

3704

Diag. Cht. No. 8551-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey ..... HYDROGRAPHIC

Field No. .... Office No. H-3704

LOCALITY

State ..... ALASKA

General locality PRINCE WILLIAM SOUND

Locality ..... LANDLOCK BAY

19/14

CHIEF OF PARTY

G. T. Rude

LIBRARY & ARCHIVES

DATE ..... FEBRUARY 12, 1915

3704

DESCRIPTIVE REPORT.

to accompany

Hydrographic Sheet Number 3704.

Scale 1 - 20,000

Landlock Bay, Prince William Sound,  
Alaska.

Steamer TAKU, Season 1914.

Gilbert T. Rude, Chief of Party, and  
Hydrographer.

Forwarded through the  
Inspector, O. & C. Survey,  
204 Burke Bldg., Seattle, Wash.  
FOR HIS INFORMATION.

Respectfully forwarded,

*[Signature]*  
Inspector

Memoranda for Title, Hydrographic Sheet No

3704

Landlock Bay, Prince William Sound, Alaska.

Steamer Taku, Gilbert T. Rude, Commanding.

September 2nd to September 19th, 1914.

Boats used : Steamer TAKU and Whaleboat.

Gilbert T. Rude, Asst., Hydrographer.

Scale 1 : 20,000.

Positions plotted by M. E. Levy, Aid.

DESCRIPTIVE REPORT

to Accompany

Hydrographic Sheet NO \_\_\_\_\_

Landlock Bay, Alaska,

Prince William Sound.

Steamer Taku, Season 1914, Gilbert T. Rude, Com'd'g.

Scale 1 : 20,000

Class of Work:

This work is a resurvey of the bay, but the same work was done as on an original survey. It was considered that the previous survey was more in the nature of a reconnaissance.

General Description of the Bay:

This bay is surrounded by high hills and the inner bay, as the name implies, is completely landlocked.

Copper Mountain, on the north side of the bay, is a prominent mark. This peak is 3900 feet in elevation, its lower elevations to 1500 feet wooded and its summit a light colored rock. The other peaks surrounding the bay are less prominent, merging into each other. They average about 2000 feet in elevation and are wooded to the 1500 foot contour. The summits are composed of a dark colored or moss covered rock.

The bay is easily entered during daylight, but the shadows cast by these hills during the night time almost totally obscure the narrow entrance, rendering it difficult to vessels not equipped with search light.

Bidarka Point, a continuation of the ridge projecting to the southward from Copper Mountain, is heavily wooded and 760 feet in elevation at its highest point.

#### Limits of Hydrography

This work was done on a scale of one to twenty thousand and covers the area included between a line from Bidarka Point to Fidalgo Point, the west point at the entrance to Fidalgo Bay, and all the shores bordering on Landlock Bay.

#### Character of Bottom and Anchorage

The bottom generally is sticky mud to rocky close inshore, and good anchorage may be had in fifteen fathoms, with about 350 yards swinging room, in the broadening of the inner bay about half way from the Narrows to its head.

It is reported that this bay is subject to severe williwaws in the late Fall and during the winter months. During the time this survey was in progress the only heavy weather experienced was a northerly wind which swept down over the hills surrounding the bay on the north. This wind blew in severe gusts and was very cold. It is not a prevailing summer wind.

#### Tidal Station:

An automatic tide gauge with a plumb staff in connection was installed on W. A. Dicky's dock near the head of the bay and a continuous tidal curve obtained from August 11th to September 25th. All soundings on this work are referred to the datum plane, mean lower low water, obtained at this station.

Control:

This work is controlled by the main scheme of triangulation carried clear to the head of Landlock Bay from the line Pine-Fido on the south side of Fidalgo Bay, together with intersection stations Per and Dick, and plane table stations located when the topographic work was in progress this season.

Inshore dangers and Shoals:

The main bay from Bôdarka Point to the head of the narrow arm is clear except for the shoal in midchannel at the entrance to the Narrows on which the Light House Service maintain a buoy. This shoal was closely developed with handlead in a whaleboat and the whole area felt over with the handlead in a dinghy. A least depth of twelve feet was found by this method.

Just inside the Narrows in the hollow on the north side of the bay a shoal was found with a least depth of 7 fathoms. This was developed and felt over with the handlead in a small boat.

The head of the bay back of the small islands is very shoal, mostly bare at extreme low water. This area was covered with whaleboat work.

The shores from the Narrows to Point Fidalgo is very foul, with offlying rocks, reefs and small islands. This area was covered with whaleboat work, and all rocks and reefs which it was possible to find by this method were located, but no wire drag work was done as none of it is in a fairway and it was considered that it was not sufficiently

important to warrant that expense.

The main bay varies in depth from fifty to ten fathoms, fifty fathoms in the outer bay to ten fathoms off Dick's Dock in the inner bay, gradually shoaling from the fifty to the ten.

Description of Shore:

The shore varies from cobblestone and sand beaches to rocky and bold.

Around Bidarka Point and along the shore almost to Burke and Steel's Dock on the north side of the Narrows, the shoreline is composed of cobble stones and large rocks; on the point at Burke and Steel's the beach is sandy. The shoreline of the inner bay is rocky and generally steep. In the outer bay in the first large bight south of the Narrows the shoreline is rocky and steep; in the smaller bights nearer Fidalgo Point the shoreline is rocky with beaches of fine rocks near the head of the bights.

Currents:-

The currents of the bay are tidal only and are not strong at any time.

Watering Place:

Water may be taken with comparative ease in small boats from the falls in the small bight just west of the abandoned copper property on the south side of the inner bay. On a rising tide the TAKU was taken right up to the falls and the water taken directly into her tanks through a canvas hose connected with a canvas bag lashed in the falls at about a thirty foot elevation. This is clear, sweet water from a lake back in the mountains.

Aids to Navigation:

The only aid to navigation is the midchannel buoy on the shoal in the Narrows.

Ports:

This bay at present has very little commercial importance. There are two abandoned copper properties in the inner bay, one at the head of the bay on the south side and the other at Burke and Steel's old dock on the north side at the entrance.

A small dock is located at Signal "Dock" on the south side of the inner bay about half way from the Narrows to the head of the bay. A copper property on which only assesment work has been done is located at this place.

The dock on the north side of the inner bay near its head is maintained by the Three Man Mine. This is a copper property from which some ore has been shipped; but work has been done mainly for development purposes and for assesment.

There are no facilities for coaling, watering, or obtaining supplies at this dock.

Names:

The following are well established names: Bidarke Point, Landlock Bay and Copper Mountain; the following are local names: Red Snapper Island, and the following names were supplied by the chief of party: Point Fidalgo, and Lion Head.

Respectfully submitted,

*Gilbert J. Wade.*

Assistant, U. & G. Survey,



Statistics for Hydrographic Sheet No \_\_\_\_\_

Landlock Bay, Prince William Sound, Alaska.

Steamer TAKU, Season 1914.

Date	Letter	Vol.	Positions	Soundings	Miles, Stat.	Vessel.
Sept. 2	a	1	13	13	1.8	TAKU
Sept. 12	b	1	145	270	19.5	TAKU
Sept. 14	c	1	165	150	22.0	TAKU
Sept. 18	d	1	111	149	18.6	TAKU
Sept. 18	d	2	59	74	6.2	TAKU
Sept. 19	e	2	68	126	6.4	TAKU
Sept. 10	a	1	101	347	8.2	Whaleboat
Sept. 15	b	1	95	310	7.0	Whaleboat
Sept. 16	c	1	127	484	11.5	Whaleboat
Sept. 17	d	2	85	301	7.7	Whaleboat
Sept. 19	e	2	3	3	0.0	Whaleboat
Sept. 23	f	2	4	4	0.0	Whaleboat.
Total			974	2231	108.9.	

VEC  
Mar. 10, 1915  
L. P. A.

HYDROGRAPHIC SHEET 3704.

Landlock Bay, Prince William Sound, Alaska, by  
Assistant G. T. Rude in 1914.

TIDES.

	Landlock Bay ft.
Mean lower low water, or plane of reference on staff	8.1
Lowest tide observed " "	5.7
Highest " " " "	22.4
Mean range of tide	9.6

Hyd Sheet No 3704

Within the limits of the work, the ground has been well covered and shoal indications carefully developed.

On the shoal at the entrance to the bay, which is marked by a buoy, the twelve foot sounding, shown on this sheet is probably the shoalest water. The difference between this and the one and one quarter fathom sounding on Hyd 2663<sup>a</sup>, by Asst. Hodgekins in 1905, being due to different allowances made for tide. The tidal observations made by Asst Rude were so much more exhaustive, that they must be accepted.

This shoal is shown on a larger scale by a sub-sketch.

R.L. Johnston

Soundings plotted in feet.

Protracted & plotted by field party  
Verified & inked by R.L.J.