

4101

C. & G. SURVEY
L. & A.
MAR 18 1925
Acc. No.

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: S.E. Alaska

11-5613

DESCRIPTIVE REPORT.

Topographic Sheet No. (1) 4101

LOCALITY:

Thomas Bay

1924

CHIEF OF PARTY:

F.B.T. Siems

4101

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET NO. 1 OF THOMAS BAY.

This is a re-survey of Thomas Bay made under the Director's instructions of February 21st, 1924. It includes all of the shoreline excepting that in Bock Bight and about 3 miles of shoreline on the north shore of the main part of the Bay. It is considered that the former survey of these areas is sufficiently accurate for their relative importance.

GENERAL DESCRIPTION OF COAST. In approaching Thomas Bay from Frederick Sound, Point Vandeput appears as a long low flat tree covered spit with no hills. Wood Point and the area for several miles S. E. of it is low with rolling tree covered hills. The landslides on the east side of the Bay are very prominent and show above the intervening hills for a considerable distance. The low water line extends out from Point Vandeput and Wood Point for a distance of one half and one quarter miles respectively and is composed of boulders of all sizes up to six or eight feet high. It is believed that these points and the bar at the entrance to the Bay are the terminal moraine of a former glacier. With the exception of the entrance to the Bay and a few miles on each side of the entrance the shoreline is steep and rocky, in many places dropping off vertically to a depth of 5 or 6 fathoms.

OFFSHORE DANGERS. With the exception of the entrance, Thomas Bay is comparatively free from offshore dangers. A shoal 800 meters east of Point Vandeput bares at low water and a rocky reef 1350 meters east of Point Vandeput bares at about half tide. A rocky reef 500 meters N. by E. from Wood Point bares at low water. A number of rocks bare at low water in the entrance to the passage east of Ruth Island. In this same channel, a dangerous rock bares at low water 140 meters N. E. of signal "Bek". Signal "Bek" is an improvised beacon erected by fishermen to be used in clearing this rock. A few inshore rocks bare at various stages of the tide west of Spurt Point and 500 meters north of station "Neck". west?

LANDMARKS FOR CHART. The landslides on the east side of Thomas Bay are very prominent as landmarks. A bold rocky cliff 1632 feet high names "Elephants Head" is prominent in the northern part of the bay. Porter Peak is easily distinguishable but is often obscured by clouds and fog. It is snow covered except in the middle of the summer.

CHANGEABLE AREAS. Baird Glacier lies at the northern end of Thomas Bay. It is formed by two glaciers flowing together at nearly right angles. The smaller of these flows in a southerly direction from peaks to the north. The main part of the glacier flows from the peaks to the eastward. From a comparison with the survey made in 1887 it appears that the face of the glacier has advanced about one half mile. The terminal moraine has advanced correspondingly and sediment washed down by the river has filled in the channel for a distance of about three fourths mile which was previously ten to sixty fathoms deep. The ground above high water is composed of sand, gravel and boulders. Below high water the soil is a fine silt. The silt is unstable but can be walked upon if the person keeps moving. The flats at the south end of the Bay have changed only slightly since the survey in 1887. The channel around the south end of Ruth Island has been narrowed by about 200 yards. The soil below low water is firm but is covered by about two inches of fine mud. Old tree stumps and snags are strewn over the flats. Along the river and above high water the soil is composed of fine and coarse gravel mixed with sand.

SURVEY METHODS. This survey is based upon a system of observed and computed triangulation which was completed ahead of the topography. The signals in the north and south arms of the Bay beyond the triangulation stations "TURN" and "SPRAY" were located by plane table triangulation. A traverse was run from "BOCK" to a point on the shore 400 meters south of signal "Saw" and closed on a point also located by cuts from "Trot", "Bird", and "Flat". This traverse which was 3 statute miles long closed with an error of 15 meters which was adjusted proportionately.

Signal "Staff" marks the position of the automatic tide guage used in connection with the hydrography.

Approved: *H. L. Williams*
C. & G. Survey Comd'g.

PLANE TABLE POSITIONS

Name of Signal	Description	Latitude	D.M.	Longitude	D.P.	Remarks
Run	Whitewash	57 - 00	1696	132 - 51	317	marked and
Tip	"	57 - 01	654	132 - 51	10	described
Bite	signal	56 - 59	1273	132 - 53	310	"
Spurt	whitewash	57 - 01	750	132 - 53	553	"
Fox	"	57 - 01	891	132 - 54	336	"
Wow	"	57 - 01	1557	132 - 54	828	"
Pil	"	57 - 02	620	132 - 55	334	marked and
Doc	"	57 - 02	1029	132 - 55	720	described
Long	"	57 - 02	1589	132 - 57	764	"
Foul	"	57 - 02	1200	132 - 58	968	"
Bowl	"	57 - 03	253	132 - 58	958	"
Meg	"	56 - 59	892	132 - 54	534	"
Be	"	57 - 01	1646	132 - 59	1011	marked and
Pile	standing pile	56 - 59	1599	132 - 51	467	Boulder described
Gab.	S. gable or old saltery	56 - 59	1705	132 - 51	145	
Bol	boulder	56 - 59	1592	132 - 50	977	
Bek	improvised beacon const. by fishermen	56 - 59	1362	132 - 51	658	
Cloth	signal	56 - 59	1225	132 - 51	400	
Goon	"	56 - 59	1045	132 - 50	706	
Fog	"	56 - 59	948	132 - 51	55	
Staff	tide starr 1924	56 - 59	506	132 - 50	302	
Ton	signal	56 - 59	184	132 - 50	669	
Bare	"	56 - 58	1697	132 - 49	841	
Tee	"	56 - 58	1232	132 - 49	551	
Gum	"	56 - 58	1142	132 - 49	930	
Saw	"	56 - 58	642	132 - 49	425	
Trot	"	56 - 58	667	132 - 48	969	marked & des.
Rub	"	56 - 57	1495	132 - 48	867	
Flat	"	56 - 57	1806	132 - 48	422	
Bird	"	56 - 58	531	132 - 48	23	
Poor	whitewash	56 - 58	1101	132 - 47	277	
Gray	"	56 - 58	1528	132 - 48	777	
Off	rock	56 - 58	1618	132 - 48	641	

PLANE TABLE POSITIONS (CONT)

Name of Signal	Description	Latitude	D.M.	Longitude	D.P.	Remarks
Quartz	outcropping quartz rock	56 - 59	373	132 - 47	539	
Wash	whitewash	56 - 59	535	132 - 47	559	
Small	"	56 - 59	816	132 - 47	459	
Boy	"	56 - 59	1331	132 - 47	683	
Hup	"	56 - 59	1204	132 - 47	279	
Rock	"	56 - 59	1476	132 - 46	955	marked by B.M. in 1923.
Pay	"	56 - 59	1780	132 - 47	836	
Bar	"	56 - 59	1803	132 - 47	624	prominent out- cropping of rock.
Fall	"	57 - 00	241	132 - 47	103	
Not	"	56 - 59	1184	132 - 49	754	prominent rock
Dog	"	56 - 59	1106	132 - 49	474	
Cat	"	56 - 59	1786	132 - 49	254	
Try	"	57 - 00	952	132 - 49	596	
Soup	"	57 - 00	926	132 - 47	580	
Duck	"	57 - 01	379	132 - 48	355	
Isle	"	57 - 03	361	132 - 52	20	
Water	waterfall	57 - 01	880	132 - 48	598	

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. (1) 4101
4101

State S.E. Alaska

General locality Frederick Sound ✓

Locality . . . Thomas Bay

Chief of party F.B.T. Siems

Surveyed by H.W. Tyler

Date of survey April and September 1924

Scale . . . 1 : 20,000

Heights in feet above mean sea level

Formline

~~Contour~~ interval 100 feet.

Inked by H.W. T. Lettered by H.W. T.

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: