

4028

Form 501

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Alaska

11-5013

DESCRIPTIVE REPORT.

Topog. Sheet No. 4028

LOCALITY:

Aleutian Islands

Unimak I., Swanson's Lagoon

1923

CHIEF OF PARTY:

R.R. Lukens

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4028

DESCRIPTIVE REPORT to accompany Topographic
Sheet No. of Swanson's Lagoon, Unimak Is-
land, South West, Alaska.

This survey was executed following instructions from the Director,
U.S.C. & G.S. to R.R. Lukens, H.&G.E. U.S.C.&G.S. dated Feb. 27, 1923.

Swanson's Lagoon is a shallow, unnavigable lagoon indenting the north
east shore of Unimak Island on the Bering Sea side. It is about seven
and one half miles (naut.) west of Chunak Point, at the north entrance
of Isanotski Strait.

GENERAL DESCRIPTION OF THE COAST

Approaching Swanson's Lagoon from
the Bering Sea, the hills between
the Lagoon and the Bering Sea serve as good land marks. These hills
are grassy on the south sides but are composed of a black sand on the
north sides. The hill with an elevation of 70' near hydrographic sig-
nal YEL appears as a rounding ridge with a small notch in this ridge.
The hill just west of this with an elevation of 90' has two small and
rather sharp summits. The hill at hydrographic signal MARK with an
elevation of 85' comes to a distinct cone shaped summit. At the west-
ern edge of the sheet, the hill with an elevation of 50 feet is cone
shaped from the east and west and appears as a short ridge from the
north and south. To the east of this hill a ridge makes to the east-
ward. The entrance to the lagoon appears as a break in the sandy
beach of this locality. Long, low, black, sandy spits form the en-
trance.

LANDMARKS

The only prominent landmarks near the Lagoon are the
hills already mentioned. The island at hydrographic
signal GULL is easily distinguished.

DESCRIPTION OF THE SHORE LINE AND LAND SURROUNDING THE LAGOON

The
shore-
line is extensively sandy on the north side and earth and mud on the
south side with the exception of the mouth of the large stream near hy-
drographic signal WET which is sandy. There are small rocks along the
east and south east sides of the Lagoon. Above the high water mark is-
land is grass covered with the exception of the north side of the range
of hills on the east side of the entrance to the lagoon. The north
sides of these hills are black sand. South of the lagoon, fresh water
swamps and small lakes or water holes feed the streams which flow to
the Lagoon. The lakes are small; the largest of them probably not over
two hundred meters in length. Many of the outlets from these lakes are
underground. There are small ranges of hills from 10 to 20 feet in el-
elevation among these swamps.

CHANGE OF COAST LINE AND DEPTHS.

The entrance to the Lagoon shifts
from year to year. Information
gathered from men stationed in the general locality indicates that sev-
eral years ago the entrance was two or three hundred meters east of
where it is now. At low water in the Bering Sea the level of the out-
let to the Lagoon is perhaps ten feet above the Bering Sea level.

With the ebb tide the sand at the entrance is washed seaward by the current of water from the Lagoon and a rising tide in the Bering Sea carries this sand back. The eastern end of the Lagoon, east of the sand spit at the mouth of the large stream, is slightly deeper than the remainder of the Lagoon. It ranges from one to five feet in depth and is deepest in the approximate middle and southeastern part.

STREAMS The larger stream which enters the Lagoon near hydrographic signal WET is about ten m. wide for a distance of about two miles back. This stream leads back into the mountains. Its depth varies between one and five feet. A branch from this stream leads to a fresh water lake. The stream at the west end of the sheet drains the swamps and small water holes well back from the Lagoon. It is about four meters wide and two to four feet deep for a distance of several miles back. The other streams shown on the sheet are small and drain the swamp land back of them.

CURRENTS Strong currents of from two to four knots were observed in the two channels leading from the entrance. The current is strongest at the entrance where the water flows rapidly to meet the much lower level of the Bering Sea at low water. The ebb current runs for about eight hours and the flood for about four.

SURVEY METHODS (TOPOGRAPHY) A base was measured by hundred foot steel tape between hydrographic signal WEST and hydrographic signal EAST. Signals were located by plane table triangulation. Intersections checked very well. Shore line was rodded in from the stations. Four mountain peaks, which have been located by triangulation, were observed upon from triangulation signal CAN and a three point fix computed.

SURVEY METHODS (HYDROGRAPHY) Hydrographic reconnaissance was accomplished by running single lines of soundings through what were ascertained to be the deepest channels. A graduated rod was used instead of a leadline and fixes were taken only at the beginnings and ends of lines. The soundings placed on the sheet in pencil have been reduced to the lowest tide observed in the Lagoon. This Lagoon is not navigable. Entrance could be made into the Lagoon at high water with a calm sea and no swell, by small launches drawing not over three feet. At times the entrance is congested with sand so that a pulling boat only could be taken through.

Respectfully submitted,
L. C. Wieder
J. H. + G. E.

To the Director

U.S.C. & G.S.

Washington, D.C.

approved. R. P. Lusk
Chief of Party.

PLANE TABLE POSITIONS

Sheet No Swanson's Lagoon

Station	Latitude	D.M.	Longitude	D.R.	Height	Remarks
		651		458		
Big	55 02'	1204	163 40'	608		Signal
Ran	55 02'	749	163 40'	227		"
		1106		839		
ag	55 02'	699	163 39'	1048	3'	"
		1156		18		
Box	55 02'	715	163 39	524		"
		1140		542		
Slat	55 02'	774	163 39'	220	2'	"
		1081		846		
Pin	55 02'	307	163 38'	925		"
		1548		141		
Snag	55 02'	550	163 38'	703		Tree stump
		1305		363		
Hut	55 02'	535	163 38'	491		Signal
		1320		575		
Tie	55 02'	409	163 38'	296		"
		1446		770		
West	55 02'	646	163 37'	869	6'	"
		1209		197		
Mark	55 02'	733	163 37'	766	88'	Hill summit
		1122		300		
Pen	55 02'	631	163 37'	531		Signal
		1224		535		
East	55 02'	854	163 36'	955	8'	"
		1001		111		
Yel	55 02'	923	163 36'	253		Oil drum
		932		813		
At	55 02'	961	163 35'	991	2'	Signal
		894		75		
Sled	55 02'	1198	163 35'	462		"
		657		604		
Mud	55 02'	1118	163 34'	1000		"
		737		66		
Be	55 02'	818	163 34'	1010		"
		1037		56		
Gob	55 02'	735	163 35'	318	2'	"
		1120		748		
Joe	55 02'	203	163 34'	966		"
		1652		100		
His	55 01'	1496	163 34'	940		"
		359		126		
Red	55 01'	923	163 34'	822	75'	Hill top
		932		244		
Toe	55 01'	758	163 34'	1001		Signal
		1097		65		
Gull	55 01'	1147	163 35'	628		Top island
		708		438		
Mis	55 01'	731	163 35'	649	8'	Signal
		1124		417		

All stations marked. All with exception of o mark, o snag and o road with hut stakes.

Station	Latitude	D.M.	Longitude	D.R.	Height	Remarks
Bel	55 01'	804 1051	163 36'	208 858		Signal
Abe	55 01'	1280 575	163 36'	359 707		"
Cop	55 01'	1685 170	163 36'	630 436		"
at	55 02'	122 1733	163 36'	763 303	1'	"
Say	55 02'	135 1720	163 37'	81 985		"
Wood	55 01'	1843 12	163 37'	70 990		Tree stump
Ale	55 01'	1614 241	163 37'	744 322		Signal
Hi	55 01'	1821 34	163 37'	980 86	8'	"
Pod	55 01'	1501 354	163 38'	154 912		"
Lag	55 01'	1543 312	163 38'	538 528	8'	"
Staf	55 01'	1569 286	163 38'	950 116		"
Pil	55 01'	1591 264	163 39'	73 993		"
Out	55 01'	1760 95	163 39'	290 776		"
Tube	55 01'	1850 5	163 39'	690 376		"
San	55 02'	181 1674	163 39'	1028 38		"
Tin	55 02'	272 1583	163 40'	335 731		"
For	55 02'	415 1440	163 40'	551 515	2'	"

Scaled by L.C.W.
Checked by A.J.H.

Copy checked by L.C.W.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 7, 1924.

SECTION OF FIELD RECORDS

Report on Topographic Sheet No. 4028

Swanson's Lagoon, Unimak Island, Alaska

Surveyed in 1923

Chief of Party, R. R. Lukens

Surveyed by L. C. Wilder

Topography inked by L. C. Wilder.

Hydrographic reconnaissance protracted and soundings plotted by
field party.

Verified and inked by H. R. Edmonston.

- ✓ 1. The records conform to the requirements of the General Instructions.
- ✓ 2. The plan and character of the topographic survey fulfill the requirements of the General Instructions. The hydrographic reconnaissance also satisfies the General Instructions.
The plan and extent of the survey satisfies the specific instructions.
- ✓ 3. The field plotting was completed to the extent prescribed in the General Instructions and none of it had to be done over.
- ✓ 4. The outer shoreline should have been completed if time permitted. Owing to the fact that this coast has never been surveyed, it will not be possible to show correctly the widths of the two spits that enclose the lagoon.
- ✓ 5. The field party states that the hydrography is to be considered as reconnaissance only.
6. No further surveying is required within the limits of the sheet.
7. A note in the sounding record states that this survey may be desired by the Bureau of Fisheries.
8. The character of the surveying and field drafting and *good.* ~~excellent.~~
9. Reviewed by E. P. Ellis, March, 1924.

Approved -

J. B.
J. H. H.

February 21, 1924.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
1 volumes of sounding records for

~~HYDROGRAPHIC~~ SHEET 4028
TOPOGRAPHIC

Locality: Swanson's Lagoon, Unimak Island, S. W. Alaska.

Chief of Party: R. R. Inkens in 1923

Plane of reference is mean lower low water reading
0.7 ft. on tide staff at Lagoon

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.



Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 4028

State ~~South West~~ Alaska

General locality ~~Aleutian~~
~~Galapagos~~ Islands.

Locality Unimak Island, Swanson's Lagoon

Chief of party R.R. Lukens

Surveyed by L.C. Wilder

Date of survey May 25 - June 9, 1923.

Scale 1 - 10,000

Heights in feet above High water

Contour interval . 20 . feet.

Inked by L.C. Wilder . . Lettered by . L.C. Wilder

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Plane table Positions

Remarks: 1 vol. soundings submitted to accompany this sheet filed in library.