "SPUR" and the intersection angle was only 5 degrees. The topographic position placed it seven meters west of the position by triangulation. It is shown on this sheet as a topographic station and a description is submitted on Form No. 524. *✓*

*Filed in  
Reviewing Section*

# MAGNETICS

Magnetic declination was measured at five places with the following results:

<u>Station</u>	<u>Declination</u>
MILLS	12° 48' E.
NOR	11° 06' E.
SIX	14° 06' E.
CRE	10° 28' E.
CON	10° 50' E.

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All observations were taken with declinoaire no. 252. It will be noted that the extreme values were taken from stations only 765 meters apart.

# STATISTICS

Statute miles of shore line = 17.0

Area in square statute miles = 34.0

Respectfully submitted,

*Hubert A. Paton*

H. A. Paton,  
H. & G. Engr.  
U.S.C. & G.S.S. EXPLORER.

APPROVED AND FORWARDED:

*J. H. Peters*

J. H. Peters,  
Commanding Officer,  
U.S.C. & G.S.S. EXPLORER.

*Forwarded  
Sen. L. Bean*  
Officer in Charge,  
Seattle Processing Office.

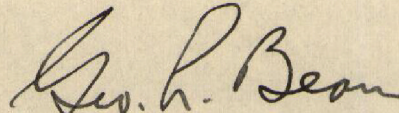


NOTE REGARDING TWO ELEVATIONS NEAR CRATER

East end Yunaska Island

Two elevations, 1803' and 1804', are shown above the 1700' form line near the crater on the east end of Yunaska Island. The topographer states that these are two small knobs. Therefore, a small form line has been drawn around each elevation to clarify the picture.

✓  
# 52-38.5  
2170-38



Geo. L. Bean  
Officer in Charge  
Seattle Processing Office.

## Remarks

## Decisions

1	submitted to U.S.G.B. O.K. to ink pending its decision.	525705
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GEOGRAPHIC NAMES  
Survey No. **T6750**

Name on Survey	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	K	
<u>East Gove</u>										1
<u>Seal Rock</u>										2
<u>Yunaska Island</u>										3
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Names undetermined in review  
by L. Healy on 3/20/42

U. S. GOVERNMENT PRINTING OFFICE 1964 O - 348-101

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

~~No. T~~

No. T

**T6750**  
(Confidential)

received Mar. 3, 1941  
registered Mar. 5, 1941  
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
20			
22			
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25	✓	HSC	Pages 3 to 5
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40	✓	OWS	Page 6
62			
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RETURN TO

82	T. B. Reed
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*TBR*



CONFIDENTIAL

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF TOPOGRAPHIC SURVEY

REGISTER NO. 6750

Field No. G-40

Aleutian Islands, Islands of Four Mountains,  
Yunaska Island (East End)  
Surveyed August - September 1940; Scale 1:20,000  
Instructions dated February 3, 1940

Plane Table Survey

Aluminum Mounted

Chief of Party - J. H. Peters  
Surveyed by - H. A. Paton  
Inked by - H. A. Paton  
Reviewed by R. H. Carstens  
Inspected by - H. R. Edmonston

1. Junctions with Contemporary Surveys

A satisfactory junction was made with T-6751 (1940) on the west.

2. Comparison with Prior Surveys

No prior surveys of the area have been made by this Bureau.

3. Comparison with Chart 8802 (Latest print date 1-29-42)

The charted topography originates from miscellaneous sources, possibly old Russian surveys, and is about 2 miles out of position. Because of the difference in scales a detailed comparison is of little value. The present survey should supersede the miscellaneous surveys in this area.

4. Condition of Survey

a. Topography.

The inking of the shoreline and other topographic features was well done. There are two inconsistencies in elevations and form lines in Lat.  $52^{\circ}41.0'$ , Long.  $170^{\circ}36.8'$ , and Lat.  $52^{\circ}40.4'$ , Long.  $170^{\circ}37.4'$  where elevations of 363 and 547 are not included within their respective form lines. The elevations fall on a lava flow on apparently gently sloping

ground. Though they are inconsistent with the form lines they were left on the map for whatever future value they may have.

b. Magnetic Meridians

Five satisfactory declinatoire observations were made. However, no standardization report or index correction for the declinatoire used was submitted with the report.

5. Compliance with Instructions

Satisfactory except as noted in previous paragraph.

6. Additional Field Work Recommended

None.

7. Superseded Surveys

None.

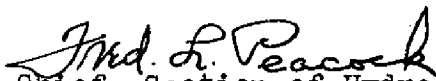
Examined and approved:



Chief, Surveys Section



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of Coastal Surveys