

# 2049

Diag. Cht. Nos. 6300-1 & 6380-1

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey *Hydrographic*  
Field No. .... Office No. *2049*

### LOCALITY

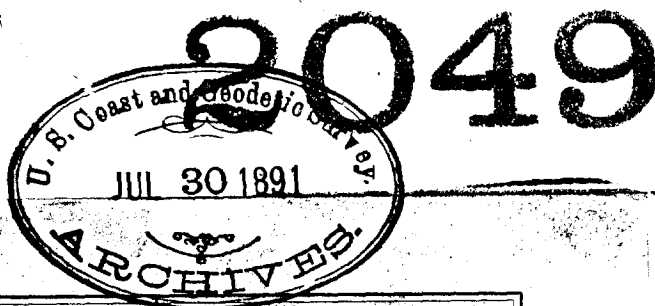
State *Washington*  
General locality *Boundary*  
Locality *And Gulf of*  
*Georgia*  
*1890*  
*194*

CHIEF OF PARTY

*J. N. Jordan*

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DATE .....



U. S. COAST AND GEODETIC SURVEY.

*T. C. Mendenhall*, Superintendent.

State: *Wash.*

DESCRIPTIVE REPORT.

*Hydrographic* Sheet No. *2049.*

LOCALITY:

*Boundary Bay*  
*and*  
*Gulf of Georgia.*

*1890*

CHIEF OF PARTY:

*Lieut. J. N. Jordan, U.S.N.*

2049

JUL 29. 1891. 014845

Give here full address to which reply should be sent: Olympia, Thurston Co., Wash.

U. S. Coast and Geodetic Survey,

Sch. Earnest

February 12, 1891.

Dr. J. C. Mendenhall

Superintendent C. &amp; G. Survey

Washington, D. C.

Sir;

In obedience to your circular of July 3, 1890,  
I have the honor to submit the following report of

1

Boundary Bay and Gulf of Georgia.

2

This survey included the extensive mud-flats of Boundary Bay between Kwo-mais Point and Point Roberts, (almost all of which is included in English territory,) the shore line around Point Roberts as far as the boundary line between the United States and British Columbia on the west side, the reef and shoal off the S.E. end of Point Roberts, and that part of the Gulf of Georgia included in a rectangle bounded by Kwo-mais and Birch Points and two points in the Gulf about four (4)

miles to the W<sup>st</sup> of Pt. Roberts.

Shore is in reality no harbor on this shore. Vessels may anchor on the East side of Point Roberts when the wind is W. or N.W., and find a lee just under the mast S.W<sup>th</sup> point during southerly blows, but there is no place sheltered from all winds and seas.

The Kicomeik River empties into the East side of Boundary Bay, in a bight known locally as Mud Bay, but the depth of water and its little importance for purposes of navigation did not, in my opinion, compensate for the large amount of extra work that would have been necessary to carry the Survey into this bight and up the River.

The shore of Point Roberts at the Boundary line on the west side rises in a steep bluff with a sand and mud flat in front. The flat here extends out nearly a mile and gradually falls off to the S<sup>th</sup>, till within a mile of the S.W. point the flat comes in to the shore, and from here to the point there is a shelving beach of gravel and scattered stones.

On the flat mentioned are many large boulders nearly all covered at high water. The bluff recedes from the beach about half a mile north of O Polo and continues along inland at a more gradual slope, coming out to the shore again just to the E<sup>th</sup> of O Barn. The S.W. point is low, of a gravel and shell formation, with a bare end, and birch and willow trees farther inland. At the extreme end of this point the beach falls off very abruptly under water, but along the south shore becomes more and more shelving, until at the point where the bluff again comes to the beach it becomes a flat. From here around the S.E. point are many large scattered boulders. The bluff along the S.E. side is very high and can be seen as far down as the Malia Ids. It is continually crumbling away, and at times large land slides occur. One was witnessed whilst working around this point in which a tree was carried over the bank with other large trees and tons of dirt. The S<sup>thly</sup> blows wash away this dirt at the foot and then

process of crumbling and land slides go on. A shoal makes out in front of this bluff in the direction of Birch Bay and on the N.E. side of this shoal is a reef of rocks. A small sand and gravel spit makes out when this reef comes in toward the shore. The bluff cuts across this spit about a quarter ( $\frac{1}{4}$ ) of a mile back, coming to the shore line again to the N.E. About a half a mile south of the Boundary line on the E. side of Point Roberts the bluff gradually decreases in height and becomes more sloping and farther north becomes flat and sandy or marshy. All of the high land and the lower land extending north on Point Roberts is covered with large firs and other ever-greens. All of the northern shore of Boundary Bay is low, much of it between the Bay and the Fraser River has been dyked and many farm houses with very large barns can be seen. On this flat land are several bunches of firs that can be seen at a distance when the low land is invisible and look like so many islands.

(5)  
1  
Back of this low land can be seen the high peaks of the Selkirk Mts. The city of Westminster, B.C., can be seen from near Point Roberts. The flats begin as soon as the gravel spit on the S.E. end of Pt. Roberts is passed and gradually extend out from the shore around the Bay. The beach is so very flat that an ordinary whale-boat will ground half a mile from the shore along the north side at high water. These flats are traversed by sloughs, and a very deep one runs up in the direction of the mouth of the Koomish River where this latter slough passes the point at the south entrance of Mud Bay is the only place from Pt. Roberts round to Kwo-mais Pt. where a boat can land at all stages of the tide without going a long distance from high water mark. This point is low and either bare or covered with low rose and thorn bushes. About half a mile south of this point the bluff comes out to the shore again and extends around Kwo-mais Pt. into Sumi-ah-moo Bay. An extensive flat

(6)  
makes out from the west side of this bluff, and around the S.W. end of Kwomais Pt. there are large scattered boulders under water and a shelving beach. The N.W. side of Birch Pt., included on this sheet, is very similar to Kwomais Pt. A bluff along the shore line, and a very shelving beach with scattered boulders. Both Points are covered with moss and bushes.

Very little trade is carried on in the waters included in this sheet. Steam Trading with Blaine and Sini-ah-moo pass around Birch Point. A small steamer made irregular trips from same place up the Fraser River, or from Vancouver, B.C., around Pt. Roberts to the mouth of the Kicomble River, usually after a tow of logs or heavy loads of paving stones picked up around Kwomais Pt. Vessels sailing or towing through the Gulf of Georgia sometimes pass through the western part, but usually keep over on the English shore. Large numbers of salmon are caught in weirs or nets around Pt. Roberts. These are carried by large sail-boats to



Blaine or Semi-ah-moo for shipments.

3

The high bluffs covered with fir and spruce on Pt. Roberts, and Birch or Kwanmais Pt. can be seen a long distance. Point Roberts from a distance looks like an island, as the low lands north of Boundary Bay, extending across the Fraser River to the Gulf of Georgia, can not be seen five (5) or six (6) miles off.

Vessels bound N. or S. through the Gulf of Georgia usually give Pt. Roberts a good clearance of three (3) or four (4) miles. There are no good natural ranges for clearing the shoal or reef off this Pt. a vessel beating up the Gulf in a fog or at night should be very careful not to get to the E. of the shoal, as the lead will not give much information whether the vessel is East or West of it till too late. If a bell buoy was

placed on the end of this shoal it would ab-  
rogate all danger. If the light at the mouth of the Fraser River can be run, keep it well open from the S.W. point to pass in safety.

If bound up the Kikomek River after rounding

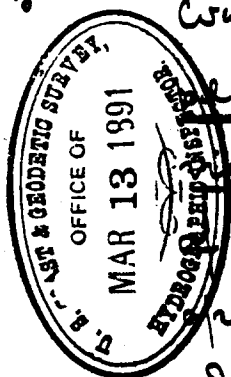
Special attention is respectfully called to the remarks underlined in the journal.

Comdr., U.S.N.,

C. & G. Survey.

Hydrographic Inspector

Chas. M. Thompson



Pt. Roberts from the N.E., give this point a clearance of about three (3) miles and head to just clear the low point on the S. side of the entrance to Mud Bay, this will give as deep water as can be found to cross the bar into the channel leading up to the River, and keeping on the same course will give as good water as can be found up to the point. The lead may be used to a good advantage till well into the channel, and by keeping a sharp lookout on the soundings and running close the both banks of the channel may be followed. The South bank is very abrupt. The clouds hanging over the mountains usually obscure any natural range of view to make the entrance of the Kiconikil. If necessary to round Kew-mais Pt., or approach it, keep the lead going and sheer off in time, the beach is covered with scattered boulders and they extend out under water. The lead can be used to a good advantage in rounding Birch Pt., and by watching the soundings a vessel can run in as far as the buoy in Senio

ah-moo Bay in a dense fog. If in clear weather give Birch Pt from one half ( $\frac{1}{2}$ ) to one (1) mile clearance when rounding it.

4

By keeping off the shores and shoals noted above plenty of water will be found.

The only channel on the shore is that leading to the Kicomuk, this has a bar at its mouth over which eight (8) feet may be carried at all stages of the tide.

There are no regular pilots in this vicinity, a fisherman at Pt. Roberts might be obtained to pilot into the Kicomuk.

Only one (1) small tug-boat could be kind in Semi-ah-moo, and no large tugs can be found nearer than Pt. Townsend or Victoria and Vancouver on the Canadian side. Care should be taken as to whom the tow is to be made. A great deal of jealousy exists among the tug-boat men, and either will be promptly libeled and fined heavily, if found towing in foreign waters.

There does not seem to be much or any change off shore, a tongue of rather deeper water was found extending up inside the end of the shoal off Pt. Roberts than is shown on the old charts, but may be due to a better development. No trace of the eight (8) fathom patch shown on C. & G. S. chart No. 684 as existing off the S.W. point of Pt. Roberts. Much difficulty was found in getting good up and down casts just off this point, owing to rapid currents and whirls. From personal observation of work done around there a difference of a very few seconds in sounding and taking position would make a great difference in the results obtained.

The shore line around the S. and S.E. end of Pt. Roberts is gradually receding & being washed away. A meadow, established by Asst. J. J. Gilbert, C. & G. S. in 1887, is now under water at very high tides and the fence around the field at this point has been moved back from its former position.

The bottom of almost the entire sheet is sand and mud out to the fathoms beyond this green mud. Exceptions to this are around Kwomais Pt. and on the reef off Pt. Roberts where it is rocky, and around Birch Pt. and the S.W. point of Pt. Roberts where it is sand, gravel and shells.

There are no good anchorages on the sheet. Vessels may anchor on the East side of Pt. Roberts to the N<sup>th</sup> of the reef during the prevalence of N<sup>thly</sup> and W<sup>thly</sup> winds, but must watch the weather and leave before a S<sup>thly</sup> wind comes on to blow, as a heavy swell rolls in during the latter blows. Just to the N<sup>th</sup> of the S.W. point of Pt. Roberts vessels may find a lee, by anchoring so as just swing clear of the beach, during S.E. blows, but must leave when the wind hauls to the W<sup>th</sup> as it usually does.

There were no harbor improvements in progress or contemplated at the time of this survey.

The flood currents sweep into Boundary Bay from the S<sup>th</sup>, and divide off Birch Pt., part flowing into Sumi-ah-moo Bay, part directly into the Bay across the flats, and part sweep to the W<sup>th</sup> across the reef and shoal off Pt. Roberts. From observations made in the launch while running normals of the mouth of Sumi-ah-moo Bay the tidal currents run in streaks with variable velocity and not as a whole body with any steadiness. To the S<sup>th</sup> and W<sup>th</sup> of Pt. Roberts the current on the flood has a general direction to the N.W. and runs <sup>at</sup> a velocity of two (2) to three (3) knots. But even two (2) or three (3) miles off shore counter currents will be found setting in different directions, and close along the W. shore will always be found a strong eddy current.

On the ebb the main current to the W<sup>th</sup> of Pt. Roberts sets to the E.S.E. and runs with even more velocity than the floods. The muddy water from the Fraser River is very noticeable on the western limits of this

shut floating on the salt water, a steamer passing through will leave a dark streak of the salt water beneath. The ebb currents set out of Boundary Bay to the S.W. and there is usually a strong set to the west across the reef off Pt Roberts, and this forms an eddy current extending as far as the S.W. point. During strong S.W. gales the currents across the reef may be reversed but are very weak. On the southern limits of the shut the ebb usually sets in towards Birch Bay.

1

The channels as shown on the old charts do not seem to have changed in in any degree and any changes in the contour lines may be due to rather close work so far as can be judged from an examination of No. 684 C. & G. S., the only chart on board covering these waters.

8

Ice does not interfere with navigation in these waters

14

Fogs are not uncommon in the early fall and spring months.

Smoke from forest fires becomes so dense at times during the months of July August and September as to make it difficult to see more than a half a mile.

9

The general direction of the summer winds is from N.W. to S.W. and in winter from S.E. to S.W. The heaviest blows are from S.E. shifting to S.W., though the N.W. winds occasionally blow pretty fresh and have a long sweep down the Gulf of Georgia. A norther in winter is of not frequent occurrence, but when it does blow it comes out fully as strong as the S.E. gales. As a usual thing the blows from N. to E. are only light airs, but on Sept. 3<sup>rd</sup> of the past season the wind shifted in heavy squalls from N.W. to N.E. and then to S.E. Warning was given of this shift by black clouds banking up on the mountains in the direction of the valley of the Kiconikee



River with sharp lightning and heavy thunder. I have noted this wind as it is almost a rule in these waters that the wind never blows harder than a light air from the N.E. and I was told by a man who had lived there twenty years that such a wind had never been experienced during that time.

10

The only wreck that came to my knowledge was an English tug that was caught on the reef of Pt. Roberts in a fog. Very little damage was done as there happened to be no wind or swell. An American ship being towed up the Gulf was swept in on the reef in a fog. She came off with the next high water, with how much damage I am unable to say. If caught on her in a heavy S.E. blow a vessel would undoubtedly be badly stove if not entirely wrecked.

Sail-boats of the fisherman caught at anchor under Pt. Roberts during S.E. gales after drag ashore. The swift currents in the Gulf make a very nasty, choppy, sea

when the wind is against the current. The cutter of this vessel was hoisted while working on the reef off Pt. Roberts. These seas come up very quickly on the change of tide, and small boats should be very careful about venturing out.

There are no Life Saving Stations on the shore.

The nearest Hospital for seamen is at Port Townsend where there is a Marine Hospital in charge of a Surgeon U.S.N.H. Service.

## 11

A vessel must go to Port Townsend to receive pratique, though by calling at Roche Harbor or Whatcom, that have been made sub-ports of entry, a vessel might communicate and obtain pratique from Townsend.

## 12

Fresh water may be obtained in casks from a spring on the S.E. end of Pt. Roberts and from a spring near the boundary line on the E. side. Both springs are small. The nearest places to obtain large quantities would be on Drayton Harbor

The nearest place that supplies can be obtained is at Semi-ah-mos or Blaine, and then only in limited quantities. Ship chandlery can not be obtained nearer than Port Townsend, Victoria or Vancouver.

The nearest coaling station is at Nanaimo B.C., where bituminous coal, of the best quality to be found north of San Francisco, may be obtained in large quantities from coal chutes.

There are no repair shops nearer than Port Townsend or Seattle in the U.S., and Vancouver or H.B.M. Naval Station at Esquimaux in B.C.

13

There are no wharves on the route.

14

There are no cautionary weather signals displayed or time ball dropped within sight of any point on the route.

15

The nearest Branch Hydrographic Office is at Portland Oregon. There are no special signals of any kind displayed within sight of any point on the route.

16

The nearest marine railway is at Seattle and that is only capable of taking out vessels of small size. The nearest dry-dock is at the B.M. Naval Station at Esquimaux, B.C.

17

A small steamer, carrying the U.S. mail, made daily trips, except Sunday, from Whistler to Blaine touching at any small settlement on the route. A passenger and freight steamer made tri-weekly trips from Seattle and way ports to Blaine. A steamer made weekly trips from Tacoma and way ports to Blaine. All of which passed around Birch Pt.

A railroad is nearly completed connecting Tacoma, Seattle, etc with Westminster, B.C. This road passes through Blaine.

The nearest Post Offices in the U.S. are at Sini-ah-moo and Blaine. A telegraph line connects this latter place with Seattle. The people on Pt. Roberts get their mail from Lad-noo Landing on the Fraser River about ten (or) miles distant. There is a Post Office at Elgin

a small settlement on the Kikomik River two or three (3) miles above its mouth.

18

The nearest custom-house is at Point Barrow. Rache Harbor and Whateau are the nearest sub-points.

19

There are no towns included within the limits where hydrographic work was carried on. Semi-ah-mos on the Spit at the entrance of Drayton Harbor consists of a few scattered houses. It was formerly a great trading place for the Indians in this vicinity, but the growing town of Blaine on the East side of the Harbor has taken away its trade, and the latter place has grown very rapidly within the last few years. On the S.W. end of Pt. Roberts is a small settlement mostly fishermen engaged in taking salmon and preparing them for market. They do the most of their trading with Blaine in sail-boats or on horse-back with Ladmo's Landing.

20

Reef will be found on the shoaler part

of the shore and on the reef off Pt Roberts. It indicates a rocky bottom. The current usually sweeps it under water, and any sign of it, if only a single piece, should be a sign to navigators in these waters that he was near enough the shore or reef to shun off. This kelp grows up in the summer months, and is torn away by the winter blows.

21

Kwas-mais Point is known locally as North Bluff, and Birch Point as South Bluff. The bight on the East side of Boundary Bay is called Mud Bay. The Niscomuk River is pronounced by the people in this vicinity as though it might be spelled Niskomuk.



Very respectfully  
J. N. Jordan, Lieut. USN.  
Comd'g. Earnest.

Forwarded and the attention of the Superintendent is respectfully  
Chas. M. Thomas - Comd'r., U. S. N., called to the thoroughness  
Hydrographic Inspector C. & G. Survey. of this admirable report.

HYDROGRAPHIC SHEET NO. 2049

This sheet covers Boundary Bay and vicinity, Washington,  
by J. N. Jordan, U. S. N., in 1890.

The plane of reference used for reduction of soundings was  
the mean of the three lowest low waters observed, corresponding  
to a reading of -0.47 foot on tide staff No. 3 in Drayton Harbor,  
1890. To reduce the soundings to mean lower low water, add  
1.1 feet.

February 10, 1927.