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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

*Hyd* Sheet No. *3309*

LOCALITY:

*Mt. Andrew Arne*

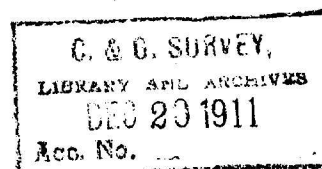
*Kasaan Bay*

*1901*

CHIEF OF PARTY:

*R. B. Herickson*

# 3309



*Hyd. 3309.*

Kasaan Bay,  
Mt. Andrew Mine,  
S.E. Alaska.

J.M.Coleman, Mate.

R.B.Derickson, Asst., Comdg.

Hydrographer.

Chief of Party.

Str. GEDNEY.

October 10, to October 15, 1911.

Scale 1:2000



Descriptive Report to accompany Hydrographic Sheet

Mount Andrew Mine, Kasaan Bay, S. E. Alaska.

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This sheet which is plotted to a scale of 1:2000 shows the hydrography in the vicinity of a wharf belonging to the Mt. Andrew Copper Mine Co. in Kasaan Bay, Alaska. The soundings are shown in feet reduced to M.L.L. Water.

The signals shown on the sheet and used in controlling the positions, were located by rod readings from the Plane-Table and transferred to this sheet direct from the plane-table sheet. The usual method of locating each position on the sounding lines by sextant angles was used, the observers, recorder, and leadsman being together in the sounding boat. Launch No. 117 was used over most of the work except on the in-shore soundings where the skiff was used. The water along the immediate face of the wharf was developed by running sounding lines parallel to the face of the wharf, spaced ten feet apart. The exact distance being spaced off with a marked line held at the wharf and in the sounding boat.

Tidal observations were made on a plane staff at the Kasaan Cannery while the survey was in progress. These observations and the soundings were simultaneous with the tidal records made by the automatic gauge at Ketchikan. By comparative readings the plane of reference at Ketchikan was transferred to the Kasaan Staff for reduced soundings. The comparison being made

on form No.248. The staff at Ketchikan having been connected with the bench marks established there in 1906, the Mean Lower Low Water data established at that time was used.

All the soundings shown on this sheet were reduced from this data.

The records of this work consist of one plane-table sheet, locating the shoreline, wharf, and signals; scale 1:5000, one Vol. Soundings, and one Vol. Tidal observations.

The shoreline in this vicinity is rocky with a shallow beach making out a short distance, a full description being given in the report accompanying the Plane-Table Sheet.

The sounding lines show the bottom to be very irregular inside the ten fathom curve; outward from the ten and fifteen fathom curve the water deepens abruptly to 100 fathoms. The wharf extends out from the N.W. corner of a shallow bight and is used to convey ore to vessels at its face. The approach is 300 ft. long. The inner face of the wharf is about on a line joining the two points forming the bight. The face of the wharf is 102 feet long, running in a N.W. and S.E. direction. On a line extending the face of the wharf and 50 feet from the west corner is a dolphin driven in 24 feet of water. This gives a secure ~~xxxxxx~~ mooring surface of 150 feet. The ore chute is a permanent fixture in the centre of the wharf. The ore is carried from the bunkers to the chute by a tram rail, elevated about 20 feet above the deck of the dock.

Soundings along the face of the dock show a depth of 27 to 30 feet at low water. The water from the face of the dock shoals gradually to the flats which at low water dry out 100 feet from the high water mark.

In developing the approaches to the wharf there were two dangers found. The first is a rounded ledge whose shoalest part inshore is 40 meters approximately S.x E. from the S.E. corner (true) covered with five feet at low water. The second is an extension of this same rock which is approximately 28 ft. S.x W. of it, covered with 8 and 11 ft. at low water. This rock is about 100 feet from the S.E. corner of the wharf, and about on range with the face. No other dangers were found in the vicinity of the wharf.

A small rock with 9 ft on it was located 100 meters S.W. of signal "High". A light drift of the current setting S.E. with the ebb, and N.W. with the flood, was noted along the coast line covered by this survey.

There was no shipping from the wharf while the survey was in progress. This wharf is in a very exposed position being open to the S.E. and any vessel would have difficulty in staying alongside in south-easterly weather, as the sea enters directly from Clarence Straits.

The hydrographic work was executed by a party from the Str. GEDNEY in charge of Mr. Coleman, Mate, assisted by J.A. Smith and W.G. Will, Aids.

Respectfully submitted,  
*L.B. Sericson*  
Asst., Comdg.

# 3309

C. & G. SURVEY
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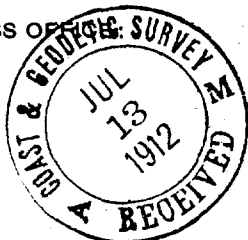
## Statistics sheet No.1

Date 1911.	Letter	Vol.	Pos.	Sdgs.	Miles.	Vessel.
					Statue	
October 12,	a	1	122	376	7	Launch #117 & Skiff.
" 13,	b	1	22	81	1	Skiff.
Total			144	457	8	

POST-OFFICE ADDRESS: U.S.S. GEDNEY, 412 Federal Building, Seattle, Wash.

TELEGRAPH ADDRESS: Ketchikan, Alaska. C. & G. SURVEY,

EXPRESS OFFICE



C. & G. SURVEY,  
LIBRARY AND ARCHIVES  
JUL 19 1912

Department of Commerce and Labor

COAST AND GEODETIC SURVEY

"U.S.S. GEDNEY."

*Insp'r of Hyd'y & Top'y*

ASSISTANT IN CHARGE

Ketchikan, Alaska.

July 5, 1912.

*Superintendent. Inspector of Hyd'y & Top'y.  
Assistant in Charge.*

To the Superintendent,

Coast and Geodetic Survey,

Washington, D. C.

Sir:-

While finishing the triangulation of Kasaan Bay, Alaska, as authorized in your instructions of April 10th, I took the opportunity to verify the position of some doubtful soundings that were made by Mr. Coleman last fall, in the vicinity of the Mt Andrew Wharf. My soundings show that the ledge 28 meters S.E. of the S.E. corner of the dock has 13 feet on the outer shoulder and that the position of the 8 foot ~~xxxx~~ sounding as shown on last year's sheet, is an error. I was there at a minus tide, smooth sea, and bottom at four fathoms plainly visible. I took the soundings with a 16 ft. oar graduated to feet and tenths. The signals established last year were in place and angles were taken with each separate depth recorded. Angles were also taken at the S.W. and S.E. corner of the dock and along the face of the dock at the top of fender piling, using the same signals and recorded in the same volume. The staff established last year was in position; I verified the zero with the established bench marks. The tides were recorded on some loose leaves inserted in the sounding volume.

Very respectfully,

*R. B. Anderson*  
Asst., Comdg.

*(See Hyd. 3309.)*

VEC  
Jan. 31, 1912.

HYDROGRAPHIC SHEET 3309.

Kasaan Bay, Prince of Wales Island, S.E. Alaska,  
by Asst. R. B. Derickson in 1911.

TIDES.

	New Kasaan ft.
Mean lower low water, or plane of reference on staff	6.2
Lowest tide observed " "	4.5
Highest " " " "	25.5
Mean range of tide	14.0

Coast and Geodetic Survey  
JAN 31 1912  
TIDAL DIVISION



VEC  
July 26, 1912.

HYDROGRAPHIC Sheet 3309 bis.

Kasaan Bay, Alaska, by Asst. R. B. Derickson  
in 1912.

TIDES.

	New Kasaan ft.
Mean lower low water, or plane of reference on staff	6.7
Lowest tide observed " "	3.0
Highest tide observed " "	25.5
Mean range of tide	13.6

**Coast and Geodetic Survey**  
**JUL 20 1912**  
**TIDAL DIVISION**

Hyd Sheet No 3309.

Feb. 1, 1912.

The area within the limits of this work  
is well covered.

The records were well kept with the exception  
that the time was not recorded for each sounding.  
Soundings between positions cannot be spaced  
correctly unless the time is given.

H. L. Simeon