2663 & 2663b

2663 bis.

2663 & 2663b bis.

Diag. Cht. No. 8551-1

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. Office No. H-2663

LOCALITY

State ALASKA

General locality PRINCE WILLIAM SOUND

Locality FIDALGO ARM FROM LANDLOCKED BAY TO FISH BAY

19~~4~~03

CHIEF OF PARTY

H. P. Ritter

LIBRARY & ARCHIVES

DATE MARCH 4, 1904

B-1870-1 (1)

2663

83
SHA
2663
1903

Treasury Department,
U. S. COAST AND GEODETIC SURVEY.

O. H. Tittmann
Superintendent.

State: Alaska.

U. S. C. & G. SURVEY.
LIBRARY AND ARCHIVES
MAR 4 - 1904
Acc. No. 2663

DESCRIPTIVE REPORT

Hydrographic Sheet No. 2663

LOCALITY:

Prince William Sound—
Eldalgo Arm, Landlocked
Bay & Fish Bay

1903

CHIEF OF PARTY:

H. P. Ritter.

2663

~~Form 35. Field Letter.~~

~~Post-Office Address:~~

~~Telegraph Address:~~

~~Express Office:~~

COAST AND GEODETIC SURVEY
Department of Commerce and Labor

11—644

MAR 4 9 33 A 1904

COAST AND GEODETIC SURVEY

U. S. C. & G. SURVEY
LIBRARY AND ARCHIVES
MAR 4 - 1904
Acc. No.

FILE:
REFERRED:
ASSISTANT IN CHARGE
Library and Archives.

Washington, D.C.
March 3, 1904.

Descriptive Report
to accompany
Hydrographic Sheet
No. 2663.

Homer P. Ritter
Asst. C. & G. Survey.

Title: Department of Commerce and Labor
Coast and Geodetic Survey
O.H. Tittmann, Superintendent
Prince William Sound
Alaska

Fidalgo Arm, Landlocked Bay to Fish Bay.
Surveyed by Homer P. Ritter, Asst. Chief of Party.
June 18 to Sept. 9. - 1903.
Scale $\frac{1}{20000}$

Notes:

Soundings are expressed in feet to the 18 ft. curve, beyond in fathoms, and show the depth at the mean of the Lower Low Waters.

The 6 foot curve is shown thus							———	(green)
" 12	"	"	"	"	"		———	(carmine)
" 18	"	"	"	"	"		———	(blue)
" 10	fathm.	"	"	"	"		———	(scarlet)
" 20	"	"	"	"	"		———	(yellow)
" 50	"	"	"	"	"		———	(purple)
" 100	"	"	"	"	"		———	(carmine)

Tides ... Snug Corner Cove ...

Mean high water on tide staff	14.85 feet
" low " " " "	5.13 "
" lower low " " " "	3.72 "
Lowest tide observed " " "	1.10 "
Highest " " " "	18.80 "
Mean rise and fall of tides	9.72 "

Register No. 2663.

Statistics.

Totals: 1049 angles - 3717 Soundings - 870 miles - Sq. miles

Date 1903.	Letter	Volume	Vessel
June 18	g	2	Steam launch 28
" 19	h	2	"
" 20	o	3	"
" 30	p	3	"
July 20	v	4	"
" 25	a'	5	"
" 30	c'	5	"
" 31	d'	5	"
Aug. 28	h'	6	"
" 31	i'	6	"
Sept. 1	k'	6	"
" 2	l'	6	"
" 3	m'	6	"
" 5	o'	7	"
" 9	p'	7	"

Positions plotted by Homer O. Ritter.
Soundings " " H. L. Simons.

The hydrography shown on Hydrographic Sheet No. 2663 embraces that part of Fidalgo Arm which extends to the eastward, from the southeastern end of Landlocked Bay, to and including Fish Bay;

It also takes in Landlocked and Bowie Bays, both of which are tributary to the Arm.

Hydrographic Sheet No. 2658 joins the sheet on the west.

Fidalgo Arm:

This Arm was named by Vancouver in 1794, after Lieutenant Fidalgo, as Spanish explorer who visited Prince William Sound in 1790.

The part of Fidalgo Arm shown on the sheet is about 5 nautical miles long and approximates a little over 2 miles in width. The deepest water (a little over 100 fathoms) is found midway between the two shores.

The land contiguous to both sides of the Arm is mountainous with steep slopes and densely wooded.

In a number of places, notably on the south side, the foot of the mountain slope is some distance back from shore; the intervening space consisting of comparatively low tundra meaddows.

Where the mountain slopes come close to the water the shore in general is rocky with a rocky beach;

In front of the low land the shore is low with gravel, shingle and boulder strewn beaches.

In a number of places, which are shown on the sheet, rocky reefs are found a short distance from shore.

With the exception of a few lumber camps along the shore and some mining development work at head of Sandlover Bay and an indian fishing village, or summer camp, at the head of Fish Bay, no industries are at present carried on in this vicinity.

Landlocked Bay:

Just east of Copper Mt. Pt. and emtying into Fidalgo Arm is a bay, known as Landlocked Bay, which extends inland for about 4 nautical miles. For the first 2 miles the bay extends in a northerly direction and varies from 1/4 to 1 1/2 miles in width; then it narrows up to 1/4 of a mile, makes a turn to the eastward and keeps that direction to the end, varying in width from 1/4 to 1/2 a mile.

The southern slope of Copper mountain which is very bold and precipitous, forms the northern shore of the bay.

The eastern side of one of the spurs of the mountain which extends and decends to the southward and terminates in Copper Mt. Pt., bounds the western side of the bay. The land contiguous to the eastern side of the bay is also mountainous, rising from comparatively low ground near Fidalgo Arm to steep mountain sides at the upper end of the bay.

The extreme eastern end of the bay ends in mud flats, and a narrow valley extending into the mountains out of which comes a large and torrential creek of ice cold water.

The usual spruce trees and alder bushes are found along the shore and part way up the mountain slopes; but near the upper end of the bay the timber does not go up so high and the upper elevations of the slopes are mostly bare; often perpendicular, worn smooth and even polished.

Near the head of the bay considerable development work is being done in prospecting for ores containing copper and gold. Several buildings have been erected, also a small wharf to which a number of good sized steamers have come to take on board ore for shipment to Tacoma (State of Washington) smelters to test the ore on a large scale. A prospecting tunnel was under way when the

party on Mt. Taku was surveying in this vicinity in 1901.

Additional mining reconnaissance work was carried on here during the summers of 1902 and 1903.

In the bay the deep water is found in the middle and extends well towards the western and northern shore of the bay.

The eastern side of the bay contains numerous small islands, exposed rocks and submerged rocks and rocky reefs along the shore and considerable distances out into the bay. The beach along the western and part of the northern shore, extending from Copper Mt. Pt. for nearly 3 miles up the bay, is from 50 to 100 yards wide at low water and is strewn with boulders varying from a foot to several yards in diameter; this material forms the bottom of the bay close to shore.

In the eastern end of the bay both shores are rocky with numerous exposed and submerged rocks close to shore.

Fish Bay:

On the northern side of Fidalgo Arm, and about 5 miles east of Landlocked Bay, is a bay which indents the land in a northeasterly direction.

This bay is locally known as Fish Bay. The native indians call it by a name which sounds like "Nuneviyah" which they say means Fish Bay.

The length of the bay from its mouth to the head is a little over 2 miles.

At its mouth the bay is about a mile wide; 1/2 a mile inland it narrows up to 1/2 a mile in width and from here to the head has a width varying from 2/3 to less than 1/2 a mile.

Fish Bay is flanked on both sides by high mountains forming a valley which extends several miles beyond the head of the bay.

A large and swift flowing stream having its origin in the high mountains

at the head of the valley, empties into Fish Bay at the upper end.

The debris brought down by this stream has formed an extensive mud and gravel flat which here fills the bay from side to side and extends out into the bay some distance.

The mountain slopes on both sides of the bay are heavily wooded with hemlock, spruce and alder, from the waters edge up to an elevation of about 2000 feet.

At the head of the bay the mountain slopes are very steep ~~and~~ rugged and bare; one of the peakes rising to an elevation of 5886. feet.

Numerous mountain streams, often consisting of a succession of waterfalls empty into the bay on all sides.

Both shores of the bay in general are rocky; the beach consisting of fragments of varying from a few

inches to several yards in diameter and covered below the mean high water line with kelp of the short leaved variety. Here and there a shingle beach is found.

Wherever a stream enters the bay a delta composed of rocky debris, brought down from the mountain, is found close to shore; the size and fall of the stream determining the extent of the rock pile.

A number of small and shallow coves indent the shores of the bay.

At the head of the bay are found a number of Indian huts or shacks, which are occupied by the natives during the fishing season.

Close to the point forming the western side of the entrance to the bay are two small islands, surrounded by rocks and connected with the point by a neck of rocks, boulders and gravel, bare at low water. In the bay about one half a mile northeast of the point is a small rocky wooded island.

The point of land forming the eastern entrance to the bay has a number of outlying rocks.

Bowie Bay:

This bay indents the southern side of Fidalgo Arm just east of Snug Corner Cove; a mountainous neck of land about 1½ miles wide separating the two bays.

At its mouth the bay is about 1½ miles wide and extends inland in a southeasterly direction for 1¼ miles, when it separates into two arms, the western one taking a southerly direction while the other one at first extends to the eastward and then gradually swings around to the southwestward and near the end again seperates into two short and narrow forks.

From the mouth to the head of

the western arm is about two miles, while to the extreme end of the other arm is about 3 miles.

At the head of the western arm of the bay is a narrow and comparatively low valley which extends in a southerly direction across to that part of Prince William Sound just west of the mouth of Gravina Bay.

Another and somewhat similar valley starts from the head of the southeastern end of the eastern arm of the bay and extends across to the low land in the vicinity of the mouth of Gravina Bay.

The land contiguous to the shores of Bowie Bay and the sides of the above mentioned valleys is steep and in many places precipitous and in general densely wooded.

Spruce and hemlock timber predominates

Close to the shore and in places where landslides or snow avalanches have stripped off the coniferous trees, alders are found growing in

dense profusion.

Areas of tundra meaddows or bogs are found along the lower levels of the valleys and in a number of places in the vicinity of the shore and occasionally on the sides of the mountain.

The tops of the mountains surrounding the bay vary from 1000 to nearly 2000 feet in hight.

The shore of the bay in general is rocky; here and there is a shingle beach, but generally strewn with boulders.

A number of small streams coming down the mountain sides, enter the bay and its arms.

By an inspection of the sheet it will be seen that areas of suitable depths and bottom for anchoring are found in the bay.

Southern shore of Fidalgo Arm east of Bowie Bay:

About 5 miles of this shore is shown on the sheet.

From Bowie Bay the general direction of the shore is to the eastward.

Several coves, a small peninsula, and a rocky reef not far from shore, are found in the western end of this stretch.

About 3 miles east of Bowie Bay there is a narrow bay extending inland in a southerly direction for about 1½ miles.

This bay is less than ½ a mile wide at the mouth, gradually narrows up towards the head and was found to terminate in a stream less than 50 yards wide, the source of which was not investigated during the survey.

The land contiguous to the shore in this stretch of 5 miles is mountainous, rising from 1500 to 1700 feet.

The mountain slopes are densely wooded.

About ½ a mile east of Bowie Bay, and extending several miles to the eastward, the foot of the steep slope of the mountain is some distance back from shore. Between here and the shore the land is comparatively flat and low and is covered with tundra.

As in the case of most of the shores in this section, wherever the slopes of the mountain come close to the water, the shore in general is rocky with a rocky beach, while in front of the low lands the shores are low with shingle or gravel and boulder strewn beaches.

Homer O. Ritter
Asst. C. & G. Survey.

83
S HA
2663
Bis
1905

2663 Bis

Treasury Department,
U. S. COAST AND GEODETIC SURVEY.

O. H. Tittmann
Superintendent.

State: Alaska

U. S. C. & G. SURVEY,
LIBRARY AND ARCHIVES,
AUG 4 - 1905
Acc. No. 2663 bis

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 2663 bis

LOCALITY:

Prince Wm. Sd.
Landlocked Bay
Examination
of Portland Rock

1905

CHIEF OF PARTY:

"W. C. Hodgkins, Comdg."

2663

C O P Y - - TO BE FILED AS A DESCRIPTIVE REPORT TO ACCOMPANY HYDC. SHEET 2663 BIS

EPS

Department of Commerce and Labor
COAST AND GEODETIC SURVEY
Washington

U. S. C. & G. SURVEY,
LIBRARY AND ARCHIVES,
AUG 4 - 1905
Acc. No.

Str. Patterson,

July 8, 1905.

Mr. O. H. Tittmann,

Superintendent, Coast & Geodetic Survey,

Washington, D. C.

Sir:

I have the honor to submit the following report upon an examination of an isolated rock situated nearly in mid-channel in the entrance to Landlocked Bay, upon which the steamer Portland recently struck.

2. Captain Denson, commanding the McArthur, having showed me the instructions received by him to examine this locality and it having become necessary for me to occupy the trigonometric station "Goose", which is in the immediate vicinity of Landlocked Bay, it seemed to me advisable to do both pieces of work at the same time.

3. A preliminary examination, with a sweep, was therefore made on June 27 and on June 30 a hydrographic development of the rock and its vicinity was made by Mr. Rhodes, aided by Messrs. Maupin and Giacomini.

4. The development, which is shown on the scale of 1:10000 on the original sheet forwarded by same mail, proved the existence of the rock in nearly the position indicated on the sketch furnished by the Office. The least depth found was 1 1/4 fathom at mean lower low water at Snug Corner Cove tidal station.

5. It will be noticed that while this rock is isolated so far as probable danger to passing craft is concerned, it is really connected with the southern shore of the passage by a ledge, or rocky bar, upon which several rather shoal

soundings were obtained. Vessels using this passage should therefore keep well to the northward and westward of mid-channel.

6. Besides the reported danger, another rock, having upon it only 1 1/4 fathom at mean lower low water, was discovered immediately in front of the copper mine wharf, as indicated on the sheet.

7. It is suggested that it might be proper to embody the results of this investigation in the next notice to mariners.

Very respectfully,

(Signed) W. C. Hodgkins

Commanding.

Sheet 2663 Tidalgo arm. Pr Wm. Sound.

(1) The position of signal L 6. as located by Mr. Simons is practically correct according to the angles given to locate it. but as the Topographical sheet does not locate a rock or anything else at that poo. that could be used as a signal, it is doubtless out of position in relation to the shore line, and should be ~~on~~ either on that point of the island or on the rock at the end of the island. The signals 7. 9. & 11. L. do not agree with the same signals located by Mr. Hodgkins in 1905.

(2) The rock noted by Mr Simons is probably the inner one of the group of three S.W. from L 6. and was placed out of position in enlarging from the Topl. sheet. An enlargement and transfer from the Topl. sheet places all the rock and small islands in vicinity of L 6. as shown.

Other criticisms by Mr Simons are correct.

January 8. 1907 F. C. Dorn.

Sheets 2663 & 2663bis Landlocked Bay
Prince William Sound Alaska.

The work on the bis sheet seems to be alright and the development of the shoal is good.

The shoreline differs very much from the shoreline on 2663. The wharf shown on Ritter's sheet and determined as a signal on Hodgkins sheet seems to be the same and only common point. While the signals L 5. L 7. L 9. & L 11. have the same letter & numbers on both sheets, they do not agree in position and distance from the wharf or each other. The shoal sounding of 2 fathoms on Ritter's sheet and the shoalest sounding, 1½ fathom, on Hodgkins sheet agree in distance from the wharf. If the direction is right then the meridian arrow on Hodgkins sheet does not stand for the true meridian.

An attempt was made to combine the two surveys in a sub-sketch 1-10-000. but the difference in shoreline and location of signals made it impossible.

Ritter has records for locating his signals, but Hodgkins has none.

Shts 2663 & 2663 bis

Hodgkins, according to his descriptive report, ~~stat~~ work at Goose △, but does not say how he reached or determined the location of signals on the working ground.

Nov. 17th 1906.

F. C. Drum

83
SHA
1911
R

2663b

C. & G. SURVEY
LIBRARY AND ARCHIVES
JAN 10 1912
Acc. No.

Department of Commerce and Labor

COAST AND GEODETIC SURVEY

Superintendent.

State: Alaska

DESCRIPTIVE REPORT.

Hydr Sheet No. 2663b

LOCALITY:

Prince William Sound

Landlocked Bay

Alaska

1901

CHIEF OF PARTY:

G. F. Rude

2663

Surveys

Hyd. 2663b.

DESCRIPTIVE REPORT TO ACCOMPANY ~~TOPOGRAPHIC SHEET "D"~~

LANDLOCK BAY, ALASKA.

SEASON 1911.

GILBERT T. RUDE, CHIEF OF PARTY C. D. CLARK, TOPOGRAPHER.

On this sheet are located two wharves and several houses comprising three settlements in Landlock Bay.

At the head of the bay, on the north west side, is a copper mine, two dwelling houses, several outbuildings and a wharf.

On the opposite side of the bay is an abandoned copper mine, a power house, a shop, and a living house.

At the southern base of Copper Mountain there are two living houses, an office building, some houses used for storage purposes, and a wharf. These buildings are used in connection with a copper mine located farther up the mountain.

SURVEY METHODS

The survey was made entirely with the Plane Table. The table was set up on a point marked Position 1 (See accompanying sketch cut from Chart 8519) and a tangent to to the point opposite Copper Mountain was drawn on the sheet. With this orientation the wharf and the houses in the head of the bay wsee located.

The table was then set up on a covering and uncovering rock lying about 6 meters N. of the most northern of the several small islands extending out from the point opposite Copper Mountain, marked Position 2, and a tangent to Copper Mountain Point was drawn on the sheet(See accompanying sketch). With

this orientation the wharf and the houses at the base of Copper Mountain were located.

Approved:

Gilbert J. Rude.

Asst. C. & G. Survey,

Chief of Party.

C. D. Clark

Aid, C. & G. Survey.

2663b

DESCRIPTIVE REPORT TO ACCOMPANY ~~TOPOGRAPHIC SHEET "D"~~

LANDLOCK BAY, ALASKA.

SEASON 1911.

C. & G. SURVEY
LIBRARY AND ARCHIVES
JAN 10 1912
Acc. No.

GILBERT T. RUDE, CHIEF OF PARTY C. D. CLARK, TOPOGRAPHER.

On this sheet are located two wharves and several houses comprising three settlements in Landlock Bay.

At the head of the bay, on the north west side, is a copper mine, two dwelling houses, several outbuildings and a wharf.

On the opposite side of the bay is an abandoned copper mine, a power house, a shop, and a living house.

At the southern base of Copper Mountain there are two living houses, an office building, some houses used for storage purposes, and a wharf. These buildings are used in connection with a copper mine located farther up the mountain.

SURVEY METHODS

The survey was made entirely with the Plane Table. The table was set up on a point marked Position 1 (See accompanying sketch cut from Chart 8519) and a tangent to to the point opposite Copper Mountain was drawn on the sheet. With this orientation the wharf and the houses in the head of the bay were located.

The table was then set up on a covering and uncovering rock lying about 6 meters N. of the most northern of the several small islands extending out from the point opposite Copper Mountain, marked Position 2, and a tangent to Cppper Mountain Point was drawn on the sheet(See accompanying sketch). With

this orientation the wharf and the houses at the base of Copper Mountain were located.

Approved:

Gilbert T. Rude.
Asst. C. & G. Survey,
Chief of Party.

C. S. Clark
Aid, C. & G. Survey.

ADDRESS ALL COMMUNICATIONS TO
"SUPERINTENDENT, COAST AND GEODETIC SURVEY,
WASHINGTON, D. C."

2663 b

Department of Commerce and Labor
COAST AND GEODETIC SURVEY
Washington

C. & G. SURVEY
LIBRARY AND ARCHIVES
JAN 13 1912
Acc. No.

DESCRIPTIVE REPORT

to accompany

Hydrographic Sheet ~~F~~, 2663 b.

Head of Landlocked Bay, Prince William Sound,

Alaska.

Steamer Taku, Season 1911.

Gilbert T. Rude, Assistant, Chief of Party.

The hydrography on this sheet is supplemental to Hydrographic SheetNo. 2663, and as there was very little of the work it was plotted by the field party on Topographic Sheet "D".

Five lines of soundings were run off Dicky's Wharf at the head of the Bay and three soundings were taken at the head of the dock, one at each end and one in the center and 15' distant from the outer edge of the dock. The least water at the head of the dock is 32 feet at mean lower low water.

No tide staff was erected for this work and the reduction of the soundings was made from a predicted tide by the Tidal Division.

The signals for this work were located by Plane Table on Topographic Sheet "D". The method of survey is explained on Descriptive Report of that sheet.

Very respectfully,

Gilbert T. Rude.

Chief of Party.

MDH
Feb.9,1912.

HYDROGRAPHIC SHEET #2663-b

Landlocked Bay, Prince William Sound,

Alaska, by Asst. G. T. Rude in 1911.

TIDES.

Predicted tides were used for reduction of soundings.

	ft.
Mean lower low water or plane of reference below mean sea level,	6.3
Mean rise and fall of tides,	9.6

Coast and Geodetic Survey
FEB 9 1912
TIDAL DIVISION.