

4153

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: SOUTHWEST ALASKA

11-5013

DESCRIPTIVE REPORT.

Topographic Sheet No. 6 4153

LOCALITY:

Alaskan Peninsula

SUTWIK ISLAND

1925

CHIEF OF PARTY:

Clem L. Garner, H. & G. E.

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DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET NO. 6, SUTWIK ISLAND, SOUTHWEST ALASKA
Instructions to Commanding Officer
dated March 25 1925.

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LIMITS OF WORK

This sheet covers the entire of Sutwik Island and offlying rocks.

GENERAL DESCRIPTION

For ships approaching from the south or southeast, Sutwik Island presents a range of gently sloping, green hills of even height. About a quarter of the eastern end of the island does not appear until approached within about 25 miles. Then Foggy Cape appears as an offlying island until a vessel is within about 15 miles of the shore.

The southern slopes are grass covered and spread out into marshy flats. The actual shore line presents the appearance of a series of low, sandy, bluffs, fringed by numerous breakers and reefs. The northern shore is a line of bluffs, mostly too steep for vegetation.

Foggy Cape is frequently hidden in fog, even when the rest of the island is clear.

OUTLYING DANGERS AND ISLANDS

There is a marked tide rip $1\frac{1}{2}$ miles, 180° true from Foggy Cape. There are three rocks a mile or less off the western shore of Sutwik Island ranging from 40 to 115 feet in height. The ones marked as signals West and Lion are bare reefs rounded in appearance. The third one has bold faces and is jagged in appearance.

LANDMARKS

The dome shaped columnar sided mound, 285 feet in height, whose highest point is marked by signal Cow, under certain light conditions shows up well for vessels approaching from any southerly quarter. It then presents a dark shape against a green background. Approached from the east or west, the mound appears detached from the rest of the island.

The rocks off the western shore of Sutwik Island mentioned above as offlying rocks are landmarks for vessels approaching the western end of Sutwik Id.

Vessels passing between Sutwik Island and Cape Kumlik will find the reef marked as signal Fish a distinct landmark. It is a cusp-shaped, black reef about 20 feet high.

ANCHORAGES

There is an anchorage off the north shore of Sutwik Island in the bay laying between signal Fish and signal Hid, good for southerly weather. It is of sandy bottom, of only fair holding properties, and has about 8 fathoms of water.

INSHORE DANGERS

Numerous reefs skirt the southern coast of Sutwik Island, extending offshore about one mile. Most of them do not bare until low tide, so this shore should be avoided. The most conspicuous rocks along this shore are the following. There is a grass-covered islet about 220 meters long and 150 feet high in Lat. $56^{\circ}-31'-20''$, Long. $157^{\circ}-17'-00''$. A grass covered islet about 150 meters long and 55 feet high lies in Lat $56^{\circ}-31'-40''$, Long. $157^{\circ}-16'-20''$. The group of four rocks which include signal Stick and signal Mesa a mile west of signal Cow, are all about 25 feet high; two of these are small and pillarlike in shape. A reef which bares at $\frac{1}{2}$ tide lies $\frac{5}{8}$ mile, 247° true from signal Cow. The rock 500 m. 160° true from signal Cow, and marked signal Spike is a tall, sharp, needlelike rock about 20 feet high. The rock marked signal Table in Lat $56^{\circ}-31'-00''$, Long. $157^{\circ}-08'-12''$ is a vertical sided, table-topped rock, 29 feet high. A reef 750 m. 60° true from signal Table bares at $\frac{1}{4}$ tide. There are two grass covered rocks in Lat $56^{\circ}-32'-20''$, Long. $157^{\circ}-08'-20''$, 600 m. offshore the cape; one of these is signal Green. The group of grass covered rocks in Lat $56^{\circ}-32'-15''$, Long. $157^{\circ}-08'-30''$, one of which is signal Sand, are connected to the shore at low tide by a sand bar. The islet in Lat $56^{\circ}-32'-35''$, Long. $157^{\circ}-06'-10''$, whose highest point is signal Bar, is the largest in the vicinity, but from the sea is inconspicuous because it blends with its background. The group of rocks in Lat. $56^{\circ}-32'-30''$, Long. $157^{\circ}-05'-00''$ the most central of which is signal Double, vary greatly in appearance according to the tide. They are all low irregular-shaped rocks. The rock marked signal Triplets in Lat $56^{\circ}-32'-30''$, Long. $157^{\circ}-03'-00''$ is broken into three perpendicular shafts about 61 feet high. The rock just outside of the Triplets whose center is signal Grass is 92 feet high and grass crowned. There is a rock awash at low tide in Lat $56^{\circ}-32'-42''$, Long. $157^{\circ}-00'-35''$ $\frac{2}{3}$ mile offshore, southwest of Foggy Cape. A green topped islet lies close to shore in Lat $56^{\circ}-32'-02''$, Long. $156^{\circ}-59'-20''$. A barren, vertically stratified, rock 60 feet high, lies 100 m. west of Foggy Cape in Lat $56^{\circ}-32'-24''$, Long. $156^{\circ}-58'-11''$. There is a marked tide-rip off Foggy Cape which should be avoided.

A strip of shoal water about $\frac{1}{3}$ mile in width extends along the north shore of Sutwik Island. It is marked by the reefs and areas of kelp shown on the sheet. There are two flat topped, square shaped rocks, about 15 feet high and some 100 m. off shore in Lat $56^{\circ}-33'-05''$, Long. $156^{\circ}-59'-20''$. The outer of these is signal Square. The rock whose highest point is signal Tail is a green crowned shaft 51 feet high close to shore. The rock in Lat $56^{\circ}-33'-31''$, Long. $157^{\circ}-01'-22''$, whose highest point is signal Twopoint is conspicuous in its vicinity. It is 65 feet high, roughly pyramidal in shape, and surmounted by a two pronged stone block. The group of reefs in Lat $56^{\circ}-35'-25''$, Long. $157^{\circ}-05'-20''$ whose highest point is signal Solo are low and inconspicuous. They lay about $\frac{1}{2}$ mile from shore. Signal Solo has a distinct point 4 feet above high water. Signal Pile in Lat. $56^{\circ}-35'-05''$, Long. $157^{\circ}-06'-50''$ is a shaftlike rock, 90 feet high, grass capped and a 130 m. from shore. Signal Pitch in Lat $56^{\circ}-35'-25''$, Long. $157^{\circ}-08'-35''$ marks the high point of a steep sided rock 84 feet high, laying $\frac{1}{4}$ mile off a reef fringed cape. Signal Dark marks a black rock 42 feet high laying between signal Pitch and the shore. The rock in Lat. $56^{\circ}-35'-17''$, Long. $157^{\circ}-09'-58''$ whose high point is signal Fore is a grass topped and 53 feet high. Signal Nuts is a bare rock 13 feet high about one half way between signal Fore and Signal Fish, and $\frac{1}{2}$ mile from shore. Signal Fish in Lat $56^{\circ}-36'-28''$, Long. $157^{\circ}-14'-50''$ marks the high point of an irregular, bare rock, crudely resembling a whale's back when seen from the east or west. It is 20 feet high, and lays about $\frac{1}{5}$ mile off a prominent

cape. A ragged line of reefs extends a $\frac{1}{4}$ mi. east of signal Fish. The highest point of these reefs is 12 feet. Signal Prom in Lat $56^{\circ}-33'-50''$, Long. $157^{\circ}-18'-35''$, is a black, pyramidal rock about 30 feet high. A jagged line of reefs extends from the point in Lat. $56^{\circ}-32'-45''$, Long. $157^{\circ}-19'-50''$. Another line of toothlike reefs extends off the southwest point of Sutwik Island in Lat $56^{\circ}-31'-40''$, Long. $157^{\circ}-19'-30''$.

LANDING PLACES, STREAMS, ETC.

Under favorable weather conditions a small boat can land on the south side of Sutwik Island on the various sand beaches indicated on the sheet. With southerly winds and seas, on the contrary, a high surf is running making such a landing dangerous. There is a kelp protected cove, however, at the southwestern end of Sutwik Island in Lat. $56^{\circ}-31'-50''$, Long. $157^{\circ}-19'-20''$ where a landing will be possible. There are several coves on the north shore on the north shore where small boats may easily land. The deep cove between signal Tail and signal Two point is well protected in any weather, but is very shallow. It is not recommended for anything larger than a whaleboat. The bay between signal Band and signal Dark, and the bay between signal Hid and signal Fish are recommended. Brooks enter both of these bays.

Brooks are everywhere abundant on Sutwik Island except on the eastern end. There are no large streams. The largest brook empties into the sea $\frac{1}{5}$ mile west of signal Sand, and the south shore of the island. There is a shack about 50 m. from the stream $\frac{1}{5}$ mile west of Sand. There are no inhabitants on Sutwik Island.

SURVEY METHODS

In order to establish control along both north and south shores, a point in Lat. $56^{\circ}-34'-12.4''$, Long. $157^{\circ}-08'-53.4''$ was occupied and determined by three point fix to triangulation signals Sut, Cow, Wik. Cuts were here taken to many of the rocks off the south shore and a cut taken to the peak, Razer. Signal Razer was then occupied and determined by resection from triangulation signal Wik. Cuts from this point could be taken here to points on the north shore. Several set-ups in the vicinity of signal Wik were also made and cuts taken to points on both the north and the south shores. The north shore was then surveyed by cuts, resection, and three point fixes, between signal Fish and signal East, except for a traverse a $\frac{1}{2}$ mile long from Lat $56^{\circ}-34'-43''$, Long. $157^{\circ}-04'-00''$ to signal Rug. This traverse closed without error.

The south shore line from Lat $56^{\circ}-33'-13''$, Long. $157^{\circ}-06'-20''$ westward and around Foggy Cape was surveyed by cuts, resection, and three point fixes. Theodolite cuts from triangulation signal Kumlik to the three rocks off the west end of Sutwik Island were plotted and the signal Lion determined by occupying this rock and resecting on triangulation signal Cow. Cuts were here taken to points along the shore line. The shore line from Lat $56^{\circ}-31'-30''$, Long. $157^{\circ}-19'-31''$ to Lat $56^{\circ}-32'-03''$, Long. $157^{\circ}-14'-14''$ was then surveyed by cuts, resection, and three point fixes. Cuts from triangulation signal Sut and two other points on neighboring hills completed the determination of the rocks laying off the south-central shore of Sutwik Island. The shore line itself was then run in from Lat $56^{\circ}-32'-03''$, Long. $157^{\circ}-14'-14''$ to Lat. $56^{\circ}-33'-13''$, Long. $157^{\circ}-06'-20''$ by a sextant survey, the

surveyer taking fixes and making notes as he traveled the shore. Plane table cuts had been taken previously on the headlands inshore from signal Stick and from signal Green, and tangents taken around the cape of signal Cow from plane table setups both north and west of triangulation signal Cow. These cuts supplemented and checked the sextant work at these points.

The shore line from signal Fish to the reef line in Lat. $56^{\circ}-32'-41''$, Long. $157^{\circ}-19'-42''$ was surveyed by Mr. C. Pierce by the use of resection and three point fixes on signals on the Cape Kumlik side of the straits. A projection upon which the signals upon the other side of the strait were plotted, was used, and the shore line from this projection transferred to the main projection, sheet No. 6.

The shore line about a mile in extent, between Lat $56^{\circ}-32'-41''$, Long $157^{\circ}-19'-42''$ and Lat $56^{\circ}-31'-30.7''$, Long. $157^{\circ}-19'-31''$ was surveyed by cuts from various positions of the ship.

Respectfully submitted,

Lt. S. Hubbard.

Jr. H. & G. Eng.

Approved and Forwarded,

Clem L. Garner

Clem L. Garner,

H. & G. Engineer, Chief of Party.

Note:

The topography of the west end of Sutwik Island was not completed because of unfavorable landing conditions at the time this work was in progress. It will have to be done ~~by~~ during another season.

The sextant work mentioned in the last paragraph above was merely for the purpose of showing in a rough way the trend of the shore line.

Clem L. Garner

Name and Description	Lat	D.M.	Longitude	D.P.	Height	Remarks
Skale, the highest point of the rocky reefs 250 m. east of Fish.	56°-35'	878	157°-14'	334	12'	
Nuts, a bare black rock	56°-35'	33	157°-12'	299	13'	center
Tip, the outer of two prominent little cones on headland	56°-35'	364	157°-09'	1009	60'	
Fore, a grass topped rock	56°-35'	529	157°-09'	964	53	highest point
Dark, a bare black rock	56°-35'	604	157°-08'	545	42	highest point
Pitch, a steep sided grass capped rock $\frac{1}{4}$ mi. from shore	56°-35'	858	157°-08'	629	84	center of top
Razer, a steep, even sloped, grass covered hill.	56°-34'	1578	157°-08'	703	613	peak
Band, the outer face of a rocky headland	56°-34'	1836	157°-07'	518	8	white washed in 1925
Pile, a prominent, shaftlike, grass-capped rock	56°-35'	157	157°-06'	851	90	highest point
Bunch, a bare black rock	56°-35'	153	157°-05'	989	22	highest point
Solo, the highest sharp point of a group of rocks	56°-35'	759	157°-05'	339	4	
Rug, the outer face of a broken headland	56°-33'	1744	157°-01'	708	15	
Twopoint, a conspicuous, roughly pyramidal rock, surmounted by two a two pronged, stone block	56°-33'	1566	157°-01'	307	65	highest point
Tail, a green crowned, shaft, close to shore	56°-33'	728	157°-00'	460	51	highest point
Square, the outer of two flat topped, block-like rocks	56°-33'	133	156°-59'	272	15	center of top
Snug, a cylindrical rock, close to shore	56°-32'	333	156°-58'	822	30	center
Grass, a grass topped rock	56°-32'	699	157°-02'	893	92	center of rock
Triplets, the highest point of three vertical slabbed rocks	56°-32'	920	157°-02'	932	61	
Cone, a bare cone shaped rock	56°-32'	1054	157°-03'	651	11	high point
Bar, the highest point of a large grass covered rock	56°-32'	1735	157°-06'	154	80	

Name and Description	Lat.	D.M.	Long.	D.P.	Height	Remarks
⑥ Double, a two humped rock	56°-32'	1490	157°-05'	86	16	center of sw group
⑥ Tick, high point of reef	56°-33'	06	157°-06	457	0	
⑥ Sand, a vertical sided, grass topped rock	56°-32	491	157°-08'	528	52	
⑥ Green, outer of two grass topped islands	56°-31 ⁸	1210	157°-08'	696	38	middle point
⑥ Table, a vertical sided, table topped rock	56°-30'	1842	157°-08'	821	29	center of top
⑥ Spike, a sharp, needle-like rock	56°-31'	704	157°-11'	499	20	tip
⑥ Thumb, the highest rock in the reef extending west from the cape of Δ Cow	56°-31'	971	157°-11'	1007	10	
⑥ Mesa, the outer large, vertical sided, grass topped rock in a group of four rocks	56°-31'	1431	157°-13'	458	25	center point
⑥ Stick, a pillar like rock	56°-31'	1554	157°-13'	537	25	center point
⑥ Lion, a black, barren, irregular sloped reef	56°-31'	34	157°-20'	196	69	highest point
⑥ West, a long, low, barren reef	56°-31'	610	157°-21'	504	36 ⁵ 7	highest point
⑥ Thorn, a sharp, needle-like rock in a reef line	56°-31'	1201	157°-19'	528	15	
⑥ Prom, a black, roughly pyramidal, barren rock	56°-30'	1572	157°-18'	614	40	highest point

Miles of Shoreline-----41.4 statute miles
 Square miles of contoured area----30.0 square statute miles.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

February 19, 1926.

SECTION OF FIELD RECORDS

Report on Topographic Sheet No. 4153

Sutwik Island, Alaska Peninsula

Surveyed in 1925

Instructions dated February 25, 1925.

Chief of Party, C. L. Garner.

Surveyed and inked by L. S. Hubbard.

1. The records as well as the plan and extent of the survey conform to the requirements of the General Instructions.
2. The plan and extent of the survey satisfy the specific instructions.
3. There are no adjoining surveys.
4. The usual field drafting was done by the field party.
5. No further surveying is needed within the area of this sheet.
6. The character and scope of the surveying and field drafting are very good.
7. Reviewed by E. P. Ellis, February, 1926.
8. Approved: A. L. Giacomini.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

4153

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. (6) 4153

State . ^{SW.} ~~South West~~ Alaska

General locality Alaskan Peninsula

Locality Sutwik Island

Chief of party Clem L. Garner

Surveyed by L.S. Hubbard

Date of survey August - September, 1925

Scale 1 - 20,000

Heights in feet above Mean High Water

Form line
Contour interval 100 . . feet.

Inked by L.S. Hubbard Lettered by L.S. Hubbard

Records accompanying sheet (check those forwarded): Photographs,

* Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet none

Remarks: This work was examined and inspected at each visit of the camp party to the ship, Aug. 25, Sept., 1, 2, 5, and at frequent intervals while the details were being completed aboard ship.

Approval recommended,

Clem L. Garner
Clem L. Garner,
Commanding Steamer DISCOVERER.